

# OCF Resource Type Specification

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OPEN CONNECTIVITY  
FOUNDATION™

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## 1 적용 범위

OCF Resource Type 스펙은 OCF Device 에서 노출 가능한 OCF 정의 Resource 를 규정한다.

Application profile device 스펙(예: 스마트홈 또는 헬스케어 용으로 생성된)은 각 profile 에 적합한 device type 을 규정한다; 이러한 스펙은 본 문서의 Resource Type 정의를 사용한다.

본 스펙은 OCF Core 스펙의 상위에 구성된다. OCF Core 스펙은 IoT 사용 및 생태계를 위한 profile 의 구현을 가능하게 하는 OCF Framework 를 규정한다. OCF Core Framework 는 단순한 device(저사양 device)에서 고성능 device(스마트 device)까지 지원하도록 확장 가능하다.

## 2 인용 표준

다음의 문헌은, 일부 또는 전부가 본 문서에서 표준적으로 인용되며 어플리케이션에 있어서 필수적이다. 날짜가 표기된 문헌의 경우에는 인용된 판만 적용된다. 날짜가 표기되지 않은 문헌의 경우에는 참조된 문헌의 최신판(보정 내용 포함)이 적용된다.

OCF Core Specification, *Open Connectivity Foundation Core Specification*, Version 1.0.0.

JSON SCHEMA, *JSON Schema: Core Definitions and Terminology*, Version 4.0,

<http://json-schema.org/latest/json-schema-core.html>.

RAML, *Restful API modelling language*, Version 0.8.

<https://github.com/raml-org/raml-spec/blob/master/versions/raml-08/raml-08.md>

ISO 8601:2004, *Data elements and interchange formats – information interchange – Representation of dates and times*.

CIE CIE159:2004, *A colour appearance model for colour management systems: CIECAM02*, January 19, 2004.

[http://www.cie.co.at/index.php/Publications/index.php?i\\_ca\\_id=435](http://www.cie.co.at/index.php/Publications/index.php?i_ca_id=435)

Swagger2.0, *Swagger RESTful API Documentation Specification*, Version 2.0

<http://swagger.io/specification/>



### 1156    **3   용어, 정의, 기호 및 약어**

#### 1157    **3.1   용어 및 정의**

##### 1158    **3.1.1**

##### 1159    **Actuator**

1160    UPDATE 동작의 지원을 받는 Resource.

##### 1161    **3.1.2**

##### 1162    **복합 Resource Type**

1163    다른 Resource Type 의 OCF Collection 으로 정의된 Resource Type.

##### 1164    **3.1.3**

##### 1165    **Sensor**

1166    UPDATE 동작의 지원을 받지 않는 Resource.

#### 1167    **3.2   기호 및 약어**

##### 1168    **3.2.1**

##### 1169    **CRUDN**

1170    **Create(생성), Retrieve(검색), Update(갱신), Delete(삭제), Notify(통보)의 약어.**

1171    Resource 에 대해 가능한 동작을 나타낸다.

##### 1172    **3.2.2**

##### 1173    **CSV**

1174    **Comma Separated Value 목록.**

1175    콤마를 사용해서 하나의 스트링 내에 더 많은 fields 를 포함하기 위한 구성.

1176

1177    값에 콤마가 포함되어 있을 때 그 앞에 “\”를 추가하면 콤마를 뺄 수 있다.

##### 1178    **3.2.3**

##### 1179    **OCF**

1180    Open Connectivity Foundation

1181    본 스펙을 제작하고 소유하는 표준 기구.

### 1182 3.2.4

### 1183 RAML

1184 RESTful API modelling language

1185 **RESTful APIs** 를 기술하는 간단명료한 방식. 자세한 사항은 **RAML** 참조.

### 1186 3.2.5

### 1187 REST

1188 Representational State Transfer

1189 네트워크에 연결된 애플리케이션을 설계하기 위한 아키텍처 스타일로, stateless, client-serve,  
1190 cacheable communications protocol 에 의존한다.

### 1191 3.2.6

### 1192 TBD

1193 추후결정.

## 1194 3.3 협약

1195 본 스펙에서, 다수의 용어, 조건, 메커니즘, 시퀀스, 파라미터, 이벤트, 상태, 또는 유사한 용어는 각  
1196 단어의 첫 번째 문자를 대문자로 표기하고 나머지는 소문자로 표기한다 (예: Resource Type).  
1197 이러한 단어가 소문자로 표기되었을 때는 일반적인 기술적 영어의 의미를 갖는다.

1198

## 1199 4 문서 규약 및 구성

1200 본 문서는 OCF 에 의해 현재 규정된 모든 Resource Type 을 나열한다. Resource 는 application  
1201 profile device 정의에 의해 사용된다. 본 문서에서 언급된 Resource Type 은 임의의 OCF  
1202 Collection 또는 device 표현 내의 임의의 OCF 적합 device 에 의해 사용될 수 있다.

1203 본 문서를 위해 OCF Core 스펙 내의 용어 및 정의가 적용된다.

1204

### 1205 4.1 표기법

1206 본 스펙에서 기능은 다음과 같이 필수(Required), 권고(Recommended), 허가(Allowed), 또는 사용  
1207 금지(DEPRECATED)로 분류된다.

1208 필수 (강제 또는 의무적)

1209 이러한 기본 기능은 OCF Resource Type 스펙을 준수하도록 구현되어야 한다. "하지 말아야  
1210 한다"나 "금지한다" 등의 구절은 금지되는, 즉, 수행하는 경우 구현이 스펙을 준수하지 않음을  
1211 의미하는 행위를 나타낸다.

1212 권고 (또는 제안)

1213 이러한 기능은 OCF Resource Type 스펙에 의해 지원되는 기능을 부가하며 구현되어야 한다.  
1214 권고 기능은, 통상적으로 중대한 복잡성의 증가 없이 OCF Resource Type 스펙의 기능을  
1215 이용한다. 규정 준수 테스트를 위해 권고 기능이 구현된다면 이 가이드라인에 따르는 특정  
1216 요건을 만족해야 한다. 일부 권고 기능은 추후에 필수 요건이 될 수 있다. "하지 않는 것이  
1217 좋다"라는 표현은 허용되지만 권고하지 않는 행위를 나타낸다.

1218

1219

1220 허가 (또는 허용)

1221 이러한 기능은 OCF Resource Type 스펙에 의해 필수적이지도 않을 뿐더러 권고되지도 않지만  
1222 기능이 구현된다면 이 가이드라인에 따르는 특정 요건을 만족해야 한다.

1223

1224 사용 금지

1225 이에 해당하는 기능은 본 스펙에서 설명은 하고 있지만 역 호환성을 제외하고는 구현되어서는  
1226 안된다. 현재 스펙에 따르는 동작 동안 사용 금지된 기능의 발생은 구현 동작에 어떤 영향도  
1227 끼치지 않으며 어떠한 에러 상태도 생성하지 않는다. 역 호환성은 기능이 구현되고 특정된 대로  
1228 기능할 것을 요구하지만 본 스펙에 따르는 구현에 의해 사용되어서는 안된다.

1229

1230

1231 조건부 허용 (CA)

1232 정의 또는 행위는 조건에 의존한다. 특정 조건이 만족되면 정의 또는 행위가 허용되고 그렇지  
1233 않으면 허용되지 않는다.

1234 조건부 필수 (CR)

1235 정의 또는 행위는 조건에 의존한다. 특정 조건이 만족되면 정의 또는 행위가 필수로 된다.  
1236 그렇지 않으면 특별한 기재가 없는 한 default 로 허용된다.

1237

1238 문자 그대로 해석되는 스트링은 "인용부호"를 사용한다.

1239 강조하는 단어는 *이탤릭체*로 표기한다.

1240 **4.2 Data type**

1241 본 스펙은 OCF Core 스펙에 정의된 type 을 채택하고 본 섹션에서는 이에 대한 예외를 기술한다.

1242

1243 JSON 숫자 type 으로 정의된 본 스펙 내의 모든 Property 는 정수 값이 아닌 부동 소수점 값으로  
1244 인코딩 되어 송신된다. JSON 숫자 type 으로 정의된 Property 의 수신은 OCF Core 스펙에서 정의된  
1245 대로 이루어져야 한다. 자세한 사항은 OCF Core 스펙 섹션 12.3 을 참조하기 바란다.

1246

## 1247 **5 Baseline Model 구성**

### 1248 **5.1 URI**

1249 본 문서에서 언급된 URI 는 단순 정보로 제조사가 정의한 것일 수 있다.

1250 Resource 의 Instance 는 URI 에 의해 표시된다. 동일한 Resource Type 의 하나 이상의 instance 가  
1251 OCF Device 에서 사용될 때, 다른 Resource instance 에 대해서는 다른 URI 를 사용해야 한다.

1252

1253 구현은 URI 의 개체군에 대한 OCF Core 스펙에서 정의된 요건을 따라야 한다. 자세한 사항은 OCF  
1254 Core 스펙 섹션 6.2 및 6.3 을 참조하기 바란다.

1255

### 1256 **5.2 Interface**

1257 OCF Core 스펙은 모든 Resource Type 이 최소한 하나 이상의 Interface 와 연관되어야 함을  
1258 규정한다; 이러한 Interface 는 Resource discovery 중에 Advertise 된다. 또한 OCF Core 스펙은  
1259 Resource Type 별 instance 에 적용 가능한 Interface 수를 규약하도록 한다.

1260

1261 본 스펙에서 정의된 모든 Resource Type 과 관련된 Default Interface 는 Resource Type 에 정의된  
1262 적용 가능한 interface 목록에서 첫 번째로 나열된 항목이어야 한다 (섹션 6 Resource Type 정의  
1263 참조). 단, Resource Type 의 정의가 Sensor 또는 Actuator Interface 를 Default Interface 로 갖는  
1264 경우는 예외이고, 이 경우의 구현은 이들 중 하나를 default 로 선택해야 한다. 따라서 그러한  
1265 Resource Type 을 호스트하는 Server 는 필수 사항인 baseline interface ("oic.if.baseline")에  
1266 더불어 "/ oic/res"를 통해 노출되는 Interface 인 oic.if.s (Sensor 의 경우) 또는 oic.if.a (Actuator 의  
1267 경우)를 설정해야 한다. Server 는 default 로 규정된 Interface 이외에 다른 Interface 를 지원할 수도  
1268 있다.

1269 Device 에 노출된 임의의 Resource 의 instance 와 관련된 기능 또는 가시성이 로컬 (국가 또는 입법  
1270 지역별) 규제 요건 또는 다른 제한 사항(예: 일부 지역에서는 Binary Switch 와 관련하여 연결된  
1271 device 에 원격으로 전원을 공급하는 기능이 제한되고, 잠금 상태가 상황에 따라 읽기 전용으로 될

1272 수 있다)에 따라 제한 될 수 있다. 이 경우 Device 는 Resource( "oic.if.a")에 대해 Actuator  
1273 Interface 를 노출시키지 않아야 하고, Device 는 "/ oic / res" 에 리소스와 임의의 필수  
1274 Interface 들과 Default Interface 로서 Sensor Interface ("oic.if.s")정보를 노출시켜야 한다.

1275

1276 **5.3 RAML 정의**

1277 본 문서에서 사용된 RAML 정의는 표준적이다. 확장 형태로 모든 정의된 JSON payload 는 명시된  
1278 JSON schema 를 준수해야 한다. 정의된 schema 들은 모든 OCF Core 스펙이 정의한 (그리고  
1279 필수적인) Property 들을 포함하는 확장을 갖는다.

1280 RAML 정의는 규정된 Resource Type 에 대한 CRUDN 동작에 대한 payload 를 기술하는데  
1281 사용된다. CRUDN 동작은 OCF Core 스펙에 정의된다. 또한 OCF Core 스펙은 CRUDN 동작에 대한  
1282 payload 내의 추가 Property 들을 규정한다. 본 문서의 RAML 정의는 자체만으로 구현을  
1283 생성하는데 충분하지 않고, Core 스펙에 정의된 추가 Property 들은 호환되는 구현을 생성하기  
1284 위하여 추가할 필요가 있다. 본 스펙은 RAML 에 의해 지원되는 response 의 서브셋을 사용하고,  
1285 이러한 응답에서 표 5-4 RAML 에 Return codes 행위 정의내역을 사용한다. 성공 및 오류 조건의  
1286 실제 값은 OCF Core 스펙에 정의되어 있다.

1287

1288

1289 RAML 정의는 RAML 에 대한 OCF CRUDN 행위를 표 5-1 에 정의된 바와 같이 RAML 에 맵핑 한다.

1290 **표 5-1 OCF CRUDN 및 RAML 정의<sup>1</sup> 간의 변환**

Resource	Create	Retrieve	Update	Delete	Notify
/example	put 또는 post	get	put 또는 post	delete	

1291 Notify 는 RAML 정의의 부분이 아니지만, Core 스펙에서 정의된다. Notify 의 의미는 CRUDN Read  
1292 값과 동일하다. 본 스펙에 정의된 모든 Resource Type 은 OCF Core 스펙 섹션 11.4.2 에 정의된  
1293 바와 같이 Observe 사용을 통한 통지를 지원한다.

1294

1295 **5.4 Property 정의**

1296 **5.4.1 Common Properties**

1297 OCF Core 스펙은 OCF Resource 에 대해 정의 가능한 다수의 Property 를 규정한다. Common  
1298 Property "if" 및 "rt"는 본 스펙에서 정의된 모든 Resource Type 에 대해 규정되어야 한다. 이

1299 Property 들은 OCF Server 와 사용 가능한 Resource 가 발견될 때 사용되는 /oic/res/ Resource  
 1300 Type 내에 노출된다. 공통 Property "p" 및 "n"은 본 스펙에 정의된 모든 Resource Type에 대해  
 1301 규정될 수 있다.

1302

1303 OCF Client 가 이들 Property 를 RETRIEVE 동작에 대한 response 로 제공되는 Resource 표현에  
 1304 포함할 것을 요구한다면, Client 는 query parameter 에서 이것을 규정할 때 OCF Core 스펙이  
 1305 정의한 baseline Interface (oic.if.baseline)를 선택해야 한다.

1306

**표 5-2 OCF Resource 에 대한 Common Property**

Property Name	Property Title	Property Value	Value Type	액세스 모드	설명
<b>if</b>	Interface	OCF Core 스펙 섹션 7.6.2 참조	스트링의 배열	Readonly	Core 정의. Resource 에서 지원되는 Interface.
<b>rt</b>	Resource Type	OCF Core 스펙 섹션 7.4 참조	스트링의 배열	Readonly	Core 정의. Resource Type 은 본 문서에서 정의. 섹션 6 참조.
<b>n</b>	Name	OCF Core 스펙 섹션 7.3.2.5 참조	스트링	Readonly	Core 정의. Resource 에 대해 사람이 인식 가능한 명칭.
<b>id</b>	Resource Identity	OCF Core 스펙 섹션 7.3.2.6 참조	스트링	Readonly	Core 정의. Resource 의 고유한 식별자 (OCF device 내의 모든 Resource 에 대해).

1307

## 1308 5.4.2 Resource Properties

1309 CRUDN 동작이 규정되는 Property 들은 JSON schemas 에 정의된다 (JSON SCHEMA 참조).

1310

1311 기본 resource Type 은 물리적 property 를 나타내는 단일 값으로 구성된다.

1312 이러한 Resource Type 은 표 5-3 과 같이 Property 들의 정의로 규정된다. 표 내에서 필수는  
 1313 Property 가 전체 Resource Type schema 의 부분으로서 규정되어야 함을 의미하고, 실제로  
 1314 Property 가 반환되거나 생성된 payload 에 포함되는지는 호출되는 동작에 적용되는 schema 에  
 1315 의존한다.

1316

1317

표 5-3 JSON schema 내의 Resource Type 의 Property 정의

Property Name	Friendly Alias Name	Property Value	Value Type	Value Rules	액세스 모드	필수	설명
<b>&lt;value&gt;</b> , <b>name 은 Resource 에 따라 변할 수 있다</b>	<value>, name 은 Resource 에 따라 변할 수 있다	Resource 에 의존	Resource 에 의존	Resource 에 의존	Resource 에 의존	예	Resource 의 현재 value
<b>range</b>	range	[Min,Max]	배열	Linear range	read-only	아니오	2-요소 배열로 규정된 입력 값의 range
<b>step</b>	step	Resource 에 의존	정수 또는 숫자	Resource 에 의존	read-only	아니오	정의된 범위에 걸친 증분 값
<b>precision</b>	Precision	Resource 에 의존	숫자	Resource 에 의존	read-only	아니오	노출된 값의 정확도

1318

1319

1320

1321

1322

1323

특성상 복수의 물리적 파라미터를 갖는 Resource 의 경우, value Property 는 상이한 물리적 파라미터를 규정하는 복수의 Property 로 대체할 수 있다. 값의 type 은 Resource Type 의 RAML 정의에 표시되어야 하고, 전달된 값에 적합해야 한다. 본 스펙에서 정의된 모든 Property 명칭과 Property 값은 대소문자를 구분해야 한다.

1324

1325

1326

5.4.3 Basic Resource Schema

여기에 정의된 모든 Resource Type 은 JSON schema 에 의해 이전에 표시된 바와 같이 표현된다. Resource Type 의 RAML 정의는 Resource Type 특정 schema element 를 삽입한다.

#### 1327 5.4.4 CRUDN Operation Response Code

1328 Resource 는 Resource Type 정의 및 허용된 CRUDN 동작에 따라 생성 또는 갱신될 수 있다.  
 1329 동작은 상이한 의미를 갖는 상이한 response 코드를 가질 수 있다. 이것은 표 5-4 에서 설명된다.

1330

1331 표 5-4 RAML 내의 Return 코드 작용

response 코드	의미
200	response 의 payload 는 변경을 확정한다. RAML 정의는 payload 를 정의하기 위한 schema 를 포함한다.
201	payload 는 생성(CREATE) 동작의 결과로서 Server 에 의해 생성된 Resource 의 URL 이다. RAML 정의는 payload 를 정의하기 위한 schema 를 포함한다.
204	OK, 모든 것이 수월하고 어떠한 payload 도 제공되지 않는다. RAML 정의는 schema 를 포함하지 않는다. RAML 정의는 204 코드 값을 OCF Server 의 default 동작으로 간주되기 때문에 이 값을 생략할 수도 있다.
403	개체 1: Resource 에 대한 검색(RETRIEVE)시 특정 Property 값을 지정하는 query parameter 를 사용하는 경우. Server 가 제공된 값을 지원하지 않는다면, 이 response 는 반환 되어야 한다. response payload 는 query parameter 에 대해 허용된 값들을 포함해야 한다. 개체 2: Server 가 제공된 payload 에 대한 문제가 있어 Resource 를 CREATE 또는 UPDATE 할 수 없다. UPDATE 의 경우, Resource Type 정의에서 달리 명시되지 않는 한, response payload 는 200 에 대해 정의된 동일한 schema 를 포함해야 한다. 현재의 Resource Property 값을 나타낸다.



```

#%RAML 0.8

title: OCFExampleActuator
version: v1.0

/ActuatorExample:

  description: |
    ResourceActuatorExample description.
    If the ActuatorExample is implemented as the example in the RAML the next values apply:
    The name of the Resource is "ResourceExample Name"
    The Resource Type is "oic.r.actuatorexample"
    The Interface (if) is denoting an Actuator by having the value oic.if.a.
    The unique identification is "actuator_example_id"
    The value of the ActuatorExample is modeled as integer
    The range of the value of ActuatorExample is between 0 and 100

  get:

    description: |
      retrieves the example Resource.

    responses:

      200:

        body:

          application/json:

            schema: |

              {
                "id": "http://openinterconnect.org/schemas/oic.r.actuatorexample.json",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "title": "AcutatorExample",
                "definitions": {
                  "oic.r.actuatorexample": {
                    "type": "object",
                    "properties": {
                      "value": { "type": "string" },
                      "range": {
                        "type": "array",
                        "items": {
                          "type": "integer"
                        }
                      }
                    }
                  }
                }
              }

```

```

    },
    "type": "object",
    "allOf": [
      {"$ref": "oic.core.json#/definitions/oic.core"},
      {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
      {"$ref": "#/definitions/oic.r.actuatorexample"}
    ],
    "required": ["value"]
  }

```

example: |

```

{
  "n": "ActuatorExample Name",
  "id": "actuator_example_id",
  "rt": ["oic.r.actuatorexample"],
  "value": "0",
  "range": ["0,100"]
}

```

post:

description: |

sets the Actuator value

example only updates the value of the Resource

it does not change the Resource name, although it is allowed to do so.

body:

application/json:

schema: |

```

{
  "id": "http://openinterconnect.org/schemas/oic.r.actuatorexample.json",
  "$schema": "http://json-schema.org/draft-04/schema#",
  "title": "ActuatorExample",
  "definitions": {
    "oic.r.actuatorexample": {
      "type": "object",
      "properties": {
        "value": { "type": "string" },
        "range": {
          "type": "array",
          "items": {
            "type": "integer"
          }
        }
      }
    }
  }
}

```

```

    "allOf": [
      {"$ref": "oic.core.json#/definitions/oic.core"},
      {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
      {"$ref": "#/definitions/oic.r.actuatorexample"}
    ],
    "required": ["value"]
  }
  example: |

    {
      "id": "actuator_example_id",
      "value": 5
    }

responses:
  200:
    body:
      application/json:
        schema: |

          {
            "id": "http://openinterconnect.org/schemas/oic.r.actuatorexample.json",
            "$schema": "http://json-schema.org/draft-04/schema#",
            "title": "AcutatorExample",
            "definitions": {
              "oic.r.actuatorexample": {
                "type": "object",
                "properties": {
                  "value": { "type": "string" },
                  "range": {
                    "type": "array",
                    "items": {
                      "type": "integer"
                    }
                  }
                }
              }
            }
          },
          "type": "object",
          "allOf": [
            {"$ref": "oic.core.json#/definitions/oic.core"},
            {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
            {"$ref": "#/definitions/oic.r.actuatorexample"}
          ],
          "required": ["value"]
        }

```

```
example: |
{
  "id": "actuator_example_id",
  "value": 5
}
```

204:

표 5-6 센서를 규정하는 Resource 의 RAML 예

```

#%RAML 0.8
title: OCFExampleSensor
version: v1.0

/SensorExample:
  description: |
    SensorExample description.
    If the SensorExample is implemented as the example in the RAML the next values apply:
    The name of the Resource is "ResourceExample_Name"
    The Resource Type is "oic.r.sensorexample"
    The Interface (if) is denoting a Sensor by having the value oic.if.s.
    The unique identification is "sensor_example_id"
    The value of the ResourceSensorExample is modeled as integer

  get:
    description: |
      retrieves the example Resource.

    responses:
      200:
        body:
          application/json:
            schema: |
              {
                "id": "http://openinterconnect.org/schemas/oic.r.sensorexample.json",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "title": "SensorExample",
                "definitions": {
                  "oic.r.sensorexample": {
                    "type": "object",

```

```

    "properties": {
      "value": { "type": "string" },
      "range": {
        "type": "array",
        "items": {
          "type": "integer"
        }
      }
    }
  },
  "type": "object",
  "allOf": [
    {"$ref": "oic.core.json#/definitions/oic.core"},
    {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
    {"$ref": "#/definitions/oic.r.sensorexample"},
  ],
  "required": ["value"]
}

example: |

{
  "n": "SensorExample_Name",
  "rt": ["oic.r.sensorexample"],
  "id": "sensor_example_id",
  "value": "3"
}

```

1336

## 1337 5.6 Observable Resource Type

1338 OCF Core 스펙은 Resource 가 OCF Client 에 " Observable" 한 것으로 자신을 Advertise 할 수  
 1339 있게 하는 메커니즘을 정의한다. 본 스펙에서 정의된 모든 Resource Type 이 Observe 될 수 있다.  
 1340 Resource Type 이 Policy Link parameter 의 사용을 통해 Observable 하게 되는지 여부는 전적으로  
 1341 구현에 의존한다.

### 1342 5.6.1 조건부 통지

1343 모든 Observable Resource 는 Observe 행위로 인해 초래되는 Notification 의 생성에 조건을  
 1344 적용할 수 있고, 이들 조건은 시간 기반, 값 기반, 또는 시간 및 값 기반 일 수 있다. 이것은  
 1345 Observable Resource 의 개체를 통해 Conditional Notification (oic.r.value.conditional) Resource  
 1346 Type 을 구성함으로써 달성될 수 있다; 즉 Server 에 의해 노출된 Resource 는 "[oic.r.<resource>",  
 1347 "oic.r.value.conditional]"의 "rt"를 갖는다.

### 5.6.1.1 Conditional Notification Property 요약

표 5-7 Conditional Notification Property 는 조건부 Notification Resource Type 에 의해 제공된 Property 를 요약한다. 표로부터 적어도 하나의 Property 는 Resource Type 의 개체에 존재하여야 한다.

표 5-7 Conditional Notification Property

Name	Type	R/W	필수	설명
threshold	숫자	RW	아니오	Notification 생성 전 Observe 값에 대한 변경 량
minnotifyperiod	정수	RW	아니오	통지 전송 전의 최소 경과 시간 (ms)
maxnotifyperiod	정수	RW	아니오	통지 전송 전의 최대 경과 시간 (ms)

모든 Property 는 노출되면 초기 값으로 설정되어야 한다. 모든 Property 는 "0"의 값을 갖고 노출될 수 있다; 이것은 Property 와 관련된 기능이 활성이 아님을 나타낸다. 임의의 Client 는 ACL 제한 사항을 조건으로 하는 노출된 값을 갱신할 수 있고; 그러한 변경은 전역적이고, 모든 Observer 에게 송신되는 모든 Notification 에 적용된다. 통지자는 Property 값에 대한 갱신을 거부할 수 있다; 그러한 경우 diagnostic payload 가 Property 의 유효 범위를 나타내는 rejection response 에 포함되어야 한다.

### 5.6.1.2 Property 정의: threshold

두 통지 간의 최소 값 변경. 마지막 통지 이후의 변경이 이 값보다 크거나 같을 때 통지가 ("minnotifyperiod"의 제약 내에서) 전송되어야 한다. 값의 측정은 전송된 마지막 통지 내의 값을 기준으로 이루어진다. 따라서 (존재할 수 있는 임의의 "maxnotifyperiod" 제약 내의) 모든 통지는 각각 적어도 "threshold"만큼의 다른 값을 갖는다. "0"의 "threshold" 값은 어떠한 "threshold"도 적용되지 않음을 의미한다.

### 5.6.1.3 Property 정의: minnotifyperiod

통지와 통지 사이의 최소 시간 (ms). 만료 전에 값 변경 조건이 충족되면("threshold" 이상의 값 또는 threshold 가 없는 경우 값의 변경이 있다면), 통지는 기간이 만료될 때까지 송신되지 않아야 한다. Property 가 존재하고 "0"으로 설정되면, 어떠한 최소 통지 기간 타이머도 실행되지 않는다. Property 가 존재하고 "0"보다 큰 값을 가지면, 최소 통지 기간 타이머는 그 값과 동일하게 실행된다. Property 값 자체는 초기에 통지자에 의해 채워진다. Property 가 없는 경우, 최소 통지 기간은 통지자에 좌우된다. 타이머는 통지가 전송될 때마다 재설정된다.

1374

#### 1375 5.6.1.4 Property 정의: maxnotifyperiod

1376 통지자가 통지 간에 초과하지 않아야 하는 최대 시간 (ms). 타이머가 만료될 때 통지가 송신되어야  
1377 한다. 존재하고, "0"으로 설정되면, 어떠한 최대 통지 기간 타이머도 실행되지 않는다; 이 값이  
1378 존재하고, 0 보다 큰 값을 가지면, 최대 통지 기간 타이머는 그 값과 동일하게 실행되어야 한다.  
1379 Property 값 자체는 처음에 통지자에 의해 채워져야 한다. "minnotifyperiod"와  
1380 "maxnotifyperiod"가 모두 존재하고, 둘 다 0 이 아닌 경우, "maxnotifyperiod" 값은  
1381 "minnotifyperiod" 값보다 커야 한다. 존재하지 않은 경우, 값은 통지자에 의해 설정되어야 한다.  
1382 타이머는 통지가 송신될 때마다 재설정된다.

#### 1383 5.6.1.5 Governing State Machine

1384 "minnotifyperiod"와 "maxnotifyperiod" 타이머는 통지가 송신될 때마다 다시 시작된다  
1385 (Observe 에 대한 response). 둘 다 존재할 경우 값 변경 조건(threshold)과 "minnotifyperiod"가  
1386 모두 충족될 때, 통지가 송신된다. Observe Property 값이 "minnotifyperiod"의 만료 전에  
1387 threshold 이하로 내려가면, 통지자는 아무런 조치도 취하지 않거나, 또는 통지가 현재 Observe  
1388 Property 값(notification 시)을 포함하는 "minnotifyperiod"의 만료 시에 송신될 수 있다. 타이머  
1389 제약 조건이 없다면 통지는 Observe Property 값이 "threshold" 이상의 양만큼 변할 때마다  
1390 송신된다.

1391

1392 전반적인 로직은 도 1: 전반적인 조건부 통지 로직에 정의된다. 도 2: 조건부 통지의 흐름 예는  
1393 예시적인 시퀀스를 제공한다.

If minnotifyperiod expired:

If observed value changed:

If change amount  $\geq$  threshold:

Send notification with current value

Reset minnotifyperiod , maxnotifyperiod

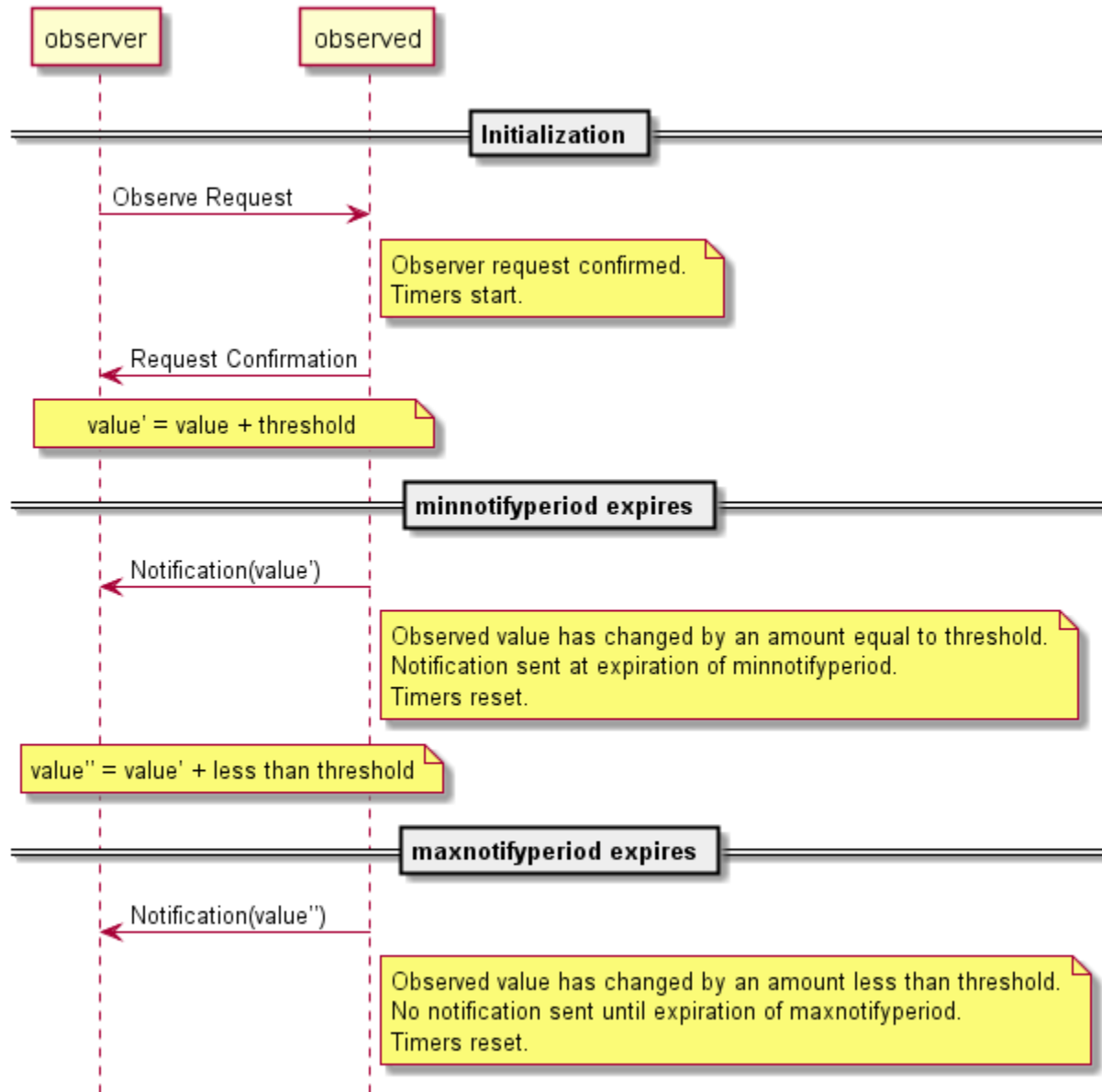
If maxnotifyperiod expired:

Get current value

Send notification with current value

Reset minnotifyperiod , maxnotifyperiod

도 1: 전반적인 조건부 통지 로직



도 2: 조건부 통지 흐름의 예



## 5.7 복합 Resource Type

복합 Resource Type 은 하나 이상의 단일 또는 다른 복합 Resource Type 으로 구성된 Resource 이고; 그 예은 표 5-8 복합 Resource Type 의 RAML 예에 도시된다. 복합 Resource Type 은 새로운 단일 Resource Type 으로 볼 수 있다. 복합 Resource Type 의 메커니즘은 새로운 단일 Resource Type 을 규정하지 않고 Resource 에 더 많은 컨텍스트를 표현하기 위하여 기존의 Resource Type 을 새로운 조합으로 사용하기 때문에 강력한 개념이다.

복합 Resource Type 은 참조된 기존 Resource 값을 Collection 에 링크함으로써 정의된다.

Linking 은 Link 의 배열을 사용하여 이루어진다; 자세한 사항은 OCF Core 스펙 섹션 7.7.2 를 참조하기 바란다. 아래에 나열된 예는 오로지 설명의 목적을 위해 본 정의의 부분적인 schema 를 포함한다. 배열의 Property 명칭은 "links"이다. 관계 유형은 복합이 복합 Resource Type 을 구성하는 다른 Resource Type 을 포함하는 것을 나타내는 "contain"이 된다.

나열된 Resource 에 대한 액세스는 OCF Core 스펙에서 정의한 oic.if.ll Interface 를 사용하여 단일 동작으로 얻을 수 있다.

표 5-8 복합 Resource 의 RAML 예

```
##%RAML 0.8
title: OCFExampleCompositeResource
version: v1.0

/CompositeExample:
  description: |
    CompositeExample description.
    If the CompositeExample is implemented as per the example RAML the following values apply:
    The name of the Resource is "CompositeExample Name"
    The Resource Type is "oic.r.compositeexample"
    The Interface (if) can denote Sensor or Actuator
    The value of the ActuatorExample is modeled as 2 references to other implemented Resources
    In the example oic.r.SensorExample and oic.r.ActuatorExample are used.
  get:
    description: |
      retrieves the composite example Resource.
```

responses:

200:

body:

application/json:

```
schema: |

{
  "id": "http://openinterconnect.org/schemas/oic.r.baseResource#",
  "$schema": "http://json-schema.org/schema#",
  "title": "SensorExample",
  "definitions": {
    "oic.r.compositeexample": {
      "type": "object",
      "properties": {
        "links": {
          "type": "array",
          "items": {
            "$ref": "oic.oic-link-schema.json#"
          }
        }
      }
    }
  },
  "type": "object",
  "allOf": [
    {"$ref": "oic.core.json#/definitions/oic.core"},
    {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
    {"$ref": "#/definitions/oic.r.compositeexample"}
  ],
  "required": ["n", "id", "links"]
}
```

example: |

```
{
  "n": "CompositeExample Name",
  "id": "composite_example_id",
  "links": [
    {
      "href": "/my_1st_reference",
      "rel": "contains",
      "rt": ["oic.r.actuatorexample"],
      "if": ["oic.if.a"]
    },
    {
      "href": "/my_2nd_reference",
      "rel": "contains",
```

```

    "rt": ["oic.r.sensorexample"],
    "if": ["oic.if.s"]
  }
]
}

```

1417

## 1418 5.8 스펙 버전

1419 본 버전의 스펙에 따르는 Device 는 스트링 "ocf.res.1.0.0" 을 oic.wk.d 내의 dmv Property 에  
1420 대입하여야 한다.

## 1421 6 Resource Type 정의

1422 본 섹션은 모든 Resource Type 에 대한 정의를 포함한다; 완전한 집합은 표 6-1 Resource Type 의  
1423 알파벳순 목록에 나열된다. Annex A.1 은 basic underlying schema 정의를 제공하고, 이에 대해  
1424 모든 다른 Resource Type 이 구성된다. Annex A.1 은 또한 모든 Resource Type 이 지원해야 하는  
1425 "oic.if.baseline" interface 의 사용 예를 제공한다. 모든 다른 섹션은 그러한 특정 Resource Type 에  
1426 적용되는 default interface 의 적용을 따르는 Resource Type 의 예시적인 표현을 제공한다.

1427

1428 Annex B 는 RAML 대신에 Swagger2.0 을 사용하는 모든 Resource Type 에 대한 정의를 제공한다.

1429 모든 Resource Type 은 OCF Core 스펙 섹션 7.2 에 따라 생성되어야 한다. Resource Type 에 대한  
1430 모든 비교는 대소문자를 구별하지 않는다.

1431 본 문서 내의 모든 Resource Type 에는 접두사로 "oic.r" 가 붙고, 이는 OCF 가 정의한 Resource  
1432 Type 임을 나타낸다.

### 1433 표 6-1 Resource Type 의 알파벳순 목록

1434

Friendly Name (단순 정보)	Resource Type (rt)	섹션
Acceleration Sensor	oic.r.sensor.acceleration	6.55
Activity Count	oic.r.sensor.activity.count	6.23
Air Quality	oic.r.airquality	6.65

<b>Air Quality Collection</b>	oic.r.airqualitycollection	6.66
<b>Altimeter</b>	oic.r.altimeter	6.60
<b>Atmospheric Pressure</b>	oic.r.sensor.atmosphericpressure	6.24
<b>Air Flow</b>	oic.r.airflow	6.1
<b>Air Flow Control</b>	oic.r.airflowcontrol	6.2
<b>Audio Controls</b>	oic.r.audio	6.25
<b>Auto Focus</b>	oic.r.autofocus	6.26
<b>Automatic Document Feeder</b>	oic.r.automaticdocumentfeeder	6.27
<b>Auto White Balance</b>	oic.r.colour.autowhitebalance	6.31
<b>Basic Resource Schema</b>	Not Applicable	Annex A.1
<b>Battery</b>	oic.r.energy.battery	6.3
<b>Binary switch</b>	oic.r.switch.binary	6.4
<b>Brightness</b>	oic.r.light.brightness	6.5
<b>Button Switch</b>	oic.r.button	6.28
<b>Carbon Dioxide Sensor</b>	oic.r.sensor.carbondioxide	6.29
<b>Carbon Monoxide Sensor</b>	oic.r.sensor.carbonmonoxide	6.30
<b>Clock</b>	oic.r.clock	6.61
<b>Colour Chroma</b>	oic.r.colour.chroma	6.6
<b>Colour RGB</b>	oic.r.colour.rgb	6.7

<b>Colour Saturation</b>	oic.r.colour.saturation	6.32
<b>Consumable</b>	oic.r.consumable	6.67
<b>Consumable Collection</b>	oic.r.consumablecollection	6.68
<b>Contact Sensor</b>	oic.r.sensor.contact	6.33
<b>Delay Defrost</b>	oic.r.delaydefrost	6.69
<b>Demand Response Load Control (DRLC)</b>	oic.r.energy.drlc	6.34
<b>Dimming</b>	oic.r.light.dimming	6.8
<b>Door</b>	oic.r.door	6.9
<b>Ecomode</b>	oic.r.ecomode	6.70
<b>Energy Consumption</b>	oic.r.energy.consumption	6.10
<b>Energy Overload/Circuit Breaker</b>	oic.r.energy.overload	6.35
<b>Energy Usage</b>	oic.r.energy.usage	6.11
<b>Generic Sensor</b>	oic.r.sensor	6.36
<b>Geolocation Sensor</b>	oic.r.sensor.geolocation	6.62
<b>Glass Break Sensor</b>	oic.r.sensor.glassbreak	6.37
<b>Heart Rate Zone Sensor</b>	oic.r.sensor.heart.zone	6.38
<b>Heating Zone</b>	oic.r.heatingzone	6.71
<b>Heating Zone Collection</b>	oic.r.heatingzonecollection	6.72

<b>Height</b>	oic.r.height	6.63
<b>Humidity</b>	oic.r.humidity	6.12
<b>Icemaker</b>	oic.r.icemaker	6.13
<b>Illuminance Sensor</b>	oic.r.sensor.illuminance	6.39
<b>Lock</b>	oic.r.lock.status	6.14
<b>Lock Code</b>	oic.r.lock.code	6.15
<b>Magnetic Field Direction</b>	oic.r.sensor.magneticfielddirection	6.40
<b>Media</b>	oic.r.media	6.41
<b>Media Source</b>	oic.r.mediasource	6.42
<b>Media Source List</b>	oic.r.mediasourcelist	6.43
<b>Media Source Input</b>	oic.r.media.input	6.44
<b>Media Source Output</b>	oic.r.media.output	6.45
<b>Mode</b>	oic.r.mode	6.16
<b>Movement</b>	oic.r.movement.linear	6.53
<b>Motion Sensor</b>	oic.r.sensor.motion	6.46
<b>Night Mode</b>	oic.r.nightmode	6.47
<b>Open Level</b>	oic.r.openlevel	6.17
<b>Operational State</b>	oic.r.operational.state	6.18
<b>Pan Tilt Zoom Movement</b>	oic.r.ptz	6.49

<b>Presence Sensor</b>	oic.r.sensor.presence	6.48
<b>Ramp Time</b>	oic.r.light.ramptime	6.19
<b>Refrigeration</b>	oic.r.refrigeration	6.20
<b>Selectable Levels</b>	oic.r.selectablelevels	6.73
<b>Signal Strength</b>	oic.r.signalstrength	6.50
<b>Sleep Sensor</b>	oic.r.sensor.sleep	6.57
<b>Smoke Sensor</b>	oic.r.sensor.smoke	6.58
<b>Speech Synthesis</b>	oic.r.speech.tts	6.51
<b>Temperature</b>	oic.r.temperature	6.21
<b>Three Axis Sensor</b>	oic.r.sensor.threeaxis	6.59
<b>Time Period</b>	oic.r.time.period	6.22
<b>Touch Sensor</b>	oic.r.sensor.touch	6.52
<b>UV Radiation</b>	oic.r.sensor.radiation.uv	6.53
<b>Value Conditional</b>	oic.r.value.conditional	6.74
<b>Water Sensor</b>	oic.r.sensor.water	6.54
<b>Weight</b>	oic.r.weight	6.64

1435

1436

## 6.1 송풍

### 6.1.1 개요

이 resource 는 공기 흐름과 관련된 property 를 기술한다. Supporteddirections 는 이 resource type 의 특별한 개체에 대한 direction property 를 위한 유효 값의 집합이다. direction 은 적용 가능한 경우 공기 흐름의 방향성이고, supporteddirections 가 존재한다면, 그러한 집합으로부터의 값이어야 한다. Direction 값은 장치의 성능에 의존한다. Speed 는 장치에 대한 현재의 속도 레벨을 표현하는 정수이다. 범위 (oic.r.baseresource 로부터)는 속도 레벨에 대한 min,max 값의 배열이다. 존재하지 않는다면, 범위는 default 로 [0,100]이 된다. automode 는 자동 모드 기능의 상태이고 Off 는 자동 모드가 설정되지 않았음을 의미한다. On 은 자동 모드가 설정되고 speed 가 장치에 의해 자동으로 제어됨을 의미한다.

### 6.1.2 URI 예

/AirFlowResURI

### 6.1.3 Resource Type

resource type (rt)는 oic.r.airflow 로 정의된다.

### 6.1.4 RAML 정의

```
1453 #%RAML 0.8
1454 title: OICAirFlow
1455 version: v1.1.0-20160519
1456 traits:
1457   - interface :
1458     queryParameters:
1459       if:
1460         enum: ["oic.if.a", "oic.if.baseline"]
1461
1462 /AirFlowResURI:
1463   description: |
1464     This resource describes the properties associated with air flow.
1465     The supporteddirections is the set of valid values for the direction property for a particular
1466 instance of this resource type.
1467     The direction is the directionality of the air flow if applicable, if supporteddirections is
1468 also present it must be a value from that set.
1469     Direction values are dependent on the capabilities of the unit.
1470     The speed is an integer representing the current speed level for the unit.
1471     The range (from oic.r.baseresource) is an array of the min,max values for the speed level
1472     If not present the range defaults to [0,100].
1473     automode is the status of the automode feature; Off means automode is not enabled, On means
1474 automode is active and the speed is automatically controlled by the device.
1475
1476   is : ['interface']
1477   get:
1478     description: |
1479       Retrieves the current air flow values.
1480
1481   responses :
1482     200:
```



```

1483     body:
1484         application/json:
1485             schema: /
1486                 {
1487                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1488                     "$schema": "http://json-schema.org/draft-04/schema#",
1489                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1490 rights reserved.",
1491                     "title": "Air Flow",
1492                     "definitions": {
1493                         "oic.r.airflow": {
1494                             "type": "object",
1495                             "properties": {
1496                                 "supporteddirections": {
1497                                     "type": "array",
1498                                     "description": "Array of possible direction settings for this instance of
1499 the Resource Type",
1500                                     "readOnly": true,
1501                                     "items": {
1502                                         "type": "string",
1503                                         "minItems": 1,
1504                                         "uniqueItems": true
1505                                     }
1506                                 },
1507                                 "direction": {
1508                                     "type": "string",
1509                                     "description": "Directionality of the air flow"
1510                                 },
1511                                 "speed": {
1512                                     "type": "integer",
1513                                     "description": "Current speed level"
1514                                 },
1515                                 "automode": {
1516                                     "enum": ["On", "Off"],
1517                                     "description": "Status of the automode feature, if on speed is set by the
1518 device"
1519                                 }
1520                             }
1521                         }
1522                     },
1523                     "type": "object",
1524                     "allOf": [
1525                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1526                         {"$ref": "#/definitions/oic.r.airflow"}
1527                     ],
1528                     "required": ["speed"]
1529                 }
1530
1531     example: /
1532         {
1533             "rt": ["oic.r.airflow"],
1534             "id": "unique_example_id",
1535             "supporteddirections": ["left", "right", "centre"],
1536             "direction": "left",
1537             "speed": 5,
1538             "range": [1, 7],
1539             "automode": "Off"
1540         }
1541
1542     post:
1543         description: |
1544             Sets the current air flow values.
1545             Only direction and speed may be set by an update operation.
1546
1547     body:
1548         application/json:
1549             schema: /

```

```

1550     {
1551         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1552         "$schema": "http://json-schema.org/draft-04/schema#",
1553         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
1554 reserved.",
1555         "title": "Air Flow",
1556         "definitions": {
1557             "oic.r.airflow": {
1558                 "type": "object",
1559                 "properties": {
1560                     "supporteddirections": {
1561                         "type": "array",
1562                         "description": "Array of possible direction settings for this instance of the
1563 Resource Type",
1564                         "readOnly": true,
1565                         "items": {
1566                             "type": "string",
1567                             "minItems": 1,
1568                             "uniqueItems": true
1569                         }
1570                     },
1571                     "direction": {
1572                         "type": "string",
1573                         "description": "Directionality of the air flow"
1574                     },
1575                     "speed": {
1576                         "type": "integer",
1577                         "description": "Current speed level"
1578                     },
1579                     "automode": {
1580                         "enum": ["On", "Off"],
1581                         "description": "Status of the automode feature, if on speed is set by the
1582 device"
1583                     }
1584                 }
1585             },
1586             "type": "object",
1587             "allOf": [
1588                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1589                 {"$ref": "#/definitions/oic.r.airflow"}
1590             ],
1591             "required": ["speed"]
1592         }
1593     }
1594
1595     example: /
1596     {
1597         "id": "unique_example_id",
1598         "direction": "right",
1599         "speed": 3
1600     }
1601
1602     responses :
1603     200:
1604         body:
1605             application/json:
1606                 schema: /
1607                 {
1608                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1609                     "$schema": "http://json-schema.org/draft-04/schema#",
1610                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1611 rights reserved.",
1612                     "title": "Air Flow",
1613                     "definitions": {
1614                         "oic.r.airflow": {
1615                             "type": "object",
1616                             "properties": {

```

```

1617         "supporteddirections": {
1618             "type": "array",
1619             "description": "Array of possible direction settings for this instance of
1620 the Resource Type",
1621             "readOnly": true,
1622             "items": {
1623                 "type": "string",
1624                 "minItems": 1,
1625                 "uniqueItems": true
1626             }
1627         },
1628         "direction": {
1629             "type": "string",
1630             "description": "Directionality of the air flow"
1631         },
1632         "speed": {
1633             "type": "integer",
1634             "description": "Current speed level"
1635         },
1636         "automode": {
1637             "enum": ["On", "Off"],
1638             "description": "Status of the automode feature, if on speed is set by the
1639 device"
1640         }
1641     }
1642 },
1643 {
1644     "type": "object",
1645     "allOf": [
1646         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1647         {"$ref": "#/definitions/oic.r.airflow"}
1648     ],
1649     "required": ["speed"]
1650 }
1651
1652 example: /
1653 {
1654     "id": "unique_example_id",
1655     "direction": "right",
1656     "speed": 3
1657 }
1658
1659 403:
1660 description: |
1661     This response is generated by the OCF Server when the client sends:
1662     An update with an invalid property value for direction.
1663     An update with an out of range property value for speed.
1664     The server may respond with the current resource representation.
1665
1666 body:
1667 application/json:
1668 schema: /
1669 {
1670     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlow.json#",
1671     "$schema": "http://json-schema.org/draft-04/schema#",
1672     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1673 rights reserved.",
1674     "title": "Air Flow",
1675     "definitions": {
1676         "oic.r.airflow": {
1677             "type": "object",
1678             "properties": {
1679                 "supporteddirections": {
1680                     "type": "array",
1681                     "description": "Array of possible direction settings for this instance of
1682 the Resource Type",
1683                     "readOnly": true,

```

```

1684         "items": {
1685             "type": "string",
1686             "minItems": 1,
1687             "uniqueItems": true
1688         },
1689     },
1690     "direction": {
1691         "type": "string",
1692         "description": "Directionality of the air flow"
1693     },
1694     "speed": {
1695         "type": "integer",
1696         "description": "Current speed level"
1697     },
1698     "automode": {
1699         "enum": ["On", "Off"],
1700         "description": "Status of the automode feature, if on speed is set by the
1701 device"
1702     },
1703 }
1704 }
1705 },
1706 "type": "object",
1707 "allOf": [
1708     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1709     {"$ref": "#/definitions/oic.r.airflow"}
1710 ],
1711 "required": ["speed"]
1712 }
1713
1714 example: /
1715 {
1716     "id": "unique_example_id",
1717     "supporteddirections": ["left", "right", "centre"],
1718     "direction": "right",
1719     "speed": 3
1720 }
1721

```

### 1722 6.1.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
automode	복수 타입: schema 참조			자동 모드 기능의 상태, on 이면, 속도는 장치에 의해 설정된다
direction	스트링			공기 흐름의 방향성
supporteddirections	배열: schema 참조		Read Only	Resource Type 의 이러한 개체에 대해 가능한 방향 설정의 배열
speed	정수	예		현재의 속도 레벨

## 1723 6.1.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		

## 1724 6.2 송풍 제어

### 1725 6.2.1 개요

1726 이 resource 는 공기 흐름의 제어와 관련된, 예를 들어, Thermostat (fan), Room A/C 또는 다른  
 1727 device 에 의해 모델링 되는 속성을 기술한다. 이러한 resource 는 AirFlow Resource, BinarySwitch  
 1728 Resource 의 collection 으로 구성되는 복합 resource 이다.

### 1729 6.2.2 URI 예

1730 /AirFlowControlResURI

### 1731 6.2.3 Resource Type

1732 resource type (rt)는 oic.r.airflowcontrol 로 정의된다.

### 1733 6.2.4 RAML 정의

```

1734 #%RAML 0.8
1735 title: OICAirFlowControl
1736 version: v1.1.0-20160519
1737 traits:
1738   - interface-b :
1739     queryParameters:
1740       if:
1741         enum: ["oic.if.b"]
1742   - interface-all :
1743     queryParameters:
1744       if:
1745         enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
1746
1747 /AirFlowControlResURI:
1748   description: |
1749     This resource describes the attributes associated with control of air flow,
1750     for example as modelled by a Thermostat (fan), Room A/C or other device.
1751     The resource is a composite resource being made up as a collection of:
1752     AirFlow Resource
1753     BinarySwitch Resource
1754
1755   get:
1756     description: |
1757       Retrieves the current air flow control values.
1758
1759   is : ['interface-all']
1760   responses :
1761     200:
1762       body:
1763         application/json:
1764           schema: /
  
```

```

1765         {
1766             "id":
1767 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl.json#",
1768             "$schema": "http://json-schema.org/draft-04/schema#",
1769             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1770 rights reserved.",
1771             "title": "Air Flow Control",
1772             "definitions": {
1773                 "oic.r.airflowcontrol": {
1774                     "type": "object",
1775                     "properties": {
1776                         "airFlowControl": {
1777                             "type": "array",
1778                             "minItems": 2,
1779                             "maxItems": 2,
1780                             "items": {
1781                                 "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
1782                             }
1783                         }
1784                     }
1785                 },
1786             },
1787             "type": "object",
1788             "allOf": [
1789                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
1790                 { "$ref": "#/definitions/oic.r.airflowcontrol" }
1791             ],
1792             "required": ["airFlowControl"]
1793         }
1794
1795     example: /
1796     {
1797         "rt": ["oic.r.airflowcontrol"],
1798         "id": "unique_example_id",
1799         "airFlowControl": [
1800             {
1801                 "href": "/BinarySwitchResURI",
1802                 "rel": "contains",
1803                 "rt": ["oic.r.switch.binary"],
1804                 "if": ["oic.if.a"],
1805                 "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]
1806             },
1807             {
1808                 "href": "/AirFlowResURI",
1809                 "rel": "contains",
1810                 "rt": ["oic.r.airflow"],
1811                 "if": ["oic.if.a"],
1812                 "eps": [{"ep": "coaps://[fe80::bld6]:1122"}]
1813             }
1814         ]
1815     }
1816
1817     post:
1818         description: |
1819             Sets the current air flow control values using the batch interface
1820
1821         is : ['interface-b']
1822         body:
1823             application/json:
1824                 schema: /
1825                 {
1826                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
1827 Batch.json#",
1828                     "$schema": "http://json-schema.org/draft-04/schema#",
1829                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
1830 reserved.",
1831                     "title": "Air Flow Control",

```

```

1832     "definitions": {
1833         "oic.r.airflowcontrol": {
1834             "type": "object",
1835             "properties": {
1836                 "airFlowControl": {
1837                     "type": "array",
1838                     "items": {
1839                         "anyOf": [
1840                             {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
1841                             {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
1842                         ]
1843                     }
1844                 }
1845             }
1846         },
1847     },
1848     "type": "object",
1849     "allOf": [
1850         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1851         {"$ref": "#/definitions/oic.r.airflowcontrol"}
1852     ],
1853     "required": ["airFlowControl"]
1854 }
1855
1856 example: /
1857 {
1858     "id": "unique_example_id",
1859     "airFlowControl": [
1860         {
1861             "id": "unique_example_id",
1862             "value": true
1863         },
1864         {
1865             "id": "unique_example_id",
1866             "direction": "right",
1867             "speed": 3
1868         }
1869     ]
1870 }
1871
1872 responses :
1873 200:
1874     body:
1875         application/json:
1876             schema: /
1877             {
1878                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
1879 Batch.json#",
1880                 "$schema": "http://json-schema.org/draft-04/schema#",
1881                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1882 rights reserved.",
1883                 "title": "Air Flow Control",
1884                 "definitions": {
1885                     "oic.r.airflowcontrol": {
1886                         "type": "object",
1887                         "properties": {
1888                             "airFlowControl": {
1889                                 "type": "array",
1890                                 "items": {
1891                                     "anyOf": [
1892                                         {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
1893                                         {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
1894                                     ]
1895                                 }
1896                             }
1897                         }
1898                     }
1899                 }
1900             }

```

```

1899         },
1900         "type": "object",
1901         "allOf": [
1902             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1903             {"$ref": "#/definitions/oic.r.airflowcontrol"}
1904         ],
1905         "required": ["airFlowControl"]
1906     }
1907
1908     example: /
1909     {
1910         "id": "unique_example_id",
1911         "airFlowControl": [
1912             {
1913                 "id": "unique_example_id",
1914                 "value": true
1915             },
1916             {
1917                 "id": "unique_example_id",
1918                 "direction": "right",
1919                 "speed": 3
1920             }
1921         ]
1922     }
1923
1924     403:
1925     description: |
1926         This response is generated by the OIC Server when the client sends:
1927         An update with an invalid property value for direction.
1928         An update with an out of range property value for speed.
1929         The server responds with the current resource representation.
1930
1931     body:
1932     application/json:
1933     schema: /
1934     {
1935         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airFlowControl-
1936 Batch.json#",
1937         "$schema": "http://json-schema.org/draft-04/schema#",
1938         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
1939 rights reserved.",
1940         "title": "Air Flow Control",
1941         "definitions": {
1942             "oic.r.airflowcontrol": {
1943                 "type": "object",
1944                 "properties": {
1945                     "airFlowControl": {
1946                         "type": "array",
1947                         "items": {
1948                             "anyOf": [
1949                                 {"$ref": "oic.r.switch.binary.json#/definitions/oic.r.switch.binary"},
1950                                 {"$ref": "oic.r.airFlow.json#/definitions/oic.r.airflow"}
1951                             ]
1952                         }
1953                     }
1954                 }
1955             }
1956         },
1957         "type": "object",
1958         "allOf": [
1959             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
1960             {"$ref": "#/definitions/oic.r.airflowcontrol"}
1961         ],
1962         "required": ["airFlowControl"]
1963     }
1964
1965     example: /

```



```

1966     {
1967         "id": "unique_example_id",
1968         "airFlowControl": [
1969             {
1970                 "id": "unique_example_id",
1971                 "value": true
1972             },
1973             {
1974                 "id": "unique_example_id",
1975                 "direction": "right",
1976                 "speed": 3
1977             }
1978         ]
1979     }
1980 
```

## 1981 6.2.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
airFlowControl	배열: schema 참조	예		

## 1982 6.2.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		

## 1983 6.3 배터리

### 1984 6.3.1 개요

1985 이 resource 는 배터리의 충전 상태를 표현한다. charge 는 현재의 배터리 충전 레벨을 보여주는  
 1986 정수이다. charge 는 0-100 범위의 백분율이다. 0 의 값은 완전히 방전된 것을 의미한다. 100 의 값은  
 1987 완전히 충전된 것을 의미한다.

### 1988 6.3.2 URI 예

1989 /BatteryResURI

### 1990 6.3.3 Resource Type

1991 resource type (rt)는 oic.r.energy.battery 로 정의된다.

### 1992 6.3.4 RAML 정의

```

1993 #%RAML 0.8
1994 title: OICBattery
1995 version: v1.1.0-20160519
1996 traits:
1997   - interface :
1998       queryParameters:
1999         if:
2000           enum: ["oic.if.s", "oic.if.baseline"]
2001
2002 /BatteryResURI:
2003   description: |

```

```

2004     This resource represents the charge state of a battery.
2005     The charge is an integer showing the current battery charge level.
2006     The charge is a percentage in the range 0-100.
2007     A value of 0 means fully discharged.
2008     A value of 100 means fully charged.
2009
2010     is : ['interface']
2011     get:
2012         description: |
2013             Retrieves the state of the battery.
2014
2015     responses :
2016         200:
2017             body:
2018                 application/json:
2019                     schema: /
2020                         {
2021                             "id":
2022             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.battery.json#",
2023                             "$schema": "http://json-schema.org/draft-04/schema#",
2024                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2025             rights reserved.",
2026                             "title": "Battery",
2027                             "definitions": {
2028                                 "oic.r.energy.battery": {
2029                                     "type": "object",
2030                                     "properties": {
2031                                         "charge" : {
2032                                             "type": "integer",
2033                                             "description": "The current charge percentage.",
2034                                             "readOnly": true,
2035                                             "minimum": 0,
2036                                             "maximum": 100
2037                                         }
2038                                     }
2039                                 }
2040                             },
2041                             "type": "object",
2042                             "allOf": [
2043                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2044                                 { "$ref": "#/definitions/oic.r.energy.battery" }
2045                             ],
2046                             "required": [ "charge" ]
2047                         }
2048
2049     example: /
2050         {
2051             "rt":      [ "oic.r.energy.battery" ],
2052             "id":      "unique_example_id",
2053             "charge":  50
2054         }
2055

```

### 2056 6.3.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
charge	정수	예	Read Only	현재 충전 백분율

### 2057 6.3.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

/BatteryResURI		get			
----------------	--	-----	--	--	--

## 6.4 바이너리 스위치

### 6.4.1 개요

이 resource 는 바이너리 (on/off) 스위치를 기술한다. 값은 Boolean 형이다. 'true' 값은 스위치가 on 인 것을 의미한다. 'false' 값은 스위치가 off 인 것을 의미한다.

### 6.4.2 URI 예

/BinarySwitchResURI

### 6.4.3 Resource Type

resource type (rt)는 oic.r.switch.binary 로 정의된다.

### 6.4.4 RAML 정의

```

#%RAML 0.8
title: OICBinarySwitch
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.baseline"]

/BinarySwitchResURI:
  description: |
    This resource describes a binary switch (on/off).
    The value is a boolean.
    A value of 'true' means that the switch is on.
    A value of 'false' means that the switch is off.

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Binary Switch",
                "definitions": {
                  "oic.r.switch.binary": {
                    "type": "object",
                    "properties": {
                      "value": {
                        "type": "boolean",
                        "description": "Status of the switch"
                      }
                    }
                  }
                }
              },

```

```

2107         "type": "object",
2108         "allOf": [
2109             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2110             {"$ref": "#/definitions/oic.r.switch.binary"}
2111         ],
2112         "required": [ "value" ]
2113     }
2114
2115     example: /
2116     {
2117         "rt":      ["oic.r.switch.binary"],
2118         "id":      "unique_example_id",
2119         "value":   false
2120     }
2121
2122     post:
2123     body:
2124     application/json:
2125     schema: /
2126     {
2127         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
2128         "$schema": "http://json-schema.org/draft-04/schema#",
2129         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2130 reserved.",
2131         "title": "Binary Switch",
2132         "definitions": {
2133             "oic.r.switch.binary": {
2134                 "type": "object",
2135                 "properties": {
2136                     "value": {
2137                         "type": "boolean",
2138                         "description": "Status of the switch"
2139                     }
2140                 }
2141             }
2142         },
2143         "type": "object",
2144         "allOf": [
2145             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2146             {"$ref": "#/definitions/oic.r.switch.binary"}
2147         ],
2148         "required": [ "value" ]
2149     }
2150
2151     example: /
2152     {
2153         "id":      "unique_example_id",
2154         "value":   true
2155     }
2156
2157     responses :
2158     200:
2159     body:
2160     application/json:
2161     schema: /
2162     {
2163         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.switch.binary.json#",
2164         "$schema": "http://json-schema.org/draft-04/schema#",
2165         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2166 rights reserved.",
2167         "title": "Binary Switch",
2168         "definitions": {
2169             "oic.r.switch.binary": {
2170                 "type": "object",

```

```

2171         "properties": {
2172             "value": {
2173                 "type": "boolean",
2174                 "description": "Status of the switch"
2175             }
2176         }
2177     },
2178     "type": "object",
2179     "allOf": [
2180         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2181         { "$ref": "#/definitions/oic.r.switch.binary" }
2182     ],
2183     "required": [ "value" ]
2184 }
2185
2186
2187 example: /
2188 {
2189     "id": "unique_example_id",
2190     "value": true
2191 }
2192

```

#### 2193 6.4.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예		스위치의 상태

#### 2194 6.4.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		

### 2195 6.5 밝기

#### 2196 6.5.1 개요

2197 이 resource 는 조명 또는 램프의 밝기를 기술한다. 밝기는 현재의 밝기 레벨을 0-100 범위의  
2198 양자화된 표현으로 나타내는 정수이다. 0 의 밝기는 resource 에 대한 최소값이다. 100 의 밝기는  
2199 resource 에 대한 최대값이다.

#### 2200 6.5.2 URI 예

2201 /BrightnessResURI

#### 2202 6.5.3 Resource Type

2203 resource type (rt)는 oic.r.light.brightness 로 정의된다.

#### 2204 6.5.4 RAML 정의

```

2205 #%RAML 0.8
2206 title: OICBrightness
2207 version: v1.1.0-20160519
2208 traits:
2209   - interface :
2210       queryParameters:
2211           if:
2212               enum: ["oic.if.a", "oic.if.baseline"]

```

```

2213
2214 /BrightnessResURI:
2215     description: |
2216         This resource describes the brightness of a light or lamp.
2217         brightness is an integer showing the current brightness level as a quantized representation in
2218 the range 0-100.
2219         A brightness of 0 is the minimum for the resource.
2220         A brightness of 100 is the maximum for the resource.
2221
2222     is : ['interface']
2223
2224     get:
2225         description: |
2226             Retrieves the current brightness level.
2227
2228         responses :
2229             200:
2230                 body:
2231                     application/json:
2232                         schema: /
2233                             {
2234 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
2235                             "$schema": "http://json-schema.org/draft-04/schema#",
2236                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2237 rights reserved.",
2238                             "title": "Brightness",
2239                             "definitions": {
2240                                 "oic.r.light.brightness": {
2241                                     "type": "object",
2242                                     "properties": {
2243                                         "brightness": {
2244                                             "type": "integer",
2245                                             "description": "Quantized representation in the range 0-100 of the current
2246 sensed or set value for Brightness",
2247                                             "minimum": 0,
2248                                             "maximum": 100
2249                                         }
2250                                     }
2251                                 },
2252                             },
2253                             "type": "object",
2254                             "allOf": [
2255                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2256                                 { "$ref": "#/definitions/oic.r.light.brightness" }
2257                             ],
2258                             "required": [ "brightness" ]
2259                         }
2260
2261                 example: /
2262                     {
2263                         "rt":          ["oic.r.light.brightness"],
2264                         "id":          "unique_example_id",
2265                         "brightness": 50
2266                     }
2267
2268     post:
2269         description: |
2270             Sets the desired brightness level.
2271
2272         body:
2273             application/json:
2274                 schema: /

```

```

2275     {
2276         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
2277         "$schema": "http://json-schema.org/draft-04/schema#",
2278         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2279 reserved.",
2280         "title": "Brightness",
2281         "definitions": {
2282             "oic.r.light.brightness": {
2283                 "type": "object",
2284                 "properties": {
2285                     "brightness": {
2286                         "type": "integer",
2287                         "description": "Quantized representation in the range 0-100 of the current
2288 sensed or set value for Brightness",
2289                         "minimum": 0,
2290                         "maximum": 100
2291                     }
2292                 }
2293             },
2294         },
2295         "type": "object",
2296         "allOf": [
2297             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2298             { "$ref": "#/definitions/oic.r.light.brightness" }
2299         ],
2300         "required": [ "brightness" ]
2301     }
2302
2303     example: /
2304     {
2305         "id": "unique_example_id",
2306         "brightness": 10
2307     }
2308
2309     responses :
2310     200:
2311         description: |
2312             Indicates that the brightness was changed.
2313             The new brightness level is provided in the response.
2314
2315         body:
2316             application/json:
2317                 schema: /
2318                 {
2319                     "id":
2320 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.brightness.json#",
2321                     "$schema": "http://json-schema.org/draft-04/schema#",
2322                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2323 rights reserved.",
2324                     "title": "Brightness",
2325                     "definitions": {
2326                         "oic.r.light.brightness": {
2327                             "type": "object",
2328                             "properties": {
2329                                 "brightness": {
2330                                     "type": "integer",
2331                                     "description": "Quantized representation in the range 0-100 of the current
2332 sensed or set value for Brightness",
2333                                     "minimum": 0,
2334                                     "maximum": 100
2335                                 }
2336                             }
2337                         },
2338                     },
2339                     "type": "object",
2340                     "allOf": [
2341                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },

```

```

2342         {"$ref": "#/definitions/oic.r.light.brightness"}
2343     },
2344     "required": [ "brightness" ]
2345 }
2346
2347     example: /
2348     {
2349         "id": "unique_example_id",
2350         "brightness": 10
2351     }
2352

```

## 2353 6.5.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
brightness	정수	예		밝기에 대해 현재 감지되거나 설정된 값의 0-100 범위의 양자화된 표현

## 2354 6.5.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		

## 2355 6.6 색채

### 2356 6.6.1 개요

2357 이 resource 는 색채 규약을 사용하여 색을 기술한다. Property 는 hue, saturation, csc, 및 ct 이다.  
 2358 Hue 및 saturation 은 CIECAM02 모델 정의 ([CIE CIE159:2004] 참조)에 의해 정의된 정수 값이다.  
 2359 csc 는 CIE 색 공간 내의 색 공간 좌표이다. 배열 내의 제 1 항목은 X 좌표이다. 배열 내의 제 2  
 2360 항목은 Y 좌표이다. ct 는 미레드(Mired) 색 온도이다.

2361

### 2362 6.6.2 URI 예

2363 /ColourChromaResURI

### 2364 6.6.3 Resource Type

2365 resource type (rt)는 oic.r.colour.chroma 로 정의된다.

### 2366 6.6.4 RAML 정의

```

2367 #%RAML 0.8
2368 title: OICColourChroma
2369 version: v1.1.0-20160519
2370
2371 traits:
2372   - interface :
2373     queryParameters:
2374       if:
2375         enum: ["oic.if.a", "oic.if.baseline"]

```



```

2375
2376 /ColourChromaResURI:
2377     description: |
2378         This resource describes the colour using chroma conventions.
2379         Properties are hue, saturation, csc, and ct.
2380         Hue and saturation are integer values as defined by the CIECAM02 model definition (see
2381         reference [CIE CIE159:2004]).
2382         csc is the colour space coordinates in CIE colour space.
2383         The first item in the array is the X coordinate.
2384         The second item in the array is the Y coordinate.
2385         ct is the Mired colour temperature.
2386
2387     is : ['interface']
2388
2389     get:
2390         description: |
2391             Provides the colour using chroma conventions.
2392
2393     responses :
2394         200:
2395             body:
2396                 application/json:
2397                     schema: /
2398                         {
2399                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.chroma.json#",
2400                             "$schema": "http://json-schema.org/draft-04/schema#",
2401                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
2402                             "title": "Colour Chroma",
2403                             "definitions": {
2404                                 "oic.r.colour.chroma": {
2405                                     "type": "object",
2406                                     "properties": {
2407                                         "hue": {
2408                                             "type": "integer",
2409                                             "description": "Hue as defined by the CIECAM02 model definition"
2410                                         },
2411                                         "saturation": {
2412                                             "type": "integer",
2413                                             "description": "Saturation as defined by the CIECAM02 model definition"
2414                                         },
2415                                         "csc": {
2416                                             "type": "array",
2417                                             "description": "X and Y coordinates of the colour in CIE colour space",
2418                                             "minItems": 2,
2419                                             "maxItems": 2,
2420                                             "items": {
2421                                                 "type": "number",
2422                                                 "minimum": 0,
2423                                                 "maximum": 1
2424                                             }
2425                                         },
2426                                         "ct": {
2427                                             "type": "integer",
2428                                             "description": "Mired colour temperature"
2429                                         }
2430                                     }
2431                                 }
2432                             },
2433                             "type": "object",
2434                             "allOf": [
2435                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2436                                 { "$ref": "#/definitions/oic.r.colour.chroma" }
2437                             ],
2438                             "required": [ "hue", "saturation", "csc" ]
2439

```

```

2440     }
2441
2442     example: /
2443     {
2444         "rt":          ["oic.r.colour.chroma"],
2445         "id":          "unique_example_id",
2446         "hue":         13088,
2447         "saturation":  212,
2448         "csc":         [0.41,0.51],
2449         "ct":          457
2450     }
2451
2452     post:
2453         description: |
2454             Sets current colour chroma values
2455
2456         body:
2457             application/json:
2458                 schema: /
2459                 {
2460                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.chroma.json#",
2461                     "$schema": "http://json-schema.org/draft-04/schema#",
2462                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2463 reserved.",
2464                     "title": "Colour Chroma",
2465                     "definitions": {
2466                         "oic.r.colour.chroma": {
2467                             "type": "object",
2468                             "properties": {
2469                                 "hue": {
2470                                     "type": "integer",
2471                                     "description": "Hue as defined by the CIECAM02 model definition"
2472                                 },
2473                                 "saturation": {
2474                                     "type": "integer",
2475                                     "description": "Saturation as defined by the CIECAM02 model definition"
2476                                 },
2477                                 "csc": {
2478                                     "type": "array",
2479                                     "description": "X and Y coordinates of the colour in CIE colour space",
2480                                     "minItems": 2,
2481                                     "maxItems": 2,
2482                                     "items": {
2483                                         "type": "number",
2484                                         "minimum": 0,
2485                                         "maximum": 1
2486                                     }
2487                                 },
2488                                 "ct": {
2489                                     "type": "integer",
2490                                     "description": "Mired colour temperature"
2491                                 }
2492                             }
2493                         },
2494                         "type": "object",
2495                         "allOf": [
2496                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2497                             { "$ref": "#/definitions/oic.r.colour.chroma" }
2498                         ],
2499                         "required": [ "hue", "saturation", "csc" ]
2500                     }
2501                 }
2502             }
2503
2504     example: /

```

```

2505     {
2506         "id":          "unique_example_id",
2507         "hue":         13088,
2508         "saturation":  212,
2509         "csc":         [0.41,0.51],
2510         "ct":          457
2511     }
2512
2513     responses :
2514         200:
2515             body:
2516                 application/json:
2517                     schema: /
2518                         {
2519                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.chroma.json#",
2520                             "$schema": "http://json-schema.org/draft-04/schema#",
2521                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2522 rights reserved.",
2523                             "title": "Colour Chroma",
2524                             "definitions": {
2525                                 "oic.r.colour.chroma": {
2526                                     "type": "object",
2527                                     "properties": {
2528                                         "hue": {
2529                                             "type": "integer",
2530                                             "description": "Hue as defined by the CIECAM02 model definition"
2531                                         },
2532                                         "saturation": {
2533                                             "type": "integer",
2534                                             "description": "Saturation as defined by the CIECAM02 model definition"
2535                                         },
2536                                         "csc": {
2537                                             "type": "array",
2538                                             "description": "X and Y coordinates of the colour in CIE colour space",
2539                                             "minItems": 2,
2540                                             "maxItems": 2,
2541                                             "items": {
2542                                                 "type": "number",
2543                                                 "minimum": 0,
2544                                                 "maximum": 1
2545                                             }
2546                                         },
2547                                         "ct": {
2548                                             "type": "integer",
2549                                             "description": "Mired colour temperature"
2550                                         }
2551                                     }
2552                                 }
2553                             },
2554                             "type": "object",
2555                             "allOf": [
2556                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2557                                 { "$ref": "#/definitions/oic.r.colour.chroma" }
2558                             ],
2559                             "required": [ "hue", "saturation", "csc" ]
2560                         }
2561
2562
2563     example: /
2564         {
2565             "id":          "unique_example_id",
2566             "hue":         13088,
2567             "saturation":  212,
2568             "csc":         [0.41,0.51],
2569             "ct":          467
2570         }
2571

```

2572 **6.6.5 Property 정의**

Property name	Value type	필수	엑세스 모드	설명
hue	정수	예		CIECAM02 모델 정의에 의해 정의된 색조
saturation	정수	예		CIECAM02 모델 정의에 의해 정의된 채도
csc	배열: schema 참조	예		CIE 색 공간 내의 X 및 Y 좌표
ct	정수			미레드 색 온도

2573 **6.6.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ColourChromaResURI		get	post		

2574 **6.7 컬러 RGB**

2575 **6.7.1 개요**

2576 이 resource 는 정수의 배열로 표현된 RGB 공간 내의 실제 컬러를 규정한다. 각 컬러 값은 Red,  
2577 Green, Blue 성분으로 기술된다. 이들 컬러 값은 정수 값의 배열 ([R,G,B])로 인코딩된이다.  
2578 성분마다의 최소 및 최대 컬러 값은 (oic.r.baseresource 로부터) 범위에 의해 기술될 수 있다.  
2579 (oic.r.baseresource 로부터) 범위가 생략되면 범위는 [0,255]이다.

2581 **6.7.2 URI 예**

2582 /ColourRGBResURI

2583 **6.7.3 Resource Type**

2584 resource type (rt)는 oic.r.colour.rgb 로 정의된다.

2585 **6.7.4 RAML 정의**

```
2586 #%RAML 0.8
2587 title: OICColourRGB
2588 version: v1.1.0-20160519
2589 traits:
2590   - interface :
2591       queryParameters:
2592         if:
2593           enum: ["oic.if.a", "oic.if.baseline"]
2594
2595 /ColourRGBResURI:
2596   description: |
```

```

2597     This resource specifies the actual colour in the RGB space represented as an array of integers.
2598     Each colour value is described with a Red, Green, Blue component.
2599     These colour values are encoded as an array of integer values ([R,G,B]).
2600     The minimum and maximum colour value per component may be described by range (from
2601 oic.r.baseresource).
2602     When range (from oic.r.baseresource) is omitted, then the range is [0,255].
2603
2604     is : ['interface']
2605
2606     get:
2607         description: |
2608             Retrieves the current colour in RGB.
2609             Value is an array of integer values in the order R,G,B.
2610
2611     responses :
2612         200:
2613             body:
2614                 application/json:
2615                     schema: /
2616                         {
2617                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2618                             "$schema": "http://json-schema.org/draft-04/schema#",
2619                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
2620                             "title": "Colour RGB",
2621                             "definitions": {
2622                                 "oic.r.colour.rgb": {
2623                                     "type": "object",
2624                                     "properties": {
2625                                         "rgbValue": {
2626                                             "type": "array",
2627                                             "description": "RGB value; the first item is the R, second the G, third the
B.",
2628                                             "minItems": 3,
2629                                             "maxItems": 3,
2630                                             "items": {
2631                                                 "type": "integer"
2632                                             }
2633                                         }
2634                                     }
2635                                 }
2636                             },
2637                             "type": "object",
2638                             "allOf": [
2639                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2640                                 { "$ref": "#/definitions/oic.r.colour.rgb" }
2641                             ],
2642                             "required": ["rgbValue"]
2643                         }
2644
2645
2646         example: /
2647             {
2648                 "rt": ["oic.r.colour.rgb"],
2649                 "id": "unique_example_id",
2650                 "rgbValue": [255,255,255],
2651                 "range": [0,255]
2652             }
2653
2654     post:
2655         description: |
2656             Sets the current colourRGB value
2657
2658         body:
2659             application/json:

```

```

2660     schema: /
2661     {
2662         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2663         "$schema": "http://json-schema.org/draft-04/schema#",
2664         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2665 reserved.",
2666         "title": "Colour RGB",
2667         "definitions": {
2668             "oic.r.colour.rgb": {
2669                 "type": "object",
2670                 "properties": {
2671                     "rgbValue": {
2672                         "type": "array",
2673                         "description": "RGB value; the first item is the R, second the G, third the B.",
2674                         "minItems": 3,
2675                         "maxItems": 3,
2676                         "items": {
2677                             "type": "integer"
2678                         }
2679                     }
2680                 }
2681             },
2682             "type": "object",
2683             "allOf": [
2684                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2685                 { "$ref": "#/definitions/oic.r.colour.rgb" }
2686             ],
2687             "required": ["rgbValue"]
2688         }
2689     }
2690
2691     example: /
2692     {
2693         "id": "unique_example_id",
2694         "rgbValue": [255,0,0]
2695     }
2696
2697     responses :
2698     200:
2699         body:
2700             application/json:
2701                 schema: /
2702                 {
2703                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.rgb.json#",
2704                     "$schema": "http://json-schema.org/draft-04/schema#",
2705                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2706 rights reserved.",
2707                     "title": "Colour RGB",
2708                     "definitions": {
2709                         "oic.r.colour.rgb": {
2710                             "type": "object",
2711                             "properties": {
2712                                 "rgbValue": {
2713                                     "type": "array",
2714                                     "description": "RGB value; the first item is the R, second the G, third the
2715 B.",
2716                                     "minItems": 3,
2717                                     "maxItems": 3,
2718                                     "items": {
2719                                         "type": "integer"
2720                                     }
2721                                 }
2722                             }
2723                         },
2724                         "type": "object",
2725                         "allOf": [

```

```

2727         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2728         {"$ref": "#/definitions/oic.r.colour.rgb"}
2729     ],
2730     "required": ["rgbValue"]
2731 }
2732
2733     example: /
2734     {
2735         "id": "unique_example_id",
2736         "rgbValue": [255,0,0]
2737     }
2738

```

## 2739 6.7.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
rgbValue	배열: schema 참조	예		RGB 값. 제 1 항목은 R, 제 2 항목은 G, 제 3 항목은 B 이다.

## 2740 6.7.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		

## 2741 6.8 조광

### 2742 6.8.1 개요

2743 이 resource 는 조광 기능을 기술한다. 값은 현재의 조광 레벨을 나타내는 정수이다.  
2744 (oic.r.baseresource 로부터) 증분이 존재하면, 조광 값 간의 증가를 나타낸다.  
2745 (oic.r.baseresource 로부터) 범위가 생략되면 범위는 [0,100]이다. 0 의값은 완전히 어두운 것을  
2746 의미하고 100 의 값은 조광을 적용하지 않는 상태를 나타낸다.

### 2747 6.8.2 URI 예

2748 /DimmingResURI

### 2749 6.8.3 Resource Type

2750 resource type (rt)는 oic.r.light.dimming 으로 정의된다.

### 2751 6.8.4 RAML 정의

```

2752 #%RAML 0.8
2753 title: OICDimming
2754 version: v1.1.0-20160519
2755 traits:
2756   - interface :
2757       queryParameters:
2758         if:
2759             enum: ["oic.if.a", "oic.if.baseline"]
2760

```

```

2761 /DimmingResURI:
2762     description: |
2763         This resource describes a dimming function.
2764         The value is an integer showing the current dimming level.
2765         If step (from oic.r.baseresource) is present then it represents the increment between dimmer
2766 values.
2767         When range (from oic.r.baseresource) is omitted, then the range is [0,100].
2768         A value of 0 means total dimming; a value of 100 means no dimming.
2769
2770     is : ['interface']
2771     get:
2772         description: |
2773             Retrieves the current dimming level.
2774
2775         responses :
2776             200:
2777                 body:
2778                     application/json:
2779                         schema: /
2780                             {
2781                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2782                                 "$schema": "http://json-schema.org/draft-04/schema#",
2783                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2784 rights reserved.",
2785                                 "title": "Dimming",
2786                                 "definitions": {
2787                                     "oic.r.light.dimming": {
2788                                         "type": "object",
2789                                         "properties": {
2790                                             "dimmingSetting": {
2791                                                 "type": "integer",
2792                                                 "description": "Current dimming value"
2793                                             }
2794                                         }
2795                                     }
2796                                 },
2797                                 "type": "object",
2798                                 "allOf": [
2799                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2800                                     { "$ref": "#/definitions/oic.r.light.dimming" }
2801                                 ],
2802                                 "required": ["dimmingSetting"]
2803                             }
2804
2805                         example: /
2806                             {
2807                                 "rt": ["oic.r.light.dimming"],
2808                                 "id": "unique_example_id",
2809                                 "dimmingSetting": 30,
2810                                 "step": 5,
2811                                 "range": [0,100]
2812                             }
2813
2814     post:
2815         description: |
2816             Sets the desired dimming level.
2817
2818         body:
2819             application/json:
2820                 schema: /
2821                     {
2822                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",

```



```

2823     "$schema": "http://json-schema.org/draft-04/schema#",
2824     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
2825 reserved.",
2826     "title": "Dimming",
2827     "definitions": {
2828         "oic.r.light.dimming": {
2829             "type": "object",
2830             "properties": {
2831                 "dimmingSetting": {
2832                     "type": "integer",
2833                     "description": "Current dimming value"
2834                 }
2835             }
2836         }
2837     },
2838     "type": "object",
2839     "allOf": [
2840         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2841         {"$ref": "#/definitions/oic.r.light.dimming"}
2842     ],
2843     "required": ["dimmingSetting"]
2844 }
2845
2846 example: /
2847 {
2848     "id": "unique_example_id",
2849     "dimmingSetting": 40
2850 }
2851
2852 responses :
2853 200:
2854     description: |
2855         Indicates that the dimming was changed.
2856         The new dimming level is provided in the response.
2857
2858 body:
2859 application/json:
2860     schema: /
2861     {
2862         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2863         "$schema": "http://json-schema.org/draft-04/schema#",
2864         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2865 rights reserved.",
2866         "title": "Dimming",
2867         "definitions": {
2868             "oic.r.light.dimming": {
2869                 "type": "object",
2870                 "properties": {
2871                     "dimmingSetting": {
2872                         "type": "integer",
2873                         "description": "Current dimming value"
2874                     }
2875                 }
2876             }
2877         },
2878         "type": "object",
2879         "allOf": [
2880             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
2881             {"$ref": "#/definitions/oic.r.light.dimming"}
2882         ],
2883         "required": ["dimmingSetting"]
2884     }
2885
2886 example: /

```

```

2887     {
2888         "id": "unique_example_id",
2889         "dimmingSetting": 40
2890     }
2891
2892 403:
2893     description: |
2894         This response is generated by the OIC Server when the client sends:
2895         An update with an out of range property value for dimmingSetting.
2896         The server responds with the current resource representation.
2897
2898     body:
2899         application/json:
2900             schema: /
2901                 {
2902                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.dimming.json#",
2903                     "$schema": "http://json-schema.org/draft-04/schema#",
2904                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
2905                     "title": "Dimming",
2906                     "definitions": {
2907                         "oic.r.light.dimming": {
2908                             "type": "object",
2909                             "properties": {
2910                                 "dimmingSetting": {
2911                                     "type": "integer",
2912                                     "description": "Current dimming value"
2913                                 }
2914                             }
2915                         }
2916                     },
2917                     "type": "object",
2918                     "allOf": [
2919                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
2920                         { "$ref": "#/definitions/oic.r.light.dimming" }
2921                     ],
2922                     "required": ["dimmingSetting"]
2923                 }
2924
2925     example: /
2926         {
2927             "id": "unique_example_id",
2928             "dimmingSetting": 40
2929         }
2930
2931

```

## 2932 6.8.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
dimmingSetting	정수	예		현재의 조광 값

## 2933 6.8.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		

## 2934 6.9 도어

### 2935 6.9.1 개요

2936 이 resource 는 도어의 개방 상태를 기술한다. 도어는 openState (Open/Closed), openDuration  
2937 (ISO 8601 Time), 및 openAlarm (boolean)에 의해 모델링 된다. 개방 상태에 대해, 값 'Open'은  
2938 도어가 개방된 것을 나타낸다. 값 'Closed'는 도어가 닫힌 것을 나타낸다. openDuration 의 type 은  
2939 ISO 8601 Time 인코딩된 스트링이다. openAlarm 값 'true' 는 개방 알람이 설정되어 있음을  
2940 나타낸다. openAlarm 값 'false'는 개방 알람이 해제되어 있음을 나타낸다.

### 2941 6.9.2 URI 예

2942 /DoorResURI

### 2943 6.9.3 Resource Type

2944 resource type (rt)는 oic.r.door 로 정의된다.

### 2945 6.9.4 RAML 정의

```
2946 #%RAML 0.8
2947 title: OICDoor
2948 version: v1.1.0-20160519
2949 traits:
2950   - interface-actuator :
2951       queryParameters:
2952           if:
2953               enum: ["oic.if.a", "oic.if.baseline"]
2954   - interface-all :
2955       queryParameters:
2956           if:
2957               enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
2958
2959 /DoorResURI:
2960     description: |
2961       This resource describes the open state of the door.
2962       A door is modelled by means of openState (Open/Closed), openDuration (ISO 8601 Time), and
2963       openAlarm (boolean).
2964       For openState, the value 'Open' indicates the door is open.
2965       The value 'Closed' indicates the door is closed.
2966       The type of openDuration is an ISO 8601 Time encoded string.
2967       The openAlarm value 'true' indicates that the open alarm is active.
2968       The openAlarm value 'false' indicates that open alarm is not active.
2969
2970     get:
2971       description: |
2972         retrieves the state of the Door.
2973
2974     is : ['interface-all']
2975     responses :
2976       200:
2977         body:
2978           application/json:
2979             schema: /
```

```

2980     {
2981         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door.json#",
2982         "$schema": "http://json-schema.org/draft-04/schema#",
2983         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
2984 rights reserved.",
2985         "title": "Door",
2986         "definitions": {
2987             "oic.r.door": {
2988                 "type": "object",
2989                 "properties": {
2990                     "openState": {
2991                         "enum": ["Open", "Closed"],
2992                         "readOnly": true,
2993                         "description": "The state of the door (open or closed)"
2994                     },
2995                     "openDuration": {
2996                         "type": "string",
2997                         "readOnly": true,
2998                         "description": "The time duration the door has been open"
2999                     },
3000                     "openAlarm": {
3001                         "type": "boolean",
3002                         "description": "The state of the door open alarm"
3003                     }
3004                 }
3005             }
3006         },
3007         "type": "object",
3008         "allOf": [
3009             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3010             {"$ref": "#/definitions/oic.r.door"}
3011         ],
3012         "required": ["openState"]
3013     }
3014
3015     example: /
3016     {
3017         "rt" :          ["oic.r.door"],
3018         "id":           "unique_example_id",
3019         "openState":    "Open",
3020         "openDuration": "P0Y0M0DT2H25M5S",
3021         "openAlarm":    true
3022     }
3023
3024     post:
3025         description: |
3026             Sets the current Door properties.
3027             The only property that can be set as part of an update operation is
3028             the openAlarm.
3029             This can be made active (true) or inactive (false)
3030
3031     is : ['interface-actuator']
3032     body:
3033         application/json:
3034             schema: /
3035             {
3036                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
3037                 "$schema": "http://json-schema.org/draft-04/schema#",
3038                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3039 reserved.",
3040                 "title": "Door",
3041                 "definitions": {
3042                     "oic.r.door": {
3043                         "type": "object",
3044                         "properties": {
3045                             "openAlarm": {
3046                                 "type": "boolean",

```

```

3047         "description": "The state of the door open alarm"
3048     }
3049 }
3050 }
3051 },
3052 "type": "object",
3053 "allOf": [
3054     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3055     {"$ref": "#/definitions/oic.r.door"}
3056 ]
3057 }
3058
3059 example: /
3060 {
3061     "id": "unique_example_id",
3062     "openAlarm": false
3063 }
3064
3065 responses :
3066 200:
3067     body:
3068         application/json:
3069             schema: /
3070                 {
3071                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.door-Update.json#",
3072                     "$schema": "http://json-schema.org/draft-04/schema#",
3073                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3074 rights reserved.",
3075                     "title": "Door",
3076                     "definitions": {
3077                         "oic.r.door": {
3078                             "type": "object",
3079                             "properties": {
3080                                 "openAlarm": {
3081                                     "type": "boolean",
3082                                     "description": "The state of the door open alarm"
3083                                 }
3084                             }
3085                         }
3086                     },
3087                     "type": "object",
3088                     "allOf": [
3089                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3090                         {"$ref": "#/definitions/oic.r.door"}
3091                     ]
3092                 }
3093
3094             example: /
3095                 {
3096                     "id": "unique_example_id",
3097                     "openAlarm": false
3098                 }
3099

```

### 3100 6.9.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
openDuration	스트링		Read Only	도어가 개방된 지속 시간
openAlarm	boolean			도어개방 알람의 상태

openState	복수 타입: schema 참조	예	Read Only	도어의 상태 (open 또는 closed)
-----------	---------------------	---	-----------	----------------------------

## 3101 6.9.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		

## 3102 6.10 에너지 소비

### 3103 6.10.1 개요

3104 이 resource 는 전원이 투입된 이후 device 에 의해 소비된 에너지 (에너지 값의 단위는 Watt Hours  
3105 [Wh]) 및 resource 가 조회되었을 때 device 의 순간적인 전력 인출 (전력 값의 단위는 Watts  
3106 [W])를 기술한다. 전력 값의 단위는 Watts [W]이다. 에너지 값의 단위는 Watt Hours [Wh]이다.

### 3108 6.10.2 URI 예

3109 /EnergyConsumptionResURI

### 3110 6.10.3 Resource Type

3111 resource type (rt)는 oic.r.energy.consumption 으로 정의된다.

### 3112 6.10.4 RAML 정의

```

3113 #%RAML 0.8
3114 title: OICEnergyConsumption
3115 version: v1.1.0-20160519
3116 traits:
3117   - interface :
3118       queryParameters:
3119         if:
3120           enum: ["oic.if.s", "oic.if.baseline"]
3121
3122 /EnergyConsumptionResURI:
3123   description: |
3124     This resource describes the energy consumed by the device since power up (the energy value is
3125     in Watt Hours [Wh])
3126     and the instantaneous power draw of the device (the power value is in Watts [W]) at the time
3127     the resource was queried.
3128     The power value is in Watts [W].
3129     The energy value is in Watt Hours [Wh].
3130
3131   is : ['interface']
3132   get:
3133     description: |
3134       Provides the current power draw and cumulative energy usage.
3135
3136     responses :
3137       200:
3138         body:
3139           application/json:

```

```

3140         schema: /
3141         {
3142             "id":
3143             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.consumption.json#",
3144             "$schema": "http://json-schema.org/draft-04/schema#",
3145             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3146             rights reserved.",
3147             "title": "Energy Consumption",
3148             "definitions": {
3149                 "oic.r.energy.consumption": {
3150                     "type": "object",
3151                     "properties": {
3152                         "power": {
3153                             "type": "number",
3154                             "readOnly": true,
3155                             "description": "Instantaneous Power"
3156                         },
3157                         "energy": {
3158                             "type": "number",
3159                             "readOnly": true,
3160                             "description": "Energy consumed"
3161                         }
3162                     }
3163                 },
3164                 "type": "object",
3165                 "allOf": [
3166                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3167                     { "$ref": "#/definitions/oic.r.energy.consumption" }
3168                 ],
3169                 "required": ["power", "energy"]
3170             }
3171
3172         example: /
3173         {
3174             "rt": ["oic.r.energy.consumption"],
3175             "id": "unique_example_id",
3176             "power": 2000.1,
3177             "energy": 3500.4
3178         }
3179

```

### 3180 6.10.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
energy	숫자	예	Read Only	소비된 에너지
power	숫자	예	Read Only	순간 전력

### 3181 6.10.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/EnergyConsumptionResURI		get			

## 3182 6.11 에너지 사용

### 3183 6.11.1 개요

3184 이 resource 는 누적되는 시간 기반 에너지 사용의 조회를 기술한다. 이 resource 는 TimePeriod  
 3185 Resource 및 EnergyConsumption Resource 의 collection 으로 구성되는 복합 resource 이다.

3186

## 3187 6.11.2 URI 예

3188 /EnergyUsageResURI

## 3189 6.11.3 Resource Type

3190 resource type (rt)는 oic.r.energy.usage로 정의된다.

## 3191 6.11.4 RAML 정의

```
3192 #%RAML 0.8
3193 title: OICEnergyUsage
3194 version: v1.1.0-20160519
3195 traits:
3196   - interface :
3197     queryParameters:
3198       if:
3199         enum: ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
3200
3201 /EnergyUsageResURI:
3202   description: |
3203     This resource describes a cumulative time-based energy usage query..
3204     The resource is a composite resource being made up as a collection of:
3205     TimePeriod Resource
3206     EnergyConsumption Resource
3207
3208   is : ['interface']
3209   get:
3210     description: |
3211       Retrieves the energy usage information as a composite of consumption over time.
3212
3213   responses :
3214     200:
3215       body:
3216         application/json:
3217           schema: /
3218             {
3219               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.usage.json#",
3220               "$schema": "http://json-schema.org/draft-04/schema#",
3221               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3222 rights reserved.",
3223               "title": "Energy Usage",
3224               "definitions": {
3225                 "oic.r.energy.usage": {
3226                   "type": "object",
3227                   "properties": {
3228                     "resources": {
3229                       "type": "array",
3230                       "minItems": 2,
3231                       "maxItems": 2,
3232                       "items": {
3233                         "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
3234                       }
3235                     }
3236                   }
3237                 },
3238               },
3239               "type": "object",
3240               "allOf": [
3241                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3242                 { "$ref": "#/definitions/oic.r.energy.usage" }
```



```

3243         ],
3244         "required": ["resources"]
3245     }
3246
3247     example: /
3248     {
3249         "rt": ["oic.r.energy.usage"],
3250         "id": "unique_example_id",
3251         "resources": [
3252             {
3253                 "href": "/TimeIntervalResURI",
3254                 "rel": "contains",
3255                 "rt": ["oic.r.time.period"],
3256                 "if": ["oic.if.a"],
3257                 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
3258             },
3259             {
3260                 "href": "/EnergyConsumptionResURI",
3261                 "rel": "contains",
3262                 "rt": ["oic.r.energy.consumption"],
3263                 "if": ["oic.if.s"],
3264                 "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
3265             }
3266         ]
3267     }
3268

```

### 3269 6.11.5 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			

## 3270 6.12 습도

### 3271 6.12.1 개요

3272 이 resource 는 감지되거나 요구되는 습도를 기술한다. 값 humidity 는 측정된 상대 습도의  
3273 백분율을 기술하는 정수이다. 값 desiredHumidity 는 요구되는 상대 습도를 나타내는 정수 이다.

3274

### 3275 6.12.2 URI 예

3276 /HumidityResURI

### 3277 6.12.3 Resource Type

3278 resource type (rt)는 oic.r.humidity 로 정의된다.

### 3279 6.12.4 RAML 정의

```

3280 #%RAML 0.8
3281 title: OIChumidity
3282 version: v1.1.0-20160519
3283 traits:
3284   - interface :
3285       queryParameters:
3286         if:
3287             enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
3288
3289 /HumidityResURI:

```

```

3290     description: |
3291         This resource describes a sensed or desired humidity.
3292         The value humidity is an integer describing the percentage measured relative humidity.
3293         The value desiredHumidity is an integer showing the desired target relative humidity.
3294
3295     is : ['interface']
3296
3297     get:
3298         description: |
3299             Retrieves the current (relative) humidity level.
3300
3301     responses :
3302         200:
3303             body:
3304                 application/json:
3305                     schema: /
3306                         {
3307                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity.json#",
3308                             "$schema": "http://json-schema.org/draft-04/schema#",
3309                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
3310                             "title": "Humidity",
3311                             "definitions": {
3312                                 "oic.r.humidity": {
3313                                     "type": "object",
3314                                     "properties": {
3315                                         "humidity": {
3316                                             "type": "integer",
3317                                             "readOnly": true,
3318                                             "description": "Current sensed value for Humidity"
3319                                         },
3320                                         "desiredHumidity": {
3321                                             "type": "integer",
3322                                             "description": "Desired value for Humidity"
3323                                         }
3324                                     }
3325                                 },
3326                                 "type": "object",
3327                                 "allOf": [
3328                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3329                                     { "$ref": "#/definitions/oic.r.humidity" }
3330                                 ],
3331                                 "required": ["humidity"]
3332                             }
3333
3334             example: /
3335                 {
3336                     "rt": ["oic.r.humidity"],
3337                     "id": "unique_example_id",
3338                     "humidity": 40,
3339                     "desiredHumidity": 40
3340                 }
3341
3342
3343     post:
3344         description: |
3345             Sets the desired relative humidity level.
3346
3347         body:
3348             application/json:
3349                 schema: /
3350                     {
3351                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-Update.json#",
3352                         "$schema": "http://json-schema.org/draft-04/schema#",

```

```

3353         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3354 reserved.",
3355         "title": "Humidity",
3356         "definitions": {
3357             "oic.r.humidity": {
3358                 "type": "object",
3359                 "properties": {
3360                     "desiredHumidity": {
3361                         "type": "integer",
3362                         "description": "Desired value for Humidity"
3363                     }
3364                 }
3365             },
3366             "type": "object",
3367             "allOf": [
3368                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3369                 {"$ref": "#/definitions/oic.r.humidity"}
3370             ]
3371         }
3372     }
3373
3374     example: /
3375     {
3376         "id": "unique_example_id",
3377         "desiredHumidity" : 45
3378     }
3379
3380     responses :
3381         200:
3382             description: |
3383                 Indicates that the relative humidity level was changed.
3384                 The new relative humidity level is provided in the response.
3385
3386             body:
3387                 application/json:
3388                     schema: /
3389                     {
3390                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.humidity-
3391 Update.json#",
3392                         "$schema": "http://json-schema.org/draft-04/schema#",
3393                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3394 rights reserved.",
3395                         "title": "Humidity",
3396                         "definitions": {
3397                             "oic.r.humidity": {
3398                                 "type": "object",
3399                                 "properties": {
3400                                     "desiredHumidity": {
3401                                         "type": "integer",
3402                                         "description": "Desired value for Humidity"
3403                                     }
3404                                 }
3405                             }
3406                         },
3407                         "type": "object",
3408                         "allOf": [
3409                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3410                             {"$ref": "#/definitions/oic.r.humidity"}
3411                         ]
3412                     }
3413
3414             example: /
3415             {
3416                 "id": "unique_example_id",
3417                 "desiredHumidity": 45

```

3418                    }  
3419

## 3420 6.12.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
desiredHumidity	정수			습도에 대해 요구되는 값
humidity	정수	예	Read Only	습도에 대해 현재 감지된 값

## 3421 6.12.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		

## 3422 6.13 제빙기

### 3423 6.13.1 개요

3424 이 resource 는 제빙기의 동작 상태를 기술한다. Status 는 가능한 제빙기 상태의 집합으로부터  
3425 하나의 값을 포함하는 하나의 스트링이다. 가능한 상태는 열거형 [on, off, full]에 의해 정의된다.  
3426 'on' 상태는 제빙기가 동작중인 것을 나타낸다. 'off' 상태는 제빙기가 동작하지 않음을 나타낸다.  
3427 'full' 상태는 얼음 통이 채워져 있음 (제빙기가 동작 중)을 나타낸다.

3428

### 3429 6.13.2 URI 예

3430 /IceMakerResURI

### 3431 6.13.3 Resource Type

3432 resource type (rt)는 oic.r.icemaker 로 정의된다.

### 3433 6.13.4 RAML 정의

```
3434 #%RAML 0.8
3435 title: OICIceMaker
3436 version: v1.1.0~20160519
3437 traits:
3438   - interface :
3439     queryParameters:
3440       if:
3441         enum: ["oic.if.a", "oic.if.baseline"]
3442
3443 /IceMakerResURI:
3444   description: |
3445     This resource describes an the operational state of an Ice Maker.
3446     The status is a string containing a value from the set of possible ice maker statuses.
3447     The possible statuses are defined by the enumeration [on, off, full]
3448     A status of 'on' means that the Ice Maker is operating.
3449     A status of 'off' means that the Ice Maker is not operating.
3450     A status of 'full' means that the ice collection bin is full (Ice Maker is operating).
3451
```

```

3452     is : ['interface']
3453     get:
3454         description: |
3455             Retrieves the current Ice Maker status.
3456
3457     responses :
3458         200:
3459             body:
3460                 application/json:
3461                     schema: /
3462                         {
3463                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker.json#",
3464                             "$schema": "http://json-schema.org/draft-04/schema#",
3465                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3466 rights reserved.",
3467                             "title": "Ice Maker",
3468                             "definitions": {
3469                                 "oic.r.iceMaker": {
3470                                     "type": "object",
3471                                     "properties": {
3472                                         "status": {
3473                                             "enum": ["on", "off", "full"],
3474                                             "description": "Status of the Ice Maker"
3475                                         }
3476                                     }
3477                                 }
3478                             },
3479                             "type": "object",
3480                             "allOf": [
3481                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3482                                 { "$ref": "#/definitions/oic.r.iceMaker" }
3483                             ],
3484                             "required": ["status"]
3485                         }
3486
3487                     example: /
3488                         {
3489                             "rt": ["oic.r.icemaker"],
3490                             "id": "unique_example_id",
3491                             "status": "on"
3492                         }
3493
3494     post:
3495         description: |
3496             Sets the desired Ice Maker status.
3497             Only valid settings for status in a Post shall be [on,off].
3498
3499         body:
3500             application/json:
3501                 schema: /
3502                     {
3503                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-Update.json#",
3504                         "$schema": "http://json-schema.org/draft-04/schema#",
3505                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3506 reserved.",
3507                         "title": "Ice Maker",
3508                         "definitions": {
3509                             "oic.r.icemaker": {
3510                                 "type": "object",
3511                                 "properties": {
3512                                     "status": {
3513                                         "enum": ["on", "off"],
3514                                         "description": "Set the status of the Ice Maker"

```

```

3515         }
3516     }
3517 }
3518 },
3519 "type": "object",
3520 "allOf": [
3521     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3522     {"$ref": "#/definitions/oic.r.icemaker"}
3523 ],
3524 "required": ["status"]
3525 }
3526
3527 example: /
3528 {
3529     "id": "unique_example_id",
3530     "status": "off"
3531 }
3532
3533 responses :
3534 200:
3535     description: |
3536         Indicates that the Ice Maker status was changed.
3537         The new status is provided in the response.
3538
3539     body:
3540         application/json:
3541             schema: /
3542                 {
3543                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
3544 Update.json#",
3545                     "$schema": "http://json-schema.org/draft-04/schema#",
3546                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3547 rights reserved.",
3548                     "title": "Ice Maker",
3549                     "definitions": {
3550                         "oic.r.icemaker": {
3551                             "type": "object",
3552                             "properties": {
3553                                 "status": {
3554                                     "enum": ["on", "off"],
3555                                     "description": "Set the status of the Ice Maker"
3556                                 }
3557                             }
3558                         }
3559                     },
3560                     "type": "object",
3561                     "allOf": [
3562                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3563                         {"$ref": "#/definitions/oic.r.icemaker"}
3564                     ],
3565                     "required": ["status"]
3566                 }
3567
3568             example: /
3569                 {
3570                     "id": "unique_example_id",
3571                     "status": "off"
3572                 }
3573
3574 403:
3575     description: |
3576         This response is generated by the OIC Server when the client sends:
3577         An update with an invalid property value for status.

```

```

3578         The server responds with the current resource representation.
3579
3580     body:
3581         application/json:
3582             schema: /
3583                 {
3584                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.iceMaker-
3585 Update.json#",
3586                     "$schema": "http://json-schema.org/draft-04/schema#",
3587                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3588 rights reserved.",
3589                     "title": "Ice Maker",
3590                     "definitions": {
3591                         "oic.r.icemaker": {
3592                             "type": "object",
3593                             "properties": {
3594                                 "status": {
3595                                     "enum": ["on", "off"],
3596                                     "description": "Set the status of the Ice Maker"
3597                                 }
3598                             }
3599                         },
3600                     },
3601                     "type": "object",
3602                     "allOf": [
3603                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3604                         { "$ref": "#/definitions/oic.r.icemaker" }
3605                     ],
3606                     "required": ["status"]
3607                 }
3608
3609             example: /
3610                 {
3611                     "id": "unique_example_id",
3612                     "status": "off"
3613                 }
3614

```

### 3615 6.13.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
status	복수 타입: schema 참조	예		제빙기의 상태

### 3616 6.13.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		

## 3617 6.14 잠금

### 3618 6.14.1 개요

3619 잠금을 기술하는 Resource. lockState 의 type 에 대해 값 'Locked'는 도어가 잠겨 있는 상태를  
 3620 나타낸다. 값 'Unlocked' 는 도어가 잠겨 있지 않은 상태를 나타낸다.

### 3621 6.14.2 URI 예

3622 /LockStatusResURI

### 6.14.3 Resource Type

resource type (rt)는 oic.r.lock.status 로 정의된다.

### 6.14.4 RAML 정의

```
##RAML 0.8
title: OICLock
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
          if:
              enum: ["oic.if.a", "oic.if.baseline"]

/LockStatusResURI:
  description: |
    Resource describing a lock.
    For the type of lockState, the value 'Locked' indicates that the door is Locked.
    The value 'Unlocked' indicates that the door is Unlocked.

  is : ['interface']

  get:
    description: |
      Retrieves the state of the lock.

    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Lock",
                "definitions": {
                  "oic.r.lock.status": {
                    "type": "object",
                    "properties": {
                      "lockState" : {
                        "type": "string",
                        "enum": ["Locked", "Unlocked"],
                        "description": "State of the lock."
                      }
                    }
                  }
                },
                "type": "object",
                "allOf": [
                  { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
                  { "$ref": "#/definitions/oic.r.lock.status" }
                ],
                "required": ["lockState"]
              }

  example: /
    {
      "rt":          ["oic.r.lock.status"],
      "id":          "unique_example_id",
```



```

3681         "lockState": "Locked"
3682     }
3683
3684     post:
3685         description: |
3686             Sets the current lock state.
3687
3688         body:
3689             application/json:
3690                 schema: /
3691                     {
3692                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3693                         "$schema": "http://json-schema.org/draft-04/schema#",
3694                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3695 reserved.",
3696                         "title": "Lock",
3697                         "definitions": {
3698                             "oic.r.lock.status": {
3699                                 "type": "object",
3700                                 "properties": {
3701                                     "lockState" : {
3702                                         "type": "string",
3703                                         "enum": ["Locked", "Unlocked"],
3704                                         "description": "State of the lock."
3705                                     }
3706                                 }
3707                             }
3708                         },
3709                         "type": "object",
3710                         "allOf": [
3711                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3712                             {"$ref": "#/definitions/oic.r.lock.status"}
3713                         ],
3714                         "required": ["lockState"]
3715                     }
3716
3717         example: /
3718             {
3719                 "id": "unique_example_id",
3720                 "lockState": "Unlocked"
3721             }
3722
3723     responses :
3724         200:
3725             body:
3726                 application/json:
3727                     schema: /
3728                         {
3729                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3730                             "$schema": "http://json-schema.org/draft-04/schema#",
3731                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3732 rights reserved.",
3733                             "title": "Lock",
3734                             "definitions": {
3735                                 "oic.r.lock.status": {
3736                                     "type": "object",
3737                                     "properties": {
3738                                         "lockState" : {
3739                                             "type": "string",
3740                                             "enum": ["Locked", "Unlocked"],
3741                                             "description": "State of the lock."
3742                                         }
3743                                     }
3744                                 }
3745                             }
3746                         }

```

```

3745         },
3746         "type": "object",
3747         "allOf": [
3748             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3749             {"$ref": "#/definitions/oic.r.lock.status"}
3750         ],
3751         "required": ["lockState"]
3752     }
3753
3754     example: /
3755     {
3756         "id": "unique_example_id",
3757         "lockState": "Unlocked"
3758     }
3759
3760     403:
3761     description: |
3762         This response is generated by the OIC Server when the client sends:
3763         An update with an invalid property value for lockState.
3764         The server responds with the current resource representation.
3765
3766     body:
3767         application/json:
3768         schema: /
3769         {
3770             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.status.json#",
3771             "$schema": "http://json-schema.org/draft-04/schema#",
3772             "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3773 rights reserved.",
3774             "title": "Lock",
3775             "definitions": {
3776                 "oic.r.lock.status": {
3777                     "type": "object",
3778                     "properties": {
3779                         "lockState": {
3780                             "type": "string",
3781                             "enum": ["Locked", "Unlocked"],
3782                             "description": "State of the lock."
3783                         }
3784                     }
3785                 }
3786             },
3787             "type": "object",
3788             "allOf": [
3789                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3790                 {"$ref": "#/definitions/oic.r.lock.status"}
3791             ],
3792             "required": ["lockState"]
3793         }
3794
3795     example: /
3796     {
3797         "lockState": "Unlocked"
3798     }
3799

```

#### 3800 6.14.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
lockState	스트링	예	.	잠금 상태

## 3801 6.14.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		

## 3802 6.15 잠금 코드

### 3803 6.15.1 개요

3804 잠금 코드를 기술하는 Resource. lockCodeList 는 잠금 관련 가능 코드의 배열이다. 이들은 모두  
3805 스트링으로 제공된다.

### 3806 6.15.2 URI 예

3807 /LockCodeResURI

### 3808 6.15.3 Resource Type

3809 resource type (rt)는 oic.r.lock.code 로 정의된다.

### 3810 6.15.4 RAML 정의

```

3811 #%RAML 0.8
3812 title: OICLockCode
3813 version: v1.1.0-20160519
3814 traits:
3815   - interface :
3816     queryParameters:
3817       if:
3818         enum: ["oic.if.a", "oic.if.baseline"]
3819
3820 /LockCodeResURI:
3821   description: |
3822     Resource describing a lock code.
3823     The lockCodeList is an array of possible codes that may be associated with a lock.
3824     These are all presented as strings.
3825
3826   is : ['interface']
3827   get:
3828     description: |
3829       Retrieves the current lock code values.
3830
3831   responses :
3832     200:
3833       body:
3834         application/json:
3835           schema: /
3836             {
3837               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3838               "$schema": "http://json-schema.org/draft-04/schema#",
3839               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3840 rights reserved.",
3841               "title": "Lock Code",
3842               "definitions": {
3843                 "oic.r.lock.code": {
3844                   "type": "object",

```

```

3845         "properties": {
3846             "lockCodeList" : {
3847                 "type": "array",
3848                 "items": {
3849                     "type": "string",
3850                     "description": "Value for the lock code"
3851                 }
3852             }
3853         }
3854     },
3855     "type": "object",
3856     "allOf": [
3857         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3858         {"$ref": "#/definitions/oic.r.lock.code"}
3859     ],
3860     "required": ["lockCodeList"]
3861 }
3862
3863
3864 example: /
3865 {
3866     "rt":          ["oic.r.lock.code"],
3867     "id":          "unique_example_id",
3868     "lockCodeList": ["012345", "112233"]
3869 }
3870
3871 post:
3872     description: |
3873         Updates the current lock code values.
3874
3875     body:
3876         application/json:
3877             schema: /
3878                 {
3879                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3880                     "$schema": "http://json-schema.org/draft-04/schema#",
3881                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
3882 reserved.",
3883                     "title": "Lock Code",
3884                     "definitions": {
3885                         "oic.r.lock.code": {
3886                             "type": "object",
3887                             "properties": {
3888                                 "lockCodeList" : {
3889                                     "type": "array",
3890                                     "items": {
3891                                         "type": "string",
3892                                         "description": "Value for the lock code"
3893                                     }
3894                                 }
3895                             }
3896                         }
3897                     },
3898                     "type": "object",
3899                     "allOf": [
3900                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
3901                         {"$ref": "#/definitions/oic.r.lock.code"}
3902                     ],
3903                     "required": ["lockCodeList"]
3904                 }
3905
3906             example: /
3907                 {
3908                     "id":          "unique_example_id",
3909                     "lockCodeList": ["543210", "332211"]

```

```

3910     }
3911
3912     responses :
3913         200:
3914             body:
3915                 application/json:
3916                     schema: /
3917                         {
3918                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.lock.code.json#",
3919                             "$schema": "http://json-schema.org/draft-04/schema#",
3920                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3921 rights reserved.",
3922                             "title": "Lock Code",
3923                             "definitions": {
3924                                 "oic.r.lock.code": {
3925                                     "type": "object",
3926                                     "properties": {
3927                                         "lockCodeList" : {
3928                                             "type": "array",
3929                                             "items": {
3930                                                 "type": "string",
3931                                                 "description": "Value for the lock code"
3932                                             }
3933                                         }
3934                                     }
3935                                 },
3936                                 "type": "object",
3937                                 "allOf": [
3938                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
3939                                     { "$ref": "#/definitions/oic.r.lock.code" }
3940                                 ],
3941                                 "required": ["lockCodeList"]
3942                             }
3943
3944
3945                     example: /
3946                         {
3947                             "id": "unique_example_id",
3948                             "lockCodeList": ["543210", "332211"]
3949                         }
3950

```

### 3951 6.15.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
lockCodeList	배열: schema 참조	예		

### 3952 6.15.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		

## 3953 6.16 모드

### 3954 6.16.1 개요

3955 이 resource 는 하나의 device 가 제공할 수 있는 동작 모드를 기술한다. 모드는 판독 또는 설정될 수  
3956 있다. supportedMode 는 device 가 지원 가능한 모드의 배열이다. modes 는 현재 활성화된 모드의  
3957 배열이다.

### 3958 6.16.2 URI 예

3959 /ModeResURI

### 3960 6.16.3 Resource Type

3961 resource type (rt)는 oic.r.mode 로 정의된다.

### 3962 6.16.4 RAML 정의

```
3963 #%RAML 0.8
3964 title: OICMode
3965 version: v1.1.0-20160519
3966 traits:
3967   - interface :
3968       queryParameters:
3969           if:
3970               enum: ["oic.if.a", "oic.if.baseline"]
3971
3972 /ModeResURI:
3973     description: |
3974         This resource describes the modes of operation that a device can provide.
3975         The mode can be read or set.
3976         The supportedModes is an array of possible modes the device supports.
3977         The modes are an array of the currently active mode(s).
3978
3979     is : ['interface']
3980     get:
3981         description: |
3982             Retrieves the current mode.
3983
3984     responses :
3985         200:
3986             body:
3987                 application/json:
3988                     schema: /
3989                         {
3990                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
3991                             "$schema": "http://json-schema.org/draft-04/schema#",
3992                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
3993 rights reserved.",
3994                             "title": "Mode",
3995                             "definitions": {
3996                                 "oic.r.mode": {
3997                                     "type": "object",
3998                                     "properties": {
3999                                         "supportedModes": {
4000                                             "type": "array",
4001                                             "readOnly": true,
4002                                             "description": "Array of possible modes the device supports.",
```

```

4003         "items": {
4004             "type": "string"
4005         },
4006     },
4007     "modes": {
4008         "type": "array",
4009         "description": "Array of the currently active mode(s)",
4010         "items": {
4011             "type": "string"
4012         }
4013     }
4014 },
4015 },
4016 },
4017 "type": "object",
4018 "allOf": [
4019     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4020     {"$ref": "#/definitions/oic.r.mode"}
4021 ],
4022 "required": ["supportedModes", "modes"]
4023 }
4024
4025 example: /
4026 {
4027     "rt": ["oic.r.mode"],
4028     "id": "unique_example_id",
4029     "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4030     "modes": ["active"]
4031 }
4032
4033 post:
4034     description: |
4035         Sets the desired mode.
4036
4037     body:
4038         application/json:
4039             schema: /
4040                 {
4041                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
4042                     "$schema": "http://json-schema.org/draft-04/schema#",
4043                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4044 reserved.",
4045                     "title": "Mode",
4046                     "definitions": {
4047                         "oic.r.mode": {
4048                             "type": "object",
4049                             "properties": {
4050                                 "modes": {
4051                                     "type": "array",
4052                                     "description": "Desired mode",
4053                                     "items": {
4054                                         "type": "string"
4055                                     }
4056                                 }
4057                             }
4058                         }
4059                     },
4060                     "type": "object",
4061                     "allOf": [
4062                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4063                         {"$ref": "#/definitions/oic.r.mode"}
4064                     ],
4065                     "required": ["modes"]
4066                 }
4067
4068             example: /

```

```

4069     {
4070         "id": "unique_example_id",
4071         "modes": ["armedAway"]
4072     }
4073
4074     responses :
4075         200:
4076             body:
4077                 application/json:
4078                     schema: /
4079                         {
4080                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode-Update.json#",
4081                             "$schema": "http://json-schema.org/draft-04/schema#",
4082                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
4083                             "title": "Mode",
4084                             "definitions": {
4085                                 "oic.r.mode": {
4086                                     "type": "object",
4087                                     "properties": {
4088                                         "modes": {
4089                                             "type": "array",
4090                                             "description": "Desired mode",
4091                                             "items": {
4092                                                 "type": "string"
4093                                             }
4094                                         }
4095                                     }
4096                                 }
4097                             },
4098                             "type": "object",
4099                             "allOf": [
4100                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4101                                 {"$ref": "#/definitions/oic.r.mode"}
4102                             ],
4103                             "required": ["modes"]
4104                         }
4105
4106
4107                     example: /
4108                         {
4109                             "id": "unique_example_id",
4110                             "modes": ["armedAway"]
4111                         }
4112
4113         403:
4114             description: |
4115                 This response is generated by the OIC Server when the client sends:
4116                 An update with an value for mode that is not found in supportedModes.
4117                 The server responds with the current resource representation.
4118
4119             body:
4120                 application/json:
4121                     schema: /
4122                         {
4123                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
4124                             "$schema": "http://json-schema.org/draft-04/schema#",
4125                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
4126                             "title": "Mode",
4127                             "definitions": {
4128                                 "oic.r.mode": {
4129                                     "type": "object",
4130                                     "properties": {
4131                                         "supportedModes": {

```



```

4133         "type": "array",
4134         "readOnly": true,
4135         "description": "Array of possible modes the device supports.",
4136         "items": {
4137             "type": "string"
4138         }
4139     },
4140     "modes": {
4141         "type": "array",
4142         "description": "Array of the currently active mode(s)",
4143         "items": {
4144             "type": "string"
4145         }
4146     }
4147 },
4148 },
4149 },
4150 "type": "object",
4151 "allof": [
4152     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4153     {"$ref": "#/definitions/oic.r.mode"}
4154 ],
4155 "required": ["supportedModes", "modes"]
4156 }
4157
4158 example: /
4159 {
4160     "id": "unique_example_id",
4161     "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
4162     "modes": ["active"]
4163 }
4164

```

## 4165 6.16.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
supportedMode	배열: schema 참조	예	Read Only	device 가 지원 가능한 모드의 배열
modes	배열: schema 참조	예		현재 활성화된 모드의 배열

## 4166 6.16.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		

## 4167 6.17 개방도

### 4168 6.17.1 개요

4169 이 resource 는 창, 도어, 블라인드, 또는 셔터와 같은 개체가 얼마나 개방되어 있는지를 기술한다.  
4170 openLevel 은 판독될 수 있다 (센서로 작용). openLevel 은 또한 설정될 수 있다 (액추에이터로  
4171 작용). openLevel 은 제공된 범위에 걸쳐 device 에 의존한다. (oic.r.baseresource 로 부터의) 범위가  
4172 생략되면 0 내지 100 이 가정되고, 여기에서 0 은 폐쇄를 의미하고, 100 은 완전 개방을 의미한다.

4173 하나의 범위가 제공되면, 하한=폐쇄이고, 상한=개방이다. (oic.r.baseresource 로부터의) 증분이  
4174 제공되면 가능한 값 사이의 증가를 표현하고 제공되지 않는다면, 1 이 가정된다.

4175

## 4176 6.17.2 URI 예

4177 /OpenLevelResURI

## 4178 6.17.3 Resource Type

4179 resource type (rt)는 oic.r.openlevel 로 정의된다.

## 4180 6.17.4 RAML 정의

```
4181 #%RAML 0.8
4182 title: OICOpenLevel
4183 version: v1.1.0-20160519
4184 traits:
4185   - interface :
4186     queryParameters:
4187       if:
4188         enum: ["oic.if.a", "oic.if.baseline"]
4189
4190 /OpenLevelResURI:
4191   description: |
4192     This resource describes how open or ajar an entity such as a window, door, blind or shutter is.
4193     The openLevel can be read (acting as a sensor).
4194     The openLevel can also be set (acting as an actuator).
4195     The openLevel is device dependent across the range provided.
4196     When range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed,
4197     100 means fully open.
4198     If a range is provided then the lower bound=closed, upper bound=open.
4199     If step (from oic.r.baseresource) is present then it represents the increment between possible
4200     values; if not provided 1 is assumed.
4201
4202   is : ['interface']
4203   get:
4204     description: |
4205       Retrieves the current openLevel.
4206
4207   responses :
4208     200:
4209       body:
4210         application/json:
4211           schema: /
4212             {
4213               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4214               "$schema": "http://json-schema.org/draft-04/schema#",
4215               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4216               rights reserved.",
4217               "title": "Open Level",
4218               "definitions": {
4219                 "oic.r.openlevel": {
4220                   "type": "object",
4221                   "properties": {
4222                     "openLevel": {
4223                       "type": "integer",
4224                       "description": "How open or ajar the entity is"
```

```

4225         },
4226         "increment": {
4227             "type": "integer",
4228             "description": "Deprecated, use 'step' instead.",
4229             "readOnly": true
4230         }
4231     }
4232 }
4233 },
4234 "type": "object",
4235 "allOf": [
4236     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4237     {"$ref": "#/definitions/oic.r.openlevel"}
4238 ],
4239 "required": ["openLevel"]
4240 }
4241
4242 example: /
4243 {
4244     "rt":          ["oic.r.openlevel"],
4245     "id":          "unique_example_id",
4246     "openLevel":  50,
4247     "step":       2,
4248     "range":      [0,100]
4249 }
4250
4251 post:
4252     description: |
4253         Sets the desired openLevel.
4254
4255     body:
4256         application/json:
4257             schema: /
4258                 {
4259                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4260                     "$schema": "http://json-schema.org/draft-04/schema#",
4261                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4262 reserved.",
4263                     "title": "Open Level",
4264                     "definitions": {
4265                         "oic.r.openlevel": {
4266                             "type": "object",
4267                             "properties": {
4268                                 "openLevel": {
4269                                     "type": "integer",
4270                                     "description": "How open or ajar the entity is"
4271                                 },
4272                                 "increment": {
4273                                     "type": "integer",
4274                                     "description": "Deprecated, use 'step' instead.",
4275                                     "readOnly": true
4276                                 }
4277                             }
4278                         },
4279                     },
4280                     "type": "object",
4281                     "allOf": [
4282                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4283                         {"$ref": "#/definitions/oic.r.openlevel"}
4284                     ],
4285                     "required": ["openLevel"]
4286                 }
4287
4288             example: /
4289                 {
4290                     "id":          "unique_example_id",

```

```

4291         "openLevel": 0
4292     }
4293
4294     responses :
4295         200:
4296             body:
4297                 application/json:
4298                     schema: /
4299                         {
4300                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4301                             "$schema": "http://json-schema.org/draft-04/schema#",
4302                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4303 rights reserved.",
4304                             "title": "Open Level",
4305                             "definitions": {
4306                                 "oic.r.openlevel": {
4307                                     "type": "object",
4308                                     "properties": {
4309                                         "openLevel": {
4310                                             "type": "integer",
4311                                             "description": "How open or ajar the entity is"
4312                                         },
4313                                         "increment": {
4314                                             "type": "integer",
4315                                             "description": "Deprecated, use 'step' instead.",
4316                                             "readOnly": true
4317                                         }
4318                                     }
4319                                 }
4320                             },
4321                             "type": "object",
4322                             "allOf": [
4323                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4324                                 {"$ref": "#/definitions/oic.r.openlevel"}
4325                             ],
4326                             "required": ["openLevel"]
4327                         }
4328
4329                     example: /
4330                         {
4331                             "id": "unique_example_id",
4332                             "openLevel": 0
4333                         }
4334
4335         403:
4336             description: |
4337                 This response is generated by the OIC Server when the client sends:
4338                 An update with an out of range property value for openLevel.
4339                 The server responds with the current resource representation.
4340
4341             body:
4342                 application/json:
4343                     schema: /
4344                         {
4345                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.openLevel.json#",
4346                             "$schema": "http://json-schema.org/draft-04/schema#",
4347                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4348 rights reserved.",
4349                             "title": "Open Level",
4350                             "definitions": {
4351                                 "oic.r.openlevel": {
4352                                     "type": "object",
4353                                     "properties": {
4354                                         "openLevel": {

```

```

4355         "type": "integer",
4356         "description": "How open or ajar the entity is"
4357     },
4358     "increment": {
4359         "type": "integer",
4360         "description": "Deprecated, use 'step' instead.",
4361         "readOnly": true
4362     }
4363 }
4364 }
4365 },
4366 "type": "object",
4367 "allOf": [
4368     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4369     {"$ref": "#/definitions/oic.r.openlevel"}
4370 ],
4371 "required": ["openLevel"]
4372 }
4373
4374 example: /
4375 {
4376     "id":          "unique_example_id",
4377     "openLevel":   50,
4378     "step":        2,
4379     "range":       [0,100]
4380 }
4381

```

#### 6.17.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
openLevel	정수	예		개체가 얼마나 개방되어 있는지
increment	정수		Read Only	Deprecated, 대신에 'step'을 사용

#### 6.17.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		

### 6.18 동작 상태

#### 6.18.1 개요

이 resource 는 device 에 대한 동작 및 작업 상태를 기술한다. states 는 판독 또는 설정될 수 있고, setting 은 요구되는 상태를 나타낸다. Device 는 불리한 동작 특성을 초래할 수 있는 상태로의 설정 시도를 거부할 수 있다. machineStates 는 가능한 동작 상태의 배열이다. currentMachineState 는 device 동작의 현재의 상태이다. jobStates 는 가능한 작업 상태의 배열이다. currentJobState 는 현재 활성인 job 상태이다. runningTime 은 현재의 동작상태내에서 ISO8601 인코딩된 경과 시간이다. remainingTime 은 현재의 동작상태의 완료까지 ISO8601 인코딩된 시간이다. progressPercentage 는 현재 jobState 의 완료도를 백분율로 표시한다.

## 4394 6.18.2 URI 예

4395 /OperationalStateResURI

## 4396 6.18.3 Resource Type

4397 resource type (rt)는 oic.r.operational.state 로 정의된다.

## 4398 6.18.4 RAML 정의

```
4399 #%RAML 0.8
4400 title: OICOperation
4401 version: v1.1.0-20160519
4402 traits:
4403   - interface :
4404     queryParameters:
4405       if:
4406         enum: ["oic.if.a", "oic.if.baseline"]
4407
4408 /OperationalStateResURI:
4409   description: |
4410     This resource describes the operational and job states on a device.
4411     The states can be read or set, setting indicates a desired state.
4412     A device may reject an attempt to set a state that would result
4413     in adverse operational characteristics.
4414     The machineStates is an array of the possible operational states.
4415     The currentMachineState is the current state of operation of the device.
4416     The jobStates is an array of the possible job states.
4417     The currentJobState is the currently active jobState.
4418     The runningTime is the ISO8601 encoded elapsed time in the current operational state.
4419     The remainingTime is the ISO8601 encoded time till completion of the current operational state.
4420     The progressPercentage is the percentage completeness of the current jobState.
4421
4422   is : ['interface']
4423   get:
4424     description: |
4425       Retrieves the current operational and job states.
4426
4427   responses :
4428     200:
4429       body:
4430         application/json:
4431           schema: /
4432             {
4433               "id":
4434                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
4435               "$schema": "http://json-schema.org/draft-04/schema#",
4436               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4437 rights reserved.",
4438               "title": "Operational State",
4439               "definitions": {
4440                 "oic.r.operational.state": {
4441                   "type": "object",
4442                   "properties": {
4443                     "machineStates": {
4444                       "type": "array",
4445                       "readOnly": true,
4446                       "description": "array of the possible operational states.",
4447                       "items": {
4448                         "type": "string"
4449                       }
4450                     }
4451                   }
4452                 }
4453               }
4454             }
```

```

4450         },
4451         "currentMachineState": {
4452             "type": "string",
4453             "description": "Current state of operation of the device."
4454         },
4455         "jobStates": {
4456             "type": "array",
4457             "readOnly": true,
4458             "description": "array of the possible job states.",
4459             "items": {
4460                 "type": "string"
4461             }
4462         },
4463         "currentJobState": {
4464             "type": "string",
4465             "description": "Currently active jobState"
4466         },
4467         "runningTime": {
4468             "type": "string",
4469             "readOnly": true,
4470             "description": "Elapsed time in the current operational state"
4471         },
4472         "remainingTime": {
4473             "type": "string",
4474             "readOnly": true,
4475             "description": "Time till completion of the current operational state"
4476         },
4477         "progressPercentage": {
4478             "type": "integer",
4479             "readOnly": true,
4480             "description": "Percentage completeness of the current jobState"
4481         }
4482     }
4483 },
4484 {
4485     "type": "object",
4486     "allOf": [
4487         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4488         {"$ref": "#/definitions/oic.r.operational.state"}
4489     ],
4490     "required": ["machineStates", "currentMachineState"]
4491 }
4492
4493 example: /
4494 {
4495     "rt": ["oic.r.operational.state"],
4496     "id": "unique_example_id",
4497     "machineStates": ["pause", "stopped", "idle", "active"],
4498     "currentMachineState": "active",
4499     "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
4500 "wrinklePrevent"],
4501     "currentJobState": "rinse",
4502     "runningTime": "PT15M20S",
4503     "remainingTime": "PT10M40S",
4504     "progressPercentage": 75
4505 }
4506
4507 post:
4508     description: |
4509         Sets the desired operational or job state.
4510
4511     body:
4512         application/json:
4513             schema: /
4514             {
4515                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
4516 Update.json#",

```

```

4517         "$schema": "http://json-schema.org/draft-04/schema#",
4518         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4519 reserved.",
4520         "title": "Operational State",
4521         "definitions": {
4522             "oic.r.operational.state": {
4523                 "type": "object",
4524                 "properties": {
4525                     "currentMachineState": {
4526                         "type": "string",
4527                         "description": "Current state of operation of the device."
4528                     },
4529                     "currentJobState": {
4530                         "type": "string",
4531                         "description": "Currently active jobState"
4532                     }
4533                 }
4534             }
4535         },
4536         "type": "object",
4537         "allOf": [
4538             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4539             {"$ref": "#/definitions/oic.r.operational.state"}
4540         ]
4541     }
4542
4543     example: /
4544     {
4545         "id": "unique_example_id",
4546         "currentMachineState": "pause",
4547         "currentJobState": "wash"
4548     }
4549
4550     responses :
4551     200:
4552         body:
4553             application/json:
4554                 schema: /
4555                 {
4556                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state-
4557 Update.json#",
4558                     "$schema": "http://json-schema.org/draft-04/schema#",
4559                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4560 rights reserved.",
4561                     "title": "Operational State",
4562                     "definitions": {
4563                         "oic.r.operational.state": {
4564                             "type": "object",
4565                             "properties": {
4566                                 "currentMachineState": {
4567                                     "type": "string",
4568                                     "description": "Current state of operation of the device."
4569                                 },
4570                                 "currentJobState": {
4571                                     "type": "string",
4572                                     "description": "Currently active jobState"
4573                                 }
4574                             }
4575                         }
4576                     },
4577                     "type": "object",
4578                     "allOf": [
4579                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4580                         {"$ref": "#/definitions/oic.r.operational.state"}
4581                     ]
4582                 }
4583

```



```

4584         example: /
4585             {
4586                 "id": "unique_example_id",
4587                 "currentMachineState": "pause",
4588                 "currentJobState": "wash"
4589             }
4590
4591 403:
4592     description: |
4593         This response is generated by the OIC Server when the client sends:
4594         An update with an value for currentMachineState that is not found in machineStates.
4595         An update with an value for currentJobState that is not found in jobStates.
4596         The server responds with the current resource representation.
4597
4598     body:
4599         application/json:
4600             schema: /
4601                 {
4602                     "id":
4603 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.operational.state.json#",
4604                     "$schema": "http://json-schema.org/draft-04/schema#",
4605                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4606 rights reserved.",
4607                     "title": "Operational State",
4608                     "definitions": {
4609                         "oic.r.operational.state": {
4610                             "type": "object",
4611                             "properties": {
4612                                 "machineStates": {
4613                                     "type": "array",
4614                                     "readOnly": true,
4615                                     "description": "array of the possible operational states.",
4616                                     "items": {
4617                                         "type": "string"
4618                                     }
4619                                 },
4620                                 "currentMachineState": {
4621                                     "type": "string",
4622                                     "description": "Current state of operation of the device."
4623                                 },
4624                                 "jobStates": {
4625                                     "type": "array",
4626                                     "readOnly": true,
4627                                     "description": "array of the possible job states.",
4628                                     "items": {
4629                                         "type": "string"
4630                                     }
4631                                 },
4632                                 "currentJobState": {
4633                                     "type": "string",
4634                                     "description": "Currently active jobState"
4635                                 },
4636                                 "runningTime": {
4637                                     "type": "string",
4638                                     "readOnly": true,
4639                                     "description": "Elapsed time in the current operational state"
4640                                 },
4641                                 "remainingTime": {
4642                                     "type": "string",
4643                                     "readOnly": true,
4644                                     "description": "Time till completion of the current operational state"
4645                                 },
4646                                 "progressPercentage": {
4647                                     "type": "integer",
4648                                     "readOnly": true,
4649                                     "description": "Percentage completeness of the current jobState"
4650                                 }
4651                             }
4652                         }
4653                     }
4654                 }

```

```

4652     }
4653   },
4654   "type": "object",
4655   "allOf": [
4656     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
4657     { "$ref": "#/definitions/oic.r.operational.state" }
4658   ],
4659   "required": ["machineStates", "currentMachineState"]
4660 }
4661
4662 example: /
4663 {
4664   "id": "unique_example_id",
4665   "machineStates": ["pause", "stopped", "idle", "active"],
4666   "currentMachineState": "active",
4667   "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
4668 "wrinklePrevent"],
4669   "currentJobState": "rinse",
4670   "runningTime": "PT15M20S",
4671   "remainingTime": "PT10M40S",
4672   "progressPercentage": 75
4673 }
4674

```

#### 4675 6.18.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
currentMachineState	스트링	예		Device 동작의 현재 상태
currentJobState	스트링			현재 활성인 작업 상태
machineStates	배열: schema 참조	예	Read Only	가능한 동작 상태의 배열.
runningTime	스트링		Read Only	현재 동작 상태의 경과된 시간
remainingTime	스트링		Read Only	현재 동작 상태의 완료까지의 시간
progressPercentage	정수		Read Only	현재 작업 상태의 완료도의 백분율
jobStates	배열: schema 참조		Read Only	가능한 작업 상태의 배열

#### 4676 6.18.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		

## 4677 6.19 램프 타임

### 4678 6.19.1 개요

4679 이 resource 는 조광 기능의 램프 타임을 기술한다. 이것은 2 개의 조광 값 간의 변화의 실제 속도를  
4680 규정한다. Time 은 밀리초[ms]로 규정된다. (oic.r.baseresource 로부터의) 범위가 생략되면  
4681 최대값은 100 ms 이다. 0 ms 의 RampTime 은 구현을 통해 가능한 최소 지연을 나타낸다.

### 4683 6.19.2 URI 예

4684 /RampTimeResURI

### 4685 6.19.3 Resource Type

4686 resource type (rt)는 oic.r.light.ramptime 으로 정의된다.

### 4687 6.19.4 RAML 정의

```
4688 #%RAML 0.8
4689 title: OICRampTime
4690 version: v1.1.0-20160519
4691 traits:
4692   - interface :
4693       queryParameters:
4694           if:
4695               enum: ["oic.if.a", "oic.if.baseline"]
4696
4697 /RampTimeResURI:
4698     description: |
4699         This resource that describes the Ramp Time of a dimming function.
4700         This specifies the actual speed of changing between 2 dimming values.
4701         Time is specified in milliseconds [ms].
4702         When range (from oic.r.baseresource) is omitted the maximum value is 100 ms.
4703         The RampTime of 0ms indicates the minimal delay possible by the implementation.
4704
4705     is : ['interface']
4706     get:
4707         description: |
4708             Retrieves the current RampTime.
4709
4710     responses :
4711         200:
4712             body:
4713                 application/json:
4714                     schema: /
4715                         {
4716                             "id":
4717 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4718 "schema": "http://json-schema.org/draft-04/schema#",
4719 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4720 rights reserved.",
4721 "title": "Ramp Time",
4722 "definitions": {
4723     "oic.r.light.ramptime": {
4724         "type": "object",
4725         "properties": {
```

```

4726         "rampTime": {
4727             "type": "integer",
4728             "description": "Actual speed of changing between 2 dimming values"
4729         }
4730     }
4731 }
4732 },
4733 "type": "object",
4734 "allOf": [
4735     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4736     {"$ref": "#/definitions/oic.r.light.ramptime"}
4737 ],
4738 "required": ["rampTime"]
4739 }
4740
4741 example: /
4742 {
4743     "rt":         ["oic.r.light.ramptime"],
4744     "id":         "unique_example_id",
4745     "rampTime": 0,
4746     "range":     [0,100]
4747 }
4748
4749 post:
4750     description: |
4751         Sets the current RampTime.
4752
4753     body:
4754         application/json:
4755             schema: /
4756                 {
4757                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4758                     "$schema": "http://json-schema.org/draft-04/schema#",
4759                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4760 reserved.",
4761                     "title": "Ramp Time",
4762                     "definitions": {
4763                         "oic.r.light.ramptime": {
4764                             "type": "object",
4765                             "properties": {
4766                                 "rampTime": {
4767                                     "type": "integer",
4768                                     "description": "Actual speed of changing between 2 dimming values"
4769                                 }
4770                             }
4771                         }
4772                     },
4773                     "type": "object",
4774                     "allOf": [
4775                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4776                         {"$ref": "#/definitions/oic.r.light.ramptime"}
4777                     ],
4778                     "required": ["rampTime"]
4779                 }
4780
4781             example: /
4782                 {
4783                     "id":         "unique_example_id",
4784                     "rampTime": 50
4785                 }
4786
4787     responses :
4788         200:
4789             body:

```

```

4790         application/json:
4791             schema: /
4792                 {
4793                     "id":
4794 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4795                     "$schema": "http://json-schema.org/draft-04/schema#",
4796                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4797 rights reserved.",
4798                     "title": "Ramp Time",
4799                     "definitions": {
4800                         "oic.r.light.ramptime": {
4801                             "type": "object",
4802                             "properties": {
4803                                 "rampTime": {
4804                                     "type": "integer",
4805                                     "description": "Actual speed of changing between 2 dimming values"
4806                                 }
4807                             }
4808                         }
4809                     },
4810                     "type": "object",
4811                     "allOf": [
4812                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4813                         {"$ref": "#/definitions/oic.r.light.ramptime"}
4814                     ],
4815                     "required": ["rampTime"]
4816                 }
4817
4818             example: /
4819                 {
4820                     "id":          "unique_example_id",
4821                     "rampTime": 50
4822                 }
4823
4824 403:
4825         description: |
4826             This response is generated by the OIC Server when the client sends:
4827             An update with an out of range property value for rampTime.
4828             The server responds with the current resource representation.
4829
4830         body:
4831             application/json:
4832                 schema: /
4833                     {
4834                         "id":
4835 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.light.rampTime.json#",
4836                         "$schema": "http://json-schema.org/draft-04/schema#",
4837                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4838 rights reserved.",
4839                         "title": "Ramp Time",
4840                         "definitions": {
4841                             "oic.r.light.ramptime": {
4842                                 "type": "object",
4843                                 "properties": {
4844                                     "rampTime": {
4845                                         "type": "integer",
4846                                         "description": "Actual speed of changing between 2 dimming values"
4847                                     }
4848                                 }
4849                             }
4850                         },
4851                         "type": "object",
4852                         "allOf": [
4853                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4854                             {"$ref": "#/definitions/oic.r.light.ramptime"}
4855                         ],

```

```

4856         "required": ["rampTime"]
4857     }
4858
4859     example: /
4860     {
4861         "id": "unique_example_id",
4862         "rampTime": 40
4863     }
4864

```

## 4865 6.19.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
rampTime	정수	예		2 개의 조광 값 간의 변화의 실제 속도

## 4866 6.19.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		

## 4867 6.20 냉장

### 4868 6.20.1 개요

4869 이 resource 는 냉장 기능을 기술한다. filter 상태는 여과기의 나머지 수명의 백분율을 제공하는  
4870 읽기 전용 값이다. RapidFreeze 는 존재한다면 신속 동결 성능을 제어하는 boolean 형이다.  
4871 RapidCool 은 존재한다면 신속 냉각 성능을 제어하는 boolean 형이다. Defrost 는 존재한다면 제상  
4872 주기를 제어하는 boolean 형이다. 열거된 Property 중 적어도 하나는 Resource instance 에  
4873 존재해야 한다.

### 4874 6.20.2 URI 예

4875 /RefrigerationResURI

### 4876 6.20.3 Resource Type

4877 resource type (rt)는 oic.r.refrigeration 으로 정의된다.

### 4878 6.20.4 RAML 정의

```

4879 #%RAML 0.8
4880 title: OICRefrigeration
4881 version: v1.1.0-20160519
4882 traits:
4883   - interface :
4884       queryParameters:
4885           if:
4886               enum: ["oic.if.a", "oic.if.baseline"]
4887
4888 /RefrigerationResURI:
4889     description: |

```

```

4890     This resource describes a refrigeration function.
4891     The filter state is a read-only value providing the percentage life time remaining for the
4892     water filter.
4893     RapidFreeze is a boolean that controls the rapid freeze capability if present.
4894     RapidCool is a boolean that controls the rapid cool capability if present.
4895     Defrost is a boolean that controls the defrost cycle if present.
4896     At least one of the listed Properties shall be present in a Resource Instance.
4897
4898     is : ['interface']
4899
4900     get:
4901         description: |
4902             Retrieves the current Refrigeration function status; all Properties supported by the Device
4903             are returned.
4904
4905     responses :
4906         200:
4907             body:
4908                 application/json:
4909                 schema: /
4910                     {
4911                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration.json#",
4912                         "$schema": "http://json-schema.org/draft-04/schema#",
4913                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
4914                         rights reserved.",
4915                         "title": "Refrigeration",
4916                         "definitions": {
4917                             "oic.r.refrigeration": {
4918                                 "type": "object",
4919                                 "anyOf": [
4920                                     {"required": ["filter"]},
4921                                     {"required": ["rapidFreeze"]},
4922                                     {"required": ["rapidCool"]},
4923                                     {"required": ["defrost"]}
4924                                 ],
4925                                 "properties": {
4926                                     "filter": {
4927                                         "type": "integer",
4928                                         "readOnly": true,
4929                                         "description": "Percentage life time remaining for the water filter"
4930                                     },
4931                                     "rapidFreeze": {
4932                                         "type": "boolean",
4933                                         "description": "Indicates whether the unit has a rapid freeze capability
4934                                         active."
4935                                     },
4936                                     "rapidCool": {
4937                                         "type": "boolean",
4938                                         "description": "Indicates whether the unit has a rapid cool capability
4939                                         active"
4940                                     },
4941                                     "defrost": {
4942                                         "type": "boolean",
4943                                         "description": "Indicates whether a defrost cycle is currently active"
4944                                     }
4945                                 }
4946                             }
4947                         },
4948                         "type": "object",
4949                         "allOf": [
4950                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
4951                             {"$ref": "#/definitions/oic.r.refrigeration"}
4952                         ]
4953                     }
4954
4955     example: /

```

```

4955         {
4956             "rt":          ["oic.r.refrigeration"],
4957             "id":          "unique_example_id",
4958             "filter":      75,
4959             "rapidFreeze": false,
4960             "rapidCool":   false,
4961             "defrost":     true
4962         }
4963
4964     post:
4965         description: |
4966             Activates the desired Refrigeration functions.
4967             Suported values are rapidFreeze, rapidCool and defrost.
4968             At least on of the supported values shall be provided.
4969
4970     body:
4971         application/json:
4972             schema: /
4973                 {
4974                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
4975 Update.json#",
4976                     "$schema": "http://json-schema.org/draft-04/schema#",
4977                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
4978 reserved.",
4979                     "title": "Refrigeration",
4980                     "definitions": {
4981                         "oic.r.refrigeration": {
4982                             "type": "object",
4983                             "anyOf": [
4984                                 {"required": ["rapidFreeze"]},
4985                                 {"required": ["rapidCool"]},
4986                                 {"required": ["defrost"]}
4987                             ],
4988                             "properties": {
4989                                 "rapidFreeze": {
4990                                     "type": "boolean",
4991                                     "description": "Indicates whether the unit has a rapid freeze capability
4992 active."
4993                                 },
4994                                 "rapidCool": {
4995                                     "type": "boolean",
4996                                     "description": "Indicates whether the unit has a rapid cool capability active"
4997                                 },
4998                                 "defrost": {
4999                                     "type": "boolean",
5000                                     "description": "Indicates whether a defrost cycle is currently active"
5001                                 }
5002                             }
5003                         }
5004                     },
5005                     "type": "object",
5006                     "allOf": [
5007                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5008                         {"$ref": "#/definitions/oic.r.refrigeration"}
5009                     ]
5010                 }
5011
5012     example: /
5013         {
5014             "id":          "unique_example_id",
5015             "rapidFreeze": true
5016         }
5017
5018     responses :
5019         200:

```



```

5020         description: |
5021             Indicates that the Refrigeration function was changed.
5022             The new status can be provided in the response.
5023
5024         body:
5025             application/json:
5026                 schema: /
5027                     {
5028                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.refrigeration-
5029 Update.json#",
5030                         "$schema": "http://json-schema.org/draft-04/schema#",
5031                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5032 rights reserved.",
5033                         "title": "Refrigeration",
5034                         "definitions": {
5035                             "oic.r.refrigeration": {
5036                                 "type": "object",
5037                                 "anyOf": [
5038                                     {"required": ["rapidFreeze"]},
5039                                     {"required": ["rapidCool"]},
5040                                     {"required": ["defrost"]}
5041                                 ],
5042                                 "properties": {
5043                                     "rapidFreeze": {
5044                                         "type": "boolean",
5045                                         "description": "Indicates whether the unit has a rapid freeze capability
5046 active."
5047                                     },
5048                                     "rapidCool": {
5049                                         "type": "boolean",
5050                                         "description": "Indicates whether the unit has a rapid cool capability
5051 active"
5052                                     },
5053                                     "defrost": {
5054                                         "type": "boolean",
5055                                         "description": "Indicates whether a defrost cycle is currently active"
5056                                     }
5057                                 }
5058                             }
5059                         },
5060                         "type": "object",
5061                         "allOf": [
5062                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5063                             {"$ref": "#/definitions/oic.r.refrigeration"}
5064                         ]
5065                     }
5066
5067                 example: /
5068                     {
5069                         "id": "unique_example_id",
5070                         "rapidFreeze": true
5071                     }
5072

```

## 5073 6.20.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
filter	정수	예	Read Only	여과기에 대해 남아 있는 수명의 백분율
rapidFreeze	boolean	예		장치가 신속 동결 성능을 활성으로

				하는지를 나타낸다.
defrost	boolean	예		제상 주기가 현재 활성인지를 나타낸다
rapidCool	boolean	예		장치가 신속 냉장 성능을 활성화로 하는지를 나타낸다

## 5074 6.20.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/RefrigerationResURI		get	post		

## 5075 6.21 온도

### 5076 6.21.1 개요

5077 이 resource 는 감지되거나 작동된 온도 값을 기술한다. temperature 는 측정된 현재의 값을  
5078 기술한다. units 는 C, F 또는 K 중 하나인 단일 값이다. 이는 온도 값에 대한 측정 단위를 제공한다.  
5079 이것은 server 가 제공하는 읽기 전용 값이다. units Property 가 없으면 default 는 섭씨[C]이다.  
5080 (oic.r.baseresource 로부터의) 범위가 생략되면 default 는 +/- MAXINT 이다.

5081

### 5082 6.21.2 URI 예

5083 /TemperatureResURI

### 5084 6.21.3 Resource Type

5085 resource type (rt)는 oic.r.temperature 로 정의된다.

### 5086 6.21.4 RAML 정의

```

5087 #%RAML 0.8
5088 title: OICTemperature
5089 version: v1.1.0-20160519
5090 traits:
5091   - interface :
5092     queryParameters:
5093       if:
5094         enum: ["oic.if.a", "oic.if.s", "oic.if.baseline"]
5095
5096 /TemperatureResURI:
5097   description: |
5098     This resource describes a sensed or actuated Temperature value.
5099     The temperature describes the current value measured.
5100     The units is a single value that is one of C, F or K.
5101     It provides the unit of measurement for the temperature value.
```

```

5102     It is a read-only value that is provided by the server.
5103     If the units Property is missing the default is Celsius [C].
5104     When range (from oic.r.baseresource) is omitted the default is +/- MAXINT.
5105
5106     is : ['interface']
5107
5108     get:
5109         description: |
5110             Retrieves the current temperature value.
5111             A client can specify the units for the requested temperature by use of a query parameter.
5112             If no query parameter is provided the server provides its default measure or set value.
5113
5114     queryParameters:
5115         units:
5116             enum: CFK
5117
5118     responses :
5119         200:
5120             body:
5121                 application/json:
5122                     schema: /
5123                         {
5124                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5125                             "$schema": "http://json-schema.org/draft-04/schema#",
5126                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5127                             rights reserved.",
5128                             "title": "Temperature",
5129                             "definitions": {
5130                                 "oic.r.temperature": {
5131                                     "type": "object",
5132                                     "properties": {
5133                                         "temperature": {
5134                                             "type": "number",
5135                                             "description": "Current temperature setting or measurement"
5136                                         },
5137                                         "units": {
5138                                             "enum": ["C", "F", "K"],
5139                                             "description": "Units for the temperature value",
5140                                             "readOnly": true
5141                                         }
5142                                     }
5143                                 },
5144                                 "type": "object",
5145                                 "allOf": [
5146                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5147                                     { "$ref": "#/definitions/oic.r.temperature" }
5148                                 ],
5149                                 "required": ["temperature"]
5150                             }
5151
5152             example: /
5153                 {
5154                     "rt":          ["oic.r.temperature"],
5155                     "id":          "unique_example_id",
5156                     "temperature": 20.0,
5157                     "units":        "C",
5158                     "range":        [0.0,100.0]
5159                 }
5160
5161         403:
5162             description: |
5163                 This response is generated by the OIC Server when the client sends:
5164                 A retrieve with q queryParameter indicating a unit that the server does not support.
5165                 The server responds with the current resource representation including the

```

```

5165         units property illustrating the supported units and the error.
5166
5167     body:
5168         application/json:
5169             schema: /
5170                 {
5171                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5172                     "$schema": "http://json-schema.org/draft-04/schema#",
5173                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5174 rights reserved.",
5175                     "title": "Temperature",
5176                     "definitions": {
5177                         "oic.r.temperature": {
5178                             "type": "object",
5179                             "properties": {
5180                                 "temperature": {
5181                                     "type": "number",
5182                                     "description": "Current temperature setting or measurement"
5183                                 },
5184                                 "units": {
5185                                     "enum": ["C", "F", "K"],
5186                                     "description": "Units for the temperature value",
5187                                     "readOnly": true
5188                                 }
5189                             }
5190                         }
5191                     },
5192                     "type": "object",
5193                     "allOf": [
5194                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5195                         {"$ref": "#/definitions/oic.r.temperature"}
5196                     ],
5197                     "required": ["temperature"]
5198                 }
5199
5200     example: /
5201         {
5202             "id": "unique_example_id",
5203             "temperature": 20.0,
5204             "units": "C"
5205         }
5206
5207     post:
5208         description: |
5209             Sets the desired temperature value.
5210             If a unit is included and the server does not support the unit indicated the request will
5211 fail.
5212             If the units are omitted value is taken to be in C.
5213
5214     body:
5215         application/json:
5216             schema: /
5217                 {
5218                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5219                     "$schema": "http://json-schema.org/draft-04/schema#",
5220                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5221 reserved.",
5222                     "title": "Temperature",
5223                     "definitions": {
5224                         "oic.r.temperature": {
5225                             "type": "object",
5226                             "properties": {
5227                                 "temperature": {
5228                                     "type": "number",
5229                                     "description": "Current temperature setting or measurement"

```

```

5230         },
5231         "units": {
5232             "enum": ["C", "F", "K"],
5233             "description": "Units for the temperature value",
5234             "readOnly": true
5235         }
5236     }
5237 },
5238 },
5239 "type": "object",
5240 "allOf": [
5241     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5242     {"$ref": "#/definitions/oic.r.temperature"}
5243 ],
5244 "required": ["temperature"]
5245 }
5246
5247 example: /
5248 {
5249     "id": "unique_example_id",
5250     "temperature": 18.0
5251 }
5252
5253 responses :
5254 200:
5255     body:
5256         application/json:
5257             schema: /
5258                 {
5259                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5260                     "$schema": "http://json-schema.org/draft-04/schema#",
5261                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
5262                     "title": "Temperature",
5263                     "definitions": {
5264                         "oic.r.temperature": {
5265                             "type": "object",
5266                             "properties": {
5267                                 "temperature": {
5268                                     "type": "number",
5269                                     "description": "Current temperature setting or measurement"
5270                                 },
5271                                 "units": {
5272                                     "enum": ["C", "F", "K"],
5273                                     "description": "Units for the temperature value",
5274                                     "readOnly": true
5275                                 }
5276                             }
5277                         }
5278                     },
5279                     "type": "object",
5280                     "allOf": [
5281                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5282                         {"$ref": "#/definitions/oic.r.temperature"}
5283                     ],
5284                     "required": ["temperature"]
5285                 }
5286
5287
5288 example: /
5289 {
5290     "id": "unique_example_id",
5291     "temperature": 18.0
5292 }
5293
5294 403:

```

```

5295     description: |
5296         This response is generated by the OIC Server when the client sends:
5297         An update with an out of range property value for temperature.
5298         An update with an unsupported unit for this server.
5299         The server responds with the current resource representation including
5300         the range property illustrating the supported range and the error.
5301
5302     body:
5303         application/json:
5304
5305             schema: /
5306
5307             {
5308                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.temperature.json#",
5309                 "$schema": "http://json-schema.org/draft-04/schema#",
5310                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
5311                 "title": "Temperature",
5312                 "definitions": {
5313                     "oic.r.temperature": {
5314                         "type": "object",
5315                         "properties": {
5316                             "temperature": {
5317                                 "type": "number",
5318                                 "description": "Current temperature setting or measurement"
5319                             },
5320                             "units": {
5321                                 "enum": ["C", "F", "K"],
5322                                 "description": "Units for the temperature value",
5323                                 "readOnly": true
5324                             }
5325                         }
5326                     },
5327                     "type": "object",
5328                     "allOf": [
5329                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5330                         {"$ref": "#/definitions/oic.r.temperature"}
5331                     ],
5332                     "required": ["temperature"]
5333                 }
5334
5335             example: /
5336
5337             {
5338                 "id": "unique_example_id",
5339                 "temperature": 20.0,
5340                 "units": "C",
5341                 "range": [0.0,100.0]
5342             }

```

### 5343 6.21.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
units	복수 타입: schema 참조		Read Only	온도 값에 대한 단위
temperature	숫자	예		현재온도의 설정 또는 측정치

### 5344 6.21.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/TemperatureResURI		get	post		

## 5345 6.22 기간

### 5346 6.22.1 개요

5347 이 resource 는 임의의 추가적으로 제공된 정보가 도출되거나 제한되는 기간을 기술한다. startTime  
5348 및 stopTime 은 ISO8601 인코딩된 스트링이다. startTime 은 반드시 있어야 한다. interval 은 분  
5349 단위의 간격이고, 존재한다면, 이 값은 1 분 이상이어야 한다. stoptime 및 interval 은 상호  
5350 배타적이고; 두 Property 가 하나의 Resource instance 에 함께 존재할 수 없다.

5351

### 5352 6.22.2 URI 예

5353 /TimePeriodResURI

### 5354 6.22.3 Resource Type

5355 resource type (rt)는 oic.r.time.period 로 정의된다.

### 5356 6.22.4 RAML 정의

```
5357 #%RAML 0.8
5358 title: OICTimePeriod
5359 version: v1.1.0-20160519
5360 traits:
5361   - interface :
5362       queryParameters:
5363         if:
5364           enum: ["oic.if.a", "oic.if.baseline"]
5365
5366 /TimePeriodResURI:
5367   description: |
5368     This resource describes the time period over which any additionally provided
5369     information is derived or bounded.
5370     The startTime and stopTime are ISO8601 encoded strings
5371     startTime must be present.
5372     The interval is the interval of the time period in minutes, if present this value must be no
5373     less than 1 minute.
5374     stoptime and interval are mutually exclusive; both Properties cannot be present in a Resource
5375     instance.
5376
5377   is : ['interface']
5378   get:
5379     description: |
5380       Defines a time period for information retrieval, action or other behaviour.
5381
5382   responses :
5383     200:
5384       body:
5385         application/json:
5386           schema: /
5387             {
5388               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5389               "$schema": "http://json-schema.org/draft-04/schema#",
5390               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5391               rights reserved.",
5392               "title": "Time Period",
```

```

5393         "definitions": {
5394             "oic.r.time.period": {
5395                 "type": "object",
5396                 "properties": {
5397                     "startTime": {
5398                         "type": "string",
5399                         "description": "Start time for the time period"
5400                     },
5401                     "stopTime": {
5402                         "type": "string",
5403                         "description": "Stop time for the time period, if present interval cannot
5404 be present"
5405                     },
5406                     "interval": {
5407                         "type": "integer",
5408                         "description": "Time interval in minutes after the startTime, if present
5409 stopTime cannot be present"
5410                     },
5411                     "required": ["startTime"]
5412                 },
5413             },
5414             "type": "object",
5415             "allOf": [
5416                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5417                 { "$ref": "#/definitions/oic.r.time.period" }
5418             ]
5419         }
5420     }
5421
5422     example: /
5423     {
5424         "rt": ["oic.r.time.period"],
5425         "id": "unique_example_id",
5426         "startTime": "2015-01-09T14:30Z",
5427         "stopTime": "2015-01-09T14:45Z"
5428     }
5429
5430     post:
5431         description: |
5432             Sets or updates a time period for information retrieval, action or other behavior.
5433
5434         body:
5435             application/json:
5436                 schema: /
5437                 {
5438                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5439                     "$schema": "http://json-schema.org/draft-04/schema#",
5440                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5441 reserved.",
5442                     "title": "Time Period",
5443                     "definitions": {
5444                         "oic.r.time.period": {
5445                             "type": "object",
5446                             "properties": {
5447                                 "startTime": {
5448                                     "type": "string",
5449                                     "description": "Start time for the time period"
5450                                 },
5451                                 "stopTime": {
5452                                     "type": "string",
5453                                     "description": "Stop time for the time period, if present interval cannot be
5454 present"
5455                                 },
5456                                 "interval": {
5457                                     "type": "integer",
5458                                     "description": "Time interval in minutes after the startTime, if present
5459 stopTime cannot be present"

```



```

5460         },
5461     },
5462     "required": ["startTime"]
5463 },
5464 },
5465 "type": "object",
5466 "allOf": [
5467     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5468     {"$ref": "#/definitions/oic.r.time.period"}
5469 ]
5470 }
5471
5472 example: /
5473 {
5474     "id": "unique_example_id",
5475     "startTime": "2015-01-09T14:30Z",
5476     "stopTime": "2015-01-09T14:45Z"
5477 }
5478
5479 responses :
5480 200:
5481     body:
5482         application/json:
5483             schema: /
5484                 {
5485                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
5486                     "$schema": "http://json-schema.org/draft-04/schema#",
5487                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5488 rights reserved.",
5489                     "title": "Time Period",
5490                     "definitions": {
5491                         "oic.r.time.period": {
5492                             "type": "object",
5493                             "properties": {
5494                                 "startTime": {
5495                                     "type": "string",
5496                                     "description": "Start time for the time period"
5497                                 },
5498                                 "stopTime": {
5499                                     "type": "string",
5500                                     "description": "Stop time for the time period, if present interval cannot
5501 be present"
5502                                 },
5503                                 "interval": {
5504                                     "type": "integer",
5505                                     "description": "Time interval in minutes after the startTime, if present
5506 stopTime cannot be present"
5507                                 }
5508                             },
5509                             "required": ["startTime"]
5510                         }
5511                     },
5512                     "type": "object",
5513                     "allOf": [
5514                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5515                         {"$ref": "#/definitions/oic.r.time.period"}
5516                     ]
5517                 }
5518
5519 example: /
5520 {
5521     "id": "unique_example_id",
5522     "startTime": "2015-01-09T14:30Z",
5523     "stopTime": "2015-01-09T14:45Z"
5524 }
5525

```

5526 **6.22.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
stopTime	스트링			기간의 종료 시간. 이 property 가 있으면 interval 이 있을 수 없다.
startTime	스트링	예		기간의 시작 시간
interval	정수			startTime 이후 분 단위의 시간 간격. 이 property 가 있으면 stopTime 이 있을 수 없다.

5527 **6.22.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		

5528 **6.23 동작 카운트**

5529 **6.23.1 개요**

5530 이 resource 는 동작 카운트를 기술한다. 이 resource 는 readonly(oic.if.s interface)가 될 수 있고,  
 5531 이 경우 count 값을 제공한다. 본 resource 는 readwrite (oic.if.a interface)가 될 수 있고, 이 경우  
 5532 count 에 대한 목표를 제공한다. count property 는 현재의 카운트 또는 목표 값을 표현하는  
 5533 정수이다.

5534 **6.23.2 URI 예**

5535 /ActivityCountResURI

5536 **6.23.3 Resource Type**

5537 resource type (rt)는 oic.r.sensor.activity.count 로 정의된다.

5538 **6.23.4 RAML 정의**

```

5539 #%RAML 0.8
5540 title: OICActivityCount
5541 version: v1.1.0-20160519
5542 traits:
5543   - interface :
5544     queryParameters:
  
```

```

5545         if:
5546             enum: ["oic.if.s", "oic.if.a", "oic.if.baseline"]
5547
5548 /ActivityCountResURI:
5549     description: |
5550         This resource specifies an activity count.
5551         The resource can be readonly (oic.if.s interface) in which instance it represents a count.
5552         The resource can be readwrite (oic.if.a interface) in which instance it represents a goal or
5553 target for a count.
5554         The count property is an integer representing either the current count or goal value.
5555
5556     is : ['interface']
5557
5558     get:
5559         description: |
5560             Retrieves the current activity count.
5561
5562     responses :
5563         200:
5564             body:
5565                 application/json:
5566                     schema: /
5567                         {
5568 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5569 "$schema": "http://json-schema.org/draft-04/schema#",
5570 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5571 rights reserved.",
5572 "title": "Activity Count Sensor",
5573 "definitions": {
5574     "oic.r.sensor.activity.count": {
5575         "properties": {
5576             "count": {
5577                 "type": "integer",
5578                 "description": "Current or Target count."
5579             }
5580         }
5581     },
5582     "type": "object",
5583     "allOf": [
5584         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5585         {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5586     ],
5587     "required": ["count"]
5588     }
5589
5590     example: /
5591         {
5592             "rt": ["oic.r.sensor.activity.count"],
5593             "id": "unique_example_id",
5594             "count": 2500
5595         }
5596
5597
5598     post:
5599         description: |
5600             Sets the count target
5601
5602     body:
5603         application/json:
5604             schema: /

```

```

5605     {
5606         "id":
5607         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5608         "$schema": "http://json-schema.org/draft-04/schema#",
5609         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5610 reserved.",
5611         "title": "Activity Count Sensor",
5612         "definitions": {
5613             "oic.r.sensor.activity.count": {
5614                 "properties": {
5615                     "count": {
5616                         "type": "integer",
5617                         "description": "Current or Target count."
5618                     }
5619                 }
5620             }
5621         },
5622         "type": "object",
5623         "allOf": [
5624             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5625             {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5626         ],
5627         "required": ["count"]
5628     }
5629
5630     example: /
5631     {
5632         "id":      "unique_example_id",
5633         "count":   5000
5634     }
5635
5636     responses :
5637         200:
5638             body:
5639                 application/json:
5640                     schema: /
5641                     {
5642                         "id":
5643                         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.activity.count.json#",
5644                         "$schema": "http://json-schema.org/draft-04/schema#",
5645                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5646 rights reserved.",
5647                         "title": "Activity Count Sensor",
5648                         "definitions": {
5649                             "oic.r.sensor.activity.count": {
5650                                 "properties": {
5651                                     "count": {
5652                                         "type": "integer",
5653                                         "description": "Current or Target count."
5654                                     }
5655                                 }
5656                             }
5657                         },
5658                         "type": "object",
5659                         "allOf": [
5660                             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5661                             {"$ref": "#/definitions/oic.r.sensor.activity.count"}
5662                         ],
5663                         "required": ["count"]
5664                     }
5665
5666     example: /
5667     {
5668         "id":      "unique_example_id",
5669         "count":   5000

```

5670                    }  
5671

## 5672   6.23.5   Property 정의

Property name	Value type	필수	엑세스 모드	설명
count	정수	예		현재 또는 목표 카운트.

## 5673   6.23.6   CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		

## 5674   6.24   대기압 센서

### 5675   6.24.1   개요

5676   이 resource 는 측정점에서 겪는 평균 해수면 압력의 밀리바 단위의 측정치를 제공한다. 값은 hPa  
5677   (hectoPascals) 단위로 대기압을 기술하는 부동 소수점 형이다. hPa 와 일반적으로 또한 사용되는  
5678   단위인 밀리바 (mbar)는 수치적으로 동등하다.

5679

### 5680   6.24.2   URI 예

5681   /AtmosphericPressureResURI

### 5682   6.24.3   Resource Type

5683   resource type (rt)는 oic.r.sensor.atmosphericpressure 로 정의된다.

### 5684   6.24.4   RAML 정의

```
5685  #%RAML 0.8
5686  title: OICAtmosphericPressureSensor
5687  version: v1.1.0-20160519
5688  traits:
5689    - interface :
5690      queryParameters:
5691        if:
5692          enum: ["oic.if.s", "oic.if.baseline"]
5693
5694  /AtmosphericPressureResURI:
5695    description: |
5696      This resource provides a measurement of Mean Sea Level Pressure experienced at the measuring
5697      point expressed in millibars.
5698      The value is float which describes the atmospheric pressure in hPa (hectoPascals).
5699      Note that hPa and the also commonly used unit of millibars (mbar) are numerically equivalent.
5700
5701    is : ['interface']
5702    get:
5703      responses :
5704        200:
5705          body:
```

```

5706     application/json:
5707         schema: /
5708             {
5709                 "id":
5710                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.atmosphericPressure.json#",
5711                 "$schema": "http://json-schema.org/draft-04/schema#",
5712                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5713 rights reserved.",
5714                 "title": "Atmospheric Pressure Sensor",
5715                 "definitions": {
5716                     "oic.r.sensor.atmosphericpressure": {
5717                         "properties": {
5718                             "atmosphericPressure": {
5719                                 "type": "number",
5720                                 "readOnly": true,
5721                                 "description": "Current atmospheric pressure in hPa."
5722                             }
5723                         }
5724                     }
5725                 },
5726                 "type": "object",
5727                 "allOf": [
5728                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5729                     {"$ref": "#/definitions/oic.r.sensor.atmosphericpressure"}
5730                 ],
5731                 "required": ["atmosphericPressure"]
5732             }
5733
5734         example: /
5735             {
5736                 "rt":                ["oic.r.sensor.atmosphericpressure"],
5737                 "id":                "unique_example_id",
5738                 "atmosphericPressure": 1000.4
5739             }
5740

```

## 5741 6.24.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
atmosphericPressure	숫자	예	Read Only	hPa 단위의 현재 대기압

## 5742 6.24.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			

## 5743 6.25 오디오 제어

### 5744 6.25.1 개요

5745 이 resource 는 기본적인 오디오 제어 기능을 정의한다. Volume 은 백분율 [0,100]을 나타내는  
5746 정수이다. 0 의 volume 은 사운드가 생성되지 않음을 의미한다. 100 의 volume 은 최대 음량을  
5747 의미한다. mute 제어는 Boolean 형으로 구현된다. true 의 mute 값은 device 가 무음 상태임을  
5748 의미한다. false 의 mute 값은 device 가 무음 상태가 아님을 의미한다.

5749

## 5750 6.25.2 URI 예

5751 /AudioResURI

## 5752 6.25.3 Resource Type

5753 resource type (rt)는 oic.r.audio 로 정의된다.

## 5754 6.25.4 RAML 정의

```
5755 #%RAML 0.8
5756 title: OICAudio
5757 version: v1.1.0-20160519
5758 traits:
5759   - interface :
5760     queryParameters:
5761       if:
5762         enum: ["oic.if.a", "oic.if.baseline"]
5763
5764 /AudioResURI:
5765   description: |
5766     This resource defines basic audio control functions.
5767     The volume is an integer containing a percentage [0,100].
5768     A volume of 0 (zero) means no sound produced.
5769     A volume of 100 means maximum sound production.
5770     The mute control is implemented as a boolean.
5771     A mute value of true means that the device is muted (no audio).
5772     A mute value of false means that the device is not muted (audio).
5773
5774   is : ['interface']
5775   get:
5776     responses :
5777       200:
5778         body:
5779           application/json:
5780             schema: /
5781               {
5782                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5783                 "$schema": "http://json-schema.org/draft-04/schema#",
5784                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5785 rights reserved.",
5786                 "definitions": {
5787                   "oic.r.audio": {
5788                     "type": "object",
5789                     "properties": {
5790                       "volume": {
5791                         "type": "integer",
5792                         "description": "Volume setting of an audio rendering device.",
5793                         "minimum": 0,
5794                         "maximum": 100
5795                       },
5796                       "mute": {
5797                         "type": "boolean",
5798                         "description": "Mute setting of an audio rendering device"
5799                       }
5800                     }
5801                   }
5802                 },
5803                 "type": "object",
5804                 "allOf": [
5805                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5806                   {"$ref": "#/definitions/oic.r.audio"}
5807                 ]
5808               }
```

```

5807         ],
5808         "required": ["volume", "mute"]
5809     }
5810
5811     example: /
5812     {
5813         "rt":      ["oic.r.audio"],
5814         "id":      "unique_example_id",
5815         "volume": 50,
5816         "mute":    false
5817     }
5818
5819     post:
5820     body:
5821     application/json:
5822     schema: /
5823     {
5824         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5825         "$schema": "http://json-schema.org/draft-04/schema#",
5826         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5827 reserved.",
5828         "definitions": {
5829             "oic.r.audio": {
5830                 "type": "object",
5831                 "properties": {
5832                     "volume": {
5833                         "type": "integer",
5834                         "description": "Volume setting of an audio rendering device.",
5835                         "minimum": 0,
5836                         "maximum": 100
5837                     },
5838                     "mute": {
5839                         "type": "boolean",
5840                         "description": "Mute setting of an audio rendering device"
5841                     }
5842                 }
5843             },
5844             "type": "object",
5845             "allOf": [
5846                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
5847                 {"$ref": "#/definitions/oic.r.audio"}
5848             ],
5849             "required": ["volume", "mute"]
5850         }
5851     }
5852
5853     example: /
5854     {
5855         "id":      "unique_example_id",
5856         "volume": 75,
5857         "mute":    false
5858     }
5859
5860     responses :
5861     200:
5862     body:
5863     application/json:
5864     schema: /
5865     {
5866         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.audio.json#",
5867         "$schema": "http://json-schema.org/draft-04/schema#",
5868         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5869 rights reserved.",
5870         "definitions": {

```



```

5871         "oic.r.audio": {
5872             "type": "object",
5873             "properties": {
5874                 "volume": {
5875                     "type": "integer",
5876                     "description": "Volume setting of an audio rendering device.",
5877                     "minimum": 0,
5878                     "maximum": 100
5879                 },
5880                 "mute": {
5881                     "type": "boolean",
5882                     "description": "Mute setting of an audio rendering device"
5883                 }
5884             }
5885         },
5886     },
5887     "type": "object",
5888     "allOf": [
5889         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5890         { "$ref": "#/definitions/oic.r.audio" }
5891     ],
5892     "required": ["volume", "mute"]
5893 }
5894
5895 example: /
5896 {
5897     "id":      "unique_example_id",
5898     "volume":  75,
5899     "mute":    false
5900 }
5901

```

#### 5902 6.25.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
volume	정수	예		오디오 출력 장치의 음량 설정.
mute	boolean	예		오디오 출력 장치의 무음 설정

#### 5903 6.25.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		

### 5904 6.26 자동 초점

#### 5905 6.26.1 개요

5906 이 resource 는 자동 초점의 on/off 기능을 기술한다. 값은 Boolean 형이다. 'true'의 AutoFocus  
5907 값은 스위치가 on 되었음을 의미한다. 'false'의 AutoFocus 값은 스위치가 off 되었음을 의미한다.  
5908 회전 경사 줌 ('Pan Tilt Zoom' Resource 정의 참조)이 사용될 때, autofocus 는 선택된 영역에만  
5909 작용된다.

## 5910 6.26.2 URI 예

5911 /AutoFocusResURI

## 5912 6.26.3 Resource Type

5913 resource type (rt)는 oic.r.autofocus 로 정의된다.

## 5914 6.26.4 RAML 정의

```
5915 #%RAML 0.8
5916 title: OICAutoFocus
5917 version: v1.1.0-20160519
5918 traits:
5919   - interface :
5920     queryParameters:
5921       if:
5922         enum: ["oic.if.a", "oic.if.baseline"]
5923
5924 /AutoFocusResURI:
5925   description: |
5926     This resource describes an auto focus on/off feature.
5927     The value is a boolean.
5928     An AutoFocus value of 'true' means that the switch is on.
5929     An AutoFocus value of 'false' means that the switch is off.
5930     Note that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource definition) is used the autofocus
5931     works only in the selected area.
5932
5933   is : ['interface']
5934   get:
5935     responses :
5936       200:
5937         body:
5938           application/json:
5939             schema: /
5940               {
5941                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
5942                 "$schema": "http://json-schema.org/draft-04/schema#",
5943                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
5944 rights reserved.",
5945                 "title": "Auto Focus",
5946                 "definitions": {
5947                   "oic.r.autofocus": {
5948                     "type": "object",
5949                     "properties": {
5950                       "autoFocus": {
5951                         "type": "boolean",
5952                         "description": "Status of the Auto Focus"
5953                       }
5954                     }
5955                   }
5956                 },
5957                 "type": "object",
5958                 "allOf": [
5959                   { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5960                   { "$ref": "#/definitions/oic.r.autofocus" }
5961                 ],
5962                 "required": [ "autoFocus" ]
5963               }
5964
5965   example: /
```

```

5966         {
5967             "rt":          ["oic.r.autofocus"],
5968             "id":          "unique_example_id",
5969             "autoFocus":   false
5970         }
5971
5972     post:
5973     body:
5974         application/json:
5975
5976         schema: /
5977             {
5978                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
5979                 "$schema": "http://json-schema.org/draft-04/schema#",
5980                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
5981 reserved.",
5982                 "title": "Auto Focus",
5983                 "definitions": {
5984                     "oic.r.autofocus": {
5985                         "type": "object",
5986                         "properties": {
5987                             "autoFocus": {
5988                                 "type": "boolean",
5989                                 "description": "Status of the Auto Focus"
5990                             }
5991                         }
5992                     },
5993                     "type": "object",
5994                     "allOf": [
5995                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
5996                         { "$ref": "#/definitions/oic.r.autofocus" }
5997                     ],
5998                     "required": [ "autoFocus" ]
5999                 }
6000
6001     example: /
6002         {
6003             "id":          "unique_example_id",
6004             "autoFocus":   true
6005         }
6006
6007     responses :
6008     200:
6009     body:
6010         application/json:
6011
6012         schema: /
6013             {
6014                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.autofocus.json#",
6015                 "$schema": "http://json-schema.org/draft-04/schema#",
6016                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6017 rights reserved.",
6018                 "title": "Auto Focus",
6019                 "definitions": {
6020                     "oic.r.autofocus": {
6021                         "type": "object",
6022                         "properties": {
6023                             "autoFocus": {
6024                                 "type": "boolean",
6025                                 "description": "Status of the Auto Focus"
6026                             }
6027                         }
6028                     },
6029                     "type": "object",
6030                     "allOf": [

```

```

6031         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6032         {"$ref": "#/definitions/oic.r.autofocus"}
6033     ],
6034     "required": [ "autoFocus" ]
6035 }
6036
6037     example: /
6038     {
6039         "id":          "unique_example_id",
6040         "autoFocus":   true
6041     }
6042

```

## 6.26.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
autoFocus	boolean	예		자동 초점 상태

## 6.26.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		

## 6.27 자동 급지 장치

### 6.27.1 개요

이 resource 는 일반적으로 스캐너와 함께 사용되는 자동 급지 장치의 상태를 기술한다. 상태는 읽기 전용이다. adfStates 는 가능한 동작 상태의 배열이다. adfProcessing 는 OK 상태이고, 다른 상태 는 에러이거나, '사용자의 관심'을 요구한다. currentAdfState 는 device 에 대한 ADF 상태의 현재의 값이다.

### 6.27.2 URI 예

/AutomaticDocumentFeederResURI

### 6.27.3 Resource Type

resource type (rt)는 oic.r.automaticdocumentfeeder 로 정의된다.

### 6.27.4 RAML 정의

```

6056  #RAML 0.8
6057  title: OICAAutomaticDocumentFeeder
6058  version: v1.1.0-20160519
6059  traits:
6060    - interface :
6061        queryParameters:
6062            if:
6063                enum: ["oic.if.s", "oic.if.baseline"]
6064
6065  /AutomaticDocumentFeederResURI:
6066      description: |
6067          This resource describes the state of an automatic document feeder, typically used with a
6068          scanner.
6069          The states are read only.

```

```

6070     The adfStates is an array of the possible operational states.
6071     adfProcessing is the OK state, other states are errors or require 'user attention'.
6072     The currentAdfState is the current value of the ADF state on the device.
6073
6074     is : ['interface']
6075
6076     get:
6077         description: |
6078             Retrieves the current automatic document feeder state.
6079
6080     responses :
6081         200:
6082             body:
6083                 application/json:
6084                     schema: /
6085                         {
6086                             "id":
6087                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.automaticDocumentFeeder.json#",
6088                             "$schema": "http://json-schema.org/draft-04/schema#",
6089                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6090                             rights reserved.",
6091                             "title": "Automatic Document Feeder",
6092                             "definitions": {
6093                                 "oic.r.automaticdocumentfeeder": {
6094                                     "type": "object",
6095                                     "properties": {
6096                                         "adfStates": {
6097                                             "type": "array",
6098                                             "readOnly": true,
6099                                             "description": "array of the possible adf states.",
6100                                             "items": {
6101                                                 "type": "string"
6102                                             }
6103                                         },
6104                                         "currentAdfState": {
6105                                             "type": "string",
6106                                             "readOnly": true,
6107                                             "description": "Current adf state."
6108                                         }
6109                                     }
6110                                 },
6111                                 "type": "object",
6112                                 "allOf": [
6113                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6114                                     { "$ref": "#/definitions/oic.r.automaticdocumentfeeder" }
6115                                 ],
6116                                 "required": ["adfStates", "currentAdfState"]
6117                             }
6118
6119     example: /
6120         {
6121             "rt": ["oic.r.automaticdocumentfeeder"],
6122             "id": "unique_example_id",
6123             "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",
6124             "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",
6125             "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],
6126             "currentAdfState": "adfProcessing"
6127         }
6128

```

## 6.27.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
---------------	------------	----	--------	----

adfStates	배열: schema 참조	예	Read Only	가능한 adf 상태의 배열.
currentAdfState	스트링	예	Read Only	현재의 adf 상태.

## 6.27.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			

## 6.28 버튼 스위치

### 6.28.1 개요

이 resource 는 버튼 타입 스위치의 동작을 기술한다. 값은 Boolean 형이다. 'true' 값은 버튼이 눌러진 것을 의미한다. 'false' 값은 버튼이 눌러지지 않은 것을 의미한다.

### 6.28.2 URI 예

/ButtonResURI

### 6.28.3 Resource Type

resource type (rt)는 oic.r.button 으로 정의된다.

### 6.28.4 RAML 정의

```

#%RAML 0.8
title: OICButton
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/ButtonResURI:

    description: |
        This resource describes the operation of a button style switch.
        The value is a boolean.
        A value of 'true' means that the button is being pushed/pressed.
        A value of 'false' means that the button is not being pushed/pressed.

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                        {
                            "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.button.json#",
                            "$schema": "http://json-schema.org/draft-04/schema#",
                            "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All

```

```

6168 rights reserved.",
6169     "title": "Button Switch",
6170     "definitions": {
6171       "oic.r.button": {
6172         "properties": {
6173           "value": {
6174             "type": "boolean",
6175             "readOnly": true,
6176             "description": "Status of the button"
6177           }
6178         }
6179       },
6180     },
6181     "type": "object",
6182     "allOf": [
6183       {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6184       {"$ref": "#/definitions/oic.r.button"}
6185     ],
6186     "required": ["value"]
6187   }
6188
6189   example: /
6190   {
6191     "rt": ["oic.r.button"],
6192     "id": "unique_example_id",
6193     "value": true
6194   }
6195

```

## 6196 6.28.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	버튼 의 상태

## 6197 6.28.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			

## 6198 6.29 이산화탄소 센서

### 6199 6.29.1 개요

6200 이 resource 는 이산화탄소가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은  
 6201 이산화탄소가 검출되었음을 의미한다. 'false' 값은 이산화탄소가 검출되지 않았음을 의미한다.

6202

### 6203 6.29.2 URI 예

6204 /CarbonDioxideResURI

### 6205 6.29.3 Resource Type

6206 resource type (rt)는 oic.r.sensor.carbondioxide 로 정의된다.

### 6207 6.29.4 RAML 정의

```

6208 #%RAML 0.8
6209 title: OIICarbonDioxideSensor
6210 version: v1.1.0-20160519

```

```

6211 traits:
6212   - interface :
6213     queryParameters:
6214       if:
6215         enum: ["oic.if.s", "oic.if.baseline"]
6216
6217 /CarbonDioxideResURI:
6218   description: |
6219     This resource describes whether carbon dioxide has been sensed or not.
6220     The value is a boolean.
6221     A value of 'true' means that carbon dioxide has been detected.
6222     A value of 'false' means that carbon dioxide has not been detected.
6223
6224   is : ['interface']
6225   get:
6226     responses :
6227       200:
6228         body:
6229           application/json:
6230             schema: /
6231               {
6232                 "id":
6233 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonDioxide.json#",
6234                 "$schema": "http://json-schema.org/draft-04/schema#",
6235                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6236 rights reserved.",
6237                 "title": "Carbon Dioxide Sensor",
6238                 "definitions": {
6239                   "oic.r.sensor.carbondioxide": {
6240                     "allOf": [
6241                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
6242                     ]
6243                   }
6244                 },
6245                 "type": "object",
6246                 "allOf": [
6247                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6248                   {"$ref": "#/definitions/oic.r.sensor.carbondioxide"}
6249                 ],
6250                 "required": ["value"]
6251               }
6252
6253   example: /
6254     {
6255       "rt":      ["oic.r.sensor.carbondioxide"],
6256       "id":      "unique_example_id",
6257       "value": true
6258     }
6259

```

## 6.29.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	True = 검출 False = 미 검출

## 6.29.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------



/CarbonDioxideResURI		get			
----------------------	--	-----	--	--	--

## 6.30 일산화탄소 센서

### 6.30.1 개요

이 resource 는 일산화탄소가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 일산화탄소가 검출되었음을 의미한다. 'false' 값은 일산화탄소가 검출되지 않았음을 의미한다.

### 6.30.2 URI 예

/CarbonMonoxideResURI

### 6.30.3 Resource Type

resource type (rt)는 oic.r.sensor.carbonmonoxide 로 정의된다.

### 6.30.4 RAML 정의

```

#%RAML 0.8
title: OICCarbonMonoxideSensor
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.s", "oic.if.baseline"]

/CarbonMonoxideResURI:
    description: |
        This resource describes whether carbon monoxide has been sensed or not.
        The value is a boolean.
        A value of 'true' means that carbon monoxide has been detected.
        A value of 'false' means that carbon monoxide has not been detected.

    is : ['interface']
    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "id":
"http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.carbonMonoxide.json#",
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                                "title": "Carbon Monoxide Sensor",
                                "definitions": {
                                    "oic.r.sensor.carbonmonoxide": {
                                        "allOf": [
                                            { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
                                        ]
                                    }
                                },
                                "type": "object",

```

```

6310         "allOf": [
6311             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6312             { "$ref": "#/definitions/oic.r.sensor.carbonmonoxide" }
6313         ],
6314         "required": ["value"]
6315     }
6316
6317     example: /
6318     {
6319         "rt":      ["oic.r.sensor.carbonmonoxide"],
6320         "id":      "unique_example_id",
6321         "value":   true
6322     }
6323

```

### 6324 6.30.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 검출 False = 미 검출

### 6325 6.30.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			

## 6326 6.31 자동 화이트 밸런스

### 6327 6.31.1 개요

6328 이 resource 는 자동 화이트 밸런스의 on/off 기능을 기술한다. 값은 boolean 형이다. 'true'의  
6329 AutoWhiteBalance 값은 스위치가 on 인 것을 의미한다. 'false'의 AutoWhiteBalance 값은 스위치가  
6330 off 인 것을 의미한다.

### 6331 6.31.2 URI 예

6332 /AutoWhiteBalanceResURI

### 6333 6.31.3 Resource Type

6334 resource type (rt)는 oic.r.colour.autowhitebalance 로 정의된다.

### 6335 6.31.4 RAML 정의

```

6336 #%RAML 0.8
6337 title: OICAutoWhiteBalance
6338 version: v1.1.0-20160519
6339 traits:
6340   - interface :
6341       queryParameters:
6342         if:
6343           enum: ["oic.if.a", "oic.if.baseline"]
6344
6345 /AutoWhiteBalanceResURI:
6346   description: |

```

```

6347     This resource describes an auto balance on/off feature.
6348     The value is a boolean.
6349     An AutoWhiteBalance value of 'true' means that the switch is on.
6350     An AutoWhiteBalance value of 'false' means that the switch is off.
6351
6352     is : ['interface']
6353
6354     get:
6355         responses :
6356             200:
6357                 body:
6358                     application/json:
6359                         schema: /
6360                             {
6361                                 "id":
6362                                     "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
6363                                 "$schema": "http://json-schema.org/draft-04/schema#",
6364                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6365 rights reserved.",
6366                                 "title": "Auto White Balance",
6367                                 "definitions": {
6368                                     "oic.r.colour.autowhitebalance": {
6369                                         "type": "object",
6370                                         "properties": {
6371                                             "autoWhiteBalance": {
6372                                                 "type": "boolean",
6373                                                 "description": "Status of the Auto White balance"
6374                                             }
6375                                         }
6376                                     }
6377                                 },
6378                                 "type": "object",
6379                                 "allOf": [
6380                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6381                                     { "$ref": "#/definitions/oic.r.colour.autowhitebalance" }
6382                                 ],
6383                                 "required": [ "autoWhiteBalance" ]
6384                             }
6385
6386                         example: /
6387                             {
6388                                 "rt":          ["oic.r.colour.autowhitebalance"],
6389                                 "id":          "unique_example_id",
6390                                 "autoWhiteBalance": false
6391                             }
6392
6393     post:
6394         body:
6395             application/json:
6396                 schema: /
6397                     {
6398                         "id":
6399                             "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
6400                         "$schema": "http://json-schema.org/draft-04/schema#",
6401                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6402 reserved.",
6403                         "title": "Auto White Balance",
6404                         "definitions": {
6405                             "oic.r.colour.autowhitebalance": {
6406                                 "type": "object",
6407                                 "properties": {
6408                                     "autoWhiteBalance": {
6409                                         "type": "boolean",
6410                                         "description": "Status of the Auto White balance"
6411                                     }
6412                             }
6413                         }

```

```

6412     }
6413   },
6414   "type": "object",
6415   "allOf": [
6416     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6417     { "$ref": "#/definitions/oic.r.colour.autowhitebalance" }
6418   ],
6419   "required": [ "autoWhiteBalance" ]
6420 }
6421
6422 example: /
6423 {
6424   "id": "unique_example_id",
6425   "autoWhiteBalance": true
6426 }
6427
6428 responses :
6429 200:
6430   body:
6431     application/json:
6432       schema: /
6433         {
6434           "id":
6435 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.autowhitebalance.json#",
6436           "$schema": "http://json-schema.org/draft-04/schema#",
6437           "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6438 rights reserved.",
6439           "title": "Auto White Balance",
6440           "definitions": {
6441             "oic.r.colour.autowhitebalance": {
6442               "type": "object",
6443               "properties": {
6444                 "autoWhiteBalance": {
6445                   "type": "boolean",
6446                   "description": "Status of the Auto White balance"
6447                 }
6448             }
6449           },
6450           "type": "object",
6451           "allOf": [
6452             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6453             { "$ref": "#/definitions/oic.r.colour.autowhitebalance" }
6454           ],
6455           "required": [ "autoWhiteBalance" ]
6456         }
6457       }
6458
6459 example: /
6460 {
6461   "id": "unique_example_id",
6462   "autoWhiteBalance": true
6463 }
6464

```

### 6.31.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
autoWhiteBalance	boolean	예		자동 화이트 밸런스의 상태

## 6466 6.31.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		

## 6467 6.32 채도

### 6468 6.32.1 개요

6469 이 resource 는 채도 값을 기술한다. 값은 정수이다. coloursaturation 은 [0,100]의 범위를 갖는다.  
 6470 0 의 coloursaturation 값은 흑백 이미지의 생성을 의미한다. 50 의 coloursaturation 값은 device  
 6471 고유의 정상적인 컬러 이미지의 생성을 의미한다. 100 의 coloursaturation 값은 device 의 풀 컬러  
 6472 이미지의 생성을 의미한다.

### 6473 6.32.2 URI 예

6474 /ColourSaturationResURI

### 6475 6.32.3 Resource Type

6476 resource type (rt)는 oic.r.colour.saturation 으로 정의된다.

### 6477 6.32.4 RAML 정의

```

6478 #%RAML 0.8
6479 title: OIcColourSaturation
6480 version: v1.1.0-20160519
6481 traits:
6482   - interface :
6483     queryParameters:
6484       if:
6485         enum: ["oic.if.a", "oic.if.baseline"]
6486
6487 /ColourSaturationResURI:
6488   description: |
6489     This resource describes a Colour saturation value.
6490     The value is an integer.
6491     A coloursaturation has a range of [0,100].
6492     A coloursaturation value of 0 means producing black and white images.
6493     A coloursaturation value of 50 means producing device specific normal colour images.
6494     A coloursaturation value of 100 means producing device very full colour images.
6495
6496   is : ['interface']
6497   get:
6498     responses :
6499       200:
6500         body:
6501           application/json:
6502             schema: /
6503               {
6504                 "id":
6505                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6506                 "$schema": "http://json-schema.org/draft-04/schema#",
6507                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6508 rights reserved.",
6509                 "title": "Colour Saturation",

```

```

6510         "definitions": {
6511             "oic.r.colour.saturation": {
6512                 "type": "object",
6513                 "properties": {
6514                     "colourSaturation": {
6515                         "type": "integer",
6516                         "description": "The colour saturation value",
6517                         "minimum": 0,
6518                         "maximum": 100
6519                     }
6520                 }
6521             },
6522             "type": "object",
6523             "allOf": [
6524                 { "$ref": "oic.core.json#/definitions/oic.core" },
6525                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6526                 { "$ref": "#/definitions/oic.r.colour.saturation" }
6527             ],
6528             "required": [ "colourSaturation" ]
6529         }
6530     }
6531
6532     example: /
6533     {
6534         "rt": [ "oic.r.colour.saturation" ],
6535         "id": "unique_example_id",
6536         "colourSaturation": 50
6537     }
6538
6539     post:
6540         body:
6541             application/json:
6542                 schema: /
6543                 {
6544                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6545                     "$schema": "http://json-schema.org/draft-04/schema#",
6546                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6547 reserved.",
6548                     "title": "Colour Saturation",
6549                     "definitions": {
6550                         "oic.r.colour.saturation": {
6551                             "type": "object",
6552                             "properties": {
6553                                 "colourSaturation": {
6554                                     "type": "integer",
6555                                     "description": "The colour saturation value",
6556                                     "minimum": 0,
6557                                     "maximum": 100
6558                                 }
6559                             }
6560                         }
6561                     },
6562                     "type": "object",
6563                     "allOf": [
6564                         { "$ref": "oic.core.json#/definitions/oic.core" },
6565                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6566                         { "$ref": "#/definitions/oic.r.colour.saturation" }
6567                     ],
6568                     "required": [ "colourSaturation" ]
6569                 }
6570
6571     example: /
6572     {
6573         "id": "unique_example_id",
6574         "colourSaturation": 60
6575     }
6576

```

```

6577     responses :
6578     200:
6579         body:
6580             application/json:
6581                 schema: /
6582                     {
6583                         "id":
6584 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.colour.saturation.json#",
6585                         "$schema": "http://json-schema.org/draft-04/schema#",
6586                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6587 rights reserved.",
6588                         "title": "Colour Saturation",
6589                         "definitions": {
6590                             "oic.r.colour.saturation": {
6591                                 "type": "object",
6592                                 "properties": {
6593                                     "colourSaturation": {
6594                                         "type": "integer",
6595                                         "description": "The colour saturation value",
6596                                         "minimum": 0,
6597                                         "maximum": 100
6598                                     }
6599                                 }
6600                             },
6601                             "type": "object",
6602                             "allOf": [
6603                                 { "$ref": "oic.core.json#/definitions/oic.core" },
6604                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6605                                 { "$ref": "#/definitions/oic.r.colour.saturation" }
6606                             ],
6607                             "required": [ "colourSaturation" ]
6608                         }
6609                     }
6610
6611             example: /
6612                 {
6613                     "id": "unique_example_id",
6614                     "colourSaturation": 60
6615                 }
6616

```

### 6.32.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
colourSaturation	정수	예		채도 값

### 6.32.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		

## 6.33 접촉 센서

### 6.33.1 개요

이 resource 는 접촉 센서가 개방 또는 단락 되었는지를 기술한다. 전형적인 사용은 창 또는 도어가  
 개방된 것을 검출하는 보안 시스템의 경우이다. 값은 Boolean 형이다. 'true' 값은 접촉이  
 끊어졌음(개방)을 의미한다. 'false' 값은 접촉이 이루어졌음(폐쇄)을 의미한다.

## 6624 6.33.2 URI 예

6625 /ContactResURI

## 6626 6.33.3 Resource Type

6627 resource type (rt)는 oic.r.sensor.contact 로 정의된다.

## 6628 6.33.4 RAML 정의

```
6629 #%RAML 0.8
6630 title: OICContactSensor
6631 version: v1.1.0-20160519
6632 traits:
6633   - interface :
6634     queryParameters:
6635       if:
6636         enum: ["oic.if.s", "oic.if.baseline"]
6637
6638 /ContactResURI:
6639   description: |
6640     This resource describes whether a contact sensor has been tripped or not.
6641     Typical use case is in Security Systems detecting window or door open.
6642     The value is a boolean.
6643     A value of 'true' means that contact has been broken (open).
6644     A value of 'false' means that contact is in place (closed).
6645
6646   is : ['interface']
6647   get:
6648     responses :
6649       200:
6650         body:
6651           application/json:
6652             schema: /
6653               {
6654                 "id":
6655 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.contact.json#",
6656                 "$schema": "http://json-schema.org/draft-04/schema#",
6657                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6658 rights reserved.",
6659                 "title": "Contact Sensor",
6660                 "definitions": {
6661                   "oic.r.sensor.contact": {
6662                     "allOf": [
6663                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
6664                     ]
6665                   }
6666                 },
6667                 "type": "object",
6668                 "allOf": [
6669                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6670                   {"$ref": "#/definitions/oic.r.sensor.contact"}
6671                 ],
6672                 "required": ["value"]
6673               }
6674
6675   example: /
6676     {
6677       "rt":      ["oic.r.sensor.contact"],
6678       "id":      "unique_example_id",
6679       "value":   true
```



6680                    }  
6681

6682   **6.33.5   Property 정의**

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	True = 개방 False = 단락

6683   **6.33.6   CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ContactResURI		get			

6684   **6.34   Demand Response Load Control (DRLC).**

6685   **6.34.1   개요**

6686   이 resource 는 적용될 임의의 또는 현재 적용되는 DRLC 신호를 기술한다. DRType 은 Zigbee/HA  
6687   Smart Energy Profile 2.0 에서 정의된 ApplianceLoadReductionType 이다. Start 는 ISO8601  
6688   인코딩된 start time 을 포함하는 스트링이다. Duration 값은 분 단위이다. Override 는 소비자가  
6689   request 를 무시하였는지(true) 또는 무시하지 않았는지(false)를 나타낸다.

6690   **6.34.2   URI 예**

6691   /DRLCResURI

6692   **6.34.3   Resource Type**

6693   resource type (rt)는 oic.r.energy.drlc 로 정의된다.

6694   **6.34.4   RAML 정의**

```
6695  #%RAML 0.8
6696  title: OICDRLC
6697  version: v1.1.0-20160519
6698  traits:
6699    - interface :
6700      queryParameters:
6701        if:
6702          enum: ["oic.if.b", "oic.if.baseline"]
6703
6704  /DRLCResURI:
6705    description: |
6706      This resource describes any to be applied or currently being applied DRLC signal.
6707      The DRType is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile 2.0.
6708      Start is a string containing an ISO8601 encoded start time.
6709      The duration value is in minutes.
6710      Override indicates whether the consumer has overridden the request (true) or not (false).
6711
6712  is : ['interface']
6713  get:
6714    description: |
6715      Provides the current DRLC action that is being applied.
6716
```

```

6717     responses :
6718         200:
6719             body:
6720                 application/json:
6721                     schema: /
6722                         {
6723                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6724                             "$schema": "http://json-schema.org/draft-04/schema#",
6725                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6726 rights reserved.",
6727                             "definitions": {
6728                                 "oic.r.energy.drlc": {
6729                                     "type": "object",
6730                                     "properties": {
6731                                         "DRType": {
6732                                             "type": "integer",
6733                                             "description": "The to be applied demand-response type"
6734                                         },
6735                                         "start": {
6736                                             "type": "string",
6737                                             "description": "The start time for the application of DR"
6738                                         },
6739                                         "duration": {
6740                                             "type": "integer",
6741                                             "description": "The duration of the to be applied DR type"
6742                                         },
6743                                         "override": {
6744                                             "type": "boolean",
6745                                             "description": "Whether the consumer has overridden the application of DR"
6746                                         }
6747                                     }
6748                                 },
6749                                 "type": "object",
6750                                 "allOf": [
6751                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6752                                     { "$ref": "#/definitions/oic.r.energy.drlc" }
6753                                 ],
6754                                 "required": ["DRType"]
6755                             }
6756                         }
6757
6758                     example: /
6759                         {
6760                             "rt": ["oic.r.energy.drlc"],
6761                             "id": "unique_example_id",
6762                             "DRType": 1,
6763                             "start": "2015-01-09T16:45Z",
6764                             "duration": 10,
6765                             "override": false
6766                         }
6767
6768         put:
6769             description: |
6770                 Provides the DRLC action to be applied to the device or updates an existing action.
6771
6772             body:
6773                 application/json:
6774                     schema: /
6775                         {
6776                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6777                             "$schema": "http://json-schema.org/draft-04/schema#",
6778                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
6779 reserved.",
6780                             "definitions": {
6781                                 "oic.r.energy.drlc": {

```

```

6782         "type": "object",
6783         "properties": {
6784             "DRTType": {
6785                 "type": "integer",
6786                 "description": "The to be applied demand-response type"
6787             },
6788             "start": {
6789                 "type": "string",
6790                 "description": "The start time for the application of DR"
6791             },
6792             "duration": {
6793                 "type": "integer",
6794                 "description": "The duration of the to be applied DR type"
6795             },
6796             "override": {
6797                 "type": "boolean",
6798                 "description": "Whether the consumer has overridden the application of DR"
6799             }
6800         }
6801     },
6802     "type": "object",
6803     "allOf": [
6804         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
6805         { "$ref": "#/definitions/oic.r.energy.drlc" }
6806     ],
6807     "required": ["DRTType"]
6808 }
6809
6810
6811 example: /
6812 {
6813     "rt": ["oic.r.energy.drlc"],
6814     "id": "unique_example_id",
6815     "DRTType": 1,
6816     "start": "2015-01-09T16:45Z",
6817     "duration": 10
6818 }
6819
6820 responses :
6821 200:
6822     description: |
6823         Indicates that the target DRLC resource was changed.
6824         The new resource attributes are provided in the response.
6825
6826     body:
6827         application/json:
6828             schema: /
6829                 {
6830                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.drlc.json#",
6831                     "$schema": "http://json-schema.org/draft-04/schema#",
6832                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6833 rights reserved.",
6834                     "definitions": {
6835                         "oic.r.energy.drlc": {
6836                             "type": "object",
6837                             "properties": {
6838                                 "DRTType": {
6839                                     "type": "integer",
6840                                     "description": "The to be applied demand-response type"
6841                                 },
6842                                 "start": {
6843                                     "type": "string",
6844                                     "description": "The start time for the application of DR"
6845                                 },
6846                                 "duration": {
6847                                     "type": "integer",
6848                                     "description": "The duration of the to be applied DR type"

```

```

6849         },
6850         "override": {
6851             "type": "boolean",
6852             "description": "Whether the consumer has overridden the application of DR"
6853         }
6854     }
6855 }
6856 },
6857 "type": "object",
6858 "allOf": [
6859     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6860     {"$ref": "#/definitions/oic.r.energy.drlc"}
6861 ],
6862 "required": ["DRType"]
6863 }
6864

```

```

6865 example: /
6866 {
6867     "DRType": 1,
6868     "id": "unique_example_id",
6869     "start": "2015-01-09T17:00Z",
6870     "duration": 15,
6871     "override": false
6872 }
6873

```

201:

```

6875 description: |
6876     Indicates successful creation of the DRLC resource with the attributes provided.
6877     The response includes the URI of the created resource.
6878

```

```

6879 body:
6880     application/json:

```

```

6881     schema: /
6882     {
6883         "id": "http://openinterconnect.org/iotdatamodels/chemas/oic.create.json#",
6884         "$schema": "http://json-schema.org/draft-04/schema#",
6885         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
6886 reserved.",
6887         "definitions": {
6888             "oic.create": {
6889                 "type": "object",
6890                 "properties": {
6891                     "ResURI": { "type": "string" }
6892                 }
6893             },
6894             "type": "object",
6895             "allOf": [
6896                 {"$ref": "#/definitions/oic.create"}
6897             ]
6898         }
6899     }
6900

```

```

6901 example: /
6902 {
6903     "ResURI": "/MyDevice/MyDRLCURI"
6904 }
6905

```

#### 6.34.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
DRType	정수	예		적용될 DR type
start	스트링			DR 의 적용 시작

				시간
duration	정수			적용될 DR type 의 지속 시간
override	boolean			DR 의 적용을 소비자가 무시하였는지 여부

#### 6907 6.34.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			

#### 6908 6.35 에너지 과부하/회로 차단기

##### 6909 6.35.1 개요

6910 이 resource 는 에너지 과부하 검출기/회로 차단기가 현재 개방 또는 단락 되었는지를 기술한다.  
6911 값은 Boolean 형이다. 'true' 값은 에너지 과부하가 검출 되었음을 의미한다. 'false' 값은 에너지  
6912 과부하가 검출되지 않았음을 의미한다.

##### 6913 6.35.2 URI 예

6914 /EnergyOverloadResURI

##### 6915 6.35.3 Resource Type

6916 resource type (rt)는 oic.r.energy.overload 로 정의된다.

##### 6917 6.35.4 RAML 정의

```

6918 #%RAML 0.8
6919 title: OICEnergyOverload
6920 version: v1.1.0-20160519
6921 traits:
6922   - interface :
6923     queryParameters:
6924       if:
6925         enum: ["oic.if.s", "oic.if.baseline"]
6926
6927 /EnergyOverloadResURI:
6928   description: |
6929     This resource describes whether an energy overload detector/circuit breaker
6930     is currently tripped.
6931     The value is a boolean.
6932     A value of 'true' means that energy overload has been tripped.
6933     A value of 'false' means that energy overload has not been tripped.
6934
6935   is : ['interface']
6936   get:
6937     responses :
```

```

6938 200:
6939 body:
6940 application/json:
6941 schema: /
6942 {
6943   "id":
6944 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.energy.overload.json#",
6945   "$schema": "http://json-schema.org/draft-04/schema#",
6946   "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
6947 rights reserved.",
6948   "title": "Energy Overload Sensor",
6949   "definitions": {
6950     "oic.r.energy.overload": {
6951       "allOf": [
6952         {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
6953       ]
6954     },
6955   },
6956   "type": "object",
6957   "allOf": [
6958     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
6959     {"$ref": "#/definitions/oic.r.energy.overload"}
6960   ],
6961   "required": ["value"]
6962 }
6963
6964 example: /
6965 {
6966   "rt": ["oic.r.energy.overload"],
6967   "id": "unique_example_id",
6968   "value": true
6969 }
6970

```

### 6.35.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 검출 False = 미 검출

### 6.35.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			

## 6.36 일반 센서

### 6.36.1 개요

이 resource 는 일부 값, property 또는개체가 감지되었는지 여부를 기술한다. 값은 boolean 형이다. 'true' 값은 목표가 감지되었음을 의미한다. 'false' 값은 목표가 감지되지 않았음을 의미한다.

### 6.36.2 URI 예

/GenericSensorResURI

### 6.36.3 Resource Type

resource type (rt)는 oic.r.sensor 로 정의된다.

### 6.36.4 RAML 정의

```
##RAML 0.8
title: OICGenericSensor
version: v1.1.0-20160519

traits:
  - interface :
      queryParameters:
          if:
              enum: ["oic.if.s", "oic.if.baseline"]

/GenericSensorResURI:
  description: |
    This resource describes whether some value or property or entity has been sensed or not.
    The value is a boolean.
    A value of 'true' means that the target has been sensed.
    A value of 'false' means that the target has not been sensed.

  is : ['interface']

  get:
    responses :
      200:
        body:
          application/json:
            schema: /
              {
                "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.json#",
                "$schema": "http://json-schema.org/draft-04/schema#",
                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
                "title": "Generic Sensor",
                "definitions": {
                  "oic.r.sensor": {
                    "type": "object",
                    "properties": {
                      "value": {
                        "type": "boolean",
                        "readOnly": true,
                        "description": "true = sensed, false = not sensed."
                      }
                    }
                  }
                },
                "type": "object",
                "allOf": [
                  {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
                  {"$ref": "#/definitions/oic.r.sensor"}
                ]
              }

  example: /
    {
      "rt": ["oic.r.sensor"],
      "id": "unique_example_id",
      "value": true
    }
```

### 7038 6.36.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean		Read Only	true = 감지 false = 미 감지

### 7039 6.36.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			

## 7040 6.37 유리 파손 센서

### 7041 6.37.1 개요

7042 이 resource 는 유리 파손 센서를 기술한다. 값은 boolean 형이다. 'true' 값은 유리 파손이  
7043 감지되었음을 의미한다. 'false' 의 값은 유리 파손이 감지되지 않았음을 의미한다.

### 7044 6.37.2 URI 예

7045 /GlassBreakResURI

### 7046 6.37.3 Resource Type

7047 resource type (rt)는 oic.r.sensor.glassbreak 로 정의된다.

### 7048 6.37.4 RAML 정의

```

7049 #%RAML 0.8
7050 title: OICGlassBreakSensor
7051 version: v1.1.0-20160519
7052 traits:
7053   - interface :
7054     queryParameters:
7055       if:
7056         enum: ["oic.if.s", "oic.if.baseline"]
7057
7058 /GlassBreakResURI:
7059   description: |
7060     This resource describes a glass break sensor.
7061     The value is a boolean.
7062     A value of 'true' means that glass break has been sensed.
7063     A value of 'false' means that glass break not been sensed.
7064
7065   is : ['interface']
7066   get:
7067     responses :
7068       200:
7069         body:
7070           application/json:
7071             schema: /
7072             {
7073               "id":
7074                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.glassBreak.json#",
7075               "$schema": "http://json-schema.org/draft-04/schema#",

```



```

7076         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7077 rights reserved.",
7078         "title": "Glass Break Sensor",
7079         "definitions": {
7080             "oic.r.sensor.glassbreak": {
7081                 "allOf": [
7082                     { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
7083                 ]
7084             },
7085         },
7086         "type": "object",
7087         "allOf": [
7088             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7089             { "$ref": "#/definitions/oic.r.sensor.glassbreak" }
7090         ],
7091         "required": ["value"]
7092     }
7093
7094     example: /
7095     {
7096         "rt":      ["oic.r.sensor.glassbreak"],
7097         "id":      "unique_example_id",
7098         "value":   true
7099     }
7100

```

### 7101 6.37.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

### 7102 6.37.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			

## 7103 6.38 심박수 존

### 7104 6.38.1 개요

7105 이 resource 는 Zoladz 방법을 사용하여 현재 Zone 에 의해 측정된 심장 박동수를 기술한다. Zoladz  
7106 방법은 최대 심장 박동수에 기초하여 Zone 을 정의한다; Zone 1 은 가장 낮고, Zone 5 는 가장 높다.  
7107 heartRateZone 은: "Zone1", "Zone2", "Zone3", "Zone4", 및 "Zone5" 중 하나를 포함하는  
7108 열거형이다.

### 7109 6.38.2 URI 예

7110 /HeartRateZoneResURI

### 7111 6.38.3 Resource Type

7112 resource type (rt)는 oic.r.sensor.heart.zone 으로 정의된다.

### 7113 6.38.4 RAML 정의

```

7114 #%RAML 0.8
7115 title: OICHeartRateZone

```

```

7116 version: v1.1.0-20160519
7117 traits:
7118   - interface :
7119     queryParameters:
7120       if:
7121         enum: ["oic.if.s", "oic.if.baseline"]
7122
7123 /HeartRateZoneResURI:
7124   description: |
7125     This resource describes a measured heart rate by the current Zone using the Zoladz method
7126     The Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest, Zone 5 is
7127 the highest.
7128     The heartRateZone is an enumeration containing one of: "Zone1", "Zone2", "Zone3", "Zone4",
7129 "Zone5".
7130
7131   is : ['interface']
7132   get:
7133     responses :
7134       200:
7135         body:
7136           application/json:
7137             schema: /
7138               {
7139                 "id":
7140 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.heart.zone.json#",
7141                 "$schema": "http://json-schema.org/draft-04/schema#",
7142                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7143 rights reserved.",
7144                 "title": "Heart Rate Zone",
7145                 "definitions": {
7146                   "oic.r.sensor.heart.zone": {
7147                     "properties": {
7148                       "heartRateZone": {
7149                         "enum": ["Zone1", "Zone2", "Zone3", "Zone4", "Zone5"],
7150                         "readOnly": true,
7151                         "description": "Current heart rate zone based on the Zoladz system."
7152                       }
7153                     }
7154                   }
7155                 },
7156                 "type": "object",
7157                 "allOf": [
7158                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7159                   {"$ref": "#/definitions/oic.r.sensor.heart.zone"}
7160                 ],
7161                 "required": ["heartRateZone"]
7162               }
7163
7164           example: /
7165             {
7166               "rt":          ["oic.r.sensor.heart.zone"],
7167               "id":          "unique_example_id",
7168               "heartRateZone": "Zone3"
7169             }
7170

```

### 7171 6.38.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
heartRateZone	복수 타입: schema 참조	예	Read Only	Zoladz 시스템에 기초한 현재의

				심장 박동수 존
--	--	--	--	----------

## 7172 6.38.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			

## 7173 6.39 조도 센서

### 7174 6.39.1 개요

7175 이 resource 는 조도 센서를 기술한다. 조도는 부동 소수점 형이고, 단위 면적당 감지된 광속을 lux  
7176 단위로 표현한다.

### 7177 6.39.2 URI 예

7178 /IlluminanceSensorResURI

### 7179 6.39.3 Resource Type

7180 resource type (rt)는 oic.r.sensor.illuminance 로 정의된다.

### 7181 6.39.4 RAML 정의

```

7182 #%RAML 0.8
7183 title: OICIlluminanceSensor
7184 version: v1.1.0-20160519
7185 traits:
7186   - interface :
7187     queryParameters:
7188       if:
7189         enum: ["oic.if.s", "oic.if.baseline"]
7190
7191 /IlluminanceSensorResURI:
7192   description: |
7193     This resource describes an illuminance sensor.
7194     Illuminance is a float and represents the sensed luminous flux per unit area in lux.
7195
7196   is : ['interface']
7197   get:
7198     responses :
7199       200:
7200         body:
7201           application/json:
7202             schema: /
7203               {
7204                 "id":
7205                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.illuminance.json#",
7206                 "$schema": "http://json-schema.org/draft-04/schema#",
7207                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7208 rights reserved.",
7209                 "title": "Illuminance Sensor",
7210                 "definitions": {
7211                   "oic.r.sensor.illuminance": {
7212                     "properties": {
7213                       "illuminance": {
7214                         "type": "number",

```

```

7215         "readOnly": true,
7216         "description": "Sensed luminous flux per unit area in lux."
7217     }
7218 }
7219 }
7220 },
7221 "type": "object",
7222 "allOf": [
7223     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
7224     {"$ref": "#/definitions/oic.r.sensor.illuminance"}
7225 ],
7226 "required": ["illuminance"]
7227 }
7228
7229 example: /
7230 {
7231     "rt": ["oic.r.sensor.illuminance"],
7232     "id": "unique_example_id",
7233     "illuminance": 450.0
7234 }
7235

```

### 7236 6.39.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
illuminance	숫자	예	Read Only	단위 면적당 lux 단위로 감지된 광속.

### 7237 6.39.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			

## 7238 6.40 자계 방향 센서

### 7239 6.40.1 개요

7240 이 resource 는 공간 내에서 Observer 의 현재 지점에서 지구 자계의 방향을 기술한다. 일반적인  
7241 사용의 경우는 개인용 device 상에서 나침반 판독 값의 측정을 포함한다. 값은 각각이 부동 소수점  
7242 형인 Hx, Hy, 및 Hz (이 순서대로)를 포함하는 배열이다. Hx, Hy, 및 Hz 의 각각은 A/m 로 표현된다.

7243

### 7244 6.40.2 URI 예

7245 /MagneticFieldDirectionResURI

### 7246 6.40.3 Resource Type

7247 resource type (rt)는 oic.r.sensor.magneticfielddirection 으로 정의된다.

### 7248 6.40.4 RAML 정의

```

7249 #%RAML 0.8
7250 title: OICMagneticFieldDirection
7251 version: v1.1.0-20160519
7252 traits:

```

```

7253 - interface :
7254     queryParameters:
7255         if:
7256             enum: ["oic.if.s", "oic.if.baseline"]
7257
7258 /MagneticFieldDirectionResURI:
7259     description: |
7260         This resource describes the direction of the Earth's magnetic field at the observer's current
7261         point in space.
7262         Typical use case includes measurement of compass readings on a personal device.
7263         The value is an array containing Hx, Hy, Hz (in that order) each of which are floats.
7264         Each of Hx, Hy and Hz are expressed in A/m (Amperes per metre)
7265
7266     is : ['interface']
7267     get:
7268         responses :
7269             200:
7270                 body:
7271                     application/json:
7272                         schema: /
7273                             {
7274                                 "id":
7275 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.magneticFieldDirection.json#",
7276                                 "$schema": "http://json-schema.org/draft-04/schema#",
7277                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7278 rights reserved.",
7279                                 "title": "Magnetic Field Direction Sensor",
7280                                 "definitions": {
7281                                     "oic.r.sensor.magneticfielddirection": {
7282                                         "properties": {
7283                                             "value": {
7284                                                 "type": "array",
7285                                                 "readOnly": true,
7286                                                 "description": "Array containing Hx, Hy, Hz.",
7287                                                 "minItems": 3,
7288                                                 "maxItems": 3,
7289                                                 "items": {
7290                                                     "type": "number"
7291                                                 }
7292                                             }
7293                                         }
7294                                     }
7295                                 },
7296                                 "type": "object",
7297                                 "allOf": [
7298                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7299                                     { "$ref": "#/definitions/oic.r.sensor.magneticfielddirection" }
7300                                 ],
7301                                 "required": ["value"]
7302                             }
7303
7304     example: /
7305         {
7306             "rt":      ["oic.r.sensor.magneticfielddirection"],
7307             "id":      "unique_example_id",
7308             "value":   [100.0,15.0,90.0]
7309         }
7310

```

#### 7311 6.40.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
---------------	------------	----	--------	----

value	배열: schema 참조	예	Read Only	Hx, Hy, 및 Hz 를 포함하는 배열.
-------	------------------	---	-----------	----------------------------

## 7312 6.40.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			

## 7313 6.41 Media

### 7314 6.41.1 개요

7315 이 resource 는 OCF Serve 가 지원하는 Media 유형을 규정한다. Resource 는 Media 요소의  
7316 배열이다. 각 요소는 다음을 포함한다: 규정된 Media 유형이 액세스될 수 있는 URL. SDP 를  
7317 사용하는 Media 의 정의를 포함하는 스트링 배열. sdp 배열 내의 각 항목은 SDP 라인이다. 각  
7318 라인은 SDP 스펙에서 정의된 SDP 구문을 따라야 한다. SDP 스펙은  
7319 <http://tools.ietf.org/html/rfc4566> 에서 찾을 수 있다.

### 7320 6.41.2 URI 예

7321 /MediaResURI

### 7322 6.41.3 Resource Type

7323 resource type (rt)는 oic.r.media 로 정의된다.

### 7324 6.41.4 RAML 정의

```

7325 #%RAML 0.8
7326 title: OICMedia
7327 version: v1.1.0-20160519
7328 traits:
7329   - interface :
7330     queryParameters:
7331       if:
7332         enum: ["oic.if.s", "oic.if.baseline"]
7333
7334 /MediaResURI:
7335   description: |
7336     This resource specifies the media types that an OCF Server supports.
7337     The resource is an array of media elements
7338     Each element contains:
7339       A URL at which the specified media type can be accessed.
7340       A string array containing the definition of the media using SDP.
7341       Each entry in the sdp array is an SDP line.
7342       Each line shall follow the SDP description syntax as defined in the SDP specification.
7343       The SDP specification can be found at http://tools.ietf.org/html/rfc4566.
7344
7345   is : ['interface']
7346   get:
7347     description: |
7348       Retrieves the current media resource.
7349
7350   responses :
```

```

7351      200:
7352      body:
7353      application/json:
7354          schema: /
7355              {
7356                  "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.media.json#",
7357                  "$schema": "http://json-schema.org/draft-04/schema#",
7358                  "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7359 rights reserved.",
7360                  "title": "Media",
7361                  "definitions": {
7362                      "oic.r.media": {
7363                          "properties": {
7364                              "media": {
7365                                  "type": "array",
7366                                  "items": {
7367                                      "type": "object",
7368                                      "properties": {
7369                                          "url": {
7370                                              "type": "string",
7371                                              "description": "url for the media instance"
7372                                          },
7373                                          "sdp": {
7374                                              "type": "array",
7375                                              "description": "Array of strings, one per SDP line",
7376                                              "items": {
7377                                                  "type": "string",
7378                                                  "description": "SDP media or attribute line"
7379                                              }
7380                                          }
7381                                      }
7382                                  }
7383                              }
7384                          }
7385                      },
7386                      "type": "object",
7387                      "allof": [
7388                          { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7389                          { "$ref": "#/definitions/oic.r.media" }
7390                      ],
7391                      "required": ["media"]
7392                  }
7393              }
7394
7395      example: /
7396          {
7397              "rt": ["oic.r.media"],
7398              "id": "unique_example_id",
7399              "media": [
7400                  {
7401                      "url": "some example url",
7402                      "sdp": [
7403                          "m=video 1 RTP/AVP 96",
7404                          "a=rtpmap:96 H264/9000",
7405                          "a=fmtp:96 profile-level-id=42A028;packetization-mode=1"
7406                      ]
7407                  },
7408                  {
7409                      "url": "some other example1 url",
7410                      "sdp": [
7411                          "m=audio 2 RTP/AVP 97",
7412                          "a=rtpmap:97 MP4A-LATM/90000"
7413                      ]
7414                  },
7415                  {
7416                      "url": "some other example2 url",
7417                      "sdp": [
7418                          "m=video 3 RTP/AVP 98",

```

```

7419         "a=rtpmap:98 jpeg/90000",
7420         "a=fmtp:98 sampling=YCbCr-4:2:0;width=256;height=256"
7421     ]
7422 }
7423 ]
7424 }
7425

```

#### 7426 6.41.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
media	배열: schema 참조	예		
url (media)	스트링			Media 개체에 대한 url
sdp (media)	배열: schema 참조			스트링의 배열, SDP 라인당 하나

#### 7427 6.41.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			

### 7428 6.42 Media Source

#### 7429 6.42.1 개요

7430 이 resource 는 device 상에 존재하는 Media Source 를 정의한다. sources 는 입력 Source 또는  
7431 출력 소스가 될 수 있고, 이 resource 는 이에 관계 없이 기능한다. sourceName 은 미리-정의된  
7432 Media 입력 또는 출력 (예: "HDMI", "DVI")을 규정한다. sourceNumber 는 개체(예: "PC", 1)를  
7433 규정하기 위한 숫자형 식별자이다. sourceType 은 소스가 오디오, 비디오 또는 둘 다인지를  
7434 정의하기 위한 열거형이다. Status 는 특정 Source 개체가 선택되었는지 여부를 결정하기 위한  
7435 Boolean 형이다. true 의 status 는 Source 개체가 선택되었음을 의미한다. false 의 status 는 Source  
7436 개체가 선택되지 않았음을 의미한다.

#### 7437 6.42.2 URI 예

7438 /mediaSourceResURI

#### 7439 6.42.3 Resource Type

7440 resource type (rt)는 oic.r.mediasource 로 정의된다.

#### 7441 6.42.4 RAML 정의

```

7442 #%RAML 0.8
7443 title: OIC Media Source
7444 version: v1.1.0-20160519
7445 traits:
7446   - interface :
7447     queryParameters:
7448       if:

```



```

7449         enum: ["oic.if.a", "oic.if.baseline"]
7450
7451 /mediaSourceResURI:
7452     description: |
7453         This resource defines a media source that exists on a device.
7454         The source can be an input source or output source, this resource is agnostic of that.
7455         The sourceName specifies a pre-defined media input or output (e.g."HDMI", "DVI")
7456         The sourceNumber is a numeric identifier to specify the instance (e.g
7457         "PC", 1)
7458         The sourceType is an enumeration defining whether the source is audio, video or both.
7459         The status is a boolean that determines if the specific source instance is selected or not.
7460         A status of true means that the source instance is selected.
7461         A status of false means that the source instance is not selected.
7462
7463     is : ['interface']
7464     get:
7465         responses :
7466             200:
7467                 body:
7468                     application/json:
7469                         schema: /
7470                             {
7471                                 "$schema": "http://json-schema.org/draft-04/schema#",
7472                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7473 rights reserved.",
7474                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
7475                                 "title": "Media Source",
7476                                 "definitions": {
7477                                     "oic.r.mediasource": {
7478                                         "properties": {
7479                                             "sourceName": {
7480                                                 "type": "string",
7481                                                 "description": "Specifies a pre-defined media input or output"
7482                                             },
7483                                             "sourceNumber": {
7484                                                 "type": [ "integer", "string" ],
7485                                                 "readOnly": true,
7486                                                 "description": "Numeric identifier to specify the instance"
7487                                             },
7488                                             "sourceType": {
7489                                                 "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
7490                                                 "readOnly": true,
7491                                                 "description": "Specifies the type of the source"
7492                                             },
7493                                             "status": {
7494                                                 "type": "boolean",
7495                                                 "description": "Specifies if the specific source instance is selected or
7496 not"
7497                                             }
7498                                         }
7499                                     }
7500                                 },
7501                                 "type": "object",
7502                                 "allOf": [
7503                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7504                                     { "$ref": "##/definitions/oic.r.mediasource" }
7505                                 ],
7506                                 "required": [ "sourceName", "status" ]
7507                             }
7508
7509         example: /
7510             {
7511                 "rt":          [ "oic.r.mediasource" ],
7512                 "id":          "unique_example_id",
7513                 "sourceName":   "HDMI-CEC",

```

```

7514         "sourceNumber": "1",
7515         "sourceType": "audioPlusVideo",
7516         "status": true
7517     }
7518
7519     post:
7520         description: |
7521             Changes the status of the source.
7522             Allows changes of the sourceName and the status.
7523
7524         body:
7525             application/json:
7526                 schema: /
7527                     {
7528                         "$schema": "http://json-schema.org/draft-04/schema#",
7529                         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7530 reserved.",
7531                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
7532                         "title": "Media Source",
7533                         "definitions": {
7534                             "oic.r.mediasource": {
7535                                 "properties": {
7536                                     "sourceName": {
7537                                         "type": "string",
7538                                         "description": "Specifies a pre-defined media input or output"
7539                                     },
7540                                     "sourceNumber": {
7541                                         "type": [ "integer", "string" ],
7542                                         "readOnly": true,
7543                                         "description": "Numeric identifier to specify the instance"
7544                                     },
7545                                     "sourceType": {
7546                                         "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
7547                                         "readOnly": true,
7548                                         "description": "Specifies the type of the source"
7549                                     },
7550                                     "status": {
7551                                         "type": "boolean",
7552                                         "description": "Specifies if the specific source instance is selected or not"
7553                                     }
7554                                 }
7555                             }
7556                         },
7557                         "type": "object",
7558                         "allOf": [
7559                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7560                             { "$ref": "#/definitions/oic.r.mediasource" }
7561                         ],
7562                         "required": [ "sourceName", "status" ]
7563                     }
7564
7565         example: /
7566             {
7567                 "id": "unique_example_id",
7568                 "sourceName": "my new name",
7569                 "sourceNumber": "1",
7570                 "status": true
7571             }
7572
7573     responses :
7574         200:
7575             body:
7576                 application/json:
7577                     schema: /

```

```

7578 {
7579     "$schema": "http://json-schema.org/draft-04/schema#",
7580     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7581 rights reserved.",
7582     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
7583     "title": "Media Source",
7584     "definitions": {
7585         "oic.r.mediasource": {
7586             "properties": {
7587                 "sourceName": {
7588                     "type": "string",
7589                     "description": "Specifies a pre-defined media input or output"
7590                 },
7591                 "sourceNumber": {
7592                     "type": [ "integer", "string" ],
7593                     "readOnly": true,
7594                     "description": "Numeric identifier to specify the instance"
7595                 },
7596                 "sourceType": {
7597                     "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
7598                     "readOnly": true,
7599                     "description": "Specifies the type of the source"
7600                 },
7601                 "status": {
7602                     "type": "boolean",
7603                     "description": "Specifies if the specific source instance is selected or
7604 not"
7605                 }
7606             }
7607         }
7608     },
7609     "type": "object",
7610     "allOf": [
7611         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7612         { "$ref": "#/definitions/oic.r.mediasource" }
7613     ],
7614     "required": [ "sourceName", "status" ]
7615 }
7616
7617 example: /
7618 {
7619     "id": "unique_example_id",
7620     "sourceName": "my new name",
7621     "sourceNumber": "1",
7622     "status": true
7623 }
7624

```

#### 7625 6.42.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
sourceName	스트링	예		미리 정의된 Media 입력 또는 출력을 규정
status	boolean	예		특정 Source 개체가 선택되었는지 여부를 규정
sourceNumber	[u'정수', u'스트링']		Read Only	개체를 규정하기 위한

				숫자형 식별자
sourceType	복수 타입: schema 참조		Read Only	Source 의 유형을 규정

## 6.42.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceResURI		get	post		

## 6.43 Media Source 목록

### 6.43.1 개요

이 resource 는 device 상에서 사용 가능한 Media Source 의 목록을 제공한다. Sources 는 개별적으로 정의된 mediaSource 의 배열이다. 기본적인 resource type oic.r.mediaSourceList 는 Source 가 입력 또는 출력인지의 어떠한 표시도 제공하지 않는다. 따라서, 이 resource 의 2 가지 사양이 존재한다. Device 가 입력 Source 를 노출할 때 oic.r.media.input 의 resource type 을 갖는 이 resource 의 개체가 노출된다. Device 가 출력 Source 를 노출할 때, oic.r.media.output 의 resource type 을 갖는 이 resource 의 개체가 노출된다. Device 가 입력 및 출력 Source 를 둘 다 노출할 때 이 resource 의 2 가지 개체, 즉, 하나의 resource type oic.r.media.input 을 갖는 개체와 oic.r.media.output 의 resource type 을 갖는 개체를 노출시킨다.

### 6.43.2 URI 예

/mediaSourceListResURI

### 6.43.3 Resource Type

resource type (rt)는 oic.r.mediasourcelist 로 정의된다.

### 6.43.4 RAML 정의

```

#%RAML 0.8
title: OICMediaSourceList
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:
        if:
            enum: ["oic.if.a", "oic.if.baseline"]

/mediaSourceListResURI:
    description: |
        This resource provides the list of media sources available on the device.
        The sources are an array of mediaSource(s) as separately defined.
        The basic resource type oic.r.mediaSourceList does not provide any indications whether the
        source is input or output.
        Hence, two specializations of this resource exist.
        When a device exposes input sources then an instance of this resource with a resource type of
        oic.r.media.input is exposed.
        When a device exposes output sources then an instance of this resource with a resource type of

```

```

7662 oic.r.media.output is exposed.
7663     A device that exposes both input and output media sources then exposes two instances of this
7664 resource,
7665     one with a resource type of oic.r.media.input and one with a resource type of
7666 oic.r.media.output
7667
7668     is : ['interface']
7669
7669     get:
7670         responses :
7671             200:
7672                 body:
7673                     application/json:
7674                         schema: /
7675                             {
7676                                 "$schema": "http://json-schema.org/draft-04/schema#",
7677                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7678 rights reserved.",
7679                                 "id":
7680 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7681                                 "title": "Media Source List",
7682                                 "definitions": {
7683                                     "oic.r.mediasourcelist": {
7684                                         "properties": {
7685                                             "sources": {
7686                                                 "type": "array",
7687                                                 "items": {
7688                                                     "oneOf": [
7689                                                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7690                                                     ]
7691                                                 }
7692                                             }
7693                                         }
7694                                     }
7695                                 },
7696                                 "type": "object",
7697                                 "allOf": [
7698                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7699                                     { "$ref": "#/definitions/oic.r.mediasourcelist" }
7700                                 ],
7701                                 "required": ["sources"]
7702                             }
7703
7704                         example: /
7705                             {
7706                                 "rt": ["oic.r.mediasourcelist"],
7707                                 "id": "unique_example_id",
7708                                 "sources": [
7709                                     {
7710                                         "sourceName": "HDMI-CEC",
7711                                         "sourceNumber": "1",
7712                                         "sourceType": "audioPlusVideo",
7713                                         "status": true
7714                                     },
7715                                     {
7716                                         "sourceName": "dualRCA",
7717                                         "sourceNumber": "1",
7718                                         "sourceType": "audioOnly",
7719                                         "status": false
7720                                     }
7721                                 ]
7722                             }
7723
7724                     post:
7725                         description: |

```

```

7726         Changes the status of the source(s).
7727         Allows changes of the sourceName and the status.
7728
7729     body:
7730         application/json:
7731
7732             schema: /
7733
7734             {
7735                 "$schema": "http://json-schema.org/draft-04/schema#",
7736                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7737 reserved.",
7738                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7739                 "title": "Media Source List",
7740                 "definitions": {
7741                     "oic.r.mediasourcelist": {
7742                         "properties": {
7743                             "sources": {
7744                                 "type": "array",
7745                                 "items": {
7746                                     "oneOf": [
7747                                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7748                                     ]
7749                                 }
7750                             }
7751                         },
7752                         "type": "object",
7753                         "allOf": [
7754                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7755                             { "$ref": "#/definitions/oic.r.mediasourcelist" }
7756                         ],
7757                         "required": ["sources"]
7758                     }
7759                 }
7760
7761             example: /
7762
7763             {
7764                 "id": "unique_example_id",
7765                 "sources": [
7766                     {
7767                         "sourceName": "my new name",
7768                         "sourceNumber": "1",
7769                         "status": true
7770                     }
7771                 ]
7772             }
7773
7774     responses :
7775
7776     200:
7777
7778         body:
7779         application/json:
7780
7781             schema: /
7782
7783             {
7784                 "$schema": "http://json-schema.org/draft-04/schema#",
7785                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7786 rights reserved.",
7787                 "id":
7788 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7789                 "title": "Media Source List",
7790                 "definitions": {
7791                     "oic.r.mediasourcelist": {
7792                         "properties": {
7793                             "sources": {
7794                                 "type": "array",
7795                                 "items": {
7796                                     "oneOf": [

```

```

7791         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7792     ]
7793 }
7794 }
7795 }
7796 }
7797 },
7798 "type": "object",
7799 "allOf": [
7800     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7801     { "$ref": "#/definitions/oic.r.mediasourcelist" }
7802 ],
7803 "required": ["sources"]
7804 }
7805
7806 example: /
7807 {
7808     "id": "unique_example_id",
7809     "sources": [
7810         {
7811             "sourceName": "my new name",
7812             "sourceNumber": "1",
7813             "status": true
7814         }
7815     ]
7816 }
7817

```

#### 7818 6.43.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
sources	배열: schema 참조	예		
sourceName	스트링	예		미리 정의된 Media 입력 또는 출력을 규정
status	boolean	예		특정 Source 개체가 선택되었는지 여부를 규정
sourceNumber	[u'정수', u'스트링']		Read Only	개체를 규정하기 위한 숫자형 식별자
sourceType	복수 타입: schema 참조		Read Only	Source 의 유형을 규정

#### 7819 6.43.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceListResURI		get	post		

## 7820 6.43.7 Referenced JSON schemas

### 7821 6.43.7.1 oic.r.mediaSource.json

```
7822 {
7823   "$schema": "http://json-schema.org/draft-04/schema#",
7824   "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7825   reserved.",
7826   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSource.json#",
7827   "title": "Media Source",
7828   "definitions": {
7829     "oic.r.mediasource": {
7830       "properties": {
7831         "sourceName": {
7832           "type": "string",
7833           "description": "Specifies a pre-defined media input or output"
7834         },
7835         "sourceNumber": {
7836           "type": [ "integer", "string" ],
7837           "readOnly": true,
7838           "description": "Numeric identifier to specify the instance"
7839         },
7840         "sourceType": {
7841           "enum": [ "audioOnly", "videoOnly", "audioPlusVideo" ],
7842           "readOnly": true,
7843           "description": "Specifies the type of the source"
7844         },
7845         "status": {
7846           "type": "boolean",
7847           "description": "Specifies if the specific source instance is selected or not"
7848         }
7849       }
7850     }
7851   },
7852   "type": "object",
7853   "allOf": [
7854     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7855     { "$ref": "#/definitions/oic.r.mediasource" }
7856   ],
7857   "required": [ "sourceName", "status" ]
7858 }
7859
```

## 7860 6.44 Media Source 입력

### 7861 6.44.1 개요

7862 이 resource 는 device 상에서 사용 가능한 입력 Media Source 의 목록을 제공한다. Sources 는  
7863 개별적으로 정의된 mediaSource 의 배열이다.

### 7864 6.44.2 URI 예

7865 /mediaSourceInputResURI

### 7866 6.44.3 Resource Type

7867 resource type (rt)는 oic.r.media.input 으로 정의된다.

### 7868 6.44.4 RAML 정의

```
7869 #%RAML 0.8
7870 title: OICMediaSourceInput
7871 version: v1.1.0-20160519
7872 traits:
7873   - interface :
```



```

7874     queryParameters:
7875         if:
7876             enum: ["oic.if.a", "oic.if.baseline"]
7877
7878 /mediaSourceInputResURI:
7879     description: |
7880         This resource provides the list of input media sources available on the device.
7881         The sources are an array of mediaSource(s) as separately defined.
7882
7883     is : ['interface']
7884
7885     get:
7886         responses :
7887             200:
7888                 body:
7889                     application/json:
7890                         schema: /
7891                             {
7892                                 "$schema": "http://json-schema.org/draft-04/schema#",
7893                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7894                                 rights reserved.",
7895                                 "id":
7896                                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7897                                 "title": "Media Source List",
7898                                 "definitions": {
7899                                     "oic.r.mediasourcelist": {
7900                                         "properties": {
7901                                             "sources": {
7902                                                 "type": "array",
7903                                                 "items": {
7904                                                     "oneOf": [
7905                                                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7906                                                     ]
7907                                                 }
7908                                             }
7909                                         }
7910                                     },
7911                                     "type": "object",
7912                                     "allOf": [
7913                                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7914                                         { "$ref": "#/definitions/oic.r.mediasourcelist" }
7915                                     ],
7916                                     "required": ["sources"]
7917                                 }
7918
7919     example: /
7920         {
7921             "rt": ["oic.r.media.input"],
7922             "id": "unique_example_id",
7923             "sources": [
7924                 {
7925                     "sourceName": "HDMI-CEC",
7926                     "sourceNumber": "1",
7927                     "sourceType": "audioPlusVideo",
7928                     "status": true
7929                 },
7930                 {
7931                     "sourceName": "dualRCA",
7932                     "sourceNumber": "1",
7933                     "sourceType": "audioOnly",
7934                     "status": false
7935                 }
7936             ]

```

```

7937         }
7938
7939     post:
7940         description: |
7941             Changes the status of the source(s).
7942             Allows changes of the sourceName and the status.
7943
7944     body:
7945         application/json:
7946             schema: /
7947                 {
7948                     "$schema": "http://json-schema.org/draft-04/schema#",
7949                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
7950 reserved.",
7951                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7952                     "title": "Media Source List",
7953                     "definitions": {
7954                         "oic.r.mediasourcelist": {
7955                             "properties": {
7956                                 "sources": {
7957                                     "type": "array",
7958                                     "items": {
7959                                         "oneOf": [
7960                                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
7961                                         ]
7962                                     }
7963                                 }
7964                             }
7965                         },
7966                         "type": "object",
7967                         "allOf": [
7968                             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
7969                             { "$ref": "#/definitions/oic.r.mediasourcelist" }
7970                         ],
7971                         "required": ["sources"]
7972                     }
7973
7974
7975     example: /
7976         {
7977             "id": "unique_example_id",
7978             "sources": [
7979                 {
7980                     "sourceName": "my new name",
7981                     "sourceNumber": "1",
7982                     "status": true
7983                 }
7984             ]
7985         }
7986
7987     responses :
7988         200:
7989             body:
7990                 application/json:
7991                     schema: /
7992                         {
7993                             "$schema": "http://json-schema.org/draft-04/schema#",
7994                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
7995 rights reserved.",
7996                             "id":
7997 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
7998                             "title": "Media Source List",
7999                             "definitions": {
8000                                 "oic.r.mediasourcelist": {

```

```

8001         "properties": {
8002             "sources": {
8003                 "type": "array",
8004                 "items": {
8005                     "oneOf": [
8006                         { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8007                     ]
8008                 }
8009             }
8010         }
8011     },
8012     "type": "object",
8013     "allOf": [
8014         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8015         { "$ref": "#/definitions/oic.r.mediasourcelist" }
8016     ],
8017     "required": ["sources"]
8018 }
8019
8020
8021 example: /
8022 {
8023     "id": "unique_example_id",
8024     "sources": [
8025         {
8026             "sourceName": "my new name",
8027             "sourceNumber": "1",
8028             "status": true
8029         }
8030     ]
8031 }
8032

```

#### 8033 6.44.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
sources	배열: schema 참조	예		

#### 8034 6.44.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		

### 8035 6.45 Media Source 출력

#### 8036 6.45.1 개요

8037 이 resource 는 device 상에서 사용 가능한 출력 Media Source 의 목록을 제공한다. Sources 는  
8038 개별적으로 정의된 mediaSource 의 배열이다.

#### 8039 6.45.2 URI 예

8040 /mediaSourceOutputResURI

#### 8041 6.45.3 Resource Type

8042 resource type (rt)는 oic.r.media.output 으로 정의된다.

#### 6.45.4 RAML 정의

```
#%RAML 0.8
title: OICMediaSourceOutput
version: v1.1.0-20160519

traits:
- interface :
    queryParameters:

    if:
        enum: ["oic.if.a", "oic.if.baseline"]

/mediaSourceOutputResURI:

    description: |
        This resource provides the list of output media sources available on the device.
        The sources are an array of mediaSource(s) as separately defined.

    is : ['interface']

    get:
        responses :
            200:
                body:
                    application/json:
                        schema: /
                            {
                                "$schema": "http://json-schema.org/draft-04/schema#",
                                "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
                                rights reserved.",
                                "id":
                                "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
                                "title": "Media Source List",
                                "definitions": {
                                    "oic.r.mediasourcelist": {
                                        "properties": {
                                            "sources": {
                                                "type": "array",
                                                "items": {
                                                    "oneOf": [
                                                        { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
                                                    ]
                                                }
                                            }
                                        }
                                    }
                                },
                                "type": "object",
                                "allOf": [
                                    { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
                                    { "$ref": "#/definitions/oic.r.mediasourcelist" }
                                ],
                                "required": ["sources"]
                            }

    example: /
        {
            "rt": ["oic.r.media.output"],
            "id": "unique_example_id",
            "sources": [
                {
                    "sourceName": "HDMI-CEC",
                    "sourceNumber": "1",
                    "sourceType": "audioPlusVideo",
                    "status": true
                }
            ],
        }
```

```

8105         {
8106             "sourceName": "dualRCA",
8107             "sourceNumber": "1",
8108             "sourceType": "audioOnly",
8109             "status": false
8110         }
8111     ]
8112 }
8113
8114 post:
8115     description: |
8116         Changes the status of the source(s).
8117         Allows changes of the sourceName and the status.
8118
8119     body:
8120         application/json:
8121             schema: /
8122                 {
8123                     "$schema": "http://json-schema.org/draft-04/schema#",
8124                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8125 reserved.",
8126                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8127                     "title": "Media Source List",
8128                     "definitions": {
8129                         "oic.r.mediasourcelist": {
8130                             "properties": {
8131                                 "sources": {
8132                                     "type": "array",
8133                                     "items": {
8134                                         "oneOf": [
8135                                             { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8136                                         ]
8137                                     }
8138                                 }
8139                             }
8140                         }
8141                     },
8142                     "type": "object",
8143                     "allOf": [
8144                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8145                         { "$ref": "#/definitions/oic.r.mediasourcelist" }
8146                     ],
8147                     "required": ["sources"]
8148                 }
8149
8150     example: /
8151         {
8152             "id": "unique_example_id",
8153             "sources": [
8154                 {
8155                     "sourceName": "my new name",
8156                     "sourceNumber": "1",
8157                     "status": true
8158                 }
8159             ]
8160         }
8161
8162     responses :
8163         200:
8164             body:
8165                 application/json:
8166                     schema: /
8167                         {
8168                             "$schema": "http://json-schema.org/draft-04/schema#",

```

```

8169         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8170 rights reserved.",
8171         "id":
8172         "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mediaSourceList.json#",
8173         "title": "Media Source List",
8174         "definitions": {
8175             "oic.r.mediasourcelist": {
8176                 "properties": {
8177                     "sources": {
8178                         "type": "array",
8179                         "items": {
8180                             "oneOf": [
8181                                 { "$ref": "oic.r.mediaSource.json#/definitions/oic.r.mediasource" }
8182                             ]
8183                         }
8184                     }
8185                 }
8186             },
8187             "type": "object",
8188             "allOf": [
8189                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8190                 { "$ref": "#/definitions/oic.r.mediasourcelist" }
8191             ],
8192             "required": ["sources"]
8193         }
8194     }
8195
8196     example: /
8197     {
8198         "id": "unique_example_id",
8199         "sources": [
8200             {
8201                 "sourceName": "my new name",
8202                 "sourceNumber": "1",
8203                 "status": true
8204             }
8205         ]
8206     }
8207

```

#### 8208 6.45.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
sources	배열: schema 참조	예		

#### 8209 6.45.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		

### 8210 6.46 모션 센서

#### 8211 6.46.1 개요

8212 이 resource 는 움직임이 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 움직임이  
8213 감지되었음을 의미한다. 'false' 값은 움직임이 감지되지 않았음을 의미한다.

8214

## 8215 6.46.2 URI 예

8216 /MotionResURI

## 8217 6.46.3 Resource Type

8218 resource type (rt)는 oic.r.sensor.motion 으로 정의된다.

## 8219 6.46.4 RAML 정의

```
8220 #%RAML 0.8
8221 title: OICMotionSensor
8222 version: v1.1.0-20160519
8223 traits:
8224   - interface :
8225     queryParameters:
8226       if:
8227         enum: ["oic.if.s", "oic.if.baseline"]
8228
8229 /MotionResURI:
8230   description: |
8231     This resource describes whether motion has been sensed or not.
8232     The value is a boolean.
8233     A value of 'true' means that motion has been sensed.
8234     A value of 'false' means that motion not been sensed.
8235
8236   is : ['interface']
8237   get:
8238     responses :
8239       200:
8240         body:
8241           application/json:
8242             schema: /
8243               {
8244                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.motion.json#",
8245                 "$schema": "http://json-schema.org/draft-04/schema#",
8246                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8247 rights reserved.",
8248                 "title": "Motion Sensor",
8249                 "definitions": {
8250                   "oic.r.sensor.motion": {
8251                     "allOf": [
8252                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8253                     ]
8254                   }
8255                 },
8256                 "type": "object",
8257                 "allOf": [
8258                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8259                   {"$ref": "#/definitions/oic.r.sensor.motion"}
8260                 ],
8261                 "required": ["value"]
8262               }
8263
8264   example: /
8265     {
8266       "rt": ["oic.r.sensor.motion"],
8267       "id": "unique_example_id",
8268       "value": true
8269     }
8270
```

## 8271 6.46.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

## 8272 6.46.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			

## 8273 6.47 야간 모드

### 8274 6.47.1 개요

8275 이 resource 는 야간 모드 on/off 기능을 기술한다. 'true'의 nightMode 값은 기능이 on 임을  
8276 의미한다. 'false' 의 nightMode 값은 기능이 off 임을 의미한다.

### 8277 6.47.2 URI 예

8278 /NightModeResURI

### 8279 6.47.3 Resource Type

8280 resource type (rt)는 oic.r.nightmode 로 정의된다.

### 8281 6.47.4 RAML 정의

```

8282 #%RAML 0.8
8283 title: OICNightMode
8284 version: v1.1.0-20160519
8285 traits:
8286   - interface :
8287     queryParameters:
8288       if:
8289         enum: ["oic.if.a", "oic.if.baseline"]
8290
8291 /NightModeResURI:
8292   description: |
8293     This resource describes a night mode on/off feature.
8294     A nightMode value of 'true' means that the feature is on.
8295     A nightMode value of 'false' means that the feature is off.
8296
8297   is : ['interface']
8298   get:
8299     responses :
8300       200:
8301         body:
8302           application/json:
8303             schema: /
8304             {
8305               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
8306               "$schema": "http://json-schema.org/draft-04/schema#",
8307               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8308               rights reserved.",

```



```

8309         "title": "Night Mode",
8310         "definitions": {
8311             "oic.r.nightmode": {
8312                 "type": "object",
8313                 "properties": {
8314                     "nightMode": {
8315                         "type": "boolean",
8316                         "description": "Status of the Night Mode"
8317                     }
8318                 }
8319             }
8320         },
8321         "type": "object",
8322         "allOf": [
8323             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8324             { "$ref": "#/definitions/oic.r.nightmode" }
8325         ],
8326         "required": [ "nightMode" ]
8327     }
8328
8329     example: /
8330     {
8331         "rt":          [ "oic.r.nightmode" ],
8332         "id":          "unique_example_id",
8333         "nightMode":   false
8334     }
8335
8336     post:
8337         body:
8338             application/json:
8339                 schema: /
8340                 {
8341                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
8342                     "$schema": "http://json-schema.org/draft-04/schema#",
8343                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8344 reserved.",
8345                     "title": "Night Mode",
8346                     "definitions": {
8347                         "oic.r.nightmode": {
8348                             "type": "object",
8349                             "properties": {
8350                                 "nightMode": {
8351                                     "type": "boolean",
8352                                     "description": "Status of the Night Mode"
8353                                 }
8354                             }
8355                         }
8356                     },
8357                     "type": "object",
8358                     "allOf": [
8359                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8360                         { "$ref": "#/definitions/oic.r.nightmode" }
8361                     ],
8362                     "required": [ "nightMode" ]
8363                 }
8364
8365                 example: /
8366                 {
8367                     "id":          "unique_example_id",
8368                     "nightMode":   true
8369                 }
8370
8371     responses :
8372         200:
8373             body:

```

```

8374 application/json:
8375     schema: /
8376         {
8377             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.nightMode.json#",
8378             "$schema": "http://json-schema.org/draft-04/schema#",
8379             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8380 rights reserved.",
8381             "title": "Night Mode",
8382             "definitions": {
8383                 "oic.r.nightmode": {
8384                     "type": "object",
8385                     "properties": {
8386                         "nightMode": {
8387                             "type": "boolean",
8388                             "description": "Status of the Night Mode"
8389                         }
8390                     }
8391                 }
8392             },
8393             "type": "object",
8394             "allOf": [
8395                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8396                 {"$ref": "#/definitions/oic.r.nightmode"}
8397             ],
8398             "required": [ "nightMode" ]
8399         }
8400
8401     example: /
8402         {
8403             "id": "unique_example_id",
8404             "nightMode": true
8405         }
8406

```

#### 8407 6.47.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
nightMode	boolean	예		야간 모드의 상태

#### 8408 6.47.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		

### 8409 6.48 존재 센서

#### 8410 6.48.1 개요

8411 이 resource 는 존재가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 존재가  
8412 감지되었음을 의미한다. 'false' 값은 존재가 감지되지 않았음을 의미한다.

8413

#### 8414 6.48.2 URI 예

8415 /PresenceResURI

#### 8416 6.48.3 Resource Type

8417 resource type (rt)는 oic.r.sensor.presence 로 정의된다.

#### 6.48.4 RAML 정의

```
8418
8419 #%RAML 0.8
8420 title: OICPresenceSensor
8421 version: v1.1.0-20160519
8422 traits:
8423   - interface :
8424     queryParameters:
8425       if:
8426         enum: ["oic.if.s", "oic.if.baseline"]
8427
8428 /PresenceResURI:
8429   description: |
8430     This resource describes whether presence has been sensed or not.
8431     The value is a boolean.
8432     A value of 'true' means that presence has been sensed.
8433     A value of 'false' means that presence not been sensed.
8434
8435   is : ['interface']
8436   get:
8437     responses :
8438       200:
8439         body:
8440           application/json:
8441             schema: /
8442               {
8443                 "id":
8444 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.presence.json#",
8445                 "$schema": "http://json-schema.org/draft-04/schema#",
8446                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8447 rights reserved.",
8448                 "title": "Presence Sensor",
8449                 "definitions": {
8450                   "oic.r.sensor.presence": {
8451                     "allOf": [
8452                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
8453                     ]
8454                   }
8455                 },
8456                 "type": "object",
8457                 "allOf": [
8458                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8459                   {"$ref": "#/definitions/oic.r.sensor.presence"}
8460                 ],
8461                 "required": ["value"]
8462               }
8463
8464           example: /
8465             {
8466               "rt": ["oic.r.sensor.presence"],
8467               "id": "unique_example_id",
8468               "value": true
8469             }
8470
```

#### 6.48.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

## 8472 6.48.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			

## 8473 6.49 팬 틸트 줌 동작

### 8474 6.49.1 개요

8475 이 resource 는 device 의 회전 경사 및 줌 기능을 규정한다. resource rt 는 동적이고, 값이  
 8476 device 의 물리적인 움직임에 적용되지는 또는 이미지에 대한 디지털/버추얼 향상에 적용되는지를  
 8477 반영한다. 물리적인 움직임에 대해, rt 는 'oic.r.movement.ptz'이다. 디지털/버추얼 이미지 향상에  
 8478 대해, rt 는 'oic.r.image.ptz'이다. 회전 및 경사는 도(°)로 규정된다. 줌 인자는 선형 (광학) 줌에 대해  
 8479 1-100 범위의 값이다. 디지털 줌에 대해 줌 인자는 [1x, 2x, 4x, 8x, 16x, 32x] 범위의 값이다. 설정할  
 8480 줌 값이 없다면, 줌 인자는 '1x'가 된다. 0 도의 값은 중간을 의미하고, 이것은 제조사가 정의한  
 8481 설정이다. 이 resource 가 물리적인 움직임에 대한 옵셋을 생성하기 위해 사용될 수도 있다. 이러한  
 8482 경우, rt 값은 oic.r.movement.offset.ptz 이다. 이 resource 가 이미지 움직임에 대한 옵셋을  
 8483 생성하기 위해 사용될 수도 있다. 이러한 경우, rt 값은 oic.r.image.offset.ptz 이다. pan\_range 값이  
 8484 생략되면 범위는 [-180.0,180.0]이다. Pan 이 지원되지 않는다면, 범위는 [0.0,0.0]이다. tilt\_range  
 8485 값이 생략되면 범위는 [ - 180.0,180.0]이다. tilt 가 지원되지 않는다면, 범위는 [0.0,0.0]이다.

8486

8487

### 8488 6.49.2 URI 예

8489 /PanTiltZoomResURI

### 8490 6.49.3 Resource Type

8491 resource type (rt)는 oic.r.ptz 로 정의된다.

### 8492 6.49.4 RAML 정의

```

8493 #%RAML 0.8
8494 title: OICPanTiltZoom
8495 version: v1.1.0-20160519
8496 traits:
8497   - interface :
8498       queryParameters:
8499         if:
8500           enum: ["oic.if.a", "oic.if.baseline"]
8501
8502 /PanTiltZoomResURI:
8503   description: |
8504     This resource specifies the pan tilt and zoom capabilities of a device.
8505     The resource rt is dynamic and reflects whether the values apply to
8506     physical movement of the device or digital/virtual enhancements to the image.
8507     For physical movement the rt is 'oic.r.movement.ptz'.
8508     For digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
8509     The Pan and Tilt are specified in degrees.
8510     The Zoom Factor is a value in the range 1-100 for linear (optical) zoom.
```

```

8511     The Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital zoom.
8512     If there is no zoom value to set the Zoom Factor shall be '1x'.
8513     The value 0 degrees means neutral, this is the vendor defined setting.
8514     Note that this resource also can be used to create an offset for physical movement.
8515     When that is the case, the rt value is: oic.r.movement.offset.ptz
8516     Note that this resource also can be used to create an offset for image movement.
8517     When that is the case, the rt value is: oic.r.image.offset.ptz
8518     When the pan_range value is omitted, then the range is [-180.0,180.0].
8519     If pan is not supported then the range shall be [0.0,0.0]
8520     When the tilt_range value is omitted, then the range is [-180.0,180.0].
8521     If tilt is not supported then the range shall be [0.0,0.0]
8522
8523     is : ['interface']
8524
8525     get:
8526         description: |
8527             Retrieves the current pan, tilt and zoom setting.
8528
8529     responses :
8530         200:
8531             body:
8532                 application/json:
8533                     schema: /
8534                         {
8535                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
8536                             "$schema": "http://json-schema.org/draft-04/schema#",
8537                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
8538                             "title": "Pan Tilt Zoom",
8539                             "definitions": {
8540                                 "oic.r.ptz": {
8541                                     "type": "object",
8542                                     "properties": {
8543                                         "pan": {
8544                                             "type": "number",
8545                                             "description": "horizontal pan in degrees"
8546                                         },
8547                                         "tilt": {
8548                                             "type": "number",
8549                                             "description": "vertical tilt in degrees"
8550                                         },
8551                                         "pan_range": {
8552                                             "type": "array",
8553                                             "readOnly": true,
8554                                             "description": "Min and Max values for the pan setting",
8555                                             "minItems": 2,
8556                                             "maxItems": 2,
8557                                             "items": {
8558                                                 "type": "number"
8559                                             }
8560                                         },
8561                                         "tilt_range": {
8562                                             "type": "array",
8563                                             "readOnly": true,
8564                                             "description": "Min and Max values for the tilt setting",
8565                                             "minItems": 2,
8566                                             "maxItems": 2,
8567                                             "items": {
8568                                                 "type": "number"
8569                                             }
8570                                         },
8571                                         "zoomFactor": {
8572                                             "type": "string",
8573                                             "description": "The Zoomfactor value"
8574                                         },
8575                                         "zoomFactorRange": {
8576                                             "type": "string",
8577                                             "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],

```

```

8578         "readOnly": true,
8579         "description": "allowed Zoom Factor values. Linear equates to a 1-100
8580 min/max."
8581     }
8582 }
8583 }
8584 },
8585 "type": "object",
8586 "allOf": [
8587     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8588     {"$ref": "#/definitions/oic.r.ptz"}
8589 ],
8590 "required": ["pan", "tilt", "zoomFactor"]
8591 }
8592
8593 example: /
8594 {
8595     "rt":         ["oic.r.ptz"],
8596     "id":         "unique_example_id",
8597     "pan":        0.0,
8598     "tilt":       0.0,
8599     "zoomFactor": "2x"
8600 }
8601
8602 post:
8603     description: |
8604         Sets the current pan, tilt and zoom value
8605
8606     body:
8607         application/json:
8608             schema: /
8609                 {
8610                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
8611                     "$schema": "http://json-schema.org/draft-04/schema#",
8612                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8613 reserved.",
8614                     "title": "Pan Tilt Zoom",
8615                     "definitions": {
8616                         "oic.r.ptz": {
8617                             "type": "object",
8618                             "properties": {
8619                                 "pan": {
8620                                     "type": "number",
8621                                     "description": "horizontal pan in degrees"
8622                                 },
8623                                 "tilt": {
8624                                     "type": "number",
8625                                     "description": "vertical tilt in degrees"
8626                                 },
8627                                 "pan_range": {
8628                                     "type": "array",
8629                                     "readOnly": true,
8630                                     "description": "Min and Max values for the pan setting",
8631                                     "minItems": 2,
8632                                     "maxItems": 2,
8633                                     "items": {
8634                                         "type": "number"
8635                                     }
8636                                 },
8637                                 "tilt_range": {
8638                                     "type": "array",
8639                                     "readOnly": true,
8640                                     "description": "Min and Max values for the tilt setting",
8641                                     "minItems": 2,
8642                                     "maxItems": 2,
8643                                     "items": {
8644                                         "type": "number"

```

```

8645         }
8646     },
8647     "zoomFactor": {
8648         "type": "string",
8649         "description": "The Zoomfactor value"
8650     },
8651     "zoomFactorRange": {
8652         "type": "string",
8653         "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
8654         "readOnly": true,
8655         "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max."
8656     }
8657 }
8658 },
8659 },
8660 "type": "object",
8661 "allOf": [
8662     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8663     {"$ref": "#/definitions/oic.r.ptz"}
8664 ],
8665 "required": ["pan", "tilt", "zoomFactor"]
8666 }
8667
8668 example: /
8669 {
8670     "id": "unique_example_id",
8671     "pan": 10.0,
8672     "tilt": -10.0,
8673     "zoomFactor": "4x"
8674 }
8675
8676 responses :
8677 200:
8678     body:
8679         application/json:
8680             schema: /
8681                 {
8682                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ptz.json#",
8683                     "$schema": "http://json-schema.org/draft-04/schema#",
8684                     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8685 rights reserved.",
8686                     "title": "Pan Tilt Zoom",
8687                     "definitions": {
8688                         "oic.r.ptz": {
8689                             "type": "object",
8690                             "properties": {
8691                                 "pan": {
8692                                     "type": "number",
8693                                     "description": "horizontal pan in degrees"
8694                                 },
8695                                 "tilt": {
8696                                     "type": "number",
8697                                     "description": "vertical tilt in degrees"
8698                                 },
8699                                 "pan_range": {
8700                                     "type": "array",
8701                                     "readOnly": true,
8702                                     "description": "Min and Max values for the pan setting",
8703                                     "minItems": 2,
8704                                     "maxItems": 2,
8705                                     "items": {
8706                                         "type": "number"
8707                                     }
8708                                 },
8709                                 "tilt_range": {
8710                                     "type": "array",
8711                                     "readOnly": true,

```

```

8712         "description": "Min and Max values for the tilt setting",
8713         "minItems": 2,
8714         "maxItems": 2,
8715         "items": {
8716             "type": "number"
8717         }
8718     },
8719     "zoomFactor": {
8720         "type": "string",
8721         "description": "The Zoomfactor value"
8722     },
8723     "zoomFactorRange": {
8724         "type": "string",
8725         "enum": ["linear", "1x", "2x", "4x", "8x", "16x", "32x"],
8726         "readOnly": true,
8727         "description": "allowed Zoom Factor values. Linear equates to a 1-100
8728 min/max."
8729     }
8730 }
8731 }
8732 },
8733 "type": "object",
8734 "allOf": [
8735     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8736     {"$ref": "#/definitions/oic.r.ptz"}
8737 ],
8738 "required": ["pan", "tilt", "zoomFactor"]
8739 }
8740
8741 example: /
8742 {
8743     "id": "unique_example_id",
8744     "pan": 10.0,
8745     "tilt": -10.0,
8746     "zoomFactor": "4x"
8747 }
8748

```

#### 8749 6.49.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
tilt_range	배열: schema 참조		Read Only	경사 설정에 대한 최소 및 최대 값
zoomFactor	스트링	예		줌 인자 값
tilt	숫자	예		도(°) 단위의 수직 경사
pan_range	배열: schema 참조		Read Only	회전 설정에 대한 최소 및 최대 값
zoomFactorRange	스트링		Read Only	허용된 줌 인자 값. 선형은 1-100 min/max 와 같다.
pan	숫자	예		도(°) 단위의 수평 회전



## 8750 6.49.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		

## 8751 6.50 신호 강도

### 8752 6.50.1 개요

8753 이 resource 는 lqi 및 rssi 에 의해 신호의 강도를 기술한다. lqi 는 Link Quality 표시자를 나타내는  
8754 부동 소수점 숫자이다. rssi 는 수신된 신호 강도 표시자를 나타내는 부동 소수점 숫자이다.

8755

### 8756 6.50.2 URI 예

8757 /SignalStrengthResURI

### 8758 6.50.3 Resource Type

8759 resource type (rt) 는 oic.r.signalstrength 로 정의된다.

### 8760 6.50.4 RAML 정의

```

8761 #%RAML 0.8
8762 title: OICSignalStrength
8763 version: v1.1.0-20160519
8764 traits:
8765   - interface :
8766       queryParameters:
8767         if:
8768           enum: ["oic.if.s", "oic.if.baseline"]
8769
8770 /SignalStrengthResURI:
8771   description: |
8772     This resource describes the strength of a signal by means of lqi and rssi.
8773     The lqi is a floating point number that represents Link Quality Indicator.
8774     The rssi is a floating point number that represents the received signal strength indicator.
8775
8776   is : ['interface']
8777   get:
8778     responses :
8779       200:
8780         body:
8781           application/json:
8782             schema: /
8783               {
8784                 "id":
8785                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.signalStrength.json#",
8786                 "$schema": "http://json-schema.org/draft-04/schema#",
8787                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8788 rights reserved.",
8789                 "title": "Signal Strength",
8790                 "definitions": {
8791                   "oic.r.signalstrength": {
8792                     "type": "object",
8793                     "properties": {
8794                       "lqi": {

```

```

8795         "type": "number",
8796         "readOnly": true,
8797         "description": "current value of Link Quality Indicator"
8798     },
8799     "rssi": {
8800         "type": "number",
8801         "readOnly": true,
8802         "description": "current value of Received Signal Strength Indicator"
8803     }
8804 }
8805 }
8806 },
8807 "type": "object",
8808 "allOf": [
8809     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
8810     { "$ref": "oic.r.signalstrength" }
8811 ],
8812 "required": ["lqi", "rssi"]
8813 }
8814
8815 example: /
8816 {
8817     "rt": ["oic.r.signalstrength"],
8818     "id": "unique_example_id",
8819     "lqi": 10.0,
8820     "rssi": 55.0
8821 }
8822

```

## 6.50.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
rssi	숫자	예	Read Only	수신된 신호 강도 표시자의 현재 값
lqi	숫자	예	Read Only	Link Quality 표시자의 현재 값

## 6.50.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			

## 6.51 음성 합성 TTS

### 6.51.1 개요

이 resource 는, OCF Client 에 의해 음성을 렌더링할 수 있고 client 가 SSML 문서에 렌더링할 텍스트를 제공하는 것을 허용하는 OIC Server 상에서 생성될 수 있거나, 또는 일부 상주 애플리케이션에 의해 OCF Server 상에서 생성될 수 있다. 렌더링 된 음성은 Server 에 국소적인 본 단계에 존재한다 (즉, 스트리밍 되지 않는다). 발성은 SSML 문서이다. supportedLanguages 는 지원되는 RFC 5646 정의 언어 태그의 배열이다. supportedVoices 는 지원되는 음성을 나타내는 SSML 문서의 단편이다.

### 6.51.2 URI 예

/SpeechTTSResURI

### 8835 6.51.3 Resource Type

8836 resource type (rt) 는 oic.r.speech.tts 로 정의된다.

### 8837 6.51.4 RAML 정의

```
8838 #%RAML 0.8
8839 title: OICSpeechTTS
8840 version: v1.1.0-20160519
8841 traits:
8842   - interface :
8843     queryParameters:
8844       if:
8845         enum: ["oic.if.a", "oic.if.baseline"]
8846
8847 /SpeechTTSResURI:
8848   description: |
8849     This resource may be created on the OIC Server that is capable of rendering speech by an OIC
8850 Client
8851     and allows the client to provide an SSML document with text to render
8852     or may be created on the OIC Server by some resident application.
8853     The audio rendered is at this stage local to the Server (i.e
8854     not streamed).
8855     The utterance is an SSML document.
8856     The supportedLanguages is an array of the RFC 5646 defined language tags that are supported.
8857     The supportedVoices is an SSML document fragment indicating the voices that are supported.
8858
8859   is : ['interface']
8860   get:
8861     description: |
8862       Utterance in the example shall be a properly escaped (JSON rules) SSML document
8863       An example is given below:
8864       "<?xml version=\"1.0\" encoding=\"ISO-8859-1\"?>\n\r
8865       <speak version=\"1.1\" xmlns=\"http://www.w3.org/2001/10/synthesis\" \n\r
8866       \txmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\" \n\r
8867       \txsi:schemaLocation=\"http://www.w3.org/2001/10/synthesis\n\r
8868       \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd\" \n\r
8869       \txml:lang=\"en-US\">\n\r
8870       \n\r
8871       \tThe title of the movie is:\n\r
8872       \t\"Monty Pythons The Meaning of Life\" \n\r
8873       \twhich is directed by Terry Jones.\n\r
8874       </speak\"
8875
8876   responses :
8877     200:
8878       body:
8879         application/json:
8880           schema: /
8881             {
8882               "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8883               "$schema": "http://json-schema.org/draft-04/schema#",
8884               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8885 rights reserved.",
8886               "title": "Speech Synthesis-TTS",
8887               "definitions": {
8888                 "oic.r.speech.tts": {
8889                   "type": "object",
8890                   "properties": {
8891                     "utterance": {
8892                       "type": "string",
8893                       "description": "SSML document including the speech body"
```

```

8894         },
8895         "supportedLanguages": {
8896             "type": "array",
8897             "readOnly": true,
8898             "description": "array of supported language tags",
8899             "items": {
8900                 "type": "string"
8901             }
8902         },
8903         "supportedVoices": {
8904             "type": "string",
8905             "readOnly": true,
8906             "description": "SSML document fragment indicating supported voices"
8907         }
8908     }
8909 }
8910 },
8911 "type": "object",
8912 "allOf": [
8913     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8914     {"$ref": "#/definitions/oic.r.speech.tts"}
8915 ],
8916 "required": ["utterance"]
8917 }
8918
8919 example: /
8920 {
8921     "rt": ["oic.r.speech.tts"],
8922     "id": "unique_example_id",
8923     "utterance": "SSML Document",
8924     "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
8925     "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
8926 name=\"Mike\"></voice>"
8927 }
8928
8929 post:
8930     description: |
8931         Changes the utterance being rendered.
8932         Example shows a change in language selected.
8933
8934     body:
8935         application/json:
8936             schema: /
8937             {
8938                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8939                 "$schema": "http://json-schema.org/draft-04/schema#",
8940                 "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
8941 reserved.",
8942                 "title": "Speech Synthesis-TTS",
8943                 "definitions": {
8944                     "oic.r.speech.tts": {
8945                         "type": "object",
8946                         "properties": {
8947                             "utterance": {
8948                                 "type": "string",
8949                                 "description": "SSML document including the speech body"
8950                             },
8951                             "supportedLanguages": {
8952                                 "type": "array",
8953                                 "readOnly": true,
8954                                 "description": "array of supported language tags",
8955                                 "items": {
8956                                     "type": "string"
8957                                 }
8958                             },
8959                             "supportedVoices": {
8960                                 "type": "string",

```

```

8961         "readOnly": true,
8962         "description": "SSML document fragment indicating supported voices"
8963     }
8964 }
8965 },
8966 {
8967     "type": "object",
8968     "allOf": [
8969         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
8970         {"$ref": "#/definitions/oic.r.speech.tts"}
8971     ],
8972     "required": ["utterance"]
8973 }
8974
8975 example: /
8976 {
8977     "rt": ["oic.r.speech.tts"],
8978     "id": "unique_example_id",
8979     "utterance": "SSML Document"
8980 }
8981
8982 responses :
8983 200:
8984     body:
8985         application/json:
8986             schema: /
8987                 {
8988                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.speech.tts.json#",
8989                     "$schema": "http://json-schema.org/draft-04/schema#",
8990                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
8991 rights reserved.",
8992                     "title": "Speech Synthesis-TTS",
8993                     "definitions": {
8994                         "oic.r.speech.tts": {
8995                             "type": "object",
8996                             "properties": {
8997                                 "utterance": {
8998                                     "type": "string",
8999                                     "description": "SSML document including the speech body"
9000                                 },
9001                                 "supportedLanguages": {
9002                                     "type": "array",
9003                                     "readOnly": true,
9004                                     "description": "array of supported language tags",
9005                                     "items": {
9006                                         "type": "string"
9007                                     }
9008                                 },
9009                                 "supportedVoices": {
9010                                     "type": "string",
9011                                     "readOnly": true,
9012                                     "description": "SSML document fragment indicating supported voices"
9013                                 }
9014                             }
9015                         }
9016                     },
9017                     "type": "object",
9018                     "allOf": [
9019                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9020                         {"$ref": "#/definitions/oic.r.speech.tts"}
9021                     ],
9022                     "required": ["utterance"]
9023                 }
9024
9025 example: /

```

```

9026      {
9027          "rt":          ["oic.r.speech.tts"],
9028          "id":          "unique_example_id",
9029          "utterance":   "SSML Document"
9030      }
9031

```

## 9032 6.51.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
supportedVoices	스트링		Read Only	지원되는 음성을 나타내는 SSML 문서의 단편
utterance	스트링	예		음성 본문을 포함하는 SSML 문서
supportedLanguages	배열: schema 참조		Read Only	지원되는 언어 태그의 배열

## 9033 6.51.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		

## 9034 6.52 터치 센서

### 9035 6.52.1 개요

9036 이 resource 는 터치가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 터치가  
 9037 감지되었음을 의미한다. 'false' 값은 터치가 감지되지 않았음을 의미한다.

### 9038 6.52.2 URI 예

9039 /TouchResURI

### 9040 6.52.3 Resource Type

9041 resource type (rt) 는 oic.r.sensor.touch 로 정의된다.

### 9042 6.52.4 RAML 정의

```

9043 #%RAML 0.8
9044 title: OICTouchSensor
9045 version: v1.1.0-20160519
9046 traits:
9047   - interface :
9048       queryParameters:
9049         if:
9050           enum: ["oic.if.s", "oic.if.baseline"]
9051
9052 /TouchResURI:
9053   description: |

```

```

9054     This resource describes whether touch has been sensed or not.
9055     The value is a boolean.
9056     A value of 'true' means that touch has been sensed.
9057     A value of 'false' means that touch not been sensed.
9058
9059     is : ['interface']
9060
9061     get:
9062         responses :
9063             200:
9064                 body:
9065                     application/json:
9066                         schema: /
9067                             {
9068                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.touch.json#",
9069                                 "$schema": "http://json-schema.org/draft-04/schema#",
9070                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
rights reserved.",
9071                                 "title": "Touch Sensor",
9072                                 "definitions": {
9073                                     "oic.r.sensor.touch": {
9074                                         "allof": [
9075                                             { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
9076                                         ]
9077                                     }
9078                                 },
9079                                 "type": "object",
9080                                 "allof": [
9081                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9082                                     { "$ref": "#/definitions/oic.r.sensor.touch" }
9083                                 ],
9084                                 "required": ["value"]
9085                             }
9086
9087                         example: /
9088                             {
9089                                 "rt":      ["oic.r.sensor.touch"],
9090                                 "id":      "unique_example_id",
9091                                 "value": true
9092                             }
9093

```

#### 9094 6.52.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

#### 9095 6.52.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			

### 9096 6.53 UV 방출

#### 9097 6.53.1 개요

9098 이 resource 는 UV 방출 측정을 규정한다. 측정은 현재 측정된 UV 인덱스이다.

9099

## 6.53.2 URI 예

/UVRadiationResURI

## 6.53.3 Resource Type

resource type (rt)는 oic.r.sensor.radiation.uv 로 정의된다.

## 6.53.4 RAML 정의

```
9105 #%RAML 0.8
9106 title: OICUVRadiation
9107 version: v1.1.0-20160519
9108 traits:
9109   - interface :
9110       queryParameters:
9111         if:
9112           enum: ["oic.if.s", "oic.if.baseline"]
9113
9114 /UVRadiationResURI:
9115   description: |
9116     This resource specifies UV radiation measurement.
9117     The measurement is the current measured UV Index
9118
9119   is : ['interface']
9120   get:
9121     description: |
9122       Retrieves the current UV Radiation value
9123
9124   responses :
9125     200:
9126       body:
9127         application/json:
9128           schema: /
9129             {
9130               "id":
9131 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.radiation.uv.json#",
9132               "$schema": "http://json-schema.org/draft-04/schema#",
9133               "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9134 rights reserved.",
9135               "title": "UV Radiation",
9136               "definitions": {
9137                 "oic.r.sensor.radiation.uv": {
9138                   "type": "object",
9139                   "properties": {
9140                     "measurement": {
9141                       "type": "number",
9142                       "readOnly": true,
9143                       "description": "The measured UV Index"
9144                     }
9145                   }
9146                 }
9147             },
9148             "type": "object",
9149             "allOf": [
9150               {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9151               {"$ref": "#/definitions/oic.r.sensor.radiation.uv"}
9152             ],
9153             "required": ["measurement"]
9154           }
9155
```



```

9156         example: /
9157         {
9158             "rt":          ["oic.r.sensor.radiation.uv"],
9159             "id":          "unique_example_id",
9160             "measurement": 3.5
9161         }
9162

```

### 9163 6.53.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
measurement	숫자	예	Read Only	측정된 UV 인덱스

### 9164 6.53.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			

## 9165 6.54 수분 센서

### 9166 6.54.1 개요

9167 이 resource 는 수분이 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 수분이  
 9168 감지되었음을 의미한다. 'false' 값은 수분이 감지되지 않았음을 의미한다.

### 9169 6.54.2 URI 예

9170 /WaterResURI

### 9171 6.54.3 Resource Type

9172 resource type (rt)는 oic.r.sensor.water 로 정의된다.

### 9173 6.54.4 RAML 정의

```

9174 #%RAML 0.8
9175 title: OICWaterSensor
9176 version: v1.1.0-20160519
9177 traits:
9178   - interface :
9179       queryParameters:
9180         if:
9181           enum: ["oic.if.s", "oic.if.baseline"]
9182
9183 /WaterResURI:
9184   description: |
9185     This resource describes whether water has been sensed or not.
9186     The value is a boolean.
9187     A value of 'true' means that water has been sensed.
9188     A value of 'false' means that water not been sensed.
9189
9190   is : ['interface']
9191   get:
9192     responses :
9193       200:

```

```

9194     body:
9195         application/json:
9196             schema: /
9197                 {
9198                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.water.json#",
9199                     "$schema": "http://json-schema.org/draft-04/schema#",
9200                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9201 rights reserved.",
9202                     "title": "Water Sensor",
9203                     "definitions": {
9204                         "oic.r.sensor.water": {
9205                             "allOf": [
9206                                 {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9207                             ]
9208                         }
9209                     },
9210                     "type": "object",
9211                     "allOf": [
9212                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9213                         {"$ref": "#/definitions/oic.r.sensor.water"}
9214                     ],
9215                     "required": ["value"]
9216                 }
9217
9218             example: /
9219                 {
9220                     "rt": ["oic.r.sensor.water"],
9221                     "id": "unique_example_id",
9222                     "value": true
9223                 }
9224

```

#### 9225 6.54.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

#### 9226 6.54.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/WaterResURI		get			

### 9227 6.55 가속도 센서

#### 9228 6.55.1 개요

9229 이 resource 는 좌표 가속도(좌표계와 Observer 에 의존하는)에 대조되는 적절한 가속도(g force)의  
 9230 측정치를 제공한다. 값은 물체가 겪는 가속도를 단위 "g"로 기술하는 부동 소수점 형이다.

9231

#### 9232 6.55.2 URI 예

9233 /AccelerationResURI

#### 9234 6.55.3 Resource Type

9235 resource type (rt)는 oic.r.sensor.acceleration 으로 정의된다.

#### 6.55.4 RAML 정의

```
9236 #%RAML 0.8
9237 title: OICAcceleration
9238 version: v1.1.0-20160519
9239
9240 traits:
9241   - interface :
9242     queryParameters:
9243       if:
9244         enum: ["oic.if.s", "oic.if.baseline"]
9245
9246 /AccelerationResURI:
9247   description: |
9248     This resource provides a measure of proper acceleration (g force) as opposed to co-ordinate
9249     acceleration
9250     (which is dependent on the co-ordinate system and the observer).
9251     The value is a float which describes the acceleration experienced by the object in "g".
9252
9253   is : ['interface']
9254   get:
9255     responses :
9256       200:
9257         body:
9258           application/json:
9259             schema: /
9260               {
9261                 "id":
9262                   "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.acceleration.json#",
9263                 "$schema": "http://json-schema.org/draft-04/schema#",
9264                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9265                 rights reserved.",
9266                 "title": "Acceleration Sensor",
9267                 "definitions": {
9268                   "oic.r.sensor.acceleration": {
9269                     "properties": {
9270                       "acceleration": {
9271                         "type": "number",
9272                         "readOnly": true,
9273                         "description": "sensed acceleration experienced in 'g'."
9274                       }
9275                     }
9276                   }
9277                 },
9278                 "type": "object",
9279                 "allOf": [
9280                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9281                   {"$ref": "#/definitions/oic.r.sensor.acceleration"}
9282                 ],
9283                 "required": ["acceleration"]
9284               }
9285
9286   example: /
9287     {
9288       "rt":          ["oic.r.sensor.acceleration"],
9289       "id":          "unique_example_id",
9290       "acceleration": 0.5
9291     }
9292
```

#### 6.55.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
---------------	------------	----	--------	----

Acceleration	숫자	예	Read Only	감지된 단위 'g'의 가속도
--------------	----	---	-----------	-----------------

## 9294 6.55.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			

## 9295 6.56 이동

### 9296 6.56.1 개요

9297 이 resource 는 선형 이동을 규정한다. movementSettings 는 가능한 이동 값(예: 회전, 정지, 좌측,  
9298 우측)을 포함하는 스트링의 배열이다. Movement 는 현재 선택된 이동 값이다.  
9299 movementModifier 는 이동 값에 대한 변경자 (예: "회전", "90")이다.

### 9300 6.56.2 URI 예

9301 /MovementResURI

### 9302 6.56.3 Resource Type

9303 resource type (rt)는 oic.r.movement.linear 로 정의된다.

### 9304 6.56.4 RAML 정의

```

9305 #%RAML 0.8
9306 title: OICAcceleration
9307 version: v1.1.0-20160519
9308 traits:
9309   - interface :
9310       queryParameters:
9311         if:
9312           enum: ["oic.if.s", "oic.if.baseline"]
9313
9314 /MovementResURI:
9315   description: |
9316     This resource specifies linear movement.
9317     The movementSettings is an array of strings containing possible movement values (e.g
9318     spin, stop, left, right).
9319     The movement is the currently selected movement value.
9320     The movementModifier is a modifier to the movement value (e.g
9321     "spin", "90")
9322
9323   is : ['interface']
9324   get:
9325     responses :
9326       200:
9327         body:
9328           application/json:
9329             schema: /
9330             {
9331               "id":
9332                 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
9333               "$schema": "http://json-schema.org/draft-04/schema#",

```

```

9334         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9335 rights reserved.",
9336         "title": "Linear Movement",
9337         "definitions": {
9338             "oic.r.movement.linear": {
9339                 "type": "object",
9340                 "properties": {
9341                     "movementSettings": {
9342                         "type": "array",
9343                         "readOnly": true,
9344                         "description": "array of possible movement values",
9345                         "items": {
9346                             "type": "string"
9347                         }
9348                     },
9349                     "movement": {
9350                         "type": "string",
9351                         "description": "Current movement value"
9352                     },
9353                     "movementModifier": {
9354                         "type": "string",
9355                         "description": "Modifier to the movement value (e.g. spin-90, left-20),
9356 units are device dependent"
9357                     }
9358                 }
9359             },
9360             "type": "object",
9361             "allOf": [
9362                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9363                 { "$ref": "#/definitions/oic.r.movement.linear" }
9364             ],
9365             "required": ["movementSettings", "movement"]
9366         }
9367     }
9368
9369     example: /
9370     {
9371         "rt": ["oic.r.movement.linear"],
9372         "id": "unique_example_id",
9373         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
9374         "movement": "rotate",
9375         "movementModifier": "90"
9376     }
9377
9378     post:
9379         description: |
9380             Sets the current device movement
9381
9382     body:
9383         application/json:
9384             schema: /
9385             {
9386                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
9387                 "$schema": "http://json-schema.org/draft-04/schema#",
9388                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9389 reserved.",
9390                 "title": "Linear Movement",
9391                 "definitions": {
9392                     "oic.r.movement.linear": {
9393                         "type": "object",
9394                         "properties": {
9395                             "movementSettings": {
9396                                 "type": "array",
9397                                 "readOnly": true,
9398                                 "description": "array of possible movement values",
9399                                 "items": {
9400                                     "type": "string"

```

```

9401         }
9402     },
9403     "movement": {
9404         "type": "string",
9405         "description": "Current movement value"
9406     },
9407     "movementModifier": {
9408         "type": "string",
9409         "description": "Modifier to the movement value (e.g. spin-90, left-20), units
9410 are device dependent"
9411     }
9412 }
9413 }
9414 },
9415 "type": "object",
9416 "allOf": [
9417     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9418     {"$ref": "#/definitions/oic.r.movement.linear"}
9419 ],
9420 "required": ["movementSettings", "movement"]
9421 }
9422
9423 example: /
9424 {
9425     "id": "unique_example_id",
9426     "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
9427     "movement": "stop"
9428 }
9429
9430 responses :
9431 200:
9432     body:
9433         application/json:
9434             schema: /
9435                 {
9436                     "id":
9437 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.movement.linear.json#",
9438 "$schema": "http://json-schema.org/draft-04/schema#",
9439 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9440 rights reserved.",
9441 "title": "Linear Movement",
9442 "definitions": {
9443     "oic.r.movement.linear": {
9444         "type": "object",
9445         "properties": {
9446             "movementSettings": {
9447                 "type": "array",
9448                 "readOnly": true,
9449                 "description": "array of possible movement values",
9450                 "items": {
9451                     "type": "string"
9452                 }
9453             },
9454             "movement": {
9455                 "type": "string",
9456                 "description": "Current movement value"
9457             },
9458             "movementModifier": {
9459                 "type": "string",
9460                 "description": "Modifier to the movement value (e.g. spin-90, left-20),
9461 units are device dependent"
9462             }
9463         }
9464     }
9465 },
9466 "type": "object",
9467 "allOf": [

```

```

9468         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9469         {"$ref": "#/definitions/oic.r.movement.linear"}
9470     ],
9471     "required": ["movementSettings", "movement"]
9472 }
9473
9474     example: /
9475     {
9476         "id": "unique_example_id",
9477         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
9478         "movement": "stop"
9479     }
9480

```

### 9481 6.56.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
movementSettings	배열: schema 참조	예	Read Only	가능한 이동 값의 배열.
movementModifier	스트링			이동 값에 대한 변경자(예: 회전 90, 좌측 20). 단위는 device 에 의존한다.
movement	스트링	예		현재의 이동 값.

### 9482 6.56.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		

## 9483 6.57 취침 센서

### 9484 6.57.1 개요

9485 이 resource 는 사람의 수면이 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은  
 9486 수면이 감지되었음을 의미한다. 'false' 값은 수면이 감지되지 않았음을 의미한다.

9487

### 9488 6.57.2 URI 예

9489 /SleepSensorResURI

### 9490 6.57.3 Resource Type

9491 resource type (rt)는 oic.r.sensor.sleep 으로 정의된다.

### 9492 6.57.4 RAML 정의

```

9493 #%RAML 0.8
9494 title: OICSleepSensor
9495 version: v1.1.0-20160519
9496 traits:

```

```

9497 - interface :
9498     queryParameters:
9499         if:
9500             enum: ["oic.if.s", "oic.if.baseline"]
9501
9502 /SleepSensorResURI:
9503     description: |
9504         This resource describes whether human sleep has been sensed or not.
9505         The value is a boolean.
9506         A value of 'true' means that sleep has been sensed.
9507         A value of 'false' means that sleep not been sensed.
9508
9509     is : ['interface']
9510     get:
9511         responses :
9512             200:
9513                 body:
9514                     application/json:
9515                         schema: /
9516                             {
9517                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.sleep.json#",
9518                                 "$schema": "http://json-schema.org/draft-04/schema#",
9519                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9520 rights reserved.",
9521                                 "title": "Sleep Sensor",
9522                                 "definitions": {
9523                                     "oic.r.sensor.sleep": {
9524                                         "allOf": [
9525                                             { "$ref": "oic.r.sensor.json#/definitions/oic.r.sensor" }
9526                                         ]
9527                                     }
9528                                 },
9529                                 "type": "object",
9530                                 "allOf": [
9531                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9532                                     { "$ref": "#/definitions/oic.r.sensor.sleep" }
9533                                 ],
9534                                 "required": ["value"]
9535                             }
9536
9537     example: /
9538         {
9539             "rt": ["oic.r.sensor.sleep"],
9540             "id": "unique_example_id",
9541             "value": true
9542         }
9543

```

### 9544 6.57.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

### 9545 6.57.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			



## 9546 6.58 연기 센서

### 9547 6.58.1 개요

9548 이 resource 는 연기가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 연기가  
9549 감지되었음을 의미한다. 'false' 값은 연기가 감지되지 않았음을 의미한다.

9550

### 9551 6.58.2 URI 예

9552 /SmokeSensorResURI

### 9553 6.58.3 Resource Type

9554 resource type (rt)는 oic.r.sensor.smoke 로 정의된다.

### 9555 6.58.4 RAML 정의

```
9556 #%RAML 0.8
9557 title: OICSmokeSensor
9558 version: v1.1.0-20160519
9559 traits:
9560   - interface :
9561       queryParameters:
9562         if:
9563           enum: ["oic.if.s", "oic.if.baseline"]
9564
9565 /SmokeSensorResURI:
9566   description: |
9567     This resource describes whether smoke has been sensed or not.
9568     The value is a boolean.
9569     A value of 'true' means that smoke has been sensed.
9570     A value of 'false' means that smoke not been sensed.
9571
9572   is : ['interface']
9573   get:
9574     responses :
9575       200:
9576         body:
9577           application/json:
9578             schema: /
9579               {
9580                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.smoke.json#",
9581                 "$schema": "http://json-schema.org/draft-04/schema#",
9582                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9583 rights reserved.",
9584                 "title": "Smoke Sensor",
9585                 "definitions": {
9586                   "oic.r.sensor.smoke": {
9587                     "allOf": [
9588                       {"$ref": "oic.r.sensor.json#/definitions/oic.r.sensor"}
9589                     ]
9590                   }
9591                 },
9592                 "type": "object",
9593                 "allOf": [
9594                   {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9595                   {"$ref": "#/definitions/oic.r.sensor.smoke"}
9596                 ]
9597               }
```

```

9597         "required": ["value"]
9598     }
9599
9600     example: /
9601     {
9602         "rt":      ["oic.r.sensor.smoke"],
9603         "id":      "unique_example_id",
9604         "value":   true
9605     }
9606

```

#### 9607 6.58.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	True = 감지 False = 미 감지

#### 9608 6.58.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SmokeSensorResURI		get			

### 9609 6.59 3 축 센서

#### 9610 6.59.1 개요

9611 이 resource 는 3 축 센서로부터 측정 표현을 제공한다. orientation 은 x-평면, y-평면 및 z-평면  
 9612 값을 표현하는 숫자의 배열이다. 각 평면에 대한 측정의 단위는 'g'이다.

#### 9614 6.59.2 URI 예

9615 /ThreeAxisResURI

#### 9616 6.59.3 Resource Type

9617 resource type (rt)는 oic.r.sensor.threeaxis 로 정의된다.

#### 9618 6.59.4 RAML 정의

```

9619 #%RAML 0.8
9620 title: OICThreeAxis
9621 version: v1.1.0-20160519
9622 traits:
9623   - interface :
9624       queryParameters:
9625         if:
9626           enum: ["oic.if.s", "oic.if.baseline"]
9627
9628 /ThreeAxisResURI:
9629   description: |
9630     This resource provides a representation of the measurement from a three-axis sensor.
9631     The orientation is an array of numbers representing x-plane, y-plane and z-plane values.
9632     The unit of measurement for each pane is 'g'.
9633
9634   is : ['interface']

```

```

9635     get:
9636         responses :
9637             200:
9638                 body:
9639                     application/json:
9640                         schema: /
9641                             {
9642                                 "id":
9643 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.sensor.threeaxis.json#",
9644                                 "$schema": "http://json-schema.org/draft-04/schema#",
9645                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
9646 rights reserved.",
9647                                 "title": "Three Axis Sensor",
9648                                 "definitions": {
9649                                     "oic.r.sensor.threeaxis": {
9650                                         "properties": {
9651                                             "orientation": {
9652                                                 "type": "array",
9653                                                 "readOnly": true,
9654                                                 "description": "Array containing x-plane, y-plane and z-plane orientation
9655 in 'g'.",
9656                                                 "minItems": 3,
9657                                                 "maxItems": 3,
9658                                                 "items": {
9659                                                     "type": "number"
9660                                                 }
9661                                             }
9662                                         }
9663                                     }
9664                                 },
9665                                 "type": "object",
9666                                 "allOf": [
9667                                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9668                                     {"$ref": "#/definitions/oic.r.sensor.threeaxis"}
9669                                 ],
9670                                 "required": ["orientation"]
9671                             }
9672
9673                         example: /
9674                             {
9675                                 "rt":          ["oic.r.sensor.threeaxis"],
9676                                 "id":          "unique_example_id",
9677                                 "orientation": [0.7, 1.1, -0.2]
9678                             }
9679

```

## 9680 6.59.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
orientation	배열: schema 참조	예	Read Only	x-평면, y-평면 및 z-평면의 'g' 단위의 방위를 포함하는 배열

## 9681 6.59.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			

## 9682 6.60 고도계

### 9683 6.60.1 개요

9684 이 resource 는 고도계와 관련된 property 를 기술한다. 고도는 위치의 높이(미터)이다.

9685

### 9686 6.60.2 URI 예

9687 /AltimeterResURI

### 9688 6.60.3 Resource Type

9689 resource type (rt)는 oic.r.altimeter 로 정의된다.

### 9690 6.60.4 RAML 정의

```
9691 #%RAML 0.8
9692 title: OICAltimeter
9693 version: v1.1.0-20160519
9694 traits:
9695   - interface :
9696     queryParameters:
9697       if:
9698         enum: ["oic.if.s", "oic.if.baseline"]
9699
9700 /AltimeterResURI:
9701   description: |
9702     This resource describes the properties associated with altimeter.
9703     Altimeter is a height of the position (metres).
9704
9705   is : ['interface']
9706   get:
9707     description: |
9708       Retrieves the current the height of the position (metres).
9709
9710   responses :
9711     200:
9712       body:
9713         application/json:
9714           schema: /
9715             {
9716               "id": "http://openinterconnect.org/schemas/oic.r.altimeter#",
9717               "$schema": "http://json-schema.org/draft-04/schema#",
9718               "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
9719 rights reserved.",
9720               "title": "Altimeter",
9721               "definitions": {
9722                 "oic.r.altimeter": {
9723                   "type": "object",
9724                   "properties": {
9725                     "alt": {
9726                       "type": "number",
9727                       "minimum": 0,
9728                       "readOnly": true,
9729                       "description": "The current height of the position (metres)"
9730                     }
9731                   }
9732                 }
9733             }
```

```

9732     },
9733     },
9734     "type": "object",
9735     "allOf": [
9736         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9737         {"$ref": "#/definitions/oic.r.altimeter"}
9738     ],
9739     "required": ["alt"]
9740 }
9741
9742 example: /
9743 {
9744     "rt": ["oic.r.altimeter"],
9745     "id": "unique_example_id",
9746     "alt": 1500.0
9747 }
9748

```

## 9749 6.60.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
alt	숫자	예	Read Only	위치의 현재 높이 (미터)

## 9750 6.60.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			

## 9751 6.61 시계

### 9752 6.61.1 개요

9753 이 resource 는 시계 및 시간과 관련된 property 를 기술한다. Clock 은 시간 정보이다. Datetime 은  
 9754 ISO 8601 datetime 형식 (예: "2007-04-05T14:30Z") (Time+Date+Timezone)을 사용한다.  
 9755 Countdown 은 카운트다운 동안 요구되는 초 단위의 총 시간이다.

### 9756 6.61.2 URI 예

9757 /ClockResURI

### 9758 6.61.3 Resource Type

9759 resource type (rt)는 oic.r.clock 으로 정의된다.

### 9760 6.61.4 RAML 정의

```

9761 #%RAML 0.8
9762 title: OICClock
9763 version: v1.1.0-20160519
9764 traits:
9765   - interface :
9766       queryParameters:
9767         if:
9768           enum: ["oic.if.a", "oic.if.baseline"]
9769
9770 /ClockResURI:

```

```

9771     description: |
9772         This resource describes the properties associated with clock and time.
9773         Clock is a time information.
9774         Datetime is using ISO 8601 datetime format (e.g: "2007-04-05T14:30Z") (Time+Date+Timezone)
9775         Countdown is the desired total seconds for countdown.
9776
9777     is : ['interface']
9778
9779     get:
9780         description: |
9781             Retrieves the current datetime data.
9782
9783     responses :
9784         200:
9785             body:
9786                 application/json:
9787                     schema: /
9788                         {
9789                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9790                             "$schema": "http://json-schema.org/draft-04/schema#",
9791                             "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9792 reserved.",
9793                             "title": "Clock",
9794                             "definitions": {
9795                                 "oic.r.clock": {
9796                                     "type": "object",
9797                                     "properties": {
9798                                         "datetime": {
9799                                             "type": "string",
9800                                             "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9801 2007-04-05T14:30+09:00)"
9802                                         },
9803                                         "countdown": {
9804                                             "type": "number",
9805                                             "minimum": 0,
9806                                             "description": "Desired total seconds for countdown"
9807                                         }
9808                                     }
9809                                 },
9810                                 "type": "object",
9811                                 "allOf": [
9812                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9813                                     { "$ref": "#/definitions/oic.r.clock" }
9814                                 ],
9815                                 "required": ["datetime"]
9816                             }
9817
9818     example: /
9819         {
9820             "rt": ["oic.r.clock"],
9821             "id": "unique_example_id",
9822             "datetime": "2015-11-05T14:30Z",
9823             "countdown": 0.0
9824         }
9825
9826     post:
9827         description: |
9828             Sets the desired datetime.
9829
9830         body:
9831             application/json:
9832                 schema: /

```

```

9833     {
9834         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9835         "$schema": "http://json-schema.org/draft-04/schema#",
9836         "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights reserved.",
9837         "title": "Clock",
9838         "definitions": {
9839             "oic.r.clock": {
9840                 "type": "object",
9841                 "properties": {
9842                     "datetime": {
9843                         "type": "string",
9844                         "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-
9845 04-05T14:30+09:00)"
9846                     },
9847                     "countdown": {
9848                         "type": "number",
9849                         "minimum": 0,
9850                         "description": "Desired total seconds for countdown"
9851                     }
9852                 }
9853             }
9854         },
9855         "type": "object",
9856         "allOf": [
9857             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
9858             { "$ref": "#/definitions/oic.r.clock" }
9859         ],
9860         "required": ["datetime"]
9861     }
9862
9863     example: /
9864     {
9865         "id": "unique_example_id",
9866         "datetime": "2015-11-05T14:30Z",
9867         "countdown": 0.0
9868     }
9869
9870     responses :
9871     200:
9872         description: |
9873             Indicates that the datetime value was successfully changed.
9874             The new datetime value is provided in the response.
9875
9876         body:
9877             application/json:
9878                 schema: /
9879                 {
9880                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9881                     "$schema": "http://json-schema.org/draft-04/schema#",
9882                     "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9883 reserved.",
9884                     "title": "Clock",
9885                     "definitions": {
9886                         "oic.r.clock": {
9887                             "type": "object",
9888                             "properties": {
9889                                 "datetime": {
9890                                     "type": "string",
9891                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9892 2007-04-05T14:30+09:00)"
9893                                 },
9894                                 "countdown": {
9895                                     "type": "number",
9896                                     "minimum": 0,
9897                                     "description": "Desired total seconds for countdown"
9898                                 }
9899                             }
9900                         }
9901                     }
9902                 }

```

```

9900         }
9901     },
9902     "type": "object",
9903     "allOf": [
9904         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9905         {"$ref": "#/definitions/oic.r.clock"}
9906     ],
9907     "required": ["datetime"]
9908 }
9909
9910 example: /
9911 {
9912     "id": "unique_example_id",
9913     "datetime": "2015-11-05T14:30Z",
9914     "countdown": 0.0
9915 }
9916
9917 403:
9918     description: |
9919         Indicates that OIC client sent an invalid property value to the server.
9920         The server responds with the required input representation.
9921
9922     body:
9923         application/json:
9924             schema: /
9925                 {
9926                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.clock.json#",
9927                     "$schema": "http://json-schema.org/draft-04/schema#",
9928                     "description": "(c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
9929 reserved.",
9930                     "title": "Clock",
9931                     "definitions": {
9932                         "oic.r.clock": {
9933                             "type": "object",
9934                             "properties": {
9935                                 "datetime": {
9936                                     "type": "string",
9937                                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z,
9938 2007-04-05T14:30+09:00)"
9939                                 },
9940                                 "countdown": {
9941                                     "type": "number",
9942                                     "minimum": 0,
9943                                     "description": "Desired total seconds for countdown"
9944                                 }
9945                             }
9946                         }
9947                     },
9948                     "type": "object",
9949                     "allOf": [
9950                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
9951                         {"$ref": "#/definitions/oic.r.clock"}
9952                     ],
9953                     "required": ["datetime"]
9954                 }
9955
9956 example: /
9957 {
9958     "id": "unique_example_id",
9959     "datetime": "2015-11-05T14:30Z",
9960     "countdown": 0.0
9961 }
9962

```



9963 **6.61.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
countdown	숫자			카운트다운 동안 요구되는 초 단위의 총 시간
datetime	스트링	예		ISO 8601datetime 형식 (예: 2007-04- 05T14:30Z, 2007- 04- 05T14:30+09:00)을 사용

9964 **6.61.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		

9965 **6.62 지리 위치**

9966 **6.62.1 개요**

9967 이 resource 는 현재의 지리 위치 좌표와 관련된 property 를 기술한다. 지리 위치는 지리 위치 좌표  
9968 데이터이다. Latitude 는 device 의 현재의 위도 좌표(도)(°)이다. Longitude 는 device 의 현재의  
9969 경도 좌표(도)(°)이다. Altitude 는 device 의 현재의 고도 위치(미터)이다. Accuracy 는 위도 및 경도  
9970 좌표(미터)의 정확도를 나타낸다. altitudeAccuracy 는 고도 좌표(미터)의 정확도를 나타낸다.  
9971 Heading 은 device 의 이동 방향(도)(°)을 나타낸다. Speed 는 device 의 현재 속도(초당 미터)를  
9972 나타낸다.

9973

9974 **6.62.2 URI 예**

9975 /GeolocationResURI

9976 **6.62.3 Resource Type**

9977 resource type (rt)는 oic.r.sensor.geolocation 으로 정의된다.

9978 **6.62.4 RAML 정의**

```

9979 #%RAML 0.8
9980 title: OICGeolocation
9981 version: v1.1.0-20160519
9982 traits:
9983   - interface :
9984     queryParameters:
9985       if:
9986         enum: ["oic.if.s", "oic.if.baseline"]

```

```

9987
9988 /GeolocationResURI:
9989     description: |
9990         This resource describes the properties associated with the current geolocation coordinate.
9991         Geolocation is a geolocation coordinate data.
9992         Latitude is a device's current Latitude coordinate (degrees).
9993         Longitude is a device's current Longitude coordinate (degrees).
9994         Altitude is a device's current Altitude position (metres).
9995         Accuracy is the accuracy level of the latitude and longitude coordinates (metres).
9996         altitudeAccuracy is the accuracy level of the altitude coordinates (metres).
9997         heading is a direction of travel of device (degree).
9998         speed is a device's current velocity (metres per second).
9999
10000 is : ['interface']
10001 get:
10002     description: |
10003         Retrieves the current geolocation coordinates.
10004
10005     responses :
10006         200:
10007             body:
10008                 application/json:
10009                     schema: /
10010                         {
10011                             "id": "http://openinterconnect.org/schemas/oic.r.sensor.geolocation#",
10012                             "$schema": "http://json-schema.org/draft-04/schema#",
10013                             "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10014 rights reserved.",
10015                             "title": "Geolocation",
10016                             "definitions": {
10017                                 "oic.r.sensor.geolocation": {
10018                                     "type": "object",
10019                                     "allOf": [
10020                                         {
10021                                             "$ref": "oic.r.altimeter.json#/definitions/oic.r.altimeter"},
10022                                         {
10023                                             "properties": {
10024                                                 "latitude": {
10025                                                     "type": "number",
10026                                                     "readOnly": true,
10027                                                     "description": "Device's Current Latitude coordinate (degrees)"
10028                                                 },
10029                                                 "longitude": {
10030                                                     "type": "number",
10031                                                     "readOnly": true,
10032                                                     "description": "Device's Current Longitude coordinate (degrees)"
10033                                                 },
10034                                                 "accuracy": {
10035                                                     "type": "number",
10036                                                     "minimum": 0,
10037                                                     "readOnly": true,
10038                                                     "description": "The accuracy level of the latitude and longitude
10039 coordinates (metres)"
10040                                                 },
10041                                                 "altitudeAccuracy": {
10042                                                     "type": "number",
10043                                                     "minimum": 0,
10044                                                     "readOnly": true,
10045                                                     "description": "The accuracy level of the altitude coordinates (metres)"
10046                                                 },
10047                                                 "heading": {
10048                                                     "type": "number",
10049                                                     "minimum": 0,
10050                                                     "maximum": 360,
10051                                                     "readOnly": true,
10052                                                     "description": "Direction of travel of device (degree)"
10053                                                 }
10054                                             }
10055                                         }
10056                                     ]
10057                                 }
10058                             }

```

```

10052         "speed": {
10053             "type": "number",
10054             "minimum": 0,
10055             "readOnly": true,
10056             "description": "Device's current velocity (metres per second)"
10057         }
10058     }
10059 }
10060 ]
10061 }
10062 },
10063 "type": "object",
10064 "allOf": [
10065     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10066     {"$ref": "#/definitions/oic.r.sensor.geolocation"}
10067 ],
10068 "required": ["latitude", "longitude", "alt"]
10069 }
10070
10071 example: /
10072 {
10073     "rt":          ["oic.r.sensor.geolocation"],
10074     "id":          "unique_example_id",
10075     "latitude":    55.070859,
10076     "longitude":   -3.60512,
10077     "alt":         12.07,
10078     "accuracy":    65.0,
10079     "altitudeAccuracy": 0.0,
10080     "heading":     90.0,
10081     "speed":       0.0
10082 }
10083

```

### 6.62.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
longitude	숫자	예	Read Only	Device 의 현재 경도 좌표(도)(°)
latitude	숫자	예	Read Only	Device 의 현재 위도 좌표(도)(°)
altitudeAccuracy	숫자		Read Only	고도 좌표(미터)의 정확도
speed	숫자		Read Only	Device 의 현재 속도 (초당 미터)
heading	숫자		Read Only	device 의 이동 방향 (도)(°)
accuracy	숫자		Read Only	위도 및 경도 좌표(미터)의 정확도

10085     **6.62.6    CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			

10086     **6.63    높이**

10087     **6.63.1    개요**

10088     이 resource 는 물체의 물리적 크기의 높이와 관련된 property 를 기술한다. Height(height)는  
10089     물체의 높이이다.

10090     **6.63.2    URI 예**

10091     /HeightResURI

10092     **6.63.3    Resource Type**

10093     resource type (rt)는 oic.r.height 로 정의된다.

10094     **6.63.4    RAML 정의**

```
10095  	#%RAML 0.8
10096  	title: OICHeight
10097  	version: v1.1.0-20160519
10098  	traits:
10099  	- interface :
10100  	queryParameters:
10101  	if:
10102  	enum: ["oic.if.a", "oic.if.baseline"]
10103
10104  	/HeightResURI:
10105  	description: |
10106  	This resource describes the properties associated with height of an object's physical size.
10107  	Height (height) is height of an object.
10108
10109  	is : ['interface']
10110  	get:
10111  	description: |
10112  	Retrieves height of an object.
10113
10114  	responses :
10115  	200:
10116  	body:
10117  	application/json:
10118  	schema: /
10119  	{
10120  	"id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10121  	"$schema": "http://json-schema.org/draft-04/schema#",
10122  	"description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10123  	rights reserved.",
10124  	"title": "Height",
10125  	"definitions": {
10126  	"oic.r.height": {
10127  	"type": "object",
10128  	"properties": {
```

```

10129         "height": {
10130             "type": "number",
10131             "minimum": 0,
10132             "description": "Height of an object"
10133         }
10134     }
10135 }
10136 },
10137 "type": "object",
10138 "allOf": [
10139     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10140     {"$ref": "#/definitions/oic.r.height"}
10141 ],
10142 "required": ["height"]
10143 }
10144
10145 example: /
10146 {
10147     "rt": ["oic.r.height"],
10148     "id": "unique_example_id",
10149     "height": 100.0
10150 }
10151
10152 post:
10153     description: |
10154         Sets the Height.
10155
10156 body:
10157     application/json:
10158         schema: /
10159             {
10160                 "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10161                 "$schema": "http://json-schema.org/draft-04/schema#",
10162                 "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All rights
10163 reserved.",
10164                 "title": "Height",
10165                 "definitions": {
10166                     "oic.r.height": {
10167                         "type": "object",
10168                         "properties": {
10169                             "height": {
10170                                 "type": "number",
10171                                 "minimum": 0,
10172                                 "description": "Height of an object"
10173                             }
10174                         }
10175                     }
10176                 },
10177                 "type": "object",
10178                 "allOf": [
10179                     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10180                     {"$ref": "#/definitions/oic.r.height"}
10181                 ],
10182                 "required": ["height"]
10183             }
10184
10185         example: /
10186             {
10187                 "id": "unique_example_id",
10188                 "height": 200.0
10189             }
10190
10191 responses :
10192     200:

```

```

10193     description: |
10194         Indicates that the height was successfully changed.
10195         The new height is provided in the response.
10196
10197     body:
10198         application/json:
10199             schema: /
10200                 {
10201                     "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10202                     "$schema": "http://json-schema.org/draft-04/schema#",
10203                     "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
rights reserved.",
10204                     "title": "Height",
10205                     "definitions": {
10206                         "oic.r.height": {
10207                             "type": "object",
10208                             "properties": {
10209                                 "height": {
10210                                     "type": "number",
10211                                     "minimum": 0,
10212                                     "description": "Height of an object"
10213                                 }
10214                             }
10215                         }
10216                     },
10217                     "type": "object",
10218                     "allOf": [
10219                         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10220                         { "$ref": "#/definitions/oic.r.height" }
10221                     ],
10222                     "required": ["height"]
10223                 }
10224
10225
10226     example: /
10227         {
10228             "id": "unique_example_id",
10229             "height": 200.0
10230         }
10231
10232 403:
10233     description: |
10234         Indicates that OIC client sent an invalid property value to the server.
10235         The server responds with the current resource representation.
10236
10237     body:
10238         application/json:
10239             schema: /
10240                 {
10241                     "id": "http://openinterconnect.org/schemas/oic.r.height.json#",
10242                     "$schema": "http://json-schema.org/draft-04/schema#",
10243                     "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
rights reserved.",
10244                     "title": "Height",
10245                     "definitions": {
10246                         "oic.r.height": {
10247                             "type": "object",
10248                             "properties": {
10249                                 "height": {
10250                                     "type": "number",
10251                                     "minimum": 0,
10252                                     "description": "Height of an object"
10253                                 }
10254                             }
10255                         }
10256                     },
10257

```

10258               "type": "object",  
10259               "allOf": [  
10260                 {"\$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},  
10261                 {"\$ref": "#/definitions/oic.r.height"}  
10262               ],  
10263               "required": ["height"]  
10264              }  
10265  
10266            example: /  
10267            {  
10268              "id":        "unique\_example\_id",  
10269              "height": 200.0  
10270            }  
10271

10272   **6.63.5   Property 정의**

Property name	Value type	필수	엑세스 모드	설명
Height	숫자	예		물체의 높이

10273   **6.63.6   CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		

10274   **6.64   무게**

10275   **6.64.1   개요**

10276   이 resource 는 물체의 무게와 관련된 property 를 기술한다. Weight (weight)는 물체의 무게이다.  
10277

10278   **6.64.2   URI 예**

10279   /WeightResURI

10280   **6.64.3   Resource Type**

10281   resource type (rt)는 oic.r.weight 로 정의된다.

10282   **6.64.4   RAML 정의**

10283   `##RAML 0.8`  
10284   `title: OICWeight`  
10285   `version: v1.1.0-20160519`  
10286   `traits:`  
10287   `- interface :`  
10288       `queryParameters:`  
10289       `if:`  
10290       `enum: ["oic.if.s", "oic.if.baseline"]`  
10291  
10292   `/WeightResURI:`  
10293       `description: |`  
10294       `This resource describes the properties associated with weight of an object.`  
10295       `Weight (weight) is weight of an object.`  
10296  
10297   `is : ['interface']`

```

10298     get:
10299         description: |
10300             Retrieves weight of an object.
10301
10302     responses :
10303         200:
10304             body:
10305                 application/json:
10306                     schema: /
10307                         {
10308                             "id": "http://openinterconnect.org/schemas/oic.r.weight.json#",
10309                             "$schema": "http://json-schema.org/draft-04/schema#",
10310                             "description": "Copyright (c) 2016, 2017 Open Interconnect Consortium, Inc. All
10311 rights reserved.",
10312                             "title": "Weight",
10313                             "definitions": {
10314                                 "oic.r.weight": {
10315                                     "type": "object",
10316                                     "properties": {
10317                                         "weight": {
10318                                             "type": "number",
10319                                             "minimum": 0,
10320                                             "readOnly": true,
10321                                             "description": "Weight of an object"
10322                                         }
10323                                     }
10324                                 },
10325                             "type": "object",
10326                             "allOf": [
10327                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10328                                 { "$ref": "#/definitions/oic.r.weight" }
10329                             ],
10330                             "required": ["weight"]
10331                         }
10332
10333
10334     example: /
10335         {
10336             "rt": ["oic.r.weight"],
10337             "id": "unique_example_id",
10338             "weight": 200.0
10339         }
10340

```

#### 10341 6.64.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
Weight	숫자	예	Read Only	물체의 무게

#### 10342 6.64.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			

### 10343 6.65 청정도

#### 10344 6.65.1 개요

10345 이 resource 는 공기의 품질을 추정하기 위하여 사용될 수 있는 정성적 또는 측정된 오염물질을  
 10346 기술한다. 측정된 것은 아래에 기술된 바와 같이 오염물질 유형마다 단위를 갖는 실제 감지된



10347 값이다. 정성적인 것은, 특정 오염물질에 대해 최소값이 최소 오염물질이고, 최대값이 최대  
10348 오염물질인, 제공된 범위 내에서의 대표 값이다. valueType 은 contaminantvalue Property 내에서  
10349 정성적 또는 측정된 판독 값을 나타낸다. Contaminant 값은 실제 측정된 또는 정성적 레벨을  
10350 포함한다. range 는 (oic.r.baseresource 로부터) 보고되는 값에 대해 허용된 범위를 포함한다.  
10351 valueType 이 'Measured'라면, 오염물질 type 에 대한 단위는 다음과 같다: Methanal  
10352 (Formaldehyde 로도 알려진): CH<sub>2</sub>O (µg/m<sup>3</sup>), 이산화탄소: CO<sub>2</sub> (ppm), 일산화탄소: CO (ppm), 분진  
10353 물질 (직경이 2.5 미크론 미만): PM2.5 (µg/m<sup>3</sup>), 분진 물질 (직경이 10 microns 미만): PM10  
10354 (µg/m<sup>3</sup>), 휘발성 유기 화합물: VOC (µg/m<sup>3</sup>).

10355

10356

## 10357 6.65.2 URI 예

10358 /AirQualityResURI

## 10359 6.65.3 Resource Type

10360 resource type (rt)는 oic.r.airquality 로 정의된다.

## 10361 6.65.4 RAML 정의

10362 `##RAML 0.8`

10363 `title: OICAirQuality`

10364 `version: v1.1.0-20160519`

10365 `traits:`

10366 `- interface :`

10367  `queryParameters:`

10368  `if:`

10369  `enum: ["oic.if.s", "oic.if.baseline"]`

10370

10371 `/AirQualityResURI:`

10372  `description: |`

10373  `This resource describes a qualitative or measured contaminant that can be used to infer Air`  
10374 `Quality.`

10375  `Measured is the actual sensed value with units per contaminant type as described below.`

10376  `Qualitative is a representative value within the range provided where the minium value is`

10377 `minimum contamination and maximum value is maximum contamination for the specific contaminant.`

10378  `The valueType indicates a qualitative or measured reading within the contaminantvalue Property.`

10379  `contaminantvalue contains the actual measured or qualitative level.`

10380  `range contains the allowed range for the value that is being reported (from oic.r.baseresource).`

10381  `If valueType is 'Measured' then the units for the contaminant types are as follows:`

10382  `Methanal (also known as Formaldehyde): CH2O (ug/m3),`

10383  `Carbon Dioxide: CO2 (ppm),`

10384  `Carbon Monoxide: CO (ppm),`

10385  `Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m3),`

10386  `Particulate Matter (less than 10 microns in diameter): PM10 (ug/m3),`

10387  `Volatile Organic Compounds: VOC (ug/m3)`

10388

10389 `is : ['interface']`

10390 `get:`

10391  `description: |`

10392  `Retrieves the current air quality.`

10393

10394 `responses :`

```

10395     200:
10396     body:
10397         application/json:
10398         schema: /
10399             {
10400                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airquality.json#",
10401                 "$schema": "http://json-schema.org/draft-04/schema#",
10402                 "description": "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10403 reserved.",
10404                 "title": "Air Quality",
10405                 "definitions": {
10406                     "oic.r.airquality": {
10407                         "type": "object",
10408                         "properties": {
10409                             "contaminantvalue": {
10410                                 "type": "integer",
10411                                 "readOnly": true,
10412                                 "description": "The measured or qualitative value for the contaminant."
10413                             },
10414                             "contaminanttype": {
10415                                 "enum":
10416 [ "CH2O", "CO2", "CO", "PM2.5", "PM10", "VOC", "Smoke", "Odor", "AirPollution"],
10417                                 "description": "The contaminant being measured.",
10418                                 "readOnly": true
10419                             },
10420                             "valuetype": {
10421                                 "enum": [ "Qualitative", "Measured"],
10422                                 "description": "Indicates whether the provided value is qualitative or
10423 measured.",
10424                                 "readOnly": true
10425                             }
10426                         }
10427                     }
10428                 },
10429                 "type": "object",
10430                 "allof": [
10431                     { "$ref": "oic.core.json#/definitions/oic.core" },
10432                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
10433                     { "$ref": "#/definitions/oic.r.airquality" }
10434                 ],
10435                 "required": [ "contaminantvalue", "contaminanttype", "valuetype", "range" ]
10436             }
10437
10438         example: /
10439             {
10440                 "rt": [ "oic.r.airquality" ],
10441                 "id": "unique_example_id",
10442                 "contaminanttype": "CO",
10443                 "valuetype": "Measured",
10444                 "contaminantvalue": 10,
10445                 "range": [ 0, 500 ]
10446             }
10447

```

### 6.65.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
valuetype	복수 타입: schema 참조	예	Read Only	제공된 값이 정성적인 값인지 또는 측정된 값인지를 나타낸다

contaminantvalue	정수	예	Read Only	오염물질에 대한 정성적 또는 측정된 값
contaminanttype	복수 타입: schema 참조	예	Read Only	측정되는 오염물질

#### 6.65.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			

### 6.66 청정도 Collection

#### 6.66.1 개요

이 resource 는 정성적 또는 측정된 공기 품질을 제공하는 센서를 기술한다. 이 resource 는 개별적으로 노출된 오염물질의 측정치를 상술하는 oic.r.airquality 개체의 collection 이다. Device 에 의해 지원되는 오염물질의 유형마다 하나의 collection entry 가 존재한다. device 는 적어도 하나의 측정된 또는 정성적 값을 노출해야만 한다.

#### 6.66.2 URI 예

/AirQualityBaselineResURI

#### 6.66.3 Resource Type

resource type (rt)는 oic.r.airqualitycollection 으로 정의된다.

#### 6.66.4 RAML 정의

```

#%RAML 0.8
title: OICAirQuality
version: v1.1.0-20160519
traits:
  - interface-ll :
      queryParameters:
        if:
          enum: ["oic.if.ll"]
  - interface-baseline :
      queryParameters:
        if:
          enum: ["oic.if.baseline"]

/AirQualityBaselineResURI:
  description: |
    This resource describes a sensor that provides the qualitative or measured Air Quality.
    The resource is a collection of instances of oic.r.airquality detailing the individual exposed
    contaminant measures
    There is one collection entry per contaminant type supported by the device
    A device must expose at least one measured or qualitative value.

  is : ['interface-baseline']
  get:

```

```

10484     description: |
10485         Retrieves the current air quality.
10486
10487     responses :
10488         200:
10489             body:
10490                 application/json:
10491                     schema: /
10492                         {
10493                             "id":
10494 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.airqualitycollection.json#",
10495 "$schema": "http://json-schema.org/draft-04/schema#",
10496 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10497 reserved.",
10498 "title": "Air Quality Collection",
10499 "definitions": {
10500     "oic.r.airqualitycollection": {
10501         "type": "object",
10502         "allOf": [
10503             {
10504                 "$ref": "oic.collection-schema.json#/definitions/oic.collection"
10505             },
10506             {
10507                 "properties": {
10508                     "rt": {
10509                         "type": "array",
10510                         "minItems": 2,
10511                         "maxItems": 2,
10512                         "uniqueItems": true,
10513                         "items": {
10514                             "enum": ["oic.r.airqualitycollection", "oic.wk.col"]
10515                         }
10516                     },
10517                     "rts": {
10518                         "type": "array",
10519                         "minItems": 1,
10520                         "maxItems": 2,
10521                         "uniqueItems": true,
10522                         "items": {
10523                             "oneOf": [
10524                                 {
10525                                     "enum": ["oic.r.airquality", "oic.r.value.conditional"]
10526                                 },
10527                                 {
10528                                     "enum": ["oic.r.airquality"]
10529                                 }
10530                             ]
10531                         }
10532                     }
10533                 }
10534             }
10535         ]
10536     },
10537     "type": "object",
10538     "allOf": [
10539         { "$ref": "oic.core.json#/definitions/oic.core" },
10540         { "$ref": "#/definitions/oic.r.airqualitycollection" }
10541     ]
10542 }
10543
10544
10545     example: /
10546         {
10547             "rt":  ["oic.r.airqualitycollection", "oic.wk.col"],
10548             "if":  ["oic.if.baseline", "oic.if.ll"],
10549             "id":   "unique_example_id",
10550             "links": [

```

```

10551         {"href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
10552 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
10553         {"href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
10554 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
10555     ]
10556 }
10557

```

#### 10558 6.66.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
rt	배열: schema 참조			
rts	배열: schema 참조			
drel	스트링			규정되는 경우, 이것은, OIC Link 가 *rel* 파라미터와의 명시적 관계를 규정하지 않을 때 사용하기 위한 default 관계이다.
link	복수 타입: schema 참조			
id	복수 타입: schema 참조			사용 컨텍스트 또는 UUIDv4 에 대해 고유한 값이 될 수 있는 collection 에 대한 ID.
rts	복수 타입: schema 참조			Collection 에 포함된 link 내에서 (Target 및 anchor 에 대해) 허용 가능한 resource type 의 목록을 정의한다. 새로운 link 는 본 목록으로부터만

				생성할 수 있다.
di	복수 타입: schema 참조			UUIDv4 스트링인 device ID; /oic/res 의 스펙 A 정의에 대해 역 호환성을 위해 사용된다.

## 10559 6.66.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirQualityBaselineResURI		get			

## 10560 6.66.7 Referenced JSON schemas

### 10561 6.66.7.1 oic.collection-schema.json

```

10562 {
10563   "$schema": "http://json-schema.org/draft-04/schema#",
10564   "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
10565   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.collection-schema.json#",
10566   "title": "Collection",
10567   "definitions": {
10568     "oic.collection.setoflinks": {
10569       "description": "A set (array) of simple or individual OIC Links. In addition to
10570 properties required for an OIC Link, the identifier for that link in this set is also required",
10571       "type": "array",
10572       "items": {
10573         "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
10574       }
10575     },
10576     "oic.collection.alllinks": {
10577       "description": "All forms of links in a collection",
10578       "oneOf": [
10579         {
10580           "$ref": "#/definitions/oic.collection.setoflinks"
10581         }
10582       ]
10583     },
10584     "oic.collection": {
10585       "type": "object",
10586       "description": "A collection is a set (array) of tagged-link or set (array) of simple
10587 links along with additional properties to describe the collection itself",
10588       "properties": {
10589         "id": {
10590           "anyOf": [
10591             {
10592               "type": "integer",
10593               "description": "A number that is unique to that collection; like an
10594 ordinal number that is not repeated"
10595             },
10596             {
10597               "type": "string",
10598               "description": "A unique string that could be a hash or similarly
10599 unique"
10600             },
10601             {
10602               "$ref": "oic.types-schema.json#/definitions/uuid",
10603               "description": "A unique string that could be a UUIDv4"
10604             }
10605           ]
10606         },
10607         "description": "ID for the collection. Can be an value that is unique to the

```

```

10607 use context or a UUIDv4"
10608     },
10609     "di": {
10610         "$ref": "oic.types-schema.json#/definitions/uuid",
10611         "description": "The device ID which is an UUIDv4 string; used for backward
10612 compatibility with Spec A definition of /oic/res"
10613     },
10614     "rts": {
10615         "$ref": "oic.core-schema.json#/definitions/oic.core/properties/rt",
10616         "description": "Defines the list of allowable resource types (for Target and
10617 anchors) in links included in the collection; new links being created can only be from this
10618 list"
10619     },
10620     "drel": {
10621         "type": "string",
10622         "description": "When specified this is the default relationship to use when an
10623 OIC Link does not specify an explicit relationship with *rel* parameter"
10624     },
10625     "links": {
10626         "$ref": "#/definitions/oic.collection.alllinks"
10627     }
10628 },
10629 },
10630 "type": "object",
10631 "allof": [
10632     {"$ref": "oic.core-schema.json#/definitions/oic.core"},
10633     {"$ref": "#/definitions/oic.collection"}
10634 ]
10635 }
10636

```

## 6.67 소모품

### 6.67.1 개요

이 resource 는 필터 재료, 프린터 토너 등과 같은 소모품을 규정한다. Type 은 Smart Home Device 스펙에 의해 정의된 바와 같이 소모품을 정의하는 열거 형이다. Remaining 은 남아있는 수명의 백분율을 나타내는 정수이다. Orderpercentage 는 제조자가 교체 또는 충전을 원하는 백분율 수명을 나타내는 정수이다. url 은 소모품에 대해 미래의 정보를 얻을 수 있는 URL 을 포함하는 스트링이다.

### 6.67.2 URI 예

/ConsumableResURI

### 6.67.3 Resource Type

resource type (rt)는 oic.r.consumable 로 정의된다.

### 6.67.4 RAML 정의

```

10650 #%RAML 0.8
10651 title: OICConsumables
10652 version: OCF-v1.0.0-20160620
10653 traits:
10654   - interface :
10655       queryParameters:
10656           if:
10657               enum: ["oic.if.s", "oic.if.baseline"]
10658

```

```

10659 /ConsumableResURI:
10660     description: |
10661         This resource specifies a thing that can be consumed such as filter material, printer toner etc
10662         The type is an enumeration defining the thing being consumed as defined by the Smart Home
10663 Device Specification
10664         The remaining is an integer capturing the percentatge remaining life
10665         The orderpercentage is an integer capturing the percentage life at which replacement or
10666 replenishment is recommended by the manufacturer
10667         The url is a string containing a URL at which further information may be obtained with respect
10668 to the consumable
10669
10670     is : ['interface']
10671
10672     get:
10673         responses :
10674             200:
10675                 body:
10676                     application/json:
10677                         schema: /
10678                             {
10679                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.consumable#",
10680                                 "$schema": "http://json-schema.org/draft-04/schema#",
10681 reserved.",
10682                                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10683                                 "title": "Consumable",
10684                                 "definitions": {
10685                                     "oic.r.consumable": {
10686                                         "type": "object",
10687                                         "properties": {
10688                                             "typeofconsumable": {
10689                                                 "type": "string",
10690                                                 "description": "Thing that is being consumed.",
10691                                                 "readOnly": true
10692                                             },
10693                                             "remaining": {
10694                                                 "type": "integer",
10695                                                 "description": "Percentage remaining lifespan.",
10696                                                 "readOnly": true,
10697                                                 "minimum": 0,
10698                                                 "maximum": 100
10699                                             },
10700                                             "orderpercentage": {
10701                                                 "type": "integer",
10702 manufacturer",
10703                                                 "description": "Percentage at which re-ordering is recommended by the
10704                                                 "readOnly": true
10705                                             },
10706                                             "url": {
10707                                                 "type": "string",
10708                                                 "format": "uri",
10709                                                 "description": "URL at which additional ordering information may be found.",
10710                                                 "readOnly": true
10711                                             }
10712                                         }
10713                                     },
10714                                     "type": "object",
10715                                     "allOf": [
10716                                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
10717                                         {"$ref": "#/definitions/oic.r.consumable"}
10718                                     ],
10719                                     "required": ["typeofconsumable", "remaining"]
10720                                 }
10721
10722                         example: /
10723                             {
10724                                 "rt":
10725                                     ["oic.r.consumable"],

```



```
10725         "id": "unique_example_id",
10726         "typeofconsumable": "tonerBlack",
10727         "remaining": 20,
10728         "orderpercentage": 10,
10729         "url": "http://myreorderURL"
10730     }
10731 }
```

10732 **6.67.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
url	스트링		Read Only	추가적인 주문 정보를 찾을 수 있는 URL.
typeofconsumable	스트링	예	Read Only	소모품.
remaining	정수	예	Read Only	나머지 수명의 백분율.
orderpercentage	정수		Read Only	제조자가 재주문을 권고하는 백분율.

10733 **6.67.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ConsumableResURI		get			

10734 **6.68 소모품 Collection**

10735 **6.68.1 개요**

10736 이 resource 는 필터 재료, 프린터 토너 등과 같은 소모품을 규정한다. Resource 는 개별적인 소모  
10737 품을 상술하는 oic.r.consumable 개체의 collection 이다. supportedconsumables 는 Resource 의  
10738 본 개체가 지원하는 소모품 유형의 집합이다.

10739

10740 **6.68.2 URI 예**

10741 /ConsumablesBaselineResURI

10742 **6.68.3 Resource Type**

10743 resource type (rt)는 oic.r.consumablecollection 으로 정의된다.

10744 **6.68.4 RAML 정의**

```
10745 #%RAML 0.8
10746 title: OICConsumables
10747 version: OCF-v1.0.0-20160620
10748 traits:
10749   - interface-11 :
10750     queryParameters:
10751       if:
```

```

10752         enum: ["oic.if.ll"]
10753     - interface-baseline :
10754         queryParameters:
10755             if:
10756                 enum: ["oic.if.baseline"]
10757
10758 /ConsumablesBaselineResURI:
10759     description: |
10760         This resource specifies things that can be consumed such as filter material, printer toner etc
10761         The resource is a collection of instances of oic.r.consumable detailing the individual consumed
10762 items
10763         supportedconsumables is the set of consumable types that this instance of the Resource supports
10764
10765     is : ['interface-baseline']
10766     get:
10767         responses :
10768             200:
10769                 body:
10770                     application/json:
10771                         schema: /
10772                             {
10773                                 "id":
10774 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.consumablecollection#",
10775                                 "$schema": "http://json-schema.org/draft-04/schema#",
10776                                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
10777 reserved.",
10778                                 "title": "Consumables Collection",
10779                                 "definitions": {
10780                                     "oic.r.consumablecollection": {
10781                                         "type": "object",
10782                                         "allOf": [
10783                                             {
10784                                                 "$ref": "oic.collection-schema.json#/definitions/oic.collection"
10785                                             },
10786                                             {
10787                                                 "properties": {
10788                                                     "rt": {
10789                                                         "type": "array",
10790                                                         "minItems": 2,
10791                                                         "maxItems": 2,
10792                                                         "uniqueItems": true,
10793                                                         "items": {
10794                                                             "enum": ["oic.r.consumablecollection", "oic.wk.col"]
10795                                                         }
10796                                                     },
10797                                                     "rts": {
10798                                                         "type": "array",
10799                                                         "minItems": 1,
10800                                                         "maxItems": 2,
10801                                                         "uniqueItems": true,
10802                                                         "items": {
10803                                                             "anyOf": [
10804                                                                 {
10805                                                                     "enum": ["oic.r.consumable", "oic.r.value.conditional"]
10806                                                                 },
10807                                                                 {
10808                                                                     "enum": ["oic.r.consumable"]
10809                                                                 }
10810                                                             ]
10811                                                         }
10812                                                     },
10813                                                     "supportedconsumables": {
10814                                                         "type": "array",
10815                                                         "description": "Array of possible consumables the device measures.",
10816                                                         "readOnly": true,

```

```

10817         "items": {
10818             "type": "string"
10819         }
10820     }
10821 }
10822 }
10823 ]
10824 }
10825 },
10826 "type": "object",
10827 "allOf": [
10828     {"$ref": "oic.core.json#/definitions/oic.core"},
10829     {"$ref": "#/definitions/oic.r.consumablecollection"}
10830 ]
10831 }
10832
10833 example: /
10834 {
10835     "rt": ["oic.r.consumablecollection", "oic.wk.col"],
10836     "id": "unique_example_id",
10837     "rts": ["oic.r.consumable", "oic.r.value.conditional"],
10838     "supportedconsumables": ["tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow"],
10839     "links": [
10840         {"href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
10841 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
10842         {"href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
10843 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
10844         {"href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
10845 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
10846         {"href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
10847 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
10848     ]
10849 }
10850

```

### 6.68.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
rt	배열: schema 참조			
supportedconsumables	배열: schema 참조		Read Only	device 가 판단 가능한 소모품의 배열
rts	배열: schema 참조			
drel	스트링			규정되는 경우, 이것은, OIC Link 가 *rel* 파라미터와의 명시적 관계를 규정하지 않을 때 사용하기 위한 default 관계이다.

link	복수 타입: schema 참조			
id	복수 타입: schema 참조			collection 에 대한 ID. 사용 컨텍스트 또는 UUIDv4 에 대해 고유한 값이 될 수 있다
rts	복수 타입: schema 참조			Collection 에 포함된 link 내에서 (Target 및 anchor 에 대해) 허용 가능한 resource type 의 목록을 정의한다. 새로운 link 는 본 목록으로부터만 생성할 수 있다.
di	복수 타입: schema 참조			UUIDv4 스트링인 device ID. /oic/res 의 스펙 A 정의에 대해 역 호환성을 위해 사용된다.

## 10852 6.68.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ConsumablesBaselineResURI		get			

## 10853 6.68.7 Referenced JSON schemas

### 10854 6.68.7.1 oic.collection-schema.json

```

10855 {
10856     "$schema": "http://json-schema.org/draft-04/schema#",
10857     "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
10858     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.collection-schema.json#",
10859     "title": "Collection",
10860     "definitions": {
10861         "oic.collection.setoflinks": {

```

```

10862         "description": "A set (array) of simple or individual OIC Links. In addition to
10863 properties required for an OIC Link, the identifier for that link in this set is also required",
10864         "type": "array",
10865         "items": {
10866             "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
10867         }
10868     },
10869     "oic.collection.alllinks": {
10870         "description": "All forms of links in a collection",
10871         "oneOf": [
10872             {
10873                 "$ref": "#/definitions/oic.collection.setoflinks"
10874             }
10875         ]
10876     },
10877     "oic.collection": {
10878         "type": "object",
10879         "description": "A collection is a set (array) of tagged-link or set (array) of simple
10880 links along with additional properties to describe the collection itself",
10881         "properties": {
10882             "id": {
10883                 "anyOf": [
10884                     {
10885                         "type": "integer",
10886                         "description": "A number that is unique to that collection; like an
10887 ordinal number that is not repeated"
10888                     },
10889                     {
10890                         "type": "string",
10891                         "description": "A unique string that could be a hash or similarly
10892 unique"
10893                     },
10894                     {
10895                         "$ref": "oic.types-schema.json#/definitions/uuid",
10896                         "description": "A unique string that could be a UUIDv4"
10897                     }
10898                 ],
10899                 "description": "ID for the collection. Can be an value that is unique to the
10900 use context or a UUIDv4"
10901             },
10902             "di": {
10903                 "$ref": "oic.types-schema.json#/definitions/uuid",
10904                 "description": "The device ID which is an UUIDv4 string; used for backward
10905 compatibility with Spec A definition of /oic/res"
10906             },
10907             "rts": {
10908                 "$ref": "oic.core-schema.json#/definitions/oic.core/properties/rt",
10909                 "description": "Defines the list of allowable resource types (for Target and
10910 anchors) in links included in the collection; new links being created can only be from this
10911 list"
10912             },
10913             "drel": {
10914                 "type": "string",
10915                 "description": "When specified this is the default relationship to use when an
10916 OIC Link does not specify an explicit relationship with *rel* parameter"
10917             },
10918             "links": {
10919                 "$ref": "#/definitions/oic.collection.alllinks"
10920             }
10921         }
10922     },
10923     "type": "object",
10924     "allOf": [
10925         {"$ref": "oic.core-schema.json#/definitions/oic.core"},
10926         {"$ref": "#/definitions/oic.collection"}
10927     ]
10928 }
10929

```

## 6.69 지연 제상

### 6.69.1 개요

이 resource 는 US Energy Star 스펙에 의해 정의된 지연 제상 기능을 기술한다. Energy Star Refrigerator Requirements Version 5 섹션 4)G (<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)를 참조하기 바란다. Status 는 기능이 on 인지를 나타내는 Boolean 형이고, off 이면, Defrost 는 정상 device 동작의 일부로 예정된다. oir.r.time.period (mandatory)로부터의 startTime 은 제상이 발생하지 않아야 하는 간격에 대한 ISO8601 인코딩된 start time 이다. oir.r.time.period 로부터 stopTime 은 제상이 발생하지 않아야 하는 간격에 대한 ISO8601 인코딩된 stop time 이다. 추가적인 범위 제한을 갖는 oir.r.time.period 로부터의 interval 은 startTime 에서 시작하는 기간의 분 단위의 시간이다(만약 존재하지 않는다면, default 는 240 이다). stopTime 과 interval 은 상호 배타적이라 둘 다가 하나의 Resource instance 내에서 존재할 수는 없다.

### 6.69.2 URI 예

/DelayDefrostResURI

### 6.69.3 Resource Type

resource type (rt)는 oic.r.delaydefrost 로 정의된다.

### 6.69.4 RAML 정의

```
##RAML 0.8
title: OICDelayDefrost
version: OCF_v1.0.0-2016_____

traits:
  - interface :
      queryParameters:
        if:
          enum: ["oic.if.a", "oic.if.baseline"]

/DelayDefrostResURI:
  description: |
    This resource describes the delay defrost function as defined by the US Energy Star
    Specifications.
    See Energy Star Refrigerator Requirements Version 5 Section 4)G
    (https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)
    The status is a boolean indicating whether the function is on, if off then defrost is scheduled
    as part of normal device operation.
    startTime, from oir.r.time.period (mandatory) is an ISO8601 encoded start time for the interval
    in which defrost shall not occur.
    stopTime, from oic.r.time.period is an ISO8601 encoded stop time for the interval in which
    defrost shall not occur.
    interval, from oic.r.time.period with additional range restrictions is the time in minutes of
    the period that starts at starttime (if not present the default is 240).
    stopTime and interval are mutually exclusive; they cannot both be present in a Resource instance

  is : ['interface']
```

```

10976  get:
10977      description: |
10978          Retrieves the current Delay Defrost function status
10979
10980  responses :
10981      200:
10982          body:
10983              application/json:
10984                  schema: /
10985                      {
10986                          "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
10987                          "$schema": "http://json-schema.org/draft-04/schema#",
10988                          "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
10989  rights reserved.",
10990                          "title": "Delay Defrost",
10991                          "definitions": {
10992                              "oic.r.delaydefrost": {
10993                                  "type": "object",
10994                                  "allOf": [
10995                                      {
10996                                          "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
10997                                      },
10998                                      {
10999                                          "properties": {
11000                                              "interval": {
11001                                                  "type": "integer",
11002                                                  "description": "Defrost interval as defined by Energy Star",
11003                                                  "minimum": 1,
11004                                                  "maximum": 1440,
11005                                                  "default": 240
11006                                              },
11007                                              "status": {
11008                                                  "type": "boolean",
11009                                                  "description": "Indicates whether any supported delay defrost function
11010  is active"
11011                                              }
11012                                          },
11013                                          "required": ["status"]
11014                                      }
11015                                  ]
11016                              }
11017                          },
11018                          "type": "object",
11019                          "allOf": [
11020                              { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11021                              { "$ref": "#/definitions/oic.r.delaydefrost" }
11022                          ]
11023                      }
11024
11025                  example: /
11026                      {
11027                          "rt": ["oic.r.delaydefrost"],
11028                          "id": "unique_example_id",
11029                          "startTime": "06:00Z",
11030                          "status": false
11031                      }
11032
11033  post:
11034      description: |
11035          Activates the desired Delay Defrost functions
11036
11037      body:
11038          application/json:
11039              schema: /

```

```

11040     {
11041         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11042         "$schema": "http://json-schema.org/draft-04/schema#",
11043         "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11044 reserved.",
11045         "title": "Delay Defrost",
11046         "definitions": {
11047             "oic.r.delaydefrost": {
11048                 "type": "object",
11049                 "allOf": [
11050                     {
11051                         "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11052                     },
11053                     {
11054                         "properties": {
11055                             "interval": {
11056                                 "type": "integer",
11057                                 "description": "Defrost interval as defined by Energy Star",
11058                                 "minimum": 1,
11059                                 "maximum": 1440,
11060                                 "default": 240
11061                             },
11062                             "status": {
11063                                 "type": "boolean",
11064                                 "description": "Indicates whether any supported delay defrost function is
11065 active"
11066                             }
11067                         },
11068                         "required": ["status"]
11069                     }
11070                 ]
11071             }
11072         },
11073         "type": "object",
11074         "allOf": [
11075             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11076             { "$ref": "#/definitions/oic.r.delaydefrost" }
11077         ]
11078     }
11079
11080     example: /
11081     {
11082         "id": "unique_example_id",
11083         "status": true,
11084         "startTime": "06:00Z",
11085         "interval": 180
11086     }
11087
11088     responses :
11089     200:
11090         description: |
11091             Indicates that the DelayDefrost function was changed.
11092             The new representation may be provided in the response.
11093
11094     body:
11095     application/json:
11096         schema: /
11097         {
11098             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11099             "$schema": "http://json-schema.org/draft-04/schema#",
11100             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11101 rights reserved.",
11102             "title": "Delay Defrost",
11103             "definitions": {
11104                 "oic.r.delaydefrost": {
11105                     "type": "object",
11106                     "allOf": [

```



```

11107         {
11108             "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11109         },
11110         {
11111             "properties": {
11112                 "interval": {
11113                     "type": "integer",
11114                     "description": "Defrost interval as defined by Energy Star",
11115                     "minimum": 1,
11116                     "maximum": 1440,
11117                     "default": 240
11118                 },
11119                 "status": {
11120                     "type": "boolean",
11121                     "description": "Indicates whether any supported delay defrost function
11122 is active"
11123                 }
11124             },
11125             "required": ["status"]
11126         }
11127     ]
11128 }
11129 },
11130 "type": "object",
11131 "allOf": [
11132     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11133     {"$ref": "#/definitions/oic.r.delaydefrost"}
11134 ]
11135 }
11136
11137 example: /
11138 {
11139     "id": "unique_example_id",
11140     "status": true,
11141     "startTime": "06:00Z",
11142     "interval": 180
11143 }
11144
11145 403:
11146 description: |
11147     Indicates the update to the time properties was rejected.
11148     Reasons for rejection:
11149         invalid time entry
11150     The current unchanged representation may be provided in the response.
11151
11152 body:
11153 application/json:
11154 schema: /
11155 {
11156     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.delaydefrost.json#",
11157     "$schema": "http://json-schema.org/draft-04/schema#",
11158     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11159 rights reserved.",
11160     "title": "Delay Defrost",
11161     "definitions": {
11162         "oic.r.delaydefrost": {
11163             "type": "object",
11164             "allOf": [
11165                 {
11166                     "$ref": "oic.r.time.period.json#/definitions/oic.r.time.period"
11167                 },
11168                 {
11169                     "properties": {
11170                         "interval": {
11171                             "type": "integer",
11172                             "description": "Defrost interval as defined by Energy Star",
11173                             "minimum": 1,

```

```

11174         "maximum": 1440,
11175         "default": 240
11176     },
11177     "status": {
11178         "type": "boolean",
11179         "description": "Indicates whether any supported delay defrost function
is active"
11180     }
11181 },
11182 },
11183 "required": ["status"]
11184 }
11185 ]
11186 }
11187 },
11188 "type": "object",
11189 "allof": [
11190     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11191     {"$ref": "#/definitions/oic.r.delaydefrost"}
11192 ]
11193 }
11194
11195 example: /
11196 {
11197     "id":         "unique_example_id",
11198     "status":     true,
11199     "startTime":  "06:00Z",
11200     "interval":   180
11201 }
11202

```

#### 11203 6.69.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
status	boolean	예		지원된 임의의 지연 제상 기능이 활성인지를 나타낸다
interval	정수			Energy Star 에 의해 정의된 제상 간격
stopTime	스트링			기간에 대한 정지 시각, stopTime 이 존재하면 interval 은 존재할 수 없다
startTime	스트링	예		기간에 대한 시작 시각.
interval	정수			startTime 이후 분 단위의 시간 간격, interval 이

				존재하면 stopTime 은 존재할 수 없다
--	--	--	--	--------------------------------

## 11204 6.69.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DelayDefrostResURI		get	post		

## 11205 6.69.7 Referenced JSON schemas

### 11206 6.69.7.1 oic.r.time.period.json

```

11207 {
11208   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.time.period.json#",
11209   "$schema": "http://json-schema.org/draft-04/schema#",
11210   "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11211 reserved.",
11212   "title": "Time Period",
11213   "definitions": {
11214     "oic.r.time.period": {
11215       "type": "object",
11216       "properties": {
11217         "startTime": {
11218           "type": "string",
11219           "description": "Start time for the time period"
11220         },
11221         "stopTime": {
11222           "type": "string",
11223           "description": "Stop time for the time period, if present interval cannot be present"
11224         },
11225         "interval": {
11226           "type": "integer",
11227           "description": "Time interval in minutes after the startTime, if present stopTime cannot
11228 be present"
11229         }
11230       },
11231       "required": ["startTime"]
11232     }
11233   },
11234   "type": "object",
11235   "allOf": [
11236     {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11237     {"$ref": "#/definitions/oic.r.time.period"}
11238   ]
11239 }
11240

```

## 11241 6.70 에코 모드

### 11242 6.70.1 개요

11243 이 resource 는 Device 가 지원하는 현재 활성 상태인 에코 모드를 규정한다. Resource 는  
11244 supportedMode 및 Mode Property 의 모집단이 "disabled", "enabled", "notsupported"로 주어진  
11245 값의 집합으로 제한된다는 제약을 갖는 Mode (oic.r.mode)에 대한 기존의 schema 를 사용한다.  
11246 adminforced Property 는 값이 다른 당사자에 의해(예: 일부 분리형 보드 Smart Energy 상호작용을  
11247 통해) 설정되었음을 나타낸다.

```

11248 6.70.2 URI 예
11249 /EcomodeResURI
11250 6.70.3 Resource Type
11251 resource type (rt)는 oic.r.ecomode 로 정의된다.
11252 6.70.4 RAML 정의
11253 #%RAML 0.8
11254 title: OICEcomode
11255 version: OCF-v1.0.0-20160620
11256 traits:
11257   - interface :
11258       queryParameters:
11259           if:
11260               enum: ["oic.if.a", "oic.if.baseline"]
11261
11262 /EcomodeResURI:
11263     description: |
11264       This resource specifies the supported and currently active Eco Mode of a Device
11265       The Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the
11266       population of supportedmodes and modes Properties is restricted to the set of values given below:
11267       "disabled","enabled","notsupported"
11268       The adminforced Property indicates that the value has been set by another party (e.g
11269       via some offboard Smart Energy interaction)
11270
11271     is : ['interface']
11272     get:
11273         responses :
11274             200:
11275                 body:
11276                     application/json:
11277                         schema: /
11278                             {
11279                                 "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode#",
11280                                 "$schema": "http://json-schema.org/draft-04/schema#",
11281                                 "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11282                                 rights reserved.",
11283                                 "title": "Eco Mode",
11284                                 "definitions": {
11285                                     "oic.r.ecomode": {
11286                                         "type": "object",
11287                                         "allOf": [
11288                                             {
11289                                                 "$ref": "oic.r.mode.json#/definitions/oic.r.mode"
11290                                             },
11291                                             {
11292                                                 "properties": {
11293                                                     "adminforced": {
11294                                                         "type": "boolean",
11295                                                         "readOnly": true,
11296                                                         "description": "Indicator that the current mode of operation has
11297                                                         been forced by admin action."
11298                                                     }
11299                                                 }
11300                                             }
11301                                         ]
11302                                     },
11303                                 },
11304                                 "type": "object",

```

```

11305         "allOf": [
11306             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11307             { "$ref": "#/definitions/oic.r.ecomode" }
11308         ],
11309         "required": ["supportedModes", "modes"]
11310     }
11311
11312     example: /
11313     {
11314         "rt": ["oic.r.ecomode"],
11315         "id": "unique_example_id",
11316         "supportedModes": ["disabled", "enabled"],
11317         "modes": ["disabled"],
11318         "adminforced": false
11319     }
11320
11321     post:
11322     body:
11323     application/json:
11324     schema: /
11325     {
11326         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode-Update#",
11327         "$schema": "http://json-schema.org/draft-04/schema#",
11328         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11329 reserved.",
11330         "title": "Eco Mode",
11331         "definitions": {
11332             "oic.r.ecomode": {
11333                 "type": "object",
11334                 "allOf": [
11335                     {
11336                         "$ref": "oic.r.mode-update.json#/definitions/oic.r.mode"
11337                     }
11338                 ]
11339             }
11340         },
11341         "type": "object",
11342         "allOf": [
11343             { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11344             { "$ref": "#/definitions/oic.r.ecomode" }
11345         ],
11346         "required": ["modes"]
11347     }
11348
11349     example: /
11350     {
11351         "id": "unique_example_id",
11352         "modes": ["enabled"]
11353     }
11354
11355     responses :
11356     200:
11357     body:
11358     application/json:
11359     schema: /
11360     {
11361         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.ecomode-Update#",
11362         "$schema": "http://json-schema.org/draft-04/schema#",
11363         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11364 rights reserved.",
11365         "title": "Eco Mode",
11366         "definitions": {
11367             "oic.r.ecomode": {
11368                 "type": "object",

```

```

11369         "allOf": [
11370             {
11371                 "$ref": "oic.r.mode-update.json#/definitions/oic.r.mode"
11372             }
11373         ]
11374     },
11375     "type": "object",
11376     "allOf": [
11377         { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11378         { "$ref": "#/definitions/oic.r.ecomode" }
11379     ],
11380     "required": ["modes"]
11381 }
11382
11383
11384 example: /
11385 {
11386     "id": "unique_example_id",
11387     "modes": ["enabled"]
11388 }
11389

```

## 11390 6.70.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
adminforced	boolean		Read Only	동작의 현재 모드가 Admin 동작에 의해 강제되었음을 나타내는 표시자.
supportedMode	배열: schema 참조	예	Read Only	Device 가 지원 가능한 모드의 배열
Mode	배열: schema 참조	예		현재 활성 상태인 모드의 배열

## 11391 6.70.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/EcomodeResURI		get	post		

## 11392 6.70.7 Referenced JSON schemas

### 11393 6.70.7.1 oic.r.mode.json

```

11394 {
11395     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.mode.json#",
11396     "$schema": "http://json-schema.org/draft-04/schema#",
11397     "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11398 reserved.",
11399     "title": "Mode",
11400     "definitions": {
11401         "oic.r.mode": {

```

```

11402     "type": "object",
11403     "properties": {
11404         "supportedModes": {
11405             "type": "array",
11406             "readOnly": true,
11407             "description": "Array of possible modes the device supports.",
11408             "items": {
11409                 "type": "string"
11410             }
11411         },
11412         "modes": {
11413             "type": "array",
11414             "description": "Array of the currently active mode(s)",
11415             "items": {
11416                 "type": "string"
11417             }
11418         }
11419     }
11420 },
11421 "type": "object",
11422 "allOf": [
11423     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11424     { "$ref": "#/definitions/oic.r.mode" }
11425 ],
11426 "required": ["supportedModes", "modes"]
11427 }
11428
11429

```

## 11430 6.71 가열 존

### 11431 6.71.1 개요

11432 이 resource 는 레인지 상부의 가열 영역의 상태에 관한 정보를 제공한다. 이는 동적으로 작동  
 11433 가능한(즉, device 가 메모리를 인식하는) 영역을 갖는 레인지 상부의 경우를 기술한다.  
 11434 maxheatinglevel 은 가열 영역에 대한 최대 레벨을 정의한다. heatinglevel 은 영역의 현재의 가열  
 11435 레벨을 나타낸다. 각 요소에 대해 값 범위는 0(영역이 미 가열 상태임을 표시)으로부터  
 11436 maxheatinglevel 까지이다.

### 11437 6.71.2 URI 예

11438 /HeatingZoneResURI

### 11439 6.71.3 Resource Type

11440 resource type (rt)는 oic.r.heatingzone 으로 정의된다.

### 11441 6.71.4 RAML 정의

```

11442 #%RAML 0.8
11443 title: OICHeatingZone
11444 version: OCF1.0-20160722
11445 traits:
11446   - interface :
11447       queryParameters:
11448           if:
11449               enum: ["oic.if.s", "oic.if.baseline"]
11450
11451 /HeatingZoneResURI:
11452     description: |

```

```

11453     This Resource provides information about the status of a heating zone of a Cook-Top.
11454     It describes the case of a Cook-Top whose zones can be activated dynamically (i.e
11455     the device implements pot recognition).
11456     maxheatinglevel defines the max level for the heating zone
11457     heatinglevel is the current heating level of the zone
11458     For each element the value range is from 0 (indication that the zone is not heating) to
11459     maxheatinglevel,
11460
11461     is : ['interface']
11462
11463     get:
11464         description: |
11465             Retrieves the current heating zone information.
11466
11467     responses :
11468         200:
11469             body:
11470                 application/json:
11471                     schema: /
11472                         {
11473                             "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.heatingzone.json#",
11474                             "$schema": "http://json-schema.org/draft-04/schema#",
11475                             "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11476                             reserved.",
11477                             "title": "Heating Zone",
11478                             "definitions": {
11479                                 "oic.r.heatingzone": {
11480                                     "type": "object",
11481                                     "properties": {
11482                                         "maxheatinglevel": {
11483                                             "type": "integer",
11484                                             "readOnly": true,
11485                                             "description": "Maximum heating level for the zone indicated."
11486                                         },
11487                                         "heatinglevel": {
11488                                             "type": "integer",
11489                                             "readOnly": true,
11490                                             "description": "Current heating level for the zone indicated."
11491                                         }
11492                                     }
11493                                 },
11494                                 "type": "object",
11495                                 "allOf": [
11496                                     { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11497                                     { "$ref": "#/definitions/oic.r.heatingzone" }
11498                                 ],
11499                                 "required": ["maxheatinglevel", "heatinglevel"]
11500                             }
11501
11502                     example: /
11503                         {
11504                             "rt": ["oic.r.heatingzone"],
11505                             "id": "unique_example_id",
11506                             "maxheatinglevel": 6,
11507                             "heatinglevel": 0
11508                         }
11509

```

### 6.71.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
heatinglevel	정수	예	Read Only	표시된 영역에 대한



				현재의 가열 레벨.
maxheatinglevel	정수	예	Read Only	표시된 영역에 대한 최대 가열 레벨.

#### 6.71.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			

### 6.72 가열 존 Collection

#### 6.72.1 개요

이 resource 는 레인지 상부의 가열 영역의 상태에 관한 정보를 제공한다. 이는 동적으로 작동 가능한(즉, device 가 냄비를 인식하는) 영역을 갖는 레인지 상부의 경우를 기술한다. resource 는 개별적인 레인지 상부 영역을 기술하는 oic.r.heatingzone 의 개체에 대한 collection 이다.

#### 6.72.2 URI 예

/HeatingZoneBaselineResURI

#### 6.72.3 Resource Type

resource type (rt)는 oic.r.heatingzonecollection 으로 정의된다.

#### 6.72.4 RAML 정의

```

#%RAML 0.8
title: OICHeatingZone
version: OCF1.0-20160722
traits:
  - interface-ll :
    queryParameters:
      if:
        enum: ["oic.if.ll"]
  - interface-baseline :
    queryParameters:
      if:
        enum: ["oic.if.baseline"]
/HeatingZoneBaselineResURI:
  description: |
    This Resource provides information about the status of the heating zones of a Cook-Top.
    It describes the case of a Cook-Top whose zones can be activated dynamically (i.e
    the device implements pot recognition).
    The resource is a collection of instances of oic.r.heatingzone detailing the individual cooktop
    zones
  is : ['interface-baseline']
  get:

```

```

11546     description: |
11547         Retrieves the current heating zone information.
11548
11549     responses :
11550         200:
11551             body:
11552                 application/json:
11553                     schema: /
11554                         {
11555                             "id":
11556 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.heatingzonecollection.json#",
11557 "$schema": "http://json-schema.org/draft-04/schema#",
11558 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11559 reserved.",
11560 "title": "Heating Zone Collection",
11561 "definitions": {
11562     "oic.r.heatingzonecollection": {
11563         "type": "object",
11564         "allOf": [
11565             {
11566                 "$ref": "oic.collection-schema.json#/definitions/oic.collection"
11567             },
11568             {
11569                 "properties": {
11570                     "rt": {
11571                         "type": "array",
11572                         "minItems": 2,
11573                         "maxItems": 2,
11574                         "uniqueItems": true,
11575                         "items": {
11576                             "enum": ["oic.r.heatingzonecollection", "oic.wk.col"]
11577                         }
11578                     },
11579                     "rts": {
11580                         "type": "array",
11581                         "minItems": 1,
11582                         "maxItems": 2,
11583                         "uniqueItems": true,
11584                         "items": {
11585                             "anyOf": [
11586                                 {
11587                                     "enum": ["oic.r.heatingzone", "oic.r.value.conditional"]
11588                                 },
11589                                 {
11590                                     "enum": ["oic.r.heatingzone"]
11591                                 }
11592                             ]
11593                         }
11594                     }
11595                 }
11596             }
11597         ]
11598     },
11599     "type": "object",
11600     "allOf": [
11601         { "$ref": "oic.core.json#/definitions/oic.core" },
11602         { "$ref": "#/definitions/oic.r.heatingzonecollection" }
11603     ]
11604 }
11605
11606
11607     example: /
11608         {
11609             "rt":      ["oic.r.heatingzonecollection", "oic.wk.col"],
11610             "id":      "unique_example_id",
11611             "links": [
11612                 { "href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if":

```

```

11613 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
11614 {"href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if":
11615 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
11616 {"href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if":
11617 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
11618 {"href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if":
11619 ["oic.if.s","oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
11620 }
11621 }
11622

```

## 11623 6.72.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
rt	배열: schema 참조			
rts	배열: schema 참조			
drel	스트링			규정되는 경우, 이것은, OIC Link 가 *rel* 파라미터와의 명시적 관계를 규정하지 않을 때 사용하기 위한 default 관계이다.
link	복수 타입: schema 참조			
id	복수 타입: schema 참조			collection 에 대한 ID. 사용 컨텍스트 또는 UUIDv4 에 대해 고유한 값이 될 수 있다
rts	복수 타입: schema 참조			Collection 에 포함된 link 내에서 (Target 및 anchor 에 대해) 허용 가능한 resource type 의 목록을 정의한다. 새로운 link 는 본

				목록으로부터만 생성할 수 있다.
di	복수 타입: schema 참조			UUIDv4 스트링인 device ID; /oic/res 의 스펙 A 정의에 대해 역 호환성을 위해 사용된다

## 11624 6.72.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneBaselineResURI		get			

## 11625 6.72.7 Referenced JSON schemas

### 11626 6.72.7.1 oic.collection-schema.json

```

11627 {
11628   "$schema": "http://json-schema.org/draft-04/schema#",
11629   "description": "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights reserved.",
11630   "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.collection-schema.json#",
11631   "title": "Collection",
11632   "definitions": {
11633     "oic.collection.setoflinks": {
11634       "description": "A set (array) of simple or individual OIC Links. In addition to
11635 properties required for an OIC Link, the identifier for that link in this set is also required",
11636       "type": "array",
11637       "items": {
11638         "$ref": "oic.oic-link-schema.json#/definitions/oic.oic-link"
11639       }
11640     },
11641     "oic.collection.alllinks": {
11642       "description": "All forms of links in a collection",
11643       "oneOf": [
11644         {
11645           "$ref": "#/definitions/oic.collection.setoflinks"
11646         }
11647       ]
11648     },
11649     "oic.collection": {
11650       "type": "object",
11651       "description": "A collection is a set (array) of tagged-link or set (array) of simple
11652 links along with additional properties to describe the collection itself",
11653       "properties": {
11654         "id": {
11655           "anyOf": [
11656             {
11657               "type": "integer",
11658               "description": "A number that is unique to that collection; like an
11659 ordinal number that is not repeated"
11660             },
11661             {
11662               "type": "string",
11663               "description": "A unique string that could be a hash or similarly
11664 unique"
11665             }
11666           ],
11667           "$ref": "oic.types-schema.json#/definitions/uuid",
11668           "description": "A unique string that could be a UUIDv4"
11669         }
11670       }
11671     }
11672   }

```

```

11670         ],
11671         "description": "ID for the collection. Can be an value that is unique to the
11672 use context or a UUIDv4"
11673     },
11674     "di": {
11675         "$ref": "oic.types-schema.json#/definitions/uuid",
11676         "description": "The device ID which is an UUIDv4 string; used for backward
11677 compatibility with Spec A definition of /oic/res"
11678     },
11679     "rts": {
11680         "$ref": "oic.core-schema.json#/definitions/oic.core/properties/rt",
11681         "description": "Defines the list of allowable resource types (for Target and
11682 anchors) in links included in the collection; new links being created can only be from this
11683 list"
11684     },
11685     "drel": {
11686         "type": "string",
11687         "description": "When specified this is the default relationship to use when an
11688 OIC Link does not specify an explicit relationship with *rel* parameter"
11689     },
11690     "links": {
11691         "$ref": "#/definitions/oic.collection.alllinks"
11692     }
11693 },
11694 "type": "object",
11695 "allof": [
11696     {"$ref": "oic.core-schema.json#/definitions/oic.core"},
11697     {"$ref": "#/definitions/oic.collection"}
11698 ]
11699 }
11700 }
11701

```

## 6.73 선택 가능 레벨

### 6.73.1 개요

이 resource 는 동작을 위해 선택될 수 있는 device 정의 '레벨'의 집합을 제공한다. 설정될 수 있는 상이한 습도 레벨을 모델링하는 이산 집합을 가습기가 갖는 예를 든다. availablelevels 은 선택될 수 있는 레벨의 배열이고, 이들은 숫자 또는 정수가 될 수 있다. targetlevel 은 현재 선택된 레벨이고, 새로운 레벨을 선택하기 위하여 기록된다. 검색될 때, targetlevel 은 선택된 실제 값을 제공한다.

### 6.73.2 URI 예

/SelectableLevelsResURI

### 6.73.3 Resource Type

resource type (rt)는 oic.r.selectablelevels 로 정의된다.

### 6.73.4 RAML 정의

```

11714 #%RAML 0.8
11715 title: OICSelectableLevels
11716 version: v1.1.0-20160519
11717 traits:
11718   - interface :
11719       queryParameters:
11720           if:
11721               enum: ["oic.if.a", "oic.if.baseline"]
11722

```

```

11723 /SelectableLevelsResURI:
11724     description: |
11725         This Resource provides a set of device defined 'levels' that can be selected for an operation.
11726         For example where a humidifier has a discrete set that model different humidity levels that can
11727 be set.
11728         availablelevels is an array of the levels that can be selected, these can be a number or an
11729 integer.
11730         targetlevel is the level that has currently been selected and is written to in order to select
11731 a new level.
11732         When retrieved the targetlevel provides the actual value that has been selected.
11733
11734     is : ['interface']
11735     get:
11736         description: |
11737             Retrieves the current selectable levels.
11738
11739     responses :
11740         200:
11741             body:
11742                 application/json:
11743                     schema: /
11744                         {
11745                             "id":
11746 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11747                             "$schema": "http://json-schema.org/draft-04/schema#",
11748                             "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11749 rights reserved.",
11750                             "title": "SelectableLevels",
11751                             "definitions": {
11752                                 "oic.r.selectablelevels": {
11753                                     "type": "object",
11754                                     "properties": {
11755                                         "availablelevels": {
11756                                             "type": "array",
11757                                             "description": "Set of levels from which one can be selected",
11758                                             "readOnly": true,
11759                                             "items": {
11760                                                 "anyOf": [
11761                                                     {"type": "integer"},
11762                                                     {"type": "number"}
11763                                                 ]
11764                                             }
11765                                         },
11766                                         "targetlevel": {
11767                                             "anyOf": [
11768                                                 {"type": "integer"},
11769                                                 {"type": "number"}
11770                                             ],
11771                                             "description": "The target level from the available selectable set"
11772                                         }
11773                                     }
11774                                 }
11775                             },
11776                             "type": "object",
11777                             "allOf": [
11778                                 {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11779                                 {"$ref": "#/definitions/oic.r.selectablelevels"}
11780                             ],
11781                             "required": ["availablelevels", "targetlevel"]
11782                         }
11783
11784     example: /
11785         {
11786             "rt":          ["oic.r.selectablelevels"],
11787             "id":          "unique_example_id",

```

```

11788         "availablelevels": [0,2,4,6,8],
11789         "targetlevel": 2
11790     }
11791
11792     post:
11793         description: |
11794             Sets the current level from the set that is selectable
11795
11796         body:
11797             application/json:
11798                 schema: /
11799                     {
11800                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11801                         "$schema": "http://json-schema.org/draft-04/schema#",
11802                         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
11803 reserved.",
11804                         "title": "SelectableLevels",
11805                         "definitions": {
11806                             "oic.r.selectablelevels": {
11807                                 "type": "object",
11808                                 "properties": {
11809                                     "targetlevel": {
11810                                         "type": ["integer", "number"],
11811                                         "description": "The target level from the available selectable set"
11812                                     }
11813                                 }
11814                             },
11815                             "type": "object",
11816                             "allOf": [
11817                                 { "$ref": "oic.baseResource.json#/definitions/oic.r.baseresource" },
11818                                 { "$ref": "#/definitions/oic.r.selectablelevels" }
11819                             ],
11820                             "required": ["targetlevel"]
11821                         }
11822
11823                 example: /
11824                     {
11825                         "targetlevel": 4
11826                     }
11827
11828
11829     responses :
11830         200:
11831             body:
11832                 application/json:
11833                     schema: /
11834                         {
11835                             "id":
11836 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11837                             "$schema": "http://json-schema.org/draft-04/schema#",
11838                             "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11839 rights reserved.",
11840                             "title": "SelectableLevels",
11841                             "definitions": {
11842                                 "oic.r.selectablelevels": {
11843                                     "type": "object",
11844                                     "properties": {
11845                                         "targetlevel": {
11846                                             "type": ["integer", "number"],
11847                                             "description": "The target level from the available selectable set"
11848                                         }
11849                                 }
11850                             },
11851

```

```

11852         "type": "object",
11853         "allOf": [
11854             {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11855             {"$ref": "#/definitions/oic.r.selectablelevels"}
11856         ],
11857         "required": ["targetlevel"]
11858     }
11859
11860     example: /
11861     {
11862         "targetlevel": 4
11863     }
11864
11865     403:
11866         description: |
11867             Generated by a Server when an attempt is made to update to a targetlevel that is not in
11868             the set of availablelevels
11869
11870         body:
11871             application/json:
11872                 schema: /
11873                 {
11874                     "id":
11875                     "http://openinterconnect.org/iotdatamodels/schemas/oic.r.selectablelevels.json#",
11876                     "$schema": "http://json-schema.org/draft-04/schema#",
11877                     "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
11878                     rights reserved.",
11879                     "title": "SelectableLevels",
11880                     "definitions": {
11881                         "oic.r.selectablelevels": {
11882                             "type": "object",
11883                             "properties": {
11884                                 "availablelevels": {
11885                                     "type": "array",
11886                                     "description": "Set of levels from which one can be selected",
11887                                     "readOnly": true,
11888                                     "items": {
11889                                         "anyOf": [
11890                                             {"type": "integer"},
11891                                             {"type": "number"}
11892                                         ]
11893                                     }
11894                                 },
11895                                 "targetlevel": {
11896                                     "anyOf": [
11897                                         {"type": "integer"},
11898                                         {"type": "number"}
11899                                     ],
11900                                     "description": "The target level from the available selectable set"
11901                                 }
11902                             }
11903                         }
11904                     },
11905                     "type": "object",
11906                     "allOf": [
11907                         {"$ref": "oic.baseResource.json#/definitions/oic.r.baseresource"},
11908                         {"$ref": "#/definitions/oic.r.selectablelevels"}
11909                     ],
11910                     "required": ["availablelevels", "targetlevel"]
11911                 }
11912
11913     example: /
11914     {
11915         "id": "unique_example_id",
11916         "availablelevels": [0,2,4,6,8],
11917         "targetlevel": 2

```



11918 }  
11919

11920 **6.73.5 Property 정의**

Property name	Value type	필수	엑세스 모드	설명
targetlevel	복수 타입: schema 참조	예		사용 가능하고 선택 가능한 집합으로부터의 목표 레벨
availablelevels	배열: schema 참조	예	Read Only	하나를 선택할 수 있는 레벨의 집합

11921 **6.73.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/SelectableLevelsResURI		get	post		

11922 **6.74 값 조건문**

11923 **6.74.1 개요**

11924 이 resource 는 임의의 Resource 내에서 Observe 값에 적용될 수 있는 조건을 규정한다. 이들  
11925 조건은 Resource 에 대한 요청으로 인해 임의로 생성된 통지에 Resource 를 노출하는 server 에  
11926 의해 적용된다. Resource 에 대한 unicast RETRIEVE 는 가장 최근의 값을 수신하고, 이는 가장  
11927 최근에 통보된 값이 아닐 수 있다. Server 는 Observe 값을 전달하는 Resource 와 관련하여 이  
11928 resource 를 노출시킨다. 이것은, ["oic.r.<thing being observed>", "oic.r.value.conditional"], 예를  
11929 들어, ["oic.r.temperature", "oic.r.value.conditional"]의 RT 를 갖는 새로운 Resource 개체에 의해  
11930 된다. 자세한 사항은 공개된 OCF Resource Type 스펙의 섹션 5.7.1 을 참조하기 바란다.  
11931 Threshold 는 통보가 송신되기 전에 Observe 되는 것이 변해야 하는 양이다. Minnotifyperiod 는  
11932 통보가 송신되기 전에 경과해야 하는 ms (밀리초) 단위의 최소 시간이다. maxnotifyperiod (ms  
11933 (밀리초) 단위의 시간)가 경과하면 통보가 송신되어야 한다. maxnotifyperiod 타이머는 통보가  
11934 송신될 때마다 리셋 된다. 임의의 threshold, minnotifyperiod, 또는 maxnotifyperiod 에 대한 '0'의  
11935 값은 성능이 지원되지만 활성이 아닌 것을 의미한다.

11936

11937

11938 **6.74.2 URI 예**

11939 /ValueConditionalResURI

11940 **6.74.3 Resource Type**

11941 resource type (rt)는 oic.r.value.conditional 로 정의된다.

#### 6.74.4 RAML 정의

```
11942 6.74.4 RAML 정의
11943 #%RAML 0.8
11944 title: OICValueConditional
11945 version: v1.1.0-20161031
11946 traits:
11947   - interface :
11948       queryParameters:
11949         if:
11950           enum: ["oic.if.rw", "oic.if.baseline"]
11951
11952 /ValueConditionalResURI:
11953   description: |
11954     This resource specifies conditions that can be applied to an observed value in any Resource.
11955     These conditions are applied by the server exposing the Resource to any generated notifications
11956     because of subscriptions to the Resource.
11957     A unicast RETRIEVE to the Resource will receive the most recent value; which may not be the
11958     most recent notified value.
11959     A server exposes this Resource in association with the Resource conveying the observed value.
11960     This is done by means of a new Resource instance with an RT of ["oic.r.<thing being observed>",
11961     "oic.r.value.conditional"], e.g ["oic.r.temperature", "oic.r.value.conditional"]
11962     Please see Section 5.7.1 of the published OCF Resource Type Specification for more details.
11963     The threshold is the amount by which the thing being observed must change before a notification
11964     is sent.
11965     The minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a
11966     notification is sent.
11967     If the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be sent.
11968     The maxnotifyperiod timer resets each time a notification is sent.
11969     A value of '0' for any of threshold, minnotifyperiod or maxnotifyperiod means that the
11970     capability is supported but not active.
11971
11972   is : ['interface']
11973   get:
11974     responses :
11975       200:
11976         body:
11977           application/json:
11978             schema: /
11979               {
11980                 "id":
11981 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.value.conditional.json#",
11982                 "$schema": "http://json-schema.org/draft-04/schema#",
11983                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
11984 reserved.",
11985                 "title": "Value Conditional",
11986                 "definitions": {
11987                   "oic.r.value.conditional": {
11988                     "type": "object",
11989                     "anyOf": [
11990                       {"required": ["threshold"]},
11991                       {"required": ["minnotifyperiod"]},
11992                       {"required": ["maxnotifyperiod"]}
11993                     ],
11994                     "properties": {
11995                       "threshold": {
11996                         "type": "number",
11997                         "minimum": 0,
11998                         "description": "Amount by which the measured value must change before a
11999 notification is sent."
12000                       },
12001                       "minnotifyperiod": {
12002                         "type": "integer",
12003                         "minimum": 0,
12004                         "description": "Minimum elapsed time in ms before a notification is sent."
```

```

12005         },
12006         "maxnotifyperiod": {
12007             "type": "integer",
12008             "minimum": 0,
12009             "description": "Maximum elapsed time in ms before a notification must be
sent."
12010         }
12011     }
12012 }
12013 }
12014 },
12015 "type": "object",
12016 "allOf": [
12017     {"$ref": "oic.core.json#/definitions/oic.core"},
12018     {"$ref": "#/definitions/oic.r.value.conditional"}
12019 ]
12020 }
12021
12022 example: /
12023 {
12024     "rt":          ["oic.r.value.conditional"],
12025     "id":          "unique_example_id",
12026     "threshold":   2,
12027     "minnotifyperiod": 2000,
12028     "maxnotifyperiod": 5000
12029 }
12030
12031 post:
12032     description: |
12033     body:
12034     application/json:
12035         schema: valueconditional
12036         example: |
12037             {
12038                 "threshold":      2,
12039                 "minnotifyperiod": 1500
12040             }
12041
12042 responses :
12043     200:
12044         body:
12045         application/json:
12046             schema: /
12047             {
12048                 "id":
12049 "http://openinterconnect.org/iotdatamodels/schemas/oic.r.value.conditional.json#",
12050                 "$schema": "http://json-schema.org/draft-04/schema#",
12051                 "description" : "Copyright (c) 2017 Open Connectivity Foundation, Inc. All rights
reserved.",
12052                 "title": "Value Conditional",
12053                 "definitions": {
12054                     "oic.r.value.conditional": {
12055                         "type": "object",
12056                         "anyOf": [
12057                             {"required": ["threshold"]},
12058                             {"required": ["minnotifyperiod"]},
12059                             {"required": ["maxnotifyperiod"]}
12060                         ],
12061                     },
12062                     "properties": {
12063                         "threshold": {
12064                             "type": "number",
12065                             "minimum": 0,
12066                             "description": "Amount by which the measured value must change before a
notification is sent."
12067                         },
12068                     },
12069                     "minnotifyperiod": {
12070                         "type": "integer",

```

```

12071         "minimum": 0,
12072         "description": "Minimum elapsed time in ms before a notification is sent."
12073     },
12074     "maxnotifyperiod": {
12075         "type": "integer",
12076         "minimum": 0,
12077         "description": "Maximum elapsed time in ms before a notification must be
12078 sent."
12079     }
12080 },
12081 },
12082 },
12083 "type": "object",
12084 "allOf": [
12085     {"$ref": "oic.core.json#/definitions/oic.core"},
12086     {"$ref": "#/definitions/oic.r.value.conditional"}
12087 ]
12088 }
12089
12090 example: /
12091 {
12092     "threshold": 2,
12093     "minnotifyperiod": 1500
12094 }
12095

```

#### 12096 6.74.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
threshold	숫자	예		통보가 송신되기 전에 측정된 값이 변해야 하는 양.
maxnotifyperiod	정수	예		통보가 송신되기 이전의 최대 경과 시간 (ms).
minnotifyperiod	정수	예		통보가 송신되기 이전의 최소 경과 시간 (ms).

#### 12097 6.74.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ValueConditionalResURI		get	post		

12098

## Annex A Base Resource

12099

### A.1 Base Resource Schema

12100

#### A.1.1 개요

12101

12102

12103

12104

이것은 본 스펙에서 정의된 모든 다른 resource 가 구축되는 기본 resource schema 이다. value 는 Resource 의 감지되거나 작동된 값이다. precision 은 값의 정확도를 나타낸다. range 는 값이 유효한 범위이다. Step 은 적용 가능한 경우 정의된 범위에 걸친 증분 기능이다(예: 항상 '2'만큼의 step).

12105

#### A.1.2 URI 예

12106

/BaseResourceSchemaResURI

12107

#### A.1.3 Resource Type

12108

resource type (rt)는 oic.baseresource 로 정의된다.

12109

#### A.1.4 RAML 정의

12110

```
##RAML 0.8
```

12111

```
title: OICBaseResourceSchema
```

12112

```
version: v1.1.0-20160519
```

12113

```
traits:
```

12114

```
- interface-a :
```

12115

```
  queryParameters:
```

12116

```
    if:
```

12117

```
      enum: ["oic.if.a"]
```

12118

```
- interface-baseline :
```

12119

```
  queryParameters:
```

12120

```
    if:
```

12121

```
      enum: ["oic.if.baseline"]
```

12122

12123

```
/BaseResourceSchemaResURI:
```

12124

```
  description: |
```

12125

```
    This is the base resource schema on which all other resources defined in this specification
```

12126

```
  build.
```

12127

```
  value is the sensed or actuated value of the Resource.
```

12128

```
  precision is the accuracy granularity of the value.
```

12129

```
  range is the range over which value is valid.
```

12130

```
  step is the step function over the defined range if applicable (e.g
```

12131

```
  always step by '2').
```

12132

12133

```
get:
```

12134

```
  description: |
```

12135

```
    retrieves the state of the resource.
```

12136

12137

```
is : ['interface-baseline']
```

12138

```
responses :
```

12139

```
  200:
```

12140

```
    body:
```

12141

```
      application/json:
```

12142

```
        schema: /
```

```

12143     {
12144         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
12145         "$schema": "http://json-schema.org/draft-04/schema#",
12146         "description": "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All
12147 rights reserved.",
12148         "title": "Base Resource",
12149         "definitions": {
12150             "oic.r.baseresource": {
12151                 "type": "object",
12152                 "properties": {
12153                     "value": {
12154                         "anyOf": [
12155                             {"type": "array"},
12156                             {"type": "string"},
12157                             {"type": "boolean"},
12158                             {"type": "integer"},
12159                             {"type": "number"},
12160                             {"type": "object"}
12161                         ],
12162                         "description": "The value sensed or actuated by this Resource"
12163                     },
12164                     "precision": {
12165                         "type": "number",
12166                         "readOnly": true,
12167                         "description": "Accuracy granularity of the exposed value"
12168                     },
12169                     "range": {
12170                         "type": "array",
12171                         "description": "The valid range for the value Property",
12172                         "readOnly": true,
12173                         "minItems": 2,
12174                         "maxItems": 2,
12175                         "items": {
12176                             "anyOf": [
12177                                 {"type": "number"},
12178                                 {"type": "integer"}
12179                             ]
12180                         }
12181                     },
12182                     "step": {
12183                         "description": "Step value across the defined range",
12184                         "readOnly": true,
12185                         "anyOf": [
12186                             {"type": "integer"},
12187                             {"type": "number"}
12188                         ]
12189                     }
12190                 }
12191             }
12192         },
12193         "type": "object",
12194         "allOf": [
12195             {"$ref": "oic.core.json#/definitions/oic.core"},
12196             {"$ref": "#/definitions/oic.r.baseresource"}
12197         ]
12198     }
12199
12200 example: /
12201 {
12202     "rt" :           ["oic.baseresource"],
12203     "if":            ["oic.if.baseline"],
12204     "id":             "unique_example_id",
12205     "value":          10.5,
12206     "precision":      0.5,
12207     "range":          [0.0,100.0]
12208 }
12209
12210 post:
12211     description: |

```

```

12212         sets the read-write resource properties
12213
12214     is : ['interface-a']
12215     body:
12216         application/json:
12217             schema: /
12218                 {
12219                     "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
12220                     "$schema": "http://json-schema.org/draft-04/schema#",
12221                     "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
12222 reserved.",
12223                     "title": "Base Resource",
12224                     "definitions": {
12225                         "oic.r.baseresource": {
12226                             "type": "object",
12227                             "properties": {
12228                                 "value": {
12229                                     "anyOf": [
12230                                         {"type": "array"},
12231                                         {"type": "string"},
12232                                         {"type": "boolean"},
12233                                         {"type": "integer"},
12234                                         {"type": "number"},
12235                                         {"type": "object"}
12236                                     ],
12237                                     "description": "The value sensed or actuated by this Resource"
12238                                 },
12239                                 "precision": {
12240                                     "type": "number",
12241                                     "readOnly": true,
12242                                     "description": "Accuracy granularity of the exposed value"
12243                                 },
12244                                 "range": {
12245                                     "type": "array",
12246                                     "description": "The valid range for the value Property",
12247                                     "readOnly": true,
12248                                     "minItems": 2,
12249                                     "maxItems": 2,
12250                                     "items": {
12251                                         "anyOf": [
12252                                             {"type": "number"},
12253                                             {"type": "integer"}
12254                                         ]
12255                                     }
12256                                 },
12257                                 "step": {
12258                                     "description": "Step value across the defined range",
12259                                     "readOnly": true,
12260                                     "anyOf": [
12261                                         {"type": "integer"},
12262                                         {"type": "number"}
12263                                     ]
12264                                 }
12265                             }
12266                         }
12267                     },
12268                     "type": "object",
12269                     "allOf": [
12270                         {"$ref": "oic.core.json#/definitions/oic.core"},
12271                         {"$ref": "#/definitions/oic.r.baseresource"}
12272                     ]
12273                 }
12274
12275             example: /
12276                 {
12277                     "value": 20.5
12278                 }
12279

```

```

12280     responses :
12281     200:
12282         body:
12283             application/json:
12284                 schema: /
12285                     {
12286                         "id": "http://openinterconnect.org/iotdatamodels/schemas/oic.baseResource.json#",
12287                         "$schema": "http://json-schema.org/draft-04/schema#",
12288                         "description" : "Copyright (c) 2016 Open Connectivity Foundation, Inc. All rights
12289 reserved.",
12290                         "title": "Base Resource",
12291                         "definitions": {
12292                             "oic.r.baseresource": {
12293                                 "type": "object",
12294                                 "properties": {
12295                                     "value": {
12296                                         "anyOf": [
12297                                             {"type": "array"},
12298                                             {"type": "string"},
12299                                             {"type": "boolean"},
12300                                             {"type": "integer"},
12301                                             {"type": "number"},
12302                                             {"type": "object"}
12303                                         ],
12304                                         "description": "The value sensed or actuated by this Resource"
12305                                     },
12306                                     "precision": {
12307                                         "type": "number",
12308                                         "readOnly": true,
12309                                         "description": "Accuracy granularity of the exposed value"
12310                                     },
12311                                     "range": {
12312                                         "type": "array",
12313                                         "description": "The valid range for the value Property",
12314                                         "readOnly": true,
12315                                         "minItems": 2,
12316                                         "maxItems": 2,
12317                                         "items": {
12318                                             "anyOf": [
12319                                                 {"type": "number"},
12320                                                 {"type": "integer"}
12321                                             ]
12322                                         }
12323                                     },
12324                                     "step": {
12325                                         "description": "Step value across the defined range",
12326                                         "readOnly": true,
12327                                         "anyOf": [
12328                                             {"type": "integer"},
12329                                             {"type": "number"}
12330                                         ]
12331                                     }
12332                                 }
12333                             }
12334                         },
12335                         "type": "object",
12336                         "allOf": [
12337                             {"$ref": "oic.core.json#/definitions/oic.core"},
12338                             {"$ref": "#/definitions/oic.r.baseresource"}
12339                         ]
12340                     }
12341
12342                 example: /
12343                     {
12344                         "value": 20.5
12345                     }
12346

```



12347 **A.1.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대해 유효한 범위
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
rt	배열: schema 참조		Read Only	Resource Type
n	스트링		Read Only	resource 의 친근한 명칭
id	스트링		Read Only	특정 resource 의 개체 ID
if	배열: schema 참조		Read Only	이 resource 에 의해 지원된 인터페이스 집합

12348 **A.1.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/BaseResourceSchemaResURI		get	post		

12349 **A.1.7 Referenced JSON schemas**

12350 **A.1.8 oic.core.json**

```

12351 {
12352   "id": "http://www.openconnectivity.org/ocf-apis/core/schemas/oic.core-schema.json#",
12353   "$schema": "http://json-schema.org/draft-04/schema#",
12354   "description" : "Copyright (c) 2016, 2017 Open Connectivity Foundation, Inc. All rights
12355 reserved.",
12356   "title": "Core",
12357   "definitions": {
12358     "oic.core": {
12359       "type": "object",
12360       "properties": {
12361         "rt": {
12362           "type": "array",
12363           "items" : {
12364             "type" : "string",
12365             "maxLength": 64
12366           },
12367         "minItems" : 1,

```

```

12368         "readOnly": true,
12369         "description": "Resource Type"
12370     },
12371     "if": {
12372         "type": "array",
12373         "items": {
12374             "type": "string",
12375             "enum": ["oic.if.baseline", "oic.if.ll", "oic.if.b", "oic.if.lb", "oic.if.rw",
12376 "oic.if.r", "oic.if.a", "oic.if.s" ]
12377         },
12378         "minItems": 1,
12379         "readOnly": true,
12380         "description": "The interface set supported by this resource"
12381     },
12382     "n": {
12383         "type": "string",
12384         "maxLength": 64,
12385         "readOnly": true,
12386         "description": "Friendly name of the resource"
12387     },
12388     "id": {
12389         "type": "string",
12390         "maxLength": 64,
12391         "readOnly": true,
12392         "description": "Instance ID of this specific resource"
12393     }
12394 }
12395 }
12396 },
12397 "type": "object",
12398 "allof": [
12399     { "$ref": "#/definitions/oic.core" }
12400 ]
12401 }
12402
12403

```

## Annex B Swagger 2.0

### B.1 가속도 센서

#### B.1.1 개요

이 resource 는 좌표 가속도(좌표계와 Observer 에 의존하는)와 대조되는 적절한 가속도의 측정치 (g force)를 제공한다. 값은 물체에 가해지는 가속도를 단위 "g"로 기술하는 부동 소수점 형이다.

#### B.1.2 URI 예

/AccelerationResURI

#### B.1.3 Resource Type

resource type (rt)는 ['oic.r.sensor.acceleration']로 정의된다.

#### B.1.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Acceleration Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AccelerationResURI" : {
      "get": {
        "description": "This resource provides a measure of proper acceleration (g force) as
opposed to co-ordinate acceleration\n(which is dependent on the co-ordinate system and the
observer).\nThe value is a float which describes the acceleration experienced by the object in
\"g\".\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": ""
          }
        }
      }
    }
  }
}
```

```

12457         "x-example":
12458             {
12459                 "rt":          ["oic.r.sensor.acceleration"],
12460                 "id":          "unique_example_id",
12461                 "acceleration": 0.5
12462             }
12463         ,
12464         "schema": { "$ref": "#/definitions/acceleration" }
12465     }
12466 }
12467 }
12468 }
12469 },
12470 "parameters": {
12471     "interface" : {
12472         "in" : "query",
12473         "name" : "if",
12474         "type" : "string",
12475         "enum" : ["oic.if.s", "oic.if.baseline"]
12476     }
12477 },
12478 "definitions": {
12479     "acceleration" :
12480     {
12481         "properties": {
12482             "acceleration": {
12483                 "description": "sensed acceleration experienced in 'g'.",
12484                 "readOnly": true,
12485                 "type": "number"
12486             },
12487             "precision": {
12488                 "description": "Accuracy granularity of the exposed value",
12489                 "readOnly": true,
12490                 "type": "number"
12491             },
12492             "range": {
12493                 "description": "The valid range for the value Property",
12494                 "items": {
12495                     "anyOf": [
12496                         {
12497                             "type": "number"
12498                         },
12499                         {
12500                             "type": "integer"
12501                         }
12502                     ]
12503                 },
12504                 "maxItems": 2,
12505                 "minItems": 2,
12506                 "readOnly": true,
12507                 "type": "array"
12508             },
12509             "step": {
12510                 "anyOf": [
12511                     {
12512                         "type": "integer"
12513                     },
12514                     {
12515                         "type": "number"
12516                     }
12517                 ],
12518                 "description": "Step value across the defined range",
12519                 "readOnly": true
12520             },
12521             "value": {
12522                 "anyOf": [
12523                     {
12524                         "type": "array"
12525                     },
12526                     {
12527                         "type": "string"

```

```

12528         },
12529         {
12530             "type": "boolean"
12531         },
12532         {
12533             "type": "integer"
12534         },
12535         {
12536             "type": "number"
12537         },
12538         {
12539             "type": "object"
12540         }
12541     ],
12542     "description": "The value sensed or actuated by this Resource"
12543 },
12544 },
12545 "required": [
12546     "acceleration"
12547 ]
12548 }
12549 }
12550 }
12551 }
12552

```

### 12553 B.1.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
Acceleration	숫자	예	Read Only	'g' 단위의 감지된 가속도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	Value Property 에 대한 유효 범위

### 12554 B.1.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AccelerationResURI		get			

## B.2 동작 카운트

### B.2.1 개요

이 resource 는 동작 카운트를 규정한다. Resource 는 readonly (oic.if.s interface)일 수 있고, 이 경우 하나의 카운트를 나타낸다. resource 는 readwrite (oic.if.a interface)일 수 있고, 이 경우 하나의 카운트에 대한 목표를 나타낸다. count property 는 현재의 카운트 또는 목표 값을 나타내는 정수이다. 현재의 동작 카운트를 검색한다.

### B.2.2 URI 예

/ActivityCountResURI

### B.2.3 Resource Type

resource type (rt)는 ['oic.r.sensor.activity.count']로 정의된다.

### B.2.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Activity Count",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ActivityCountResURI" : {
      "get": {
        "description": "This resource specifies an activity count.\nThe resource can be readonly
(oic.if.s interface) in which instance it represents a count.\nThe resource can be readwrite
(oic.if.a interface) in which instance it represents a goal or target for a count.\nThe count
property is an integer representing either the current count or goal value.\nRetrieves the current
activity count.\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
```

```

12608         "200": {
12609             "description": "",
12610             "x-example":
12611                 {
12612                     "rt": ["oic.r.sensor.activity.count"],
12613                     "id": "unique_example_id",
12614                     "count": 2500
12615                 }
12616             ,
12617             "schema": { "$ref": "#/definitions/Count" }
12618         }
12619     },
12620 },
12621 "post": {
12622     "description": "Sets the count target\n",
12623     "parameters": [
12624         { "$ref": "#/parameters/interface" },
12625         {
12626             "name": "body",
12627             "in": "body",
12628             "required": true,
12629             "schema": { "$ref": "#/definitions/Count" },
12630             "x-example":
12631                 {
12632                     "id": "unique_example_id",
12633                     "count": 5000
12634                 }
12635         }
12636     ],
12637     "responses": {
12638         "200": {
12639             "description": "",
12640             "x-example":
12641                 {
12642                     "id": "unique_example_id",
12643                     "count": 5000
12644                 }
12645             ,
12646             "schema": { "$ref": "#/definitions/Count" }
12647         }
12648     }
12649 },
12650 },
12651 },
12652 "parameters": {
12653     "interface": {
12654         "in": "query",
12655         "name": "if",
12656         "type": "string",
12657         "enum": ["oic.if.s", "oic.if.a", "oic.if.baseline"]
12658     }
12659 },
12660 "definitions": {
12661     "Count": {
12662         {
12663             "properties": {
12664                 "count": {
12665                     "description": "Current or Target count.",
12666                     "type": "integer"
12667                 },
12668                 "precision": {
12669                     "description": "Accuracy granularity of the exposed value",
12670                     "readOnly": true,
12671                     "type": "number"
12672                 },
12673                 "range": {
12674                     "description": "The valid range for the value Property",
12675                     "items": {
12676                         "anyOf": [
12677                             {
12678                                 "type": "number"

```

```

12679         },
12680         {
12681             "type": "integer"
12682         }
12683     ],
12684 },
12685 "maxItems": 2,
12686 "minItems": 2,
12687 "readOnly": true,
12688 "type": "array"
12689 },
12690 "step": {
12691     "anyOf": [
12692         {
12693             "type": "integer"
12694         },
12695         {
12696             "type": "number"
12697         }
12698     ],
12699     "description": "Step value across the defined range",
12700     "readOnly": true
12701 },
12702 "value": {
12703     "anyOf": [
12704         {
12705             "type": "array"
12706         },
12707         {
12708             "type": "string"
12709         },
12710         {
12711             "type": "boolean"
12712         },
12713         {
12714             "type": "integer"
12715         },
12716         {
12717             "type": "number"
12718         },
12719         {
12720             "type": "object"
12721         }
12722     ],
12723     "description": "The value sensed or actuated by this Resource"
12724 }
12725 },
12726 "required": [
12727     "count"
12728 ]
12729 }
12730 }
12731 }
12732 }
12733

```

## B.2.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도.
count	정수	예		현재 또는 목표 카운트.
range	배열:		Read Only	value Property



	schema 참조			에 대한 유효 범위.
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값.
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값.

## 12735 B.2.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ActivityCountResURI		get	post		

## 12736 B.3 송풍

### 12737 B.3.1 개요

12738 이 resource 는 공기 흐름과 관련된 property 를 기술한다. Supporteddirections 는 이 resource  
12739 type 의 특정 개체를 위한 direction property 에 대한 유효 값의 집합이다. Direction 값은 적용  
12740 가능한 경우 공기 흐름의 방향성이고, supporteddirections 가 존재하면 그 집합으로부터의  
12741 값이어야 한다. Direction 값은 장치의 성능에 의존한다. Speed 는 그 장치에 대한 현재의 속도  
12742 레벨을 나타내는 정수이다. (oic.r.baseresource 로부터의) range 는 속도 레벨에 대한 최소, 최대  
12743 값의 배열이다. 만약 존재하지 않는다면, range default 는 [0,100]이 된다. automode 는 automode  
12744 기능의 상태를 나타낸다. Off 는 automode 가 설정되지 않았음을 의미하고, On 은 automode 가  
12745 설정되고 속도가 device 에 의해 자동적으로 제어됨을 의미한다. 현재의 공기 흐름 값을 검색한다.

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### 12751 B.3.2 URI 예

12752 /AirFlowResURI

### 12753 B.3.3 Resource Type

12754 resource type (rt)는 ['oic.r.airflow']로 정의된다.

### 12755 B.3.4 Swagger2.0 정의

```
12756 {
12757   "swagger": "2.0",
12758   "info": {
12759     "title": "Air Flow",
```

```

12760     "version": "v1.1.0-20160519",
12761     "license": {
12762         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
12763         "x-description": "Redistribution and use in source and binary forms, with or without
12764 modification, are permitted provided that the following conditions are met:\n      1.
12765 Redistributions of source code must retain the above copyright notice, this list of conditions and
12766 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
12767 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
12768 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
12769 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
12770 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
12771 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
12772 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
12773 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
12774 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
12775 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
12776 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
12777 OF SUCH DAMAGE.\n"
12778     },
12779 },
12780 "schemes": ["http"],
12781 "consumes": ["application/json"],
12782 "produces": ["application/json"],
12783 "paths": {
12784     "/AirFlowResURI" : {
12785         "get": {
12786             "description": "This resource describes the properties associated with air flow.\nThe
12787 supporteddirections is the set of valid values for the direction property for a particular instance
12788 of this resource type.\nThe direction is the directionality of the air flow if applicable, if
12789 supporteddirections is also present it must be a value from that set.\nDirection values are
12790 dependent on the capabilities of the unit.\nThe speed is an integer representing the current speed
12791 level for the unit.\nThe range (from oic.r.baseresource) is an array of the min,max values for the
12792 speed level. If not present the range defaults to [0,100].\nautomode is the status of the automode
12793 feature; Off means automode is not enabled, On means automode is active and the speed is
12794 automatically controlled by the device.\nRetrieves the current air flow values.\n",
12795             "parameters": [
12796                 { "$ref": "#/parameters/interface" }
12797             ],
12798             "responses": {
12799                 "200": {
12800                     "description": "",
12801                     "x-example": {
12802                         "rt": ["oic.r.airflow"],
12803                         "id": "unique_example_id",
12804                         "supporteddirections": ["left", "right", "centre"],
12805                         "direction": "left",
12806                         "speed": 5,
12807                         "range": [1, 7],
12808                         "automode": "Off"
12809                     }
12810                 },
12811                 "schema": { "$ref": "#/definitions/AirFlow" }
12812             }
12813         },
12814     },
12815 },
12816 "post": {
12817     "description": "Sets the current air flow values.\nOnly direction and speed may be set by
12818 an update operation.\n",
12819     "parameters": [
12820         { "$ref": "#/parameters/interface" },
12821         {
12822             "name": "body",
12823             "in": "body",
12824             "required": true,
12825             "schema": { "$ref": "#/definitions/AirFlow" },
12826             "x-example": {
12827                 "id": "unique_example_id",
12828                 "direction": "right",
12829                 "speed": 3
12830             }
12831         }
12832     ]
12833 }

```

```

12831     }
12832   }
12833 },
12834 "responses": {
12835   "200": {
12836     "description": "",
12837     "x-example":
12838       {
12839         "id": "unique_example_id",
12840         "direction": "right",
12841         "speed": 3
12842       }
12843     ,
12844     "schema": { "$ref": "#/definitions/AirFlow" }
12845   },
12846   "403": {
12847     "description": "This response is generated by the OCF Server when the client
12848 sends:\n An update with an invalid property value for direction.\n An update with an out of range
12849 property value for speed.\nThe server may respond with the current resource representation.\n",
12850     "x-example":
12851       {
12852         "id": "unique_example_id",
12853         "supporteddirections": ["left","right","centre"],
12854         "direction": "right",
12855         "speed": 3
12856       }
12857     ,
12858     "schema": { "$ref": "#/definitions/AirFlow" }
12859   }
12860 }
12861 }
12862 }
12863 },
12864 "parameters": {
12865   "interface": {
12866     "in": "query",
12867     "name": "if",
12868     "type": "string",
12869     "enum": ["oic.if.a", "oic.if.baseline"]
12870   }
12871 },
12872 "definitions": {
12873   "AirFlow":
12874     {
12875       "properties": {
12876         "automode": {
12877           "description": "Status of the automode feature, if on speed is set by the device",
12878           "enum": [
12879             "On",
12880             "Off"
12881           ]
12882         },
12883         "direction": {
12884           "description": "Directionality of the air flow",
12885           "type": "string"
12886         },
12887         "precision": {
12888           "description": "Accuracy granularity of the exposed value",
12889           "readOnly": true,
12890           "type": "number"
12891         },
12892         "range": {
12893           "description": "The valid range for the value Property",
12894           "items": {
12895             "anyOf": [
12896               {
12897                 "type": "number"
12898               },
12899               {
12900                 "type": "integer"
12901               }

```

```

12902         ]
12903     },
12904     "maxItems": 2,
12905     "minItems": 2,
12906     "readOnly": true,
12907     "type": "array"
12908 },
12909 "speed": {
12910     "description": "Current speed level",
12911     "type": "integer"
12912 },
12913 "step": {
12914     "anyOf": [
12915         {
12916             "type": "integer"
12917         },
12918         {
12919             "type": "number"
12920         }
12921     ],
12922     "description": "Step value across the defined range",
12923     "readOnly": true
12924 },
12925 "supporteddirections": {
12926     "description": "Array of possible direction settings for this instance of the Resource
12927 Type",
12928     "items": {
12929         "minItems": 1,
12930         "type": "string",
12931         "uniqueItems": true
12932     },
12933     "readOnly": true,
12934     "type": "array"
12935 },
12936 "value": {
12937     "anyOf": [
12938         {
12939             "type": "array"
12940         },
12941         {
12942             "type": "string"
12943         },
12944         {
12945             "type": "boolean"
12946         },
12947         {
12948             "type": "integer"
12949         },
12950         {
12951             "type": "number"
12952         },
12953         {
12954             "type": "object"
12955         }
12956     ],
12957     "description": "The value sensed or actuated by this Resource"
12958 },
12959 ],
12960 "required": [
12961     "speed"
12962 ],
12963 "type": "object"
12964 }
12965 }
12966 }
12967 }
12968

```

12969 **B.3.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
speed	정수	예		현재의 속도 레벨.
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위.
supporteddirections	배열: schema 참조		Read Only	Resource Type 의 본 개체에 대한 가능한 direction settings 의 배열
precision	숫자		Read Only	노출된 값의 정확도.
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값.
direction	스트링			공기 흐름의 방향성
automode	복수 타입: schema 참조			automode 기능의 상태. on 이면 속도는 device 에 의해 설정된다.
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값.

12970 **B.3.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/AirFlowResURI		get	post		

12971 **B.4 송풍 제어**

12972 **B.4.1 개요**

12973 이 resource 는 공기 흐름의 제어와 관련된, 예를 들어, Thermostat (fan), Room A/C 또는 다른  
12974 device 에 의해 모델링 되는 속성을 기술한다. resource 는 AirFlow Resource 및 BinarySwitch  
12975 Resource 의 collection 으로 구성되는 복합 resource 이다. 현재의 공기 흐름 제어 값을 검색한다.

12976  
12977  
12978  
12979

## B.4.2 URI 예

/AirFlowControlResURI

## B.4.3 Resource Type

resource type (rt)는 ['oic.r.airflowcontrol']로 정의된다.

## B.4.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Flow Control",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirFlowControlResURI" : {
      "get": {
        "description": "This resource describes the attributes associated with control of air
flow,\nfor example as modelled by a Thermostat (fan), Room A/C or other device.\nThe resource is a
composite resource being made up as a collection of:\n  AirFlow Resource\n  BinarySwitch
Resource\nRetrieves the current air flow control values.\n",
        "parameters": [
          {"$ref": "#/parameters/interface-all"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.airflowcontrol"],
              "id": "unique_example_id",
              "airFlowControl": [
                {
                  "href": "/BinarySwitchResURI",
                  "rel": "contains",
                  "rt": ["oic.r.switch.binary"],
                  "if": ["oic.if.a"],
                  "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
                ]
              }
            }
          }
        }
      }
    }
  }
}
```

```

13036         },
13037         {
13038             "href": "/AirFlowResURI",
13039             "rel": "contains",
13040             "rt": ["oic.r.airflow"],
13041             "if": ["oic.if.a"],
13042             "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
13043         }
13044     ]
13045 }
13046 ,
13047 "schema": { "$ref": "#/definitions/AirFlowControl" }
13048 }
13049 },
13050 },
13051 "post": {
13052     "description": "Sets the current air flow control values using the batch interface\n",
13053     "parameters": [
13054         { "$ref": "#/parameters/interface-b" },
13055         {
13056             "name": "body",
13057             "in": "body",
13058             "required": true,
13059             "schema": { "$ref": "#/definitions/AirFlowControlBatch" },
13060             "x-example":
13061                 {
13062                     "id": "unique_example_id",
13063                     "airFlowControl": [
13064                         {
13065                             "id": "unique_example_id",
13066                             "value": true
13067                         },
13068                         {
13069                             "id": "unique_example_id",
13070                             "direction": "right",
13071                             "speed": 3
13072                         }
13073                     ]
13074                 }
13075         }
13076     ],
13077     "responses": {
13078         "200": {
13079             "description": "",
13080             "x-example":
13081                 {
13082                     "id": "unique_example_id",
13083                     "airFlowControl": [
13084                         {
13085                             "id": "unique_example_id",
13086                             "value": true
13087                         },
13088                         {
13089                             "id": "unique_example_id",
13090                             "direction": "right",
13091                             "speed": 3
13092                         }
13093                     ]
13094                 }
13095         },
13096         "schema": { "$ref": "#/definitions/AirFlowControlBatch" }
13097     },
13098     "403": {
13099         "description": "This response is generated by the OIC Server when the client
13100 sends:\n An update with an invalid property value for direction.\n An update with an out of range
13101 property value for speed.\nThe server responds with the current resource representation.\n",
13102         "x-example":
13103             {
13104                 "id": "unique_example_id",
13105                 "airFlowControl": [
13106                     {

```

```

13107         "id": "unique_example_id",
13108         "value": true
13109     },
13110     {
13111         "id": "unique_example_id",
13112         "direction": "right",
13113         "speed": 3
13114     }
13115 ]
13116 }
13117 ,
13118 "schema": { "$ref": "#/definitions/AirFlowControlBatch" }
13119 }
13120 }
13121 }
13122 }
13123 },
13124 "parameters": {
13125     "interface-b" : {
13126         "in" : "query",
13127         "name" : "if",
13128         "type" : "string",
13129         "enum" : ["oic.if.b"]
13130     },
13131     "interface-all" : {
13132         "in" : "query",
13133         "name" : "if",
13134         "type" : "string",
13135         "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
13136     }
13137 },
13138 "definitions": {
13139     "AirFlowControl" :
13140     {
13141         "properties": {
13142             "airFlowControl": {
13143                 "items": {
13144                     "properties": {
13145                         "anchor": {
13146 the containing collection",
13147                 "description": "This is used to override the context URI e.g. override the URI of",
13148                 "format": "uri",
13149                 "maxLength": 256,
13150                 "type": "string"
13151             },
13152             "di": {
13153                 "description": "Unique identifier for device (UUID)",
13154                 "pattern": "[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
13155 F0-9]{12}$",
13156                 "type": "string"
13157             },
13158             "eps": {
13159                 "description": "the Endpoint information of the target Resource",
13160                 "items": {
13161                     "properties": {
13162                         "ep": {
13163 specified in 10.2.1",
13164                 "description": "URI with Transport Protocol Suites + Endpoint Locator as",
13165                 "format": "uri",
13166                 "type": "string"
13167             },
13168             "pri": {
13169                 "description": "The priority among multiple Endpoints as specified in
13170 10.2.3",
13171                 "minimum": 1,
13172                 "type": "integer"
13173             }
13174         },
13175         "type": "object"
13176     },
13177     "type": "array"

```



```

13178         },
13179         "href": {
13180             "description": "This is the target URI, it can be specified as a Relative
13181 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
13182 make it unique.",
13183             "format": "uri",
13184             "maxLength": 256,
13185             "type": "string"
13186         },
13187         "if": {
13188             "description": "The interface set supported by this resource",
13189             "items": {
13190                 "enum": [
13191                     "oic.if.baseline",
13192                     "oic.if.ll",
13193                     "oic.if.b",
13194                     "oic.if.rw",
13195                     "oic.if.r",
13196                     "oic.if.a",
13197                     "oic.if.s"
13198                 ],
13199                 "type": "string"
13200             },
13201             "minItems": 1,
13202             "type": "array"
13203         },
13204         "ins": {
13205             "description": "The instance identifier for this web link in an array of web
13206 links - used in collections",
13207             "oneOf": [
13208                 {
13209                     "description": "An ordinal number that is not repeated - must be unique in
13210 the collection context",
13211                     "type": "integer"
13212                 },
13213                 {
13214                     "description": "Any unique string including a URI",
13215                     "format": "uri",
13216                     "maxLength": 256,
13217                     "type": "string"
13218                 },
13219                 {
13220                     "description": "Unique identifier (UUID)",
13221                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
13222 fA-F0-9]{12}$",
13223                     "type": "string"
13224                 }
13225             ]
13226         },
13227         "p": {
13228             "description": "Specifies the framework policies on the Resource referenced by
13229 the target URI",
13230             "properties": {
13231                 "bm": {
13232                     "description": "Specifies the framework policies on the Resource referenced
13233 by the target URI for e.g. observable and discoverable",
13234                     "type": "integer"
13235                 }
13236             },
13237             "required": [
13238                 "bm"
13239             ],
13240             "type": "object"
13241         },
13242         "rel": {
13243             "description": "The relation of the target URI referenced by the link to the
13244 context URI",
13245             "oneOf": [
13246                 {
13247                     "default": [
13248                         "hosts"

```

```

13249         ],
13250         "items": {
13251             "maxLength": 64,
13252             "type": "string"
13253         },
13254         "minItems": 1,
13255         "type": "array"
13256     },
13257     {
13258         "default": "hosts",
13259         "maxLength": 64,
13260         "type": "string"
13261     }
13262 ],
13263 },
13264 "rt": {
13265     "description": "Resource Type",
13266     "items": {
13267         "maxLength": 64,
13268         "type": "string"
13269     },
13270     "minItems": 1,
13271     "type": "array"
13272 },
13273 "title": {
13274     "description": "A title for the link relation. Can be used by the UI to provide a
context",
13275     "maxLength": 64,
13276     "type": "string"
13277 },
13278 "type": {
13279     "default": "application/cbor",
13280     "description": "A hint at the representation of the resource referenced by the
target URI. This represents the media types that are used for both accepting and emitting",
13281     "items": {
13282         "maxLength": 64,
13283         "type": "string"
13284     },
13285     "minItems": 1,
13286     "type": "array"
13287 },
13288 },
13289 },
13290 "required": [
13291     "href",
13292     "rt",
13293     "if"
13294 ],
13295 "type": "object"
13296 },
13297 "maxItems": 2,
13298 "minItems": 2,
13299 "type": "array"
13300 },
13301 "precision": {
13302     "description": "Accuracy granularity of the exposed value",
13303     "readOnly": true,
13304     "type": "number"
13305 },
13306 "range": {
13307     "description": "The valid range for the value Property",
13308     "items": {
13309         "anyOf": [
13310             {
13311                 "type": "number"
13312             },
13313             {
13314                 "type": "integer"
13315             }
13316         ]
13317     },
13318 },
13319 "maxItems": 2,

```

```

13320         "minItems": 2,
13321         "readOnly": true,
13322         "type": "array"
13323     },
13324     "step": {
13325         "anyOf": [
13326             {
13327                 "type": "integer"
13328             },
13329             {
13330                 "type": "number"
13331             }
13332         ],
13333         "description": "Step value across the defined range",
13334         "readOnly": true
13335     },
13336     "value": {
13337         "anyOf": [
13338             {
13339                 "type": "array"
13340             },
13341             {
13342                 "type": "string"
13343             },
13344             {
13345                 "type": "boolean"
13346             },
13347             {
13348                 "type": "integer"
13349             },
13350             {
13351                 "type": "number"
13352             },
13353             {
13354                 "type": "object"
13355             }
13356         ],
13357         "description": "The value sensed or actuated by this Resource"
13358     },
13359     "type": "object"
13360 }
13361
13362 ,
13363 "AirFlowControlBatch" :
13364 {
13365     "properties": {
13366         "airFlowControl": {
13367             "items": {
13368                 "anyOf": [
13369                     {
13370                         "properties": {
13371                             "value": {
13372                                 "description": "Status of the switch",
13373                                 "type": "boolean"
13374                             }
13375                         },
13376                         "type": "object"
13377                     },
13378                     {
13379                         "properties": {
13380                             "automode": {
13381                                 "description": "Status of the automode feature, if on speed is set by the
13382 device",
13383                                 "enum": [
13384                                     "On",
13385                                     "Off"
13386                                 ]
13387                             },
13388                             "direction": {
13389                                 "description": "Directionality of the air flow",
13390

```

```

13391         "type": "string"
13392     },
13393     "speed": {
13394         "description": "Current speed level",
13395         "type": "integer"
13396     },
13397     "supporteddirections": {
13398         "description": "Array of possible direction settings for this instance of the
Resource Type",
13399         "items": {
13400             "minItems": 1,
13401             "type": "string",
13402             "uniqueItems": true
13403         },
13404         "readOnly": true,
13405         "type": "array"
13406     }
13407 },
13408 },
13409 "type": "object"
13410 }
13411 ]
13412 },
13413 "type": "array"
13414 },
13415 "precision": {
13416     "description": "Accuracy granularity of the exposed value",
13417     "readOnly": true,
13418     "type": "number"
13419 },
13420 "range": {
13421     "description": "The valid range for the value Property",
13422     "items": {
13423         "anyOf": [
13424             {
13425                 "type": "number"
13426             },
13427             {
13428                 "type": "integer"
13429             }
13430         ]
13431     },
13432     "maxItems": 2,
13433     "minItems": 2,
13434     "readOnly": true,
13435     "type": "array"
13436 },
13437 "step": {
13438     "anyOf": [
13439         {
13440             "type": "integer"
13441         },
13442         {
13443             "type": "number"
13444         }
13445     ],
13446     "description": "Step value across the defined range",
13447     "readOnly": true
13448 },
13449 "value": {
13450     "anyOf": [
13451         {
13452             "type": "array"
13453         },
13454         {
13455             "type": "string"
13456         },
13457         {
13458             "type": "boolean"
13459         },
13460         {
13461             "type": "integer"

```

```

13462         },
13463         {
13464             "type": "number"
13465         },
13466         {
13467             "type": "object"
13468         }
13469     ],
13470     "description": "The value sensed or actuated by this Resource"
13471 },
13472 },
13473 "required": [
13474     "airFlowControl"
13475 ],
13476 "type": "object"
13477 }
13478 }
13479 }
13480 }
13481

```

#### 13482 B.4.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값.
precision	숫자		Read Only	노출된 값의 정확도
airFlowControl	배열: schema 참조	예		
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
airFlowControl	배열: schema 참조			
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입:		Read Only	정의된 범위에

	schema 참조			걸친 증분 값
--	-----------	--	--	---------

#### 13483 B.4.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirFlowControlResURI		get	post		

### 13484 B.5 청정도

#### 13485 B.5.1 개요

13486 이 resource 는 공기의 품질을 추정하기 위하여 사용될 수 있는 정성적 또는 측정된 오염물질을  
13487 기술한다.

13488  
13489 측정된 것은 아래에 기술된 바와 같이 오염물질의 유형마다 단위를 갖는 실제 감지된 값이다.  
13490 정성적인 것은, 특정 오염물질에 대해 최소값이 최소 오염물질이고, 최대값이 최대 오염물질인,  
13491 제공된 범위 내에서의 대표 값이다.

13492  
13493 valueType 은 contaminantvalue Property 내에서 정성적 또는 측정된 판독 값을 나타낸다.  
13494 Contaminant 값은 실제 측정된 또는 정성적 레벨을 포함한다. range 는 (oic.r.baseresource 로부터)  
13495 보고되는 값에 대해 허용된 범위를 포함한다.

13496  
13497 valueType 이 '측정된' 것이라면, 오염물질의 유형에 대한 단위는 다음과 같다: Methanal  
13498 (Formaldehyde 로도 알려진): CH<sub>2</sub>O (µg/m<sup>3</sup>), 이산화탄소: CO<sub>2</sub> (ppm), 일산화탄소: CO (ppm), 분진  
13499 물질 (직경이 2.5 microns 미만): PM2.5 (µg/m<sup>3</sup>), 분진 물질 (직경이 10 microns 미만): PM10  
13500 (µg/m<sup>3</sup>), 휘발성 유기 화합물: VOC (µg/m<sup>3</sup>). 현재의 공기 품질을 검색한다.

13501

13502

13503

#### 13504 B.5.2 URI 예

13505 /AirQualityResURI

#### 13506 B.5.3 Resource Type

13507 resource type (rt)는 ['oic.r.airquality']로 정의된다.

#### 13508 B.5.4 Swagger2.0 정의

```

13509 {
13510   "swagger": "2.0",
13511   "info": {
13512     "title": "Air Quality",
13513     "version": "v1.1.0-20160519",
13514     "license": {
13515       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
13516       "x-description": "Redistribution and use in source and binary forms, with or without
```

```

13517 modification, are permitted provided that the following conditions are met:\n          1.
13518 Redistributions of source code must retain the above copyright notice, this list of conditions and
13519 the following disclaimer.\n          2. Redistributions in binary form must reproduce the above
13520 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
13521 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
13522 Connectivity Foundation, INC. \n"AS IS\n" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
13523 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
13524 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
13525 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
13526 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
13527 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND ON
13528 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
13529 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
13530 OF SUCH DAMAGE.\n"
13531     }
13532 },
13533 "schemes": ["http"],
13534 "consumes": ["application/json"],
13535 "produces": ["application/json"],
13536 "paths": {
13537     "/AirQualityResURI" : {
13538         "get": {
13539             "description": "This resource describes a qualitative or measured contaminant that can be
13540 used to infer Air Quality.\nMeasured is the actual sensed value with units per contaminant type as
13541 described below.\nQualitative is a representative value within the range provided where the minium
13542 value is minimum contamination and maximum value is maximum contamination for the specific
13543 contaminant.\nThe valueType indicates a qualitative or measured reading within the contaminantvalue
13544 Property.\ncontaminantvalue contains the actual measured or qualitative level.\nrange contains the
13545 allowed range for the value that is being reported (from oic.r.baseresource).\nIf valueType is
13546 'Measured' then the units for the contaminant types are as follows:\nMethanal (also known as
13547 Formaldehyde): CH2O (ug/m^3),\nCarbon Dioxide: CO2 (ppm),\nCarbon Monoxide: CO (ppm),\n
13548 Particulate Matter (less than 2.5 microns in diameter): PM2.5 (ug/m^3),\nParticulate Matter (less
13549 than 10 microns in diameter): PM10 (ug/m^3),\nVolatile Organic Compounds: VOC (ug/m^3)\nRetrieves
13550 the current air quality.\n",
13551         "parameters": [
13552             { "$ref": "#/parameters/interface" }
13553         ],
13554         "responses": {
13555             "200": {
13556                 "description": "",
13557                 "x-example": {
13558                     "rt": ["oic.r.airquality"],
13559                     "id": "unique_example_id",
13560                     "contaminanttype": "CO",
13561                     "valuetype": "Measured",
13562                     "contaminantvalue": 10,
13563                     "range": [0,500]
13564                 }
13565             },
13566             "schema": { "$ref": "#/definitions/AirQuality" }
13567         }
13568     }
13569 }
13570 }
13571 },
13572 },
13573 "parameters": {
13574     "interface" : {
13575         "in" : "query",
13576         "name" : "if",
13577         "type" : "string",
13578         "enum" : ["oic.if.s", "oic.if.baseline"]
13579     }
13580 },
13581 "definitions": {
13582     "AirQuality" : {
13583         "properties": {
13584             "contaminanttype": {
13585                 "description": "The contaminant being measured.",
13586                 "enum": [

```

```

13588         "CH2O",
13589         "CO2",
13590         "CO",
13591         "PM2.5",
13592         "PM10",
13593         "VOC",
13594         "Smoke",
13595         "Odor",
13596         "AirPollution"
13597     ],
13598     "readOnly": true
13599 },
13600 "contaminantvalue": {
13601     "description": "The measured or qualitative value for the contaminant.",
13602     "readOnly": true,
13603     "type": "integer"
13604 },
13605 "id": {
13606     "description": "Instance ID of this specific resource",
13607     "maxLength": 64,
13608     "readOnly": true,
13609     "type": "string"
13610 },
13611 "if": {
13612     "description": "The interface set supported by this resource",
13613     "items": {
13614         "enum": [
13615             "oic.if.baseline",
13616             "oic.if.ll",
13617             "oic.if.b",
13618             "oic.if.lb",
13619             "oic.if.rw",
13620             "oic.if.r",
13621             "oic.if.a",
13622             "oic.if.s"
13623         ],
13624         "type": "string"
13625     },
13626     "minItems": 1,
13627     "readOnly": true,
13628     "type": "array"
13629 },
13630 "n": {
13631     "description": "Friendly name of the resource",
13632     "maxLength": 64,
13633     "readOnly": true,
13634     "type": "string"
13635 },
13636 "precision": {
13637     "description": "Accuracy granularity of the exposed value",
13638     "readOnly": true,
13639     "type": "number"
13640 },
13641 "range": {
13642     "description": "The valid range for the value Property",
13643     "items": {
13644         "anyOf": [
13645             {
13646                 "type": "number"
13647             },
13648             {
13649                 "type": "integer"
13650             }
13651         ]
13652     },
13653     "maxItems": 2,
13654     "minItems": 2,
13655     "readOnly": true,
13656     "type": "array"
13657 },
13658 "rt": {

```



```

13659         "description": "Resource Type",
13660         "items": {
13661             "maxLength": 64,
13662             "type": "string"
13663         },
13664         "minItems": 1,
13665         "readOnly": true,
13666         "type": "array"
13667     },
13668     "step": {
13669         "anyOf": [
13670             {
13671                 "type": "integer"
13672             },
13673             {
13674                 "type": "number"
13675             }
13676         ],
13677         "description": "Step value across the defined range",
13678         "readOnly": true
13679     },
13680     "value": {
13681         "anyOf": [
13682             {
13683                 "type": "array"
13684             },
13685             {
13686                 "type": "string"
13687             },
13688             {
13689                 "type": "boolean"
13690             },
13691             {
13692                 "type": "integer"
13693             },
13694             {
13695                 "type": "number"
13696             },
13697             {
13698                 "type": "object"
13699             }
13700         ],
13701         "description": "The value sensed or actuated by this Resource"
13702     },
13703     "valuetype": {
13704         "description": "Indicates whether the provided value is qualitative or measured.",
13705         "enum": [
13706             "Qualitative",
13707             "Measured"
13708         ],
13709         "readOnly": true
13710     }
13711 },
13712 "required": [
13713     "contaminantvalue",
13714     "contaminanttype",
13715     "valuetype",
13716     "range"
13717 ],
13718 "type": "object"
13719 }
13720 }
13721 }
13722 }

```

### B.5.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
---------------	------------	----	--------	----

precision	숫자		Read Only	노출된 값의 정확도
valuetype	복수 타입: schema 참조	예	Read Only	제공된 값이 정성적인 값인지 또는 측정된 값인지를 나타낸다
contaminanttype	복수 타입: schema 참조	예	Read Only	측정되는 오염물질
if	배열: schema 참조		Read Only	이 resource 에 의해 지원되는 인터페이스 집합
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
contaminantvalue	정수	예	Read Only	오염물질에 대한 측정된 또는 정성적 값
n	스트링		Read Only	Resource 의 친근한 명칭
id	스트링		Read Only	특정 resource 의 개체 ID
rt	배열: schema 참조		Read Only	Resource Type
range	배열: schema 참조	예	Read Only	value Property 에 대한 유효 범위

13725

#### B.5.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirQualityResURI		get			

## B.6 청정도 Collection

### B.6.1 개요

이 resource 는 정성적 또는 측정된 공기 품질을 제공하는 센서를 기술한다. resource 는 개별적으로 노출된 오염물질 측정치를 상술하는 oic.r.airquality 의 개체의 collection 이다. device 에 의해 지원되는 오염물질의 유형마다 하나의 collection entry 가 존재한다. device 는 적어도 하나의 측정된 또는 정성적 값을 노출하여야만 한다. 현재의 공기 품질을 검색한다.

### B.6.2 URI 예

/AirQualityBaselineResURI

### B.6.3 Resource Type

resource type (rt)는 ['oic.r.airqualitycollection', 'oic.wk.col']로 정의된다.

### B.6.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Air Quality Collection",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AirQualityLLResURI" : {
      "get": {
        "description": "This resource describes a sensor that provides the qualitative or measured
Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the
individual exposed contaminant measures\nThere is one collection entry per contaminant type
supported by the device. A device must expose at least one measured or qualitative
value.\nRetrieves the current air quality.\n",
        "parameters": [
          {"$ref": "#/parameters/interface-11"}
        ],
        "responses": {
```

```

13779         "200": {
13780             "description": "",
13781             "x-example":
13782                 [
13783                     { "href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
13784 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13785                     { "href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
13786 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
13787                 ]
13788             ,
13789             "schema": { "$ref": "#/definitions/AirQuality-11" }
13790         }
13791     }
13792 },
13793     "/AirQualityBaselineResURI" : {
13794         "get": {
13795             "description": "This resource describes a sensor that provides the qualitative or measured
13796 Air Quality.\nThe resource is a collection of instances of oic.r.airquality detailing the
13797 individual exposed contaminant measures\nThere is one collection entry per contaminant type
13798 supported by the device. A device must expose at least one measured or qualitative
13799 value.\nRetrieves the current air quality.\n",
13800             "parameters": [
13801                 { "$ref": "#/parameters/interface-baseline" }
13802             ],
13803             "responses": {
13804                 "200": {
13805                     "description": "",
13806                     "x-example":
13807                         {
13808                             "rt": ["oic.r.airqualitycollection", "oic.wk.col"],
13809                             "if": ["oic.if.baseline", "oic.if.ll"],
13810                             "id": "unique_example_id",
13811                             "links": [
13812                                 { "href": "/myCOMeasureResURI", "rt": ["oic.r.airquality"], "if":
13813 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]},
13814                                 { "href": "/myCO2ResURI", "rt": ["oic.r.airquality"], "if":
13815 ["oic.if.s", "oic.if.baseline"], "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]}
13816                             ]
13817                         }
13818                     ,
13819                     "schema": { "$ref": "#/definitions/AirQuality" }
13820                 }
13821             }
13822         }
13823     }
13824 },
13825     "parameters": {
13826         "interface-11" : {
13827             "in" : "query",
13828             "name" : "if",
13829             "type" : "string",
13830             "enum" : ["oic.if.ll"]
13831         },
13832         "interface-baseline" : {
13833             "in" : "query",
13834             "name" : "if",
13835             "type" : "string",
13836             "enum" : ["oic.if.baseline"]
13837         }
13838     },
13839     "definitions": {
13840         "AirQuality-11" :
13841             {
13842                 "allOf": [
13843                     {
13844                         "description": "All forms of links in a collection",
13845                         "oneOf": [
13846                             {
13847                                 "description": "A set (array) of simple or individual OIC Links. In addition to
13848 properties required for an OIC Link, the identifier for that link in this set is also required",

```

```

13850         "items": {
13851             "properties": {
13852                 "anchor": {
13853                     "description": "This is used to override the context URI e.g. override the
13854 URI of the containing collection",
13855                     "format": "uri",
13856                     "maxLength": 256,
13857                     "type": "string"
13858                 },
13859                 "di": {
13860                     "description": "Unique identifier for device (UUID)",
13861                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
13862 fA-F0-9]{12}$",
13863                     "type": "string"
13864                 },
13865                 "eps": {
13866                     "description": "the Endpoint information of the target Resource",
13867                     "items": {
13868                         "properties": {
13869                             "ep": {
13870                                 "description": "URI with Transport Protocol Suites + Endpoint Locator
13871 as specified in 10.2.1",
13872                                 "format": "uri",
13873                                 "type": "string"
13874                             },
13875                             "pri": {
13876                                 "description": "The priority among multiple Endpoints as specified in
13877 10.2.3",
13878                                 "minimum": 1,
13879                                 "type": "integer"
13880                             }
13881                         },
13882                         "type": "object"
13883                     },
13884                     "type": "array"
13885                 },
13886                 "href": {
13887                     "description": "This is the target URI, it can be specified as a Relative
13888 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
13889 make it unique.",
13890                     "format": "uri",
13891                     "maxLength": 256,
13892                     "type": "string"
13893                 },
13894                 "if": {
13895                     "description": "The interface set supported by this resource",
13896                     "items": {
13897                         "enum": [
13898                             "oic.if.baseline",
13899                             "oic.if.ll",
13900                             "oic.if.b",
13901                             "oic.if.rw",
13902                             "oic.if.r",
13903                             "oic.if.a",
13904                             "oic.if.s"
13905                         ],
13906                         "type": "string"
13907                     },
13908                     "minItems": 1,
13909                     "type": "array"
13910                 },
13911                 "ins": {
13912                     "description": "The instance identifier for this web link in an array of web
13913 links - used in collections",
13914                     "oneOf": [
13915                         {
13916                             "description": "An ordinal number that is not repeated - must be unique
13917 in the collection context",
13918                             "type": "integer"
13919                         },
13920                         {

```

```

13921         "description": "Any unique string including a URI",
13922         "format": "uri",
13923         "maxLength": 256,
13924         "type": "string"
13925     },
13926     {
13927         "description": "Unique identifier (UUID)",
13928         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
13929 [a-fA-F0-9]{12}$",
13930         "type": "string"
13931     }
13932 ]
13933 },
13934 "p": {
13935     "description": "Specifies the framework policies on the Resource referenced
13936 by the target URI",
13937     "properties": {
13938         "bm": {
13939             "description": "Specifies the framework policies on the Resource
13940 referenced by the target URI for e.g. observable and discoverable",
13941             "type": "integer"
13942         }
13943     },
13944     "required": [
13945         "bm"
13946     ],
13947     "type": "object"
13948 },
13949 "rel": {
13950     "description": "The relation of the target URI referenced by the link to the
13951 context URI",
13952     "oneOf": [
13953         {
13954             "default": [
13955                 "hosts"
13956             ],
13957             "items": {
13958                 "maxLength": 64,
13959                 "type": "string"
13960             },
13961             "minItems": 1,
13962             "type": "array"
13963         },
13964         {
13965             "default": "hosts",
13966             "maxLength": 64,
13967             "type": "string"
13968         }
13969     ]
13970 },
13971 "rt": {
13972     "description": "Resource Type",
13973     "items": {
13974         "maxLength": 64,
13975         "type": "string"
13976     },
13977     "minItems": 1,
13978     "type": "array"
13979 },
13980 "title": {
13981     "description": "A title for the link relation. Can be used by the UI to
13982 provide a context",
13983     "maxLength": 64,
13984     "type": "string"
13985 },
13986 "type": {
13987     "default": "application/cbor",
13988     "description": "A hint at the representation of the resource referenced by
13989 the target URI. This represents the media types that are used for both accepting and emitting",
13990     "items": {
13991         "maxLength": 64,

```

```

13992         "type": "string"
13993     },
13994     "minItems": 1,
13995     "type": "array"
13996 }
13997 },
13998 "required": [
13999     "href",
14000     "rt",
14001     "if"
14002 ],
14003 "type": "object"
14004 },
14005 "type": "array"
14006 }
14007 ]
14008 }
14009 ]
14010 }
14011
14012 ,
14013 "AirQuality" :
14014 {
14015     "allOf": [
14016     {
14017         "description": "A collection is a set (array) of tagged-link or set (array) of simple
14018 links along with additional properties to describe the collection itself",
14019         "properties": {
14020             "di": {
14021                 "description": "The device ID which is an UUIDv4 string; used for backward
14022 compatibility with Spec A definition of /oic/res",
14023                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
14024 9]{12}$",
14025                 "type": "string"
14026             },
14027             "drel": {
14028                 "description": "When specified this is the default relationship to use when an OIC
14029 Link does not specify an explicit relationship with *rel* parameter",
14030                 "type": "string"
14031             },
14032             "id": {
14033                 "anyOf": [
14034                 {
14035                     "description": "A number that is unique to that collection; like an ordinal
14036 number that is not repeated",
14037                     "type": "integer"
14038                 },
14039                 {
14040                     "description": "A unique string that could be a hash or similarly unique",
14041                     "type": "string"
14042                 },
14043                 {
14044                     "description": "A unique string that could be a UUIDv4",
14045                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
14046 F0-9]{12}$",
14047                     "type": "string"
14048                 }
14049                 ],
14050                 "description": "ID for the collection. Can be an value that is unique to the use
14051 context or a UUIDv4"
14052             },
14053             "links": {
14054                 "description": "All forms of links in a collection",
14055                 "oneOf": [
14056                 {
14057                     "description": "A set (array) of simple or individual OIC Links. In addition to
14058 properties required for an OIC Link, the identifier for that link in this set is also required",
14059                     "items": {
14060                         "properties": {
14061                             "anchor": {
14062                                 "description": "This is used to override the context URI e.g. override

```

```

14063 the URI of the containing collection",
14064     "format": "uri",
14065     "maxLength": 256,
14066     "type": "string"
14067 },
14068 "di": {
14069     "description": "Unique identifier for device (UUID)",
14070     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
14071 [a-fA-F0-9]{12}$",
14072     "type": "string"
14073 },
14074 "eps": {
14075     "description": "the Endpoint information of the target Resource",
14076     "items": {
14077         "properties": {
14078             "ep": {
14079                 "description": "URI with Transport Protocol Suites + Endpoint
14080 Locator as specified in 10.2.1",
14081                 "format": "uri",
14082                 "type": "string"
14083             },
14084             "pri": {
14085                 "description": "The priority among multiple Endpoints as specified
14086 in 10.2.3",
14087                 "minimum": 1,
14088                 "type": "integer"
14089             }
14090         },
14091         "type": "object"
14092     },
14093     "type": "array"
14094 },
14095 "href": {
14096     "description": "This is the target URI, it can be specified as a Relative
14097 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
14098 make it unique.",
14099     "format": "uri",
14100     "maxLength": 256,
14101     "type": "string"
14102 },
14103 "if": {
14104     "description": "The interface set supported by this resource",
14105     "items": {
14106         "enum": [
14107             "oic.if.baseline",
14108             "oic.if.ll",
14109             "oic.if.b",
14110             "oic.if.rw",
14111             "oic.if.r",
14112             "oic.if.a",
14113             "oic.if.s"
14114         ],
14115         "type": "string"
14116     },
14117     "minItems": 1,
14118     "type": "array"
14119 },
14120 "ins": {
14121     "description": "The instance identifier for this web link in an array of
14122 web links - used in collections",
14123     "oneOf": [
14124         {
14125             "description": "An ordinal number that is not repeated - must be
14126 unique in the collection context",
14127             "type": "integer"
14128         },
14129         {
14130             "description": "Any unique string including a URI",
14131             "format": "uri",
14132             "maxLength": 256,
14133             "type": "string"

```



```

14134         },
14135         {
14136             "description": "Unique identifier (UUID)",
14137             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$",
14138             "type": "string"
14139         }
14140     ],
14141 },
14142 "p": {
14143     "description": "Specifies the framework policies on the Resource
14144 referenced by the target URI",
14145     "properties": {
14146         "bm": {
14147             "description": "Specifies the framework policies on the Resource
14148 referenced by the target URI for e.g. observable and discoverable",
14149             "type": "integer"
14150         }
14151     },
14152     "required": [
14153         "bm"
14154     ],
14155     "type": "object"
14156 },
14157 "rel": {
14158     "description": "The relation of the target URI referenced by the link to
14159 the context URI",
14160     "oneOf": [
14161         {
14162             "default": [
14163                 "hosts"
14164             ],
14165             "items": {
14166                 "maxLength": 64,
14167                 "type": "string"
14168             },
14169             "minItems": 1,
14170             "type": "array"
14171         },
14172         {
14173             "default": "hosts",
14174             "maxLength": 64,
14175             "type": "string"
14176         }
14177     ]
14178 },
14179 "rt": {
14180     "description": "Resource Type",
14181     "items": {
14182         "maxLength": 64,
14183         "type": "string"
14184     },
14185     "minItems": 1,
14186     "type": "array"
14187 },
14188 "title": {
14189     "description": "A title for the link relation. Can be used by the UI to
14190 provide a context",
14191     "maxLength": 64,
14192     "type": "string"
14193 },
14194 "type": {
14195     "default": "application/cbor",
14196     "description": "A hint at the representation of the resource referenced
14197 by the target URI. This represents the media types that are used for both accepting and emitting",
14198     "items": {
14199         "maxLength": 64,
14200         "type": "string"
14201     },
14202     "minItems": 1,
14203     "type": "array"
14204 }

```

```

14205         }
14206     },
14207     "required": [
14208         "href",
14209         "rt",
14210         "if"
14211     ],
14212     "type": "object"
14213 },
14214 "type": "array"
14215 }
14216 ]
14217 },
14218 "rts": {
14219     "description": "Defines the list of allowable resource types (for Target and
14220 anchors) in links included in the collection; new links being created can only be from this list",
14221     "items": {
14222         "maxLength": 64,
14223         "type": "string"
14224     },
14225     "minItems": 1,
14226     "readOnly": true,
14227     "type": "array"
14228 },
14229 },
14230 "type": "object"
14231 },
14232 {
14233     "properties": {
14234         "id": {
14235             "description": "Instance ID of this specific resource",
14236             "maxLength": 64,
14237             "readOnly": true,
14238             "type": "string"
14239         },
14240         "if": {
14241             "description": "The interface set supported by this resource",
14242             "items": {
14243                 "enum": [
14244                     "oic.if.baseline",
14245                     "oic.if.ll",
14246                     "oic.if.b",
14247                     "oic.if.lb",
14248                     "oic.if.rw",
14249                     "oic.if.r",
14250                     "oic.if.a",
14251                     "oic.if.s"
14252                 ],
14253                 "type": "string"
14254             },
14255             "minItems": 1,
14256             "readOnly": true,
14257             "type": "array"
14258         },
14259         "n": {
14260             "description": "Friendly name of the resource",
14261             "maxLength": 64,
14262             "readOnly": true,
14263             "type": "string"
14264         },
14265         "rt": {
14266             "items": {
14267                 "enum": [
14268                     "oic.r.airqualitycollection",
14269                     "oic.wk.col"
14270                 ]
14271             },
14272             "maxItems": 2,
14273             "minItems": 2,
14274             "type": "array",
14275             "uniqueItems": true

```

```

14276      },
14277      "rts": {
14278        "items": {
14279          "oneOf": [
14280            {
14281              "enum": [
14282                "oic.r.airquality",
14283                "oic.r.value.conditional"
14284              ]
14285            },
14286            {
14287              "enum": [
14288                "oic.r.airquality"
14289              ]
14290            }
14291          ]
14292        },
14293        "maxItems": 2,
14294        "minItems": 1,
14295        "type": "array",
14296        "uniqueItems": true
14297      }
14298    }
14299  ],
14300  "type": "object"
14301 }
14302 }
14303 }
14304 }
14305 }
14306

```

### B.6.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
rt	배열: schema 참조	예		Resource Type
eps	배열: schema 참조			타깃 Resource 의 Endpoint 정보
type	배열: schema 참조			target URI 에 의해 참조되는 resource 의 표현에 대한 힌트. 수락 및 방출 모두를 위해 사용되는 Media 유형을 나타낸다.
ins	복수 타입: schema 참조			collection 에서 사용된- web link 배열 내의 web link 에 대한 개체 식별자
rel	복수 타입:			link 에 의해

	schema 참조			참조되는 타깃 URI 의 컨텍스트 URI 에 대한 관계
if	배열: schema 참조	예		이 resource 에 의해 지원되는 인터페이스 집합
di	스트링			Device 에 대한 고유 식별자 (UUID)
anchor	스트링			이것은 컨텍스트 URI 를 무시하기 위하여, 예: collection 을 포함하는 URI 를 무시하기 위해 사용된다.
href	스트링	예		이것은 target URI 이고, 상대 참조 또는 완전한 URI 로 규정될 수 있다. 상대 참조는 고유하게 되도록 di 파라미터와 함께 사용되어야 한다.
title	스트링			link 관계에 대한 제목. 컨텍스트를 제공하기 위하여 UI 에 의해 사용될 수 있다.
p	객체: schema 참조			target URI 에 의해 참조되는 Resource 에 대한 framework 정책을 규정한다.
rt	배열:	예		

	schema 참조			
if	배열: schema 참조	예	Read Only	이 resource 에 의해 지원되는 인터페이스 집합
id	스트링		Read Only	특정 resource 의 개체 ID
rts	배열: schema 참조			
n	스트링		Read Only	resource 의 친근한 명칭

## 14308 B.6.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AirQualityBaselineResURI		get			

## 14309 B.7 고도계

### 14310 B.7.1 개요

14311 이 resource 는 고도와 관련된 property 를 기술한다. 고도는 위치의 높이(미터)이다.  
14312 위치의 현재 높이(미터)를 검색한다.

14313

14314

### 14315 B.7.2 URI 예

14316 /AltimeterResURI

### 14317 B.7.3 Resource Type

14318 resource type (rt)는 ['oic.r.altimeter']로 정의된다.

### 14319 B.7.4 Swagger2.0 정의

```

14320 {
14321   "swagger": "2.0",
14322   "info": {
14323     "title": "Altimeter",
14324     "version": "v1.1.0-20160519",
14325     "license": {
14326       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
14327       "x-description": "Redistribution and use in source and binary forms, with or without
14328 modification, are permitted provided that the following conditions are met:\n      1.
14329 Redistributions of source code must retain the above copyright notice, this list of conditions and
14330 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
14331 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
14332 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
14333 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
14334 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
14335 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
14336 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,

```

```

14337 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
14338 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND ON
14339 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
14340 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
14341 OF SUCH DAMAGE.\n"
14342 }
14343 },
14344 "schemes": ["http"],
14345 "consumes": ["application/json"],
14346 "produces": ["application/json"],
14347 "paths": {
14348     "/AltimeterResURI" : {
14349         "get": {
14350             "description": "This resource describes the properties associated with
14351 altimeter.\nAltimeter is a height of the position (metres).\nRetrieves the current the height of
14352 the position (metres).\n",
14353             "parameters": [
14354                 {"$ref": "#/parameters/interface"}
14355             ],
14356             "responses": {
14357                 "200": {
14358                     "description": "",
14359                     "x-example":
14360                     {
14361                         "rt": ["oic.r.altimeter"],
14362                         "id": "unique_example_id",
14363                         "alt": 1500.0
14364                     },
14365                     "schema": { "$ref": "#/definitions/Altimeter" }
14366                 }
14367             }
14368         }
14369     }
14370 },
14371 },
14372 "parameters": {
14373     "interface" : {
14374         "in" : "query",
14375         "name" : "if",
14376         "type" : "string",
14377         "enum" : ["oic.if.s", "oic.if.baseline"]
14378     }
14379 },
14380 "definitions": {
14381     "Altimeter" :
14382     {
14383         "properties": {
14384             "alt": {
14385                 "description": "The current height of the position (metres)",
14386                 "minimum": 0,
14387                 "readOnly": true,
14388                 "type": "number"
14389             },
14390             "precision": {
14391                 "description": "Accuracy granularity of the exposed value",
14392                 "readOnly": true,
14393                 "type": "number"
14394             },
14395             "range": {
14396                 "description": "The valid range for the value Property",
14397                 "items": {
14398                     "anyOf": [
14399                         {
14400                             "type": "number"
14401                         },
14402                         {
14403                             "type": "integer"
14404                         }
14405                     ]
14406                 },
14407                 "maxItems": 2,

```

```

14408         "minItems": 2,
14409         "readOnly": true,
14410         "type": "array"
14411     },
14412     "step": {
14413         "anyOf": [
14414             {
14415                 "type": "integer"
14416             },
14417             {
14418                 "type": "number"
14419             }
14420         ],
14421         "description": "Step value across the defined range",
14422         "readOnly": true
14423     },
14424     "value": {
14425         "anyOf": [
14426             {
14427                 "type": "array"
14428             },
14429             {
14430                 "type": "string"
14431             },
14432             {
14433                 "type": "boolean"
14434             },
14435             {
14436                 "type": "integer"
14437             },
14438             {
14439                 "type": "number"
14440             },
14441             {
14442                 "type": "object"
14443             }
14444         ],
14445         "description": "The value sensed or actuated by this Resource"
14446     }
14447 },
14448 "required": [
14449     "alt"
14450 ],
14451 "type": "object"
14452 }
14453 }
14454 }
14455 }
14456

```

### 14457 B.7.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입:		Read Only	정의된 범위에

	schema 참조			걸친 증분 값
alt	숫자	예	Read Only	위치의 현재 높이 (미터)

#### 14458 B.7.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AltimeterResURI		get			

### 14459 B.8 대기압 센서

#### 14460 B.8.1 개요

14461 이 resource 는 측정점에서 겪는 평균 해수면 압력의 밀리바 단위의 측정치를 제공한다. 값은 hPa  
14462 (hectoPascals) 단위로 대기압을 기술하는 부동 소수점 형이다. hPa 와 일반적으로 사용되는 단위인  
14463 밀리바 (mbar)는 수치적으로 동등하다.

14464

14465

#### 14466 B.8.2 URI 예

14467 /AtmosphericPressureResURI

#### 14468 B.8.3 Resource Type

14469 resource type (rt)는 ['oic.r.sensor.atmosphericpressure']로 정의된다.

#### 14470 B.8.4 Swagger2.0 정의

```

14471 {
14472   "swagger": "2.0",
14473   "info": {
14474     "title": "Atmospheric Pressure Sensor",
14475     "version": "v1.1.0-20160519",
14476     "license": {
14477       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
14478       "x-description": "Redistribution and use in source and binary forms, with or without
14479 modification, are permitted provided that the following conditions are met:\n      1.
14480 Redistributions of source code must retain the above copyright notice, this list of conditions and
14481 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
14482 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
14483 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
14484 Connectivity Foundation, INC. \n      AS IS\n      AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
14485 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
14486 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
14487 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
14488 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
14489 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
14490 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
14491 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
14492 OF SUCH DAMAGE.\n"
14493   }
14494 },
14495 "schemes": ["http"],
14496 "consumes": ["application/json"],
14497 "produces": ["application/json"],
14498 "paths": {
14499   "/AtmosphericPressureResURI" : {

```



```

14500     "get": {
14501         "description": "This resource provides a measurement of Mean Sea Level Pressure experienced
14502 at the measuring point expressed in millibars.\n\nThe value is float which describes the atmospheric
14503 pressure in hPa (hectoPascals).\n\nNote that hPa and the also commonly used unit of millibars (mbar)
14504 are numerically equivalent.\n",
14505         "parameters": [
14506             { "$ref": "#/parameters/interface" }
14507         ],
14508         "responses": {
14509             "200": {
14510                 "description": "",
14511                 "x-example": {
14512                     "rt": ["oic.r.sensor.atmosphericpressure"],
14513                     "id": "unique_example_id",
14514                     "atmosphericPressure": 1000.4
14515                 },
14516                 "schema": { "$ref": "#/definitions/atmosphericPressure" }
14517             }
14518         }
14519     }
14520 },
14521 },
14522 },
14523 },
14524 "parameters": {
14525     "interface": {
14526         "in": "query",
14527         "name": "if",
14528         "type": "string",
14529         "enum": ["oic.if.s", "oic.if.baseline"]
14530     }
14531 },
14532 "definitions": {
14533     "atmosphericPressure": {
14534         {
14535             "properties": {
14536                 "atmosphericPressure": {
14537                     "description": "Current atmospheric pressure in hPa.",
14538                     "readOnly": true,
14539                     "type": "number"
14540                 },
14541                 "precision": {
14542                     "description": "Accuracy granularity of the exposed value",
14543                     "readOnly": true,
14544                     "type": "number"
14545                 },
14546                 "range": {
14547                     "description": "The valid range for the value Property",
14548                     "items": {
14549                         "anyOf": [
14550                             {
14551                                 "type": "number"
14552                             },
14553                             {
14554                                 "type": "integer"
14555                             }
14556                         ]
14557                     },
14558                     "maxItems": 2,
14559                     "minItems": 2,
14560                     "readOnly": true,
14561                     "type": "array"
14562                 },
14563                 "step": {
14564                     "anyOf": [
14565                         {
14566                             "type": "integer"
14567                         },
14568                         {
14569                             "type": "number"
14570                         }

```

```

14571         ],
14572         "description": "Step value across the defined range",
14573         "readOnly": true
14574     },
14575     "value": {
14576         "anyOf": [
14577             {
14578                 "type": "array"
14579             },
14580             {
14581                 "type": "string"
14582             },
14583             {
14584                 "type": "boolean"
14585             },
14586             {
14587                 "type": "integer"
14588             },
14589             {
14590                 "type": "number"
14591             },
14592             {
14593                 "type": "object"
14594             }
14595         ],
14596         "description": "The value sensed or actuated by this Resource"
14597     },
14598 },
14599 "required": [
14600     "atmosphericPressure"
14601 ]
14602 }
14603 }
14604 }
14605 }
14606

```

### B.8.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
atmosphericPressure	숫자	예	Read Only	hPa 단위의 현재 대기압

### B.8.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AtmosphericPressureResURI		get			

## B.9 오디오 제어

### B.9.1 개요

이 resource 는 기본적인 오디오 제어 기능을 정의한다. Volume 은 백분율 [0,100]을 포함하는 정수이다. 0(zero) 의 volume 의 어떠한 사운드도 출력되지 않음을 의미한다. 100 의 volume 은 최대 사운드의 출력을 의미한다. mute 제어는 Boolean 형으로 구현된다. True 의 mute 값은 device 가 무음 상태로 됨(오디오 출력 없음)을 의미한다. false 의 mute 값은 device 가 무음 상태로 되지 않음(오디오 출력 있음)을 의미한다.

### B.9.2 URI 예

/AudioResURI

### B.9.3 Resource Type

resource type (rt)는 ['oic.r.audio']로 정의된다.

### B.9.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Audio Controls",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AudioResURI" : {
      "get": {
        "description": "This resource defines basic audio control functions.\nThe volume is an
integer containing a percentage [0,100].\nA volume of 0 (zero) means no sound produced.\nA volume
of 100 means maximum sound production.\nThe mute control is implemented as a boolean.\nA mute value
of true means that the device is muted (no audio).\nA mute value of false means that the device is
not muted (audio).\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
```

```

14661     ],
14662     "responses": {
14663         "200": {
14664             "description": "",
14665             "x-example":
14666                 {
14667                     "rt": ["oic.r.audio"],
14668                     "id": "unique_example_id",
14669                     "volume": 50,
14670                     "mute": false
14671                 },
14672             "schema": { "$ref": "#/definitions/Audio" }
14673         }
14674     },
14675 },
14676 "post": {
14677     "description": "",
14678     "parameters": [
14679         { "$ref": "#/parameters/interface" },
14680         {
14681             "name": "body",
14682             "in": "body",
14683             "required": true,
14684             "schema": { "$ref": "#/definitions/Audio" },
14685             "x-example":
14686                 {
14687                     "id": "unique_example_id",
14688                     "volume": 75,
14689                     "mute": false
14690                 }
14691         }
14692     ],
14693     "responses": {
14694         "200": {
14695             "description": "",
14696             "x-example":
14697                 {
14698                     "id": "unique_example_id",
14699                     "volume": 75,
14700                     "mute": false
14701                 },
14702             "schema": { "$ref": "#/definitions/Audio" }
14703         }
14704     }
14705 },
14706 },
14707 },
14708 },
14709 },
14710 "parameters": {
14711     "interface": {
14712         "in": "query",
14713         "name": "if",
14714         "type": "string",
14715         "enum": ["oic.if.a", "oic.if.baseline"]
14716     }
14717 },
14718 "definitions": {
14719     "Audio": {
14720         {
14721             "properties": {
14722                 "mute": {
14723                     "description": "Mute setting of an audio rendering device",
14724                     "type": "boolean"
14725                 },
14726                 "precision": {
14727                     "description": "Accuracy granularity of the exposed value",
14728                     "readOnly": true,
14729                     "type": "number"
14730                 },
14731                 "range": {

```

```

14732         "description": "The valid range for the value Property",
14733         "items": {
14734             "anyOf": [
14735                 {
14736                     "type": "number"
14737                 },
14738                 {
14739                     "type": "integer"
14740                 }
14741             ]
14742         },
14743         "maxItems": 2,
14744         "minItems": 2,
14745         "readOnly": true,
14746         "type": "array"
14747     },
14748     "step": {
14749         "anyOf": [
14750             {
14751                 "type": "integer"
14752             },
14753             {
14754                 "type": "number"
14755             }
14756         ],
14757         "description": "Step value across the defined range",
14758         "readOnly": true
14759     },
14760     "value": {
14761         "anyOf": [
14762             {
14763                 "type": "array"
14764             },
14765             {
14766                 "type": "string"
14767             },
14768             {
14769                 "type": "boolean"
14770             },
14771             {
14772                 "type": "integer"
14773             },
14774             {
14775                 "type": "number"
14776             },
14777             {
14778                 "type": "object"
14779             }
14780         ],
14781         "description": "The value sensed or actuated by this Resource"
14782     },
14783     "volume": {
14784         "description": "Volume setting of an audio rendering device.",
14785         "maximum": 100,
14786         "minimum": 0,
14787         "type": "integer"
14788     }
14789 },
14790 "required": [
14791     "volume",
14792     "mute"
14793 ],
14794 "type": "object"
14795 }
14796
14797 }
14798 }
14799

```

14800     **B.9.5     Property 정의**

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
mute	boolean	예		오디오 출력 장치의 무음 설정
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
volume	정수	예		오디오 출력 장치의 음량 설정
precision	숫자		Read Only	노출된 값의 정확도

14801     **B.9.6     CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/AudioResURI		get	post		

14802     **B.10     자동 초점**

14803     **B.10.1     개요**

14804     이 resource 는 자동 초점 on/off 기능을 기술한다. 값은 Boolean 형이다. 'true'의 AutoFocus 값은  
14805     스위치가 on 임을 의미한다. 'false' 의 AutoFocus 값은 스위치가 off 임을 의미한다. Pan Tilt Zoom  
14806     ('Pan Tilt Zoom' Resource 정의 참조) 사용 시에 autofocus 는 선택된 영역에서만 작용한다.

14807

14808

14809

14810

14811     **B.10.2     URI 예**

14812     /AutoFocusResURI

14813     **B.10.3     Resource Type**

14814     resource type (rt)는 ['oic.r.autofocus']로 정의된다.

## B.10.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Auto Focus",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/AutoFocusResURI" : {
      "get": {
        "description": "This resource describes an auto focus on/off feature.\nThe value is a
boolean.\nAn AutoFocus value of 'true' means that the switch is on.\nAn AutoFocus value of 'false'
means that the switch is off.\nNote that when Pan Tilt Zoom (see 'Pan Tilt Zoom' Resource
definition) is used the autofocus works only in the selected area.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.autofocus"],
              "id": "unique_example_id",
              "autoFocus": false
            }
          },
          "schema": { "$ref": "#/definitions/AutoFocus" }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/AutoFocus" },
            "x-example": {
              "id": "unique_example_id",
              "autoFocus": true
            }
          }
        ],
        "responses": {
          "200": {
```

```

14885         "description" : "",
14886         "x-example":
14887             {
14888                 "id":          "unique_example_id",
14889                 "autoFocus":  true
14890             }
14891         ,
14892         "schema": { "$ref": "#/definitions/AutoFocus" }
14893     }
14894 }
14895 }
14896 }
14897 },
14898 "parameters": {
14899     "interface" : {
14900         "in" : "query",
14901         "name" : "if",
14902         "type" : "string",
14903         "enum" : ["oic.if.a", "oic.if.baseline"]
14904     }
14905 },
14906 "definitions": {
14907     "AutoFocus" :
14908         {
14909             "properties": {
14910                 "autoFocus": {
14911                     "description": "Status of the Auto Focus",
14912                     "type": "boolean"
14913                 },
14914                 "precision": {
14915                     "description": "Accuracy granularity of the exposed value",
14916                     "readOnly": true,
14917                     "type": "number"
14918                 },
14919                 "range": {
14920                     "description": "The valid range for the value Property",
14921                     "items": {
14922                         "anyOf": [
14923                             {
14924                                 "type": "number"
14925                             },
14926                             {
14927                                 "type": "integer"
14928                             }
14929                         ]
14930                     },
14931                     "maxItems": 2,
14932                     "minItems": 2,
14933                     "readOnly": true,
14934                     "type": "array"
14935                 },
14936                 "step": {
14937                     "anyOf": [
14938                         {
14939                             "type": "integer"
14940                         },
14941                         {
14942                             "type": "number"
14943                         }
14944                     ],
14945                     "description": "Step value across the defined range",
14946                     "readOnly": true
14947                 },
14948                 "value": {
14949                     "anyOf": [
14950                         {
14951                             "type": "array"
14952                         },
14953                         {
14954                             "type": "string"
14955                         }
14956                     ]
14957                 }
14958             }
14959         }
14960     }
14961 }

```



```

14956         {
14957             "type": "boolean"
14958         },
14959         {
14960             "type": "integer"
14961         },
14962         {
14963             "type": "number"
14964         },
14965         {
14966             "type": "object"
14967         }
14968     ],
14969     "description": "The value sensed or actuated by this Resource"
14970 },
14971 },
14972 "required": [
14973     "autoFocus"
14974 ],
14975 "type": "object"
14976 }
14977 }
14978 }
14979 }
14980

```

## 14981 B.10.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
autoFocus	boolean	예		자동 초점의 상태
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도

## 14982 B.10.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AutoFocusResURI		get	post		

## 14983 B.11 자동 급지 장치

### 14984 B.11.1 개요

14985 이 resource 는 전형적으로 센서와 함께 사용되는 자동 급지 장치의 상태를 기술한다. 상태는 읽기  
14986 전용이다. adfState 는 가능한 동작 상태의 배열이다. adfProcessing 은 OK 상태이고, 다른 상태는

14987     에러이거나 '사용자 관심'을 요구한다. currentAdfState 는 device 에 대한 ADF 상태의 현재 값이다.  
14988     현재의 자동 문서 공급기 상태를 검색한다.

14989

14990

14991

## 14992     **B.11.2    URI 예**

14993     /AutomaticDocumentFeederResURI

## 14994     **B.11.3    Resource Type**

14995     resource type (rt)는 ['oic.r.automaticdocumentfeeder']로 정의된다.

## 14996     **B.11.4    Swagger2.0 정의**

```
14997     {  
14998         "swagger": "2.0",  
14999         "info": {  
15000             "title": "Automatic Document Feeder",  
15001             "version": "v1.1.0-20160519",  
15002             "license": {  
15003                 "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
15004                 "x-description": "Redistribution and use in source and binary forms, with or without  
15005     modification, are permitted provided that the following conditions are met:\n      1.  
15006     Redistributions of source code must retain the above copyright notice, this list of conditions and  
15007     the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
15008     copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
15009     other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
15010     Connectivity Foundation, INC. \n\"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
15011     LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
15012     WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
15013     Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,  
15014     OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR  
15015     SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON  
15016     ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
15017     OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
15018     OF SUCH DAMAGE.\n\"  
15019             }  
15020         },  
15021         "schemes": ["http"],  
15022         "consumes": ["application/json"],  
15023         "produces": ["application/json"],  
15024         "paths": {  
15025             "/AutomaticDocumentFeederResURI" : {  
15026                 "get": {  
15027                     "description": "This resource describes the state of an automatic document feeder,  
15028     typically used with a scanner.\n\"The states are read only.\n\"The adfStates is an array of the  
15029     possible operational states.\n\"adfProcessing is the OK state, other states are errors or require  
15030     'user attention'.\n\"The currentAdfState is the current value of the ADF state on the  
15031     device.\n\"Retrieves the current automatic document feeder state.\n\",  
15032                     "parameters": [  
15033                         {"$ref": "#/parameters/interface"}  
15034                     ],  
15035                     "responses": {  
15036                         "200": {  
15037                             "description": "",  
15038                             "x-example":  
15039                             {  
15040                                 "rt": ["oic.r.automaticdocumentfeeder"],  
15041                                 "id": "unique_example_id",  
15042                                 "adfStates": ["adfProcessing", "adfEmpty", "adfJam", "adfLoaded",  
15043     "adfMispick", "adfHatchOpen", "adfDuplexPageTooShort", "adfDuplexPageTooLong",  
15044     "adfMultipickDetected", "adfInputTrayFailed", "adfInputTrayOverloaded"],  
15045                                 "currentAdfState": "adfProcessing"
```

```

15046         }
15047     },
15048     "schema": { "$ref": "#/definitions/AutomaticDocumentFeeder" }
15049 }
15050 }
15051 }
15052 }
15053 },
15054 "parameters": {
15055     "interface": {
15056         "in": "query",
15057         "name": "if",
15058         "type": "string",
15059         "enum": ["oic.if.s", "oic.if.baseline"]
15060     }
15061 },
15062 "definitions": {
15063     "AutomaticDocumentFeeder": {
15064         {
15065             "properties": {
15066                 "adfStates": {
15067                     "description": "array of the possible adf states.",
15068                     "items": {
15069                         "type": "string"
15070                     },
15071                     "readOnly": true,
15072                     "type": "array"
15073                 },
15074                 "currentAdfState": {
15075                     "description": "Current adf state.",
15076                     "readOnly": true,
15077                     "type": "string"
15078                 },
15079                 "precision": {
15080                     "description": "Accuracy granularity of the exposed value",
15081                     "readOnly": true,
15082                     "type": "number"
15083                 },
15084                 "range": {
15085                     "description": "The valid range for the value Property",
15086                     "items": {
15087                         "anyOf": [
15088                             {
15089                                 "type": "number"
15090                             },
15091                             {
15092                                 "type": "integer"
15093                             }
15094                         ]
15095                     },
15096                     "maxItems": 2,
15097                     "minItems": 2,
15098                     "readOnly": true,
15099                     "type": "array"
15100                 },
15101                 "step": {
15102                     "anyOf": [
15103                         {
15104                             "type": "integer"
15105                         },
15106                         {
15107                             "type": "number"
15108                         }
15109                     ],
15110                     "description": "Step value across the defined range",
15111                     "readOnly": true
15112                 },
15113                 "value": {
15114                     "anyOf": [
15115                         {
15116                             "type": "array"

```

```

15117         },
15118         {
15119             "type": "string"
15120         },
15121         {
15122             "type": "boolean"
15123         },
15124         {
15125             "type": "integer"
15126         },
15127         {
15128             "type": "number"
15129         },
15130         {
15131             "type": "object"
15132         }
15133     ],
15134     "description": "The value sensed or actuated by this Resource"
15135 },
15136 },
15137 "required": [
15138     "adfStates",
15139     "currentAdfState"
15140 ],
15141 "type": "object"
15142 }
15143 }
15144 }
15145 }
15146

```

#### 15147 B.11.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
currentAdfState	스트링	예	Read Only	현재의 adf 상태.
adfStates	배열: schema 참조	예	Read Only	가능한 adf 상태의 배열.
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

#### 15148 B.11.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/AutomaticDocumentFeederResURI		get			

## B.12 Base Resource Schema

### B.12.1 개요

이것은 본 스펙 내에서 정의된 모든 다른 resource 가 구축되는 base resource schema 이다. Value 는 이 resource 의 감지되거나 작동된 값이다. precision 은 값의 정확도이다. range 는 값이 유효한 범위이다. step 은 적용 가능하다면 정의된 범위에 걸친 증분 기능 (예: 항상 '2'만큼의 증분)이다. resource 의 상태를 검색한다.

### B.12.2 URI 예

/BaseResourceSchemaResURI

### B.12.3 Resource Type

resource type (rt)는 ['oic.baseresource']로 정의된다.

### B.12.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Base Resource Schema",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BaseResourceSchemaResURI" : {
      "get": {
        "description": "This is the base resource schema on which all other resources defined in
this specification build.\nvalue is the sensed or actuated value of the Resource.\nprecision is the
accuracy granularity of the value.\nrange is the range over which value is valid.\nstep is the step
function over the defined range if applicable (e.g. always step by '2').\nretrieves the state of
the resource.",
        "parameters": [
          { "$ref": "#/parameters/interface-baseline" }
        ],
        "responses": {
          "200": {
            "description": "",

```

```

15203         "x-example":
15204             {
15205                 "rt" :           ["oic.baseresource"],
15206                 "if":           ["oic.if.baseline"],
15207                 "id":           "unique_example_id",
15208                 "value":        10.5,
15209                 "precision":    0.5,
15210                 "range":        [0.0,100.0]
15211             }
15212         ,
15213         "schema": { "$ref": "#/definitions/base" }
15214     }
15215 },
15216 ],
15217 "post": {
15218     "description": "sets the read-write resource properties",
15219     "parameters": [
15220         { "$ref": "#/parameters/interface-a" },
15221         {
15222             "name": "body",
15223             "in": "body",
15224             "required": true,
15225             "schema": { "$ref": "#/definitions/base" },
15226             "x-example":
15227                 {
15228                     "value": 20.5
15229                 }
15230         }
15231     ],
15232     "responses": {
15233         "200": {
15234             "description": "",
15235             "x-example":
15236                 {
15237                     "value": 20.5
15238                 }
15239             ,
15240             "schema": { "$ref": "#/definitions/base" }
15241         }
15242     }
15243 },
15244 },
15245 "parameters": {
15246     "interface-a" : {
15247         "in" : "query",
15248         "name" : "if",
15249         "type" : "string",
15250         "enum" : ["oic.if.a"]
15251     },
15252     "interface-baseline" : {
15253         "in" : "query",
15254         "name" : "if",
15255         "type" : "string",
15256         "enum" : ["oic.if.baseline"]
15257     }
15258 },
15259 },
15260 "definitions": {
15261     "base" :
15262         {
15263             "properties": {
15264                 "id": {
15265                     "description": "Instance ID of this specific resource",
15266                     "maxLength": 64,
15267                     "readOnly": true,
15268                     "type": "string"
15269                 },
15270                 "if": {
15271                     "description": "The interface set supported by this resource",
15272                     "items": {
15273                         "enum": [

```

```

15274         "oic.if.baseline",
15275         "oic.if.ll",
15276         "oic.if.b",
15277         "oic.if.lb",
15278         "oic.if.rw",
15279         "oic.if.r",
15280         "oic.if.a",
15281         "oic.if.s"
15282     ],
15283     "type": "string"
15284 },
15285     "minItems": 1,
15286     "readOnly": true,
15287     "type": "array"
15288 },
15289     "n": {
15290         "description": "Friendly name of the resource",
15291         "maxLength": 64,
15292         "readOnly": true,
15293         "type": "string"
15294     },
15295     "precision": {
15296         "description": "Accuracy granularity of the exposed value",
15297         "readOnly": true,
15298         "type": "number"
15299     },
15300     "range": {
15301         "description": "The valid range for the value Property",
15302         "items": {
15303             "anyOf": [
15304                 {
15305                     "type": "number"
15306                 },
15307                 {
15308                     "type": "integer"
15309                 }
15310             ]
15311         },
15312         "maxItems": 2,
15313         "minItems": 2,
15314         "readOnly": true,
15315         "type": "array"
15316     },
15317     "rt": {
15318         "description": "Resource Type",
15319         "items": {
15320             "maxLength": 64,
15321             "type": "string"
15322         },
15323         "minItems": 1,
15324         "readOnly": true,
15325         "type": "array"
15326     },
15327     "step": {
15328         "anyOf": [
15329             {
15330                 "type": "integer"
15331             },
15332             {
15333                 "type": "number"
15334             }
15335         ],
15336         "description": "Step value across the defined range",
15337         "readOnly": true
15338     },
15339     "value": {
15340         "anyOf": [
15341             {
15342                 "type": "array"
15343             },
15344             {

```

```

15345         "type": "string"
15346     },
15347     {
15348         "type": "boolean"
15349     },
15350     {
15351         "type": "integer"
15352     },
15353     {
15354         "type": "number"
15355     },
15356     {
15357         "type": "object"
15358     }
15359 ],
15360 "description": "The value sensed or actuated by this Resource"
15361 },
15362 },
15363 "type": "object"
15364 }
15365 }
15366 }
15367 }
15368

```

#### 15369 B.12.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
if	배열: schema 참조		Read Only	이 resource 에 의해 지원되는 인터페이스 집합
rt	배열: schema 참조		Read Only	Resource Type
id	스트링		Read Only	특정 resource 의 개체 ID
n	스트링		Read Only	resource 의 친근한 명칭
precision	숫자		Read Only	노출된 값의 정확도

#### 15370 B.12.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------



/BaseResourceSchemaResURI		get	post		
---------------------------	--	-----	------	--	--

## B.13 배터리

### B.13.1 개요

이 resource 는 배터리의 충전 상태를 표현한다. charge 는 현재의 배터리 충전 레벨을 보여주는 정수이다. charge 는 0-100 범위의 백분율이다. 0 의 값은 완전히 방전된 것을 의미한다. 100 의 값은 완전히 충전된 것을 의미한다. 배터리의 상태를 검색한다.

### B.13.2 URI 예

/BatteryResURI

### B.13.3 Resource Type

resource type (rt)는 ['oic.r.energy.battery']로 정의된다.

### B.13.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Battery",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BatteryResURI" : {
      "get": {
        "description": "This resource represents the charge state of a battery.\nThe charge is an
integer showing the current battery charge level.\nThe charge is a percentage in the range 0-
100.\nA value of 0 means fully discharged.\nA value of 100 means fully charged.\nRetrieves the
state of the battery.\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ]
      }
    }
  }
}
```

```

15421     ],
15422     "responses": {
15423         "200": {
15424             "description": "",
15425             "x-example":
15426                 {
15427                     "rt": ["oic.r.energy.battery"],
15428                     "id": "unique_example_id",
15429                     "charge": 50
15430                 },
15431             ,
15432             "schema": { "$ref": "#/definitions/Battery" }
15433         }
15434     }
15435 }
15436 },
15437 },
15438 "parameters": {
15439     "interface": {
15440         "in": "query",
15441         "name": "if",
15442         "type": "string",
15443         "enum": ["oic.if.s", "oic.if.baseline"]
15444     }
15445 },
15446 "definitions": {
15447     "Battery": {
15448         {
15449             "properties": {
15450                 "charge": {
15451                     "description": "The current charge percentage.",
15452                     "maximum": 100,
15453                     "minimum": 0,
15454                     "readOnly": true,
15455                     "type": "integer"
15456                 },
15457                 "precision": {
15458                     "description": "Accuracy granularity of the exposed value",
15459                     "readOnly": true,
15460                     "type": "number"
15461                 },
15462                 "range": {
15463                     "description": "The valid range for the value Property",
15464                     "items": {
15465                         "anyOf": [
15466                             {
15467                                 "type": "number"
15468                             },
15469                             {
15470                                 "type": "integer"
15471                             }
15472                         ]
15473                     },
15474                     "maxItems": 2,
15475                     "minItems": 2,
15476                     "readOnly": true,
15477                     "type": "array"
15478                 },
15479                 "step": {
15480                     "anyOf": [
15481                         {
15482                             "type": "integer"
15483                         },
15484                         {
15485                             "type": "number"
15486                         }
15487                     ],
15488                     "description": "Step value across the defined range",
15489                     "readOnly": true
15490                 },
15491                 "value": {

```

```

15492         "anyOf": [
15493             {
15494                 "type": "array"
15495             },
15496             {
15497                 "type": "string"
15498             },
15499             {
15500                 "type": "boolean"
15501             },
15502             {
15503                 "type": "integer"
15504             },
15505             {
15506                 "type": "number"
15507             },
15508             {
15509                 "type": "object"
15510             }
15511         ],
15512         "description": "The value sensed or actuated by this Resource"
15513     },
15514 },
15515 "required": [
15516     "charge"
15517 ],
15518 "type": "object"
15519 }
15520 }
15521 }
15522 }
15523

```

### 15524 B.13.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
charge	정수	예	Read Only	현재의 충전 백분율
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

### 15525 B.13.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/BatteryResURI		get			

## B.14 바이너리 스위치

### B.14.1 개요

이 resource 는 바이너리 스위치의 on/off 를 기술한다. value 는 Boolean 형이다. 'true' 값은 스위치가 on 임을 의미한다. 'false' 값은 switch 가 off 임을 의미한다.

### B.14.2 URI 예

/BinarySwitchResURI

### B.14.3 Resource Type

resource type (rt)는 ['oic.r.switch.binary']로 정의된다.

### B.14.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Binary Switch",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
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Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/BinarySwitchResURI" : {
      "get": {
        "description": "This resource describes a binary switch (on/off).\nThe value is a
boolean.\nA value of 'true' means that the switch is on.\nA value of 'false' means that the switch
is off.\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.switch.binary"],
              "id": "unique_example_id",
            }
          }
        }
      }
    }
  }
}
```

```

15581         "value": false
15582     }
15583     ,
15584     "schema": { "$ref": "#/definitions/BinarySwitch" }
15585 }
15586 }
15587 },
15588 "post": {
15589     "description": "",
15590     "parameters": [
15591         { "$ref": "#/parameters/interface" },
15592         {
15593             "name": "body",
15594             "in": "body",
15595             "required": true,
15596             "schema": { "$ref": "#/definitions/BinarySwitch" },
15597             "x-example":
15598                 {
15599                     "id": "unique_example_id",
15600                     "value": true
15601                 }
15602         }
15603     ],
15604     "responses": {
15605         "200": {
15606             "description": "",
15607             "x-example":
15608                 {
15609                     "id": "unique_example_id",
15610                     "value": true
15611                 }
15612             ,
15613             "schema": { "$ref": "#/definitions/BinarySwitch" }
15614         }
15615     }
15616 }
15617 },
15618 },
15619 "parameters": {
15620     "interface": {
15621         "in": "query",
15622         "name": "if",
15623         "type": "string",
15624         "enum": ["oic.if.a", "oic.if.baseline"]
15625     }
15626 },
15627 "definitions": {
15628     "BinarySwitch":
15629     {
15630         "properties": {
15631             "precision": {
15632                 "description": "Accuracy granularity of the exposed value",
15633                 "readOnly": true,
15634                 "type": "number"
15635             },
15636             "range": {
15637                 "description": "The valid range for the value Property",
15638                 "items": {
15639                     "anyOf": [
15640                         {
15641                             "type": "number"
15642                         },
15643                         {
15644                             "type": "integer"
15645                         }
15646                     ]
15647                 },
15648                 "maxItems": 2,
15649                 "minItems": 2,
15650                 "readOnly": true,
15651                 "type": "array"

```

```

15652     },
15653     "step": {
15654       "anyOf": [
15655         {
15656           "type": "integer"
15657         },
15658         {
15659           "type": "number"
15660         }
15661       ],
15662       "description": "Step value across the defined range",
15663       "readOnly": true
15664     },
15665     "value": {
15666       "description": "Status of the switch",
15667       "type": "boolean"
15668     }
15669   },
15670   "required": [
15671     "value"
15672   ],
15673   "type": "object"
15674 }
15675
15676 }
15677 }
15678

```

#### 15679 B.14.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
value	boolean	예		스위치의 상태
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

#### 15680 B.14.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/BinarySwitchResURI		get	post		

### 15681 B.15 밝기

#### 15682 B.15.1 개요

15683 이 resource 는 조명 또는 램프의 밝기를 기술한다. 밝기는 현재의 밝기 레벨을 0-100 범위의  
 15684 정량화된 표현으로 나타내는 정수이다. 0 의 밝기는 resource 에 대한 최소값이다. 100 의 밝기는  
 15685 resource 에 대한 최대값이다. 현재의 밝기 레벨을 검색한다.

15686

15687

15688  
15689

## 15690 **B.15.2 URI 예**

15691 /BrightnessResURI

## 15692 **B.15.3 Resource Type**

15693 resource type (rt)는 ['oic.r.light.brightness']로 정의된다.

## 15694 **B.15.4 Swagger2.0 정의**

```
15695 {
15696   "swagger": "2.0",
15697   "info": {
15698     "title": "Brightness",
15699     "version": "v1.1.0-20160519",
15700     "license": {
15701       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
15702       "x-description": "Redistribution and use in source and binary forms, with or without
15703 modification, are permitted provided that the following conditions are met:\n      1.
15704 Redistributions of source code must retain the above copyright notice, this list of conditions and
15705 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
15706 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
15707 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
15708 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
15709 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
15710 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
15711 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
15712 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
15713 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
15714 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
15715 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
15716 OF SUCH DAMAGE.\n"
15717     },
15718   },
15719   "schemes": ["http"],
15720   "consumes": ["application/json"],
15721   "produces": ["application/json"],
15722   "paths": {
15723     "/BrightnessResURI" : {
15724       "get": {
15725         "description": "This resource describes the brightness of a light or lamp.\nbrightness is
15726 an integer showing the current brightness level as a quantized representation in the range 0-
15727 100.\nA brightness of 0 is the minimum for the resource.\nA brightness of 100 is the maximum for
15728 the resource.\nRetrieves the current brightness level.\n",
15729         "parameters": [
15730           { "$ref": "#/parameters/interface" }
15731         ],
15732         "responses": {
15733           "200": {
15734             "description": "",
15735             "x-example": {
15736               "rt": ["oic.r.light.brightness"],
15737               "id": "unique_example_id",
15738               "brightness": 50
15739             }
15740           },
15741           "schema": { "$ref": "#/definitions/Brightness" }
15742         }
15743       }
15744     },
15745     "post": {
15746       "description": "Sets the desired brightness level.\n",
15747       "parameters": [
```

```

15749         {"$ref": "#/parameters/interface"},
15750     {
15751         "name": "body",
15752         "in": "body",
15753         "required": true,
15754         "schema": { "$ref": "#/definitions/Brightness" },
15755         "x-example":
15756             {
15757                 "id": "unique_example_id",
15758                 "brightness": 10
15759             }
15760     },
15761 ],
15762 "responses": {
15763     "200": {
15764         "description": "Indicates that the brightness was changed.\n\nThe new brightness level
15765 is provided in the response.\n",
15766         "x-example":
15767             {
15768                 "id": "unique_example_id",
15769                 "brightness": 10
15770             }
15771         ,
15772         "schema": { "$ref": "#/definitions/Brightness" }
15773     }
15774 },
15775 }
15776 },
15777 },
15778 "parameters": {
15779     "interface": {
15780         "in": "query",
15781         "name": "if",
15782         "type": "string",
15783         "enum": ["oic.if.a", "oic.if.baseline"]
15784     }
15785 },
15786 "definitions": {
15787     "Brightness":
15788         {
15789         "properties": {
15790             "brightness": {
15791                 "description": "Quantized representation in the range 0-100 of the current sensed or
15792 set value for Brightness",
15793                 "maximum": 100,
15794                 "minimum": 0,
15795                 "type": "integer"
15796             },
15797             "precision": {
15798                 "description": "Accuracy granularity of the exposed value",
15799                 "readOnly": true,
15800                 "type": "number"
15801             },
15802             "range": {
15803                 "description": "The valid range for the value Property",
15804                 "items": {
15805                     "anyOf": [
15806                         {
15807                             "type": "number"
15808                         },
15809                         {
15810                             "type": "integer"
15811                         }
15812                     ]
15813                 },
15814                 "maxItems": 2,
15815                 "minItems": 2,
15816                 "readOnly": true,
15817                 "type": "array"
15818             },
15819             "step": {

```



```

15820         "anyOf": [
15821             {
15822                 "type": "integer"
15823             },
15824             {
15825                 "type": "number"
15826             }
15827         ],
15828         "description": "Step value across the defined range",
15829         "readOnly": true
15830     },
15831     "value": {
15832         "anyOf": [
15833             {
15834                 "type": "array"
15835             },
15836             {
15837                 "type": "string"
15838             },
15839             {
15840                 "type": "boolean"
15841             },
15842             {
15843                 "type": "integer"
15844             },
15845             {
15846                 "type": "number"
15847             },
15848             {
15849                 "type": "object"
15850             }
15851         ],
15852         "description": "The value sensed or actuated by this Resource"
15853     },
15854 },
15855 "required": [
15856     "brightness"
15857 ],
15858 "type": "object"
15859 }
15860 }
15861 }
15862 }
15863

```

#### 15864 B.15.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
brightness	정수	예		Brightness 에

				대한 현재 감지되거나 설정된 값의 0- 100 범위의 양자화된 표현
--	--	--	--	---

## B.15.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/BrightnessResURI		get	post		

## B.16 버튼 스위치

### B.16.1 개요

이 resource 는 버튼 타입 스위치의 동작을 기술한다. 값은 Boolean 형이다. 'true' 값은 버튼이 눌러진 것을 의미한다. 'false' 값은 버튼이 눌러지지 않은 것을 의미한다.

### B.16.2 URI 예

/ButtonResURI

### B.16.3 Resource Type

resource type (rt)는 ['oic.r.button']로 정의된다.

### B.16.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Button Switch",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
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ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
}
```

```

15903     "consumes": ["application/json"],
15904     "produces": ["application/json"],
15905     "paths": {
15906         "/ButtonResURI" : {
15907             "get": {
15908                 "description": "This resource describes the operation of a button style switch.\n\nThe value
15909 is a boolean.\n\nA value of 'true' means that the button is being pushed/pressed.\n\nA value of 'false'
15910 means that the button is not being pushed/pressed.\n\n",
15911                 "parameters": [
15912                     { "$ref": "#/parameters/interface" }
15913                 ],
15914                 "responses": {
15915                     "200": {
15916                         "description": "",
15917                         "x-example":
15918                             {
15919                                 "rt": ["oic.r.button"],
15920                                 "id": "unique_example_id",
15921                                 "value": true
15922                             }
15923                     },
15924                     "schema": { "$ref": "#/definitions/Button" }
15925                 }
15926             }
15927         }
15928     },
15929     "parameters": {
15930         "interface" : {
15931             "in" : "query",
15932             "name" : "if",
15933             "type" : "string",
15934             "enum" : ["oic.if.s", "oic.if.baseline"]
15935         }
15936     },
15937     "definitions": {
15938         "Button" :
15939             {
15940                 "properties": {
15941                     "precision": {
15942                         "description": "Accuracy granularity of the exposed value",
15943                         "readOnly": true,
15944                         "type": "number"
15945                     },
15946                     "range": {
15947                         "description": "The valid range for the value Property",
15948                         "items": {
15949                             "anyOf": [
15950                                 {
15951                                     "type": "number"
15952                                 },
15953                                 {
15954                                     "type": "integer"
15955                                 }
15956                             ]
15957                     },
15958                     "maxItems": 2,
15959                     "minItems": 2,
15960                     "readOnly": true,
15961                     "type": "array"
15962                 },
15963                 "step": {
15964                     "anyOf": [
15965                         {
15966                             "type": "integer"
15967                         },
15968                         {
15969                             "type": "number"
15970                         }
15971                     ],
15972                     "description": "Step value across the defined range",
15973

```

```
15974         "readOnly": true
15975     },
15976     "value": {
15977         "description": "Status of the button",
15978         "readOnly": true,
15979         "type": "boolean"
15980     }
15981 },
15982 "required": [
15983     "value"
15984 ]
15985 }
15986
15987 }
15988 }
15989 }
```

15990 **B.16.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	버튼 의 상태
precision	숫자		Read Only	노출된 값의 정확도
range	배열 schema 참조		Read Only	value property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

15991 **B.16.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ButtonResURI		get			

15992 **B.17 이산화탄소 센서**

15993 **B.17.1 개요**

15994 이 resource 는 이산화탄소가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은  
15995 이산화탄소가 검출되었음을 의미한다. 'false' 값은 이산화탄소가 검출되지 않았음을 의미한다.

15996

15997

15998

15999 **B.17.2 URI 예**

16000 /CarbonDioxideResURI

16001 **B.17.3 Resource Type**

16002 resource type (rt)는 ['oic.r.sensor.carbondioxide']로 정의된다.

## B.17.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Carbon Dioxide Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CarbonDioxideResURI" : {
      "get": {
        "description": "This resource describes whether carbon dioxide has been sensed or not.\nThe
value is a boolean.\nA value of 'true' means that carbon dioxide has been detected.\nA value of
'false' means that carbon dioxide has not been detected.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.carbondioxide"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/CO2" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "CO2" : {
      "allOf": [
        {
          "properties": {
            "precision": {
              "description": "Accuracy granularity of the exposed value",
              "readOnly": true,
```

```

16073         "type": "number"
16074     },
16075     "range": {
16076         "description": "The valid range for the value Property",
16077         "items": {
16078             "anyOf": [
16079                 {
16080                     "type": "number"
16081                 },
16082                 {
16083                     "type": "integer"
16084                 }
16085             ]
16086         },
16087         "maxItems": 2,
16088         "minItems": 2,
16089         "readOnly": true,
16090         "type": "array"
16091     },
16092     "step": {
16093         "anyOf": [
16094             {
16095                 "type": "integer"
16096             },
16097             {
16098                 "type": "number"
16099             }
16100         ],
16101         "description": "Step value across the defined range",
16102         "readOnly": true
16103     },
16104     "value": {
16105         "description": "true = sensed, false = not sensed.",
16106         "readOnly": true,
16107         "type": "boolean"
16108     }
16109 },
16110 "type": "object"
16111 }
16112 ],
16113 "required": [
16114     "value"
16115 ]
16116 }
16117 }
16118 }
16119 }
16120

```

#### 16121 B.17.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
value	boolean	예	Read Only	true = 감지 false = 미 감지
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

## B.17.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/CarbonDioxideResURI		get			

## B.18 일산화탄소 센서

### B.18.1 개요

이 resource 는 일산화탄소가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 일산화탄소가 검출되었음을 의미한다. 'false' 값은 일산화탄소가 검출되지 않았음을 의미한다.

### B.18.2 URI 예

/CarbonMonoxideResURI

### B.18.3 Resource Type

resource type (rt)는 ['oic.r.sensor.carbonmonoxide']로 정의된다.

### B.18.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Carbon Monoxide Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/CarbonMonoxideResURI": {
      "get": {
        "description": "This resource describes whether carbon monoxide has been sensed or
not.\nThe value is a boolean.\nA value of 'true' means that carbon monoxide has been detected.\nA
value of 'false' means that carbon monoxide has not been detected.\n",
        "parameters": [
          {
            "$ref": "#/parameters/interface"
          }
        ]
      }
    }
  }
}
```

```

16170     ],
16171     "responses": {
16172         "200": {
16173             "description": "",
16174             "x-example":
16175                 {
16176                     "rt": ["oic.r.sensor.carbonmonoxide"],
16177                     "id": "unique_example_id",
16178                     "value": true
16179                 },
16180             "schema": { "$ref": "#/definitions/CO" }
16181         }
16182     }
16183 },
16184 {
16185     "parameters": {
16186         "interface": {
16187             "in": "query",
16188             "name": "if",
16189             "type": "string",
16190             "enum": ["oic.if.s", "oic.if.baseline"]
16191         }
16192     },
16193     "definitions": {
16194         "CO": {
16195             "allOf": [
16196                 {
16197                     "properties": {
16198                         "precision": {
16199                             "description": "Accuracy granularity of the exposed value",
16200                             "readOnly": true,
16201                             "type": "number"
16202                         }
16203                     },
16204                     "range": {
16205                         "description": "The valid range for the value Property",
16206                         "items": {
16207                             "anyOf": [
16208                                 {
16209                                     "type": "number"
16210                                 },
16211                                 {
16212                                     "type": "integer"
16213                                 }
16214                             ]
16215                         }
16216                     },
16217                     "maxItems": 2,
16218                     "minItems": 2,
16219                     "readOnly": true,
16220                     "type": "array"
16221                 }
16222             ],
16223             "step": {
16224                 "anyOf": [
16225                     {
16226                         "type": "integer"
16227                     },
16228                     {
16229                         "type": "number"
16230                     }
16231                 ],
16232                 "description": "Step value across the defined range",
16233                 "readOnly": true
16234             },
16235             "value": {
16236                 "description": "true = sensed, false = not sensed.",
16237                 "readOnly": true,
16238                 "type": "boolean"
16239             }
16240         }
16241     },

```



```
16241         "type": "object"
16242     },
16243 ],
16244     "required": [
16245         "value"
16246     ]
16247 }
16248 }
16249 }
16250 }
16251 }
```

16252 **B.18.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
range	배열 schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
value	boolean	예	Read Only	true = 감지 false = 미 감지
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

16253 **B.18.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/CarbonMonoxideResURI		get			

16254 **B.19 시계**

16255 **B.19.1 개요**

16256 이 resource 는 시계 및 시간과 관련된 property 를 기술한다. Clock 은 시간 정보이다. Datetime 은  
16257 ISO 8601 datetime 형식 (예: "2007-04-05T14:30Z") (Time+Date+Timezone)을 사용한다.  
16258 Countdown 은 카운트다운 동안 요구되는 초 단위의 총 시간이다. 현재의 datetime data 를  
16259 검색한다.

16260

16261

16262 **B.19.2 URI 예**

16263 /ClockResURI

16264 **B.19.3 Resource Type**

16265 resource type (rt)는 ['oic.r.clock']로 정의된다.

## B.19.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Clock",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
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OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ClockResURI" : {
      "get": {
        "description": "This resource describes the properties associated with clock and
time.\nClock is a time information.\nDatetime is using ISO 8601 datetime format (e.g: \"2007-04-
05T14:30Z\") (Time+Date+Timezone)\nCountdown is the desired total seconds for countdown.\nRetrieves
the current datetime data.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.clock"],
              "id": "unique_example_id",
              "datetime": "2015-11-05T14:30Z",
              "countdown": 0.0
            }
          },
          "schema": { "$ref": "#/definitions/Clock" }
        }
      },
      "post": {
        "description": "Sets the desired datetime.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Clock" },
            "x-example": {
              "id": "unique_example_id",
              "datetime": "2015-11-05T14:30Z",
              "countdown": 0.0
            }
          }
        ]
      }
    }
  }
}
```

```

16336         "responses": {
16337             "200": {
16338                 "description": "Indicates that the datetime value was successfully changed.\n\nThe new
16339 datetime value is provided in the response.\n",
16340                 "x-example":
16341                     {
16342                         "id": "unique_example_id",
16343                         "datetime": "2015-11-05T14:30Z",
16344                         "countdown": 0.0
16345                     },
16346                 "schema": { "$ref": "#/definitions/Clock" }
16347             },
16348             "403": {
16349                 "description": "Indicates that OIC client sent an invalid property value to the
16350 server.\n\nThe server responds with the required input representation.\n",
16351                 "x-example":
16352                     {
16353                         "id": "unique_example_id",
16354                         "datetime": "2015-11-05T14:30Z",
16355                         "countdown": 0.0
16356                     },
16357                 "schema": { "$ref": "#/definitions/Clock" }
16358             }
16359         }
16360     }
16361 }
16362 }
16363 },
16364 "parameters": {
16365     "interface": {
16366         "in": "query",
16367         "name": "if",
16368         "type": "string",
16369         "enum": ["oic.if.a", "oic.if.baseline"]
16370     }
16371 },
16372 "definitions": {
16373     "Clock": {
16374         {
16375             "properties": {
16376                 "countdown": {
16377                     "description": "Desired total seconds for countdown",
16378                     "minimum": 0,
16379                     "type": "number"
16380                 },
16381                 "datetime": {
16382                     "description": "Using ISO 8601 datetime format (e.g: 2007-04-05T14:30Z, 2007-04-
16383 05T14:30+09:00)",
16384                     "type": "string"
16385                 },
16386                 "precision": {
16387                     "description": "Accuracy granularity of the exposed value",
16388                     "readOnly": true,
16389                     "type": "number"
16390                 },
16391                 "range": {
16392                     "description": "The valid range for the value Property",
16393                     "items": {
16394                         "anyOf": [
16395                             {
16396                                 "type": "number"
16397                             },
16398                             {
16399                                 "type": "integer"
16400                             }
16401                         ]
16402                     },
16403                     "maxItems": 2,
16404                     "minItems": 2,
16405                     "readOnly": true,

```

```

16407         "type": "array"
16408     },
16409     "step": {
16410         "anyOf": [
16411             {
16412                 "type": "integer"
16413             },
16414             {
16415                 "type": "number"
16416             }
16417         ],
16418         "description": "Step value across the defined range",
16419         "readOnly": true
16420     },
16421     "value": {
16422         "anyOf": [
16423             {
16424                 "type": "array"
16425             },
16426             {
16427                 "type": "string"
16428             },
16429             {
16430                 "type": "boolean"
16431             },
16432             {
16433                 "type": "integer"
16434             },
16435             {
16436                 "type": "number"
16437             },
16438             {
16439                 "type": "object"
16440             }
16441         ],
16442         "description": "The value sensed or actuated by this Resource"
16443     }
16444 },
16445 "required": [
16446     "datetime"
16447 ],
16448 "type": "object"
16449 }
16450
16451 }
16452 }
16453

```

#### 16454 B.19.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
datetime	스트링	예		ISO 8601 datetime 형식 (예: 2007-04- 05T14:30Z, 2007- 04- 05T14:30+09:00)을 사용

step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
countdown	숫자			카운트다운 동안 요구되는 초 단위의 총 시간

## 16455 B.19.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ClockResURI		get	post		

## 16456 B.20 자동 화이트 밸런스

### 16457 B.20.1 개요

16458 이 resource 는 자동 화이트 밸런스의 on/off 기능을 기술한다. 값은 boolean 형이다. 'true'의  
16459 AutoWhiteBalance 값은 스위치가 on 인 것을 의미한다. 'false'의 AutoWhiteBalance 값은 스위치가  
16460 off 인 것을 의미한다.

16461

16462

### 16463 B.20.2 URI 예

16464 /AutoWhiteBalanceResURI

### 16465 B.20.3 Resource Type

16466 resource type (rt)는 ['oic.r.colour.autowhitebalance']로 정의된다.

### 16467 B.20.4 Swagger2.0 정의

```

16468 {
16469   "swagger": "2.0",
16470   "info": {
16471     "title": "Auto White Balance",
16472     "version": "v1.1.0-20160519",
16473     "license": {
16474       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
16475       "x-description": "Redistribution and use in source and binary forms, with or without
16476 modification, are permitted provided that the following conditions are met:\n      1.
16477 Redistributions of source code must retain the above copyright notice, this list of conditions and
16478 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
16479 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
16480 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
16481 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
16482 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
16483 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
16484 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
16485 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
16486 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
16487 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
16488 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY

```

```

16489 OF SUCH DAMAGE.\n"
16490     }
16491   },
16492   "schemes": ["http"],
16493   "consumes": ["application/json"],
16494   "produces": ["application/json"],
16495   "paths": {
16496     "/AutoWhiteBalanceResURI" : {
16497       "get": {
16498         "description": "This resource describes an auto balance on/off feature.\nThe value is a
16499 boolean.\nAn AutoWhiteBalance value of 'true' means that the switch is on.\nAn AutoWhiteBalance
16500 value of 'false' means that the switch is off.\n",
16501         "parameters": [
16502           { "$ref": "#/parameters/interface" }
16503         ],
16504         "responses": {
16505           "200": {
16506             "description": "",
16507             "x-example":
16508               {
16509                 "rt": ["oic.r.colour.autowhitebalance"],
16510                 "id": "unique_example_id",
16511                 "autoWhiteBalance": false
16512               },
16513             ,
16514             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
16515           }
16516         }
16517       },
16518       "post": {
16519         "description": "",
16520         "parameters": [
16521           { "$ref": "#/parameters/interface" },
16522           {
16523             "name": "body",
16524             "in": "body",
16525             "required": true,
16526             "schema": { "$ref": "#/definitions/AutoWhiteBalance" },
16527             "x-example":
16528               {
16529                 "id": "unique_example_id",
16530                 "autoWhiteBalance": true
16531               }
16532           }
16533         ],
16534         "responses": {
16535           "200": {
16536             "description": "",
16537             "x-example":
16538               {
16539                 "id": "unique_example_id",
16540                 "autoWhiteBalance": true
16541               },
16542             ,
16543             "schema": { "$ref": "#/definitions/AutoWhiteBalance" }
16544           }
16545         }
16546       }
16547     }
16548   },
16549   "parameters": {
16550     "interface" : {
16551       "in" : "query",
16552       "name" : "if",
16553       "type" : "string",
16554       "enum" : ["oic.if.a", "oic.if.baseline"]
16555     }
16556   },
16557   "definitions": {
16558     "AutoWhiteBalance" :
16559     {

```

```

16560 "properties": {
16561   "autoWhiteBalance": {
16562     "description": "Status of the Auto White balance",
16563     "type": "boolean"
16564   },
16565   "precision": {
16566     "description": "Accuracy granularity of the exposed value",
16567     "readOnly": true,
16568     "type": "number"
16569   },
16570   "range": {
16571     "description": "The valid range for the value Property",
16572     "items": {
16573       "anyOf": [
16574         {
16575           "type": "number"
16576         },
16577         {
16578           "type": "integer"
16579         }
16580       ]
16581     },
16582     "maxItems": 2,
16583     "minItems": 2,
16584     "readOnly": true,
16585     "type": "array"
16586   },
16587   "step": {
16588     "anyOf": [
16589       {
16590         "type": "integer"
16591       },
16592       {
16593         "type": "number"
16594       }
16595     ],
16596     "description": "Step value across the defined range",
16597     "readOnly": true
16598   },
16599   "value": {
16600     "anyOf": [
16601       {
16602         "type": "array"
16603       },
16604       {
16605         "type": "string"
16606       },
16607       {
16608         "type": "boolean"
16609       },
16610       {
16611         "type": "integer"
16612       },
16613       {
16614         "type": "number"
16615       },
16616       {
16617         "type": "object"
16618       }
16619     ],
16620     "description": "The value sensed or actuated by this Resource"
16621   }
16622 },
16623 "required": [
16624   "autoWhiteBalance"
16625 ],
16626 "type": "object"
16627 }
16628
16629 }
```

16630 }  
16631

16632 **B.20.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
autoWhiteBalance	boolean	예		자동 화이트 밸런스의 상태
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

16633 **B.20.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/AutoWhiteBalanceResURI		get	post		

16634 **B.21 채도**

16635 **B.21.1 개요**

16636 이 resource 는 채도 값을 기술한다. 값은 정수이다. coloursaturation 은 [0,100]의 범위를 갖는다.  
16637 0 의 coloursaturation 값은 흑백 이미지의 생성을 의미한다. 50 의 coloursaturation 값은 device  
16638 고유의 정상적인 컬러 이미지의 생성을 의미한다. 100 의 coloursaturation 값은 device 의 풀 컬러  
16639 이미지의 생성을 의미한다.

16640

16641

16642

16643 **B.21.2 URI 예**

16644 /ColourSaturationResURI

16645 **B.21.3 Resource Type**

16646 resource type (rt)는 ['oic.r.colour.saturation']로 정의된다.



## B.21.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Saturation",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ColourSaturationResURI" : {
      "get": {
        "description": "This resource describes a Colour saturation value.\nThe value is an
integer.\nA coloursaturation has a range of [0,100].\nA coloursaturation value of 0 means producing
black and white images.\nA coloursaturation value of 50 means producing device specific normal
colour images.\nA coloursaturation value of 100 means producing device very full colour images.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.colour.saturation"],
              "id": "unique_example_id",
              "colourSaturation": 50
            },
            "schema": { "$ref": "#/definitions/Saturation" }
          }
        }
      },
      "post": {
        "description": "",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Saturation" },
            "x-example": {
              "id": "unique_example_id",
              "colourSaturation": 60
            }
          }
        ],
        "responses": {
          "200": {
```

```

16717         "description" : "",
16718         "x-example":
16719             {
16720                 "id": "unique_example_id",
16721                 "colourSaturation": 60
16722             }
16723         ,
16724         "schema": { "$ref": "#/definitions/Saturation" }
16725     }
16726 }
16727 }
16728 }
16729 },
16730 "parameters": {
16731     "interface" : {
16732         "in" : "query",
16733         "name" : "if",
16734         "type" : "string",
16735         "enum" : ["oic.if.a", "oic.if.baseline"]
16736     }
16737 },
16738 "definitions": {
16739     "Saturation" :
16740         {
16741             "properties": {
16742                 "colourSaturation": {
16743                     "description": "The colour saturation value",
16744                     "maximum": 100,
16745                     "minimum": 0,
16746                     "type": "integer"
16747                 },
16748                 "id": {
16749                     "description": "Instance ID of this specific resource",
16750                     "maxLength": 64,
16751                     "readOnly": true,
16752                     "type": "string"
16753                 },
16754                 "if": {
16755                     "description": "The interface set supported by this resource",
16756                     "items": {
16757                         "enum": [
16758                             "oic.if.baseline",
16759                             "oic.if.ll",
16760                             "oic.if.b",
16761                             "oic.if.lb",
16762                             "oic.if.rw",
16763                             "oic.if.x",
16764                             "oic.if.a",
16765                             "oic.if.s"
16766                         ],
16767                         "type": "string"
16768                     },
16769                     "minItems": 1,
16770                     "readOnly": true,
16771                     "type": "array"
16772                 },
16773                 "n": {
16774                     "description": "Friendly name of the resource",
16775                     "maxLength": 64,
16776                     "readOnly": true,
16777                     "type": "string"
16778                 },
16779                 "precision": {
16780                     "description": "Accuracy granularity of the exposed value",
16781                     "readOnly": true,
16782                     "type": "number"
16783                 },
16784                 "range": {
16785                     "description": "The valid range for the value Property",
16786                     "items": {
16787                         "anyOf": [

```

```

16788         {
16789             "type": "number"
16790         },
16791         {
16792             "type": "integer"
16793         }
16794     ],
16795 },
16796 "maxItems": 2,
16797 "minItems": 2,
16798 "readOnly": true,
16799 "type": "array"
16800 },
16801 "rt": {
16802     "description": "Resource Type",
16803     "items": {
16804         "maxLength": 64,
16805         "type": "string"
16806     },
16807     "minItems": 1,
16808     "readOnly": true,
16809     "type": "array"
16810 },
16811 "step": {
16812     "anyOf": [
16813         {
16814             "type": "integer"
16815         },
16816         {
16817             "type": "number"
16818         }
16819     ],
16820     "description": "Step value across the defined range",
16821     "readOnly": true
16822 },
16823 "value": {
16824     "anyOf": [
16825         {
16826             "type": "array"
16827         },
16828         {
16829             "type": "string"
16830         },
16831         {
16832             "type": "boolean"
16833         },
16834         {
16835             "type": "integer"
16836         },
16837         {
16838             "type": "number"
16839         },
16840         {
16841             "type": "object"
16842         }
16843     ],
16844     "description": "The value sensed or actuated by this Resource"
16845 }
16846 },
16847 "required": [
16848     "colourSaturation"
16849 ],
16850 "type": "object"
16851 }
16852 }
16853 }
16854 }
16855

```

16856 **B.21.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
if	배열: schema 참조		Read Only	이 resource 에 의해 지원되는 인터페이스 집합
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
id	스트링		Read Only	특정 resource 의 개체 ID
colourSaturation	정수	예		채도 값
rt	배열: schema 참조		Read Only	Resource Type
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
n	스트링		Read Only	resource 의 친근한 명칭
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

16857 **B.21.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ColourSaturationResURI		get	post		

16858 **B.22 색채**

16859 **B.22.1 개요**

16860 이 resource 는 색채 규약을 사용하여 색을 기술한다. Property 는 hue, saturation, csc, 및 ct 이다.  
 16861 Hue 및 saturation 은 CIECAM02 모델 정의 ([CIE CIE159:2004] 참조)에 의해 정의된 정수 값이다.

16862  
 16863 csc 는 CIE 색 공간 내의 색 공간 좌표이다. 배열 내의 제 1 항목은 X 좌표이다. 배열 내의 제 2  
 16864 항목은 Y 좌표이다. ct 는 미레드(Mired) 색 온도이다. chroma 규약을 사용하여 컬러를 제공한다.

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16866

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16888  
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16926

**B.22.2 URI 예**

/ColourChromaResURI

**B.22.3 Resource Type**

resource type (rt)는 ['oic.r.colour.chroma']로 정의된다.

**B.22.4 Swagger2.0 정의**

```
{
  "swagger": "2.0",
  "info": {
    "title": "Colour Chroma",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ColourChromaResURI" : {
      "get": {
        "description": "This resource describes the colour using chroma conventions.\nProperties
are hue, saturation, csc, and ct.\nHue and saturation are integer values as defined by the CIECAM02
model definition (see reference [CIE CIE159:2004]).\nncsc is the colour space coordinates in CIE
colour space.\n The first item in the array is the X coordinate.\n The second item in the array
is the Y coordinate.\nct is the Mired colour temperature.\nProvides the colour using chroma
conventions.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.colour.chroma"],
              "id": "unique_example_id",
              "hue": 13088,
              "saturation": 212,
              "csc": [0.41,0.51],
              "ct": 457
            }
          }
        }
      }
    }
  }
}
```

```

16927         "schema": { "$ref": "#/definitions/ColourChroma" }
16928     }
16929 }
16930 },
16931 "post": {
16932     "description": "Sets current colour chroma values\n",
16933     "parameters": [
16934         { "$ref": "#/parameters/interface" },
16935         {
16936             "name": "body",
16937             "in": "body",
16938             "required": true,
16939             "schema": { "$ref": "#/definitions/ColourChroma" },
16940             "x-example":
16941                 {
16942                     "id": "unique_example_id",
16943                     "hue": 13088,
16944                     "saturation": 212,
16945                     "csc": [0.41,0.51],
16946                     "ct": 457
16947                 }
16948         },
16949     ],
16950     "responses": {
16951         "200": {
16952             "description": "",
16953             "x-example":
16954                 {
16955                     "id": "unique_example_id",
16956                     "hue": 13088,
16957                     "saturation": 212,
16958                     "csc": [0.41,0.51],
16959                     "ct": 467
16960                 },
16961             "schema": { "$ref": "#/definitions/ColourChroma" }
16962         }
16963     }
16964 }
16965 }
16966 },
16967 },
16968 "parameters": {
16969     "interface": {
16970         "in": "query",
16971         "name": "if",
16972         "type": "string",
16973         "enum": ["oic.if.a", "oic.if.baseline"]
16974     }
16975 },
16976 "definitions": {
16977     "ColourChroma": {
16978         {
16979             "properties": {
16980                 "csc": {
16981                     "description": "X and Y coordinates of the colour in CIE colour space",
16982                     "items": {
16983                         "maximum": 1,
16984                         "minimum": 0,
16985                         "type": "number"
16986                     },
16987                     "maxItems": 2,
16988                     "minItems": 2,
16989                     "type": "array"
16990                 },
16991                 "ct": {
16992                     "description": "Mired colour temperature",
16993                     "type": "integer"
16994                 },
16995                 "hue": {
16996                     "description": "Hue as defined by the CIECAM02 model definition",
16997                     "type": "integer"

```

```

16998     },
16999     "precision": {
17000         "description": "Accuracy granularity of the exposed value",
17001         "readOnly": true,
17002         "type": "number"
17003     },
17004     "range": {
17005         "description": "The valid range for the value Property",
17006         "items": {
17007             "anyOf": [
17008                 {
17009                     "type": "number"
17010                 },
17011                 {
17012                     "type": "integer"
17013                 }
17014             ]
17015         },
17016         "maxItems": 2,
17017         "minItems": 2,
17018         "readOnly": true,
17019         "type": "array"
17020     },
17021     "saturation": {
17022         "description": "Saturation as defined by the CIECAM02 model definition",
17023         "type": "integer"
17024     },
17025     "step": {
17026         "anyOf": [
17027             {
17028                 "type": "integer"
17029             },
17030             {
17031                 "type": "number"
17032             }
17033         ],
17034         "description": "Step value across the defined range",
17035         "readOnly": true
17036     },
17037     "value": {
17038         "anyOf": [
17039             {
17040                 "type": "array"
17041             },
17042             {
17043                 "type": "string"
17044             },
17045             {
17046                 "type": "boolean"
17047             },
17048             {
17049                 "type": "integer"
17050             },
17051             {
17052                 "type": "number"
17053             },
17054             {
17055                 "type": "object"
17056             }
17057         ],
17058         "description": "The value sensed or actuated by this Resource"
17059     }
17060 },
17061 "required": [
17062     "hue",
17063     "saturation",
17064     "csc"
17065 ],
17066 "type": "object"
17067 }
17068

```

17069 }  
17070 }  
17071

17072 **B.22.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
saturation	정수	예		CIECAM02 모델 정의에 의해 정의된 채도
ct	정수			미레드(Mired) 색 온도
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
csc	배열: schema 참조	예		CIE 색 공간 내의 X 및 Y 좌표
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
hue	정수	예		CIECAM02 모델 정의에 의해 정의된 색조

17073 **B.22.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ColourChromaResURI		get	post		

17074 **B.23 컬러 RGB**

17075 **B.23.1 개요**

17076 이 resource 는 정수의 배열로 표현된 RGB 공간 내의 실제 컬러를 규정한다. 각 컬러 값은 Red,  
17077 Green, Blue 성분으로 기술된다. 이들 컬러 값은 정수 값의 배열 ([R,G,B])로 인코딩된다.  
17078



17079 구성 요소 별 최소 및 최대 컬러 값은 (oic.r.baseresource 로부터) 범위에 의해 기술될 수 있다.  
17080 (oic.r.baseresource 로부터) 범위가 생략되면 범위는 [0,255]이다. RGB 형식의 현재 컬러를  
17081 검색한다. 값은 R, G, B 순서의 정수 값의 배열이다.

17082  
17083  
17084

## 17085 **B.23.2 URI 예**

17086 /ColourRGBResURI

## 17087 **B.23.3 Resource Type**

17088 resource type (rt)는 ['oic.r.colour.rgb']로 정의된다.

## 17089 **B.23.4 Swagger2.0 정의**

```
17090 {  
17091   "swagger": "2.0",  
17092   "info": {  
17093     "title": "Colour RGB",  
17094     "version": "v1.1.0-20160519",  
17095     "license": {  
17096       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
17097       "x-description": "Redistribution and use in source and binary forms, with or without  
17098 modification, are permitted provided that the following conditions are met:\n      1.  
17099 Redistributions of source code must retain the above copyright notice, this list of conditions and  
17100 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
17101 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
17102 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
17103 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
17104 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
17105 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
17106 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,  
17107 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR  
17108 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON  
17109 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
17110 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
17111 OF SUCH DAMAGE.\n    }  
17112   },  
17113   "schemes": ["http"],  
17114   "consumes": ["application/json"],  
17115   "produces": ["application/json"],  
17116   "paths": {  
17117     "/ColourRGBResURI" : {  
17118       "get": {  
17119         "description": "This resource specifies the actual colour in the RGB space represented as  
17120 an array of integers.\nEach colour value is described with a Red, Green, Blue component.\nThese  
17121 colour values are encoded as an array of integer values ([R,G,B]).\nThe minimum and maximum colour  
17122 value per component may be described by range (from oic.r.baseresource).\nWhen range (from  
17123 oic.r.baseresource) is omitted, then the range is [0,255].\nRetrieves the current colour in  
17124 RGB.\nValue is an array of integer values in the order R,G,B.\n",  
17125         "parameters": [  
17126           {  
17127             "$ref": "#/parameters/interface"  
17128           }  
17129         ],  
17130         "responses": {  
17131           "200": {  
17132             "description": "",  
17133             "x-example":  
17134               {  
17135                 "rt": ["oic.r.colour.rgb"],  
17136                 "id": "unique_example_id",  
                 "rgbValue": [255,255,255],
```

```

17137         "range":      [0,255]
17138     }
17139     ,
17140     "schema": { "$ref": "#/definitions/ColourRGB" }
17141 }
17142 },
17143 },
17144 "post": {
17145     "description": "Sets the current colourRGB value\n",
17146     "parameters": [
17147         { "$ref": "#/parameters/interface" },
17148         {
17149             "name": "body",
17150             "in": "body",
17151             "required": true,
17152             "schema": { "$ref": "#/definitions/ColourRGB" },
17153             "x-example":
17154                 {
17155                     "id": "unique_example_id",
17156                     "rgbValue": [255,0,0]
17157                 }
17158         }
17159     ],
17160     "responses": {
17161         "200": {
17162             "description": "",
17163             "x-example":
17164                 {
17165                     "id": "unique_example_id",
17166                     "rgbValue": [255,0,0]
17167                 }
17168             ,
17169             "schema": { "$ref": "#/definitions/ColourRGB" }
17170         }
17171     }
17172 },
17173 },
17174 },
17175 "parameters": {
17176     "interface": {
17177         "in": "query",
17178         "name": "if",
17179         "type": "string",
17180         "enum": ["oic.if.a", "oic.if.baseline"]
17181     }
17182 },
17183 "definitions": {
17184     "ColourRGB": {
17185         {
17186             "properties": {
17187                 "precision": {
17188                     "description": "Accuracy granularity of the exposed value",
17189                     "readOnly": true,
17190                     "type": "number"
17191                 },
17192                 "range": {
17193                     "description": "The valid range for the value Property",
17194                     "items": {
17195                         "anyOf": [
17196                             {
17197                                 "type": "number"
17198                             },
17199                             {
17200                                 "type": "integer"
17201                             }
17202                         ]
17203                     },
17204                     "maxItems": 2,
17205                     "minItems": 2,
17206                     "readOnly": true,
17207                     "type": "array"

```

```

17208     },
17209     "rgbValue": {
17210         "description": "RGB value; the first item is the R, second the G, third the B.",
17211         "items": {
17212             "type": "integer"
17213         },
17214         "maxItems": 3,
17215         "minItems": 3,
17216         "type": "array"
17217     },
17218     "step": {
17219         "anyOf": [
17220             {
17221                 "type": "integer"
17222             },
17223             {
17224                 "type": "number"
17225             }
17226         ],
17227         "description": "Step value across the defined range",
17228         "readOnly": true
17229     },
17230     "value": {
17231         "anyOf": [
17232             {
17233                 "type": "array"
17234             },
17235             {
17236                 "type": "string"
17237             },
17238             {
17239                 "type": "boolean"
17240             },
17241             {
17242                 "type": "integer"
17243             },
17244             {
17245                 "type": "number"
17246             },
17247             {
17248                 "type": "object"
17249             }
17250         ],
17251         "description": "The value sensed or actuated by this Resource"
17252     }
17253 },
17254 "required": [
17255     "rgbValue"
17256 ],
17257 "type": "object"
17258 }
17259
17260 }
17261 }
17262

```

### 17263 B.23.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
rgbValue	배열: schema 참조	예		RGB 값. 제 1 항목은 R, 제 2

				항목은 G, 제 3 항목은 B 이다.
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

## 17264 B.23.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ColourRGBResURI		get	post		

## 17265 B.24 소모품

### 17266 B.24.1 개요

17267 이 resource 는 필터 재료, 프린터 토너 등과 같은 소모품을 규정한다. Type 은 Smart Home Device  
 17268 스펙에 의해 정의된 바와 같이 소모품을 정의하는 열거 형이다. Remaining 은 남아있는 수명의  
 17269 백분율을 나타내는 정수이다. Orderpercentage 는 제조자가 교체 또는 충전을 원하는 백분율  
 17270 수명을 나타내는 정수이다. url 은 소모품에 대해 미래의 정보를 얻을 수 있는 URL 을 포함하는  
 17271 스트링이다.

17272

17273

17274

17275

### 17276 B.24.2 URI 예

17277 /ConsumableResURI

### 17278 B.24.3 Resource Type

17279 resource type (rt)는 ['oic.r.consumable']로 정의된다.

### 17280 B.24.4 Swagger2.0 정의

```

17281 {
17282   "swagger": "2.0",
17283   "info": {
17284     "title": "Consumable",
17285     "version": "OCF-v1.0.0-20160620",
17286     "license": {
17287       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
17288       "x-description": "Redistribution and use in source and binary forms, with or without
17289 modification, are permitted provided that the following conditions are met:\n      1.
17290 Redistributions of source code must retain the above copyright notice, this list of conditions and
```

```

17291 the following disclaimer.\n          2. Redistributions in binary form must reproduce the above
17292 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
17293 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
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17297 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
17298 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
17299 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND ON
17300 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
17301 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
17302 OF SUCH DAMAGE.\n"
17303     }
17304   },
17305   "schemes": ["http"],
17306   "consumes": ["application/json"],
17307   "produces": ["application/json"],
17308   "paths": {
17309     "/ConsumableResURI" : {
17310       "get": {
17311         "description": "This resource specifies a thing that can be consumed such as filter
17312 material, printer toner etc\nThe type is an enumeration defining the thing being consumed as
17313 defined by the Smart Home Device Specification\nThe remaining is an integer capturing the
17314 percentage remaining life\nThe orderpercentage is an integer capturing the percentage life at
17315 which replacement or replenishment is recommended by the manufacturer\nThe url is a string
17316 containing a URL at which further information may be obtained with respect to the consumable\n",
17317         "parameters": [
17318           { "$ref": "#/parameters/interface" }
17319         ],
17320         "responses": {
17321           "200": {
17322             "description": "",
17323             "x-example":
17324               {
17325                 "rt": ["oic.r.consumable"],
17326                 "id": "unique_example_id",
17327                 "typeofconsumable": "tonerBlack",
17328                 "remaining": 20,
17329                 "orderpercentage": 10,
17330                 "url": "http://myreorderURL"
17331               },
17332             ,
17333             "schema": { "$ref": "#/definitions/consumable" }
17334           }
17335         }
17336       }
17337     }
17338   },
17339   "parameters": {
17340     "interface" : {
17341       "in" : "query",
17342       "name" : "if",
17343       "type" : "string",
17344       "enum" : ["oic.if.s", "oic.if.baseline"]
17345     }
17346   },
17347   "definitions": {
17348     "consumable" :
17349       {
17350         "properties": {
17351           "orderpercentage": {
17352             "description": "Percentage at which re-ordering is recommended by the manufacturer",
17353             "readOnly": true,
17354             "type": "integer"
17355           },
17356           "precision": {
17357             "description": "Accuracy granularity of the exposed value",
17358             "readOnly": true,
17359             "type": "number"
17360           },
17361           "range": {

```

```

17362         "description": "The valid range for the value Property",
17363         "items": {
17364             "anyOf": [
17365                 {
17366                     "type": "number"
17367                 },
17368                 {
17369                     "type": "integer"
17370                 }
17371             ]
17372         },
17373         "maxItems": 2,
17374         "minItems": 2,
17375         "readOnly": true,
17376         "type": "array"
17377     },
17378     "remaining": {
17379         "description": "Percentage remaining lifespan.",
17380         "maximum": 100,
17381         "minimum": 0,
17382         "readOnly": true,
17383         "type": "integer"
17384     },
17385     "step": {
17386         "anyOf": [
17387             {
17388                 "type": "integer"
17389             },
17390             {
17391                 "type": "number"
17392             }
17393         ],
17394         "description": "Step value across the defined range",
17395         "readOnly": true
17396     },
17397     "typeofconsumable": {
17398         "description": "Thing that is being consumed.",
17399         "readOnly": true,
17400         "type": "string"
17401     },
17402     "url": {
17403         "description": "URL at which additional ordering information may be found.",
17404         "format": "uri",
17405         "readOnly": true,
17406         "type": "string"
17407     },
17408     "value": {
17409         "anyOf": [
17410             {
17411                 "type": "array"
17412             },
17413             {
17414                 "type": "string"
17415             },
17416             {
17417                 "type": "boolean"
17418             },
17419             {
17420                 "type": "integer"
17421             },
17422             {
17423                 "type": "number"
17424             },
17425             {
17426                 "type": "object"
17427             }
17428         ],
17429         "description": "The value sensed or actuated by this Resource"
17430     }
17431 },
17432 "required": [

```

```
17433         "typeofconsumable",
17434         "remaining"
17435     ],
17436     "type": "object"
17437 }
17438 }
17439 }
17440 }
17441 }
```

17442 **B.24.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
url	스트링		Read Only	추가적인 주문 정보를 찾을 수 있는 URL.
remaining	정수	예	Read Only	나머지 수명의 백분율
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
orderpercentage	정수		Read Only	제조자가 재주문을 권고하는 백분율
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
typeofconsumable	스트링	예	Read Only	소모되는 것.
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

17443 **B.24.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ConsumableResURI		get			

17444 **B.25 소모품**

17445 **B.25.1 개요**

17446 이 resource 는 필터 재료, 프린터 토너 등과 같은 소모품을 규정한다. Resource 는 개별적인 소모  
17447 품을 상술하는 oic.r.consumable 개체의 collection 이다. supportedconsumables 는 Resource 의  
17448 본 개체가 지원하는 소모품 유형의 집합이다.

17449  
17450  
17451

## 17452 B.25.2 URI 예

17453 /ConsumablesBaselineResURI

## 17454 B.25.3 Resource Type

17455 resource type (rt)는 ['oic.r.consumablecollection', 'oic.wk.col']로 정의된다.

## 17456 B.25.4 Swagger2.0 정의

```
17457 {  
17458   "swagger": "2.0",  
17459   "info": {  
17460     "title": "Consumables",  
17461     "version": "OCF-v1.0.0-20160620",  
17462     "license": {  
17463       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
17464       "x-description": "Redistribution and use in source and binary forms, with or without  
17465 modification, are permitted provided that the following conditions are met:\n      1.  
17466 Redistributions of source code must retain the above copyright notice, this list of conditions and  
17467 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
17468 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
17469 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
17470 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
17471 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
17472 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
17473 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,  
17474 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR  
17475 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON  
17476 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
17477 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
17478 OF SUCH DAMAGE.\n    }  
17479   },  
17480   "schemes": ["http"],  
17481   "consumes": ["application/json"],  
17482   "produces": ["application/json"],  
17483   "paths": {  
17484     "/ConsumablesLLResURI" : {  
17485       "get": {  
17486         "description": "This resource specifies things that can be consumed such as filter material,  
17487 printer toner etc\nThe resource is a collection of instances of oic.r.consumable detailing the  
17488 individual consumed items\n\nsupportedconsumables is the set of consumable types that this instance  
17489 of the Resource supports\n",  
17490         "parameters": [  
17491           {  
17492             "$ref": "#/parameters/interface-11"  
17493           }  
17494         ],  
17495         "responses": {  
17496           "200": {  
17497             "description": "",  
17498             "x-example":  
17499               [  
17500                 {  
17501                   "href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":  
17502                   ["oic.if.s", "oic.if.baseline"], "eps": [{  
17503                     "ep": "coaps://[fe80::b1d6]:1122"  
17504                   }],  
17505                   "href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":  
17506                   ["oic.if.s", "oic.if.baseline"], "eps": [{  
17507                     "ep": "coaps://[fe80::b1d6]:1122"  
17508                   }],  
17509                   "href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":  
17510                   ["oic.if.s", "oic.if.baseline"], "eps": [{  
17511                     "ep": "coaps://[fe80::b1d6]:1122"  
17512                   }],  
17513                   "href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":  
17514                   ["oic.if.s", "oic.if.baseline"], "eps": [{  
17515                     "ep": "coaps://[fe80::b1d6]:1122"  
17516                   }]  
17517                 }  
17518               ]  
17519             }  
17520           }  
17521         }  
17522       }  
17523     }  
17524   }  
17525 }
```



```

17509         "schema": { "$ref": "#/definitions/consumables-11" }
17510     }
17511 }
17512 },
17513 },
17514 "/ConsumablesBaselineResURI" : {
17515     "get": {
17516         "description": "This resource specifies things that can be consumed such as filter material,
17517 printer toner etc\nThe resource is a collection of instances of oic.r.consumable detailing the
17518 individual consumed items\nsupportedconsumables is the set of consumable types that this instance
17519 of the Resource supports\n",
17520         "parameters": [
17521             { "$ref": "#/parameters/interface-baseline" }
17522         ],
17523         "responses": {
17524             "200": {
17525                 "description": "",
17526                 "x-example":
17527                 {
17528                     "rt": ["oic.r.consumablecollection", "oic.wk.col"],
17529                     "id": "unique_example_id",
17530                     "rts": ["oic.r.consumable", "oic.r.value.conditional"],
17531                     "supportedconsumables": ["tonerBlack", "tonerCyan", "tonerMagenta", "tonerYellow"],
17532                     "links": [
17533                         { "href": "/myTonerBlackResURI", "rt": ["oic.r.consumable"], "if":
17534 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" } ] },
17535                         { "href": "/myTonerCyanResURI", "rt": ["oic.r.consumable"], "if":
17536 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" } ] },
17537                         { "href": "/myTonerMagentaResURI", "rt": ["oic.r.consumable"], "if":
17538 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" } ] },
17539                         { "href": "/myTonerYellowResURI", "rt": ["oic.r.consumable"], "if":
17540 ["oic.if.s", "oic.if.baseline"], "eps": [{ "ep": "coaps://[fe80::b1d6]:1122" } ] }
17541                     ]
17542                 }
17543             },
17544             "schema": { "$ref": "#/definitions/consumables" }
17545         }
17546     }
17547 }
17548 },
17549 },
17550 "parameters": {
17551     "interface-11" : {
17552         "in" : "query",
17553         "name" : "if",
17554         "type" : "string",
17555         "enum" : ["oic.if.11"]
17556     },
17557     "interface-baseline" : {
17558         "in" : "query",
17559         "name" : "if",
17560         "type" : "string",
17561         "enum" : ["oic.if.baseline"]
17562     }
17563 },
17564 "definitions": {
17565     "consumables-11" :
17566     {
17567         "allOf": [
17568             {
17569                 "description": "All forms of links in a collection",
17570                 "oneOf": [
17571                     {
17572                         "description": "A set (array) of simple or individual OIC Links. In addition to
17573 properties required for an OIC Link, the identifier for that link in this set is also required",
17574                         "items": {
17575                             "properties": {
17576                                 "anchor": {
17577                                     "description": "This is used to override the context URI e.g. override the
17578 URI of the containing collection",
17579                                     "format": "uri",

```

```

17580         "maxLength": 256,
17581         "type": "string"
17582     },
17583     "di": {
17584         "description": "Unique identifier for device (UUID)",
17585         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
17586 fa-F0-9]{12}$",
17587         "type": "string"
17588     },
17589     "eps": {
17590         "description": "the Endpoint information of the target Resource",
17591         "items": {
17592             "properties": {
17593                 "ep": {
17594                     "description": "URI with Transport Protocol Suites + Endpoint Locator
17595 as specified in 10.2.1",
17596                     "format": "uri",
17597                     "type": "string"
17598                 },
17599                 "pri": {
17600                     "description": "The priority among multiple Endpoints as specified in
17601 10.2.3",
17602                     "minimum": 1,
17603                     "type": "integer"
17604                 }
17605             },
17606             "type": "object"
17607         },
17608         "type": "array"
17609     },
17610     "href": {
17611         "description": "This is the target URI, it can be specified as a Relative
17612 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
17613 make it unique.",
17614         "format": "uri",
17615         "maxLength": 256,
17616         "type": "string"
17617     },
17618     "if": {
17619         "description": "The interface set supported by this resource",
17620         "items": {
17621             "enum": [
17622                 "oic.if.baseline",
17623                 "oic.if.ll",
17624                 "oic.if.b",
17625                 "oic.if.rw",
17626                 "oic.if.r",
17627                 "oic.if.a",
17628                 "oic.if.s"
17629             ],
17630             "type": "string"
17631         },
17632         "minItems": 1,
17633         "type": "array"
17634     },
17635     "ins": {
17636         "description": "The instance identifier for this web link in an array of web
17637 links - used in collections",
17638         "oneOf": [
17639             {
17640                 "description": "An ordinal number that is not repeated - must be unique
17641 in the collection context",
17642                 "type": "integer"
17643             },
17644             {
17645                 "description": "Any unique string including a URI",
17646                 "format": "uri",
17647                 "maxLength": 256,
17648                 "type": "string"
17649             }
17650         ]
17651     }

```

```

17651         "description": "Unique identifier (UUID)",
17652         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
17653 [a-fA-F0-9]{12}$",
17654         "type": "string"
17655     }
17656 ]
17657 },
17658 "p": {
17659     "description": "Specifies the framework policies on the Resource referenced
17660 by the target URI",
17661     "properties": {
17662         "bm": {
17663             "description": "Specifies the framework policies on the Resource
17664 referenced by the target URI for e.g. observable and discoverable",
17665             "type": "integer"
17666         }
17667     },
17668     "required": [
17669         "bm"
17670     ],
17671     "type": "object"
17672 },
17673 "rel": {
17674     "description": "The relation of the target URI referenced by the link to the
17675 context URI",
17676     "oneOf": [
17677         {
17678             "default": [
17679                 "hosts"
17680             ],
17681             "items": {
17682                 "maxLength": 64,
17683                 "type": "string"
17684             },
17685             "minItems": 1,
17686             "type": "array"
17687         },
17688         {
17689             "default": "hosts",
17690             "maxLength": 64,
17691             "type": "string"
17692         }
17693     ]
17694 },
17695 "rt": {
17696     "description": "Resource Type",
17697     "items": {
17698         "maxLength": 64,
17699         "type": "string"
17700     },
17701     "minItems": 1,
17702     "type": "array"
17703 },
17704 "title": {
17705     "description": "A title for the link relation. Can be used by the UI to
17706 provide a context",
17707     "maxLength": 64,
17708     "type": "string"
17709 },
17710 "type": {
17711     "default": "application/cbor",
17712     "description": "A hint at the representation of the resource referenced by
17713 the target URI. This represents the media types that are used for both accepting and emitting",
17714     "items": {
17715         "maxLength": 64,
17716         "type": "string"
17717     },
17718     "minItems": 1,
17719     "type": "array"
17720 }
17721 },

```

```

17722         "required": [
17723             "href",
17724             "rt",
17725             "if"
17726         ],
17727         "type": "object"
17728     },
17729     "type": "array"
17730 }
17731 ]
17732 }
17733 ]
17734 }
17735
17736 ,
17737 "consumables" :
17738 {
17739     "allOf": [
17740         {
17741             "description": "A collection is a set (array) of tagged-link or set (array) of simple
17742 links along with additional properties to describe the collection itself",
17743             "properties": {
17744                 "di": {
17745                     "description": "The device ID which is an UUIDv4 string; used for backward
17746 compatibility with Spec A definition of /oic/res",
17747                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
17748 9]{12}$",
17749                     "type": "string"
17750                 },
17751                 "drel": {
17752                     "description": "When specified this is the default relationship to use when an OIC
17753 Link does not specify an explicit relationship with *rel* parameter",
17754                     "type": "string"
17755                 },
17756                 "id": {
17757                     "anyOf": [
17758                         {
17759                             "description": "A number that is unique to that collection; like an ordinal
17760 number that is not repeated",
17761                             "type": "integer"
17762                         },
17763                         {
17764                             "description": "A unique string that could be a hash or similarly unique",
17765                             "type": "string"
17766                         },
17767                         {
17768                             "description": "A unique string that could be a UUIDv4",
17769                             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
17770 F0-9]{12}$",
17771                             "type": "string"
17772                         }
17773                     ],
17774                     "description": "ID for the collection. Can be an value that is unique to the use
17775 context or a UUIDv4"
17776                 },
17777                 "links": {
17778                     "description": "All forms of links in a collection",
17779                     "oneOf": [
17780                         {
17781                             "description": "A set (array) of simple or individual OIC Links. In addition to
17782 properties required for an OIC Link, the identifier for that link in this set is also required",
17783                             "items": {
17784                                 "properties": {
17785                                     "anchor": {
17786                                         "description": "This is used to override the context URI e.g. override
17787 the URI of the containing collection",
17788                                         "format": "uri",
17789                                         "maxLength": 256,
17790                                         "type": "string"
17791                                     },
17792                                     "di": {

```

```

17793         "description": "Unique identifier for device (UUID)",
17794         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
17795 [a-fA-F0-9]{12}$",
17796         "type": "string"
17797     },
17798     "eps": {
17799         "description": "the Endpoint information of the target Resource",
17800         "items": {
17801             "properties": {
17802                 "ep": {
17803                     "description": "URI with Transport Protocol Suites + Endpoint
17804 Locator as specified in 10.2.1",
17805                     "format": "uri",
17806                     "type": "string"
17807                 },
17808                 "pri": {
17809                     "description": "The priority among multiple Endpoints as specified
17810 in 10.2.3",
17811                     "minimum": 1,
17812                     "type": "integer"
17813                 }
17814             },
17815             "type": "object"
17816         },
17817         "type": "array"
17818     },
17819     "href": {
17820         "description": "This is the target URI, it can be specified as a Relative
17821 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
17822 make it unique.",
17823         "format": "uri",
17824         "maxLength": 256,
17825         "type": "string"
17826     },
17827     "if": {
17828         "description": "The interface set supported by this resource",
17829         "items": {
17830             "enum": [
17831                 "oic.if.baseline",
17832                 "oic.if.ll",
17833                 "oic.if.b",
17834                 "oic.if.rw",
17835                 "oic.if.r",
17836                 "oic.if.a",
17837                 "oic.if.s"
17838             ],
17839             "type": "string"
17840         },
17841         "minItems": 1,
17842         "type": "array"
17843     },
17844     "ins": {
17845         "description": "The instance identifier for this web link in an array of
17846 web links - used in collections",
17847         "oneOf": [
17848             {
17849                 "description": "An ordinal number that is not repeated - must be
17850 unique in the collection context",
17851                 "type": "integer"
17852             },
17853             {
17854                 "description": "Any unique string including a URI",
17855                 "format": "uri",
17856                 "maxLength": 256,
17857                 "type": "string"
17858             },
17859             {
17860                 "description": "Unique identifier (UUID)",
17861                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
17862 9]{4}-[a-fA-F0-9]{12}$",
17863                 "type": "string"

```

```

17864         }
17865     ],
17866 },
17867 "p": {
17868     "description": "Specifies the framework policies on the Resource
17869 referenced by the target URI",
17870     "properties": {
17871         "bm": {
17872             "description": "Specifies the framework policies on the Resource
17873 referenced by the target URI for e.g. observable and discoverable",
17874             "type": "integer"
17875         }
17876     },
17877     "required": [
17878         "bm"
17879     ],
17880     "type": "object"
17881 },
17882 "rel": {
17883     "description": "The relation of the target URI referenced by the link to
17884 the context URI",
17885     "oneOf": [
17886         {
17887             "default": [
17888                 "hosts"
17889             ],
17890             "items": {
17891                 "maxLength": 64,
17892                 "type": "string"
17893             },
17894             "minItems": 1,
17895             "type": "array"
17896         },
17897         {
17898             "default": "hosts",
17899             "maxLength": 64,
17900             "type": "string"
17901         }
17902     ]
17903 },
17904 "rt": {
17905     "description": "Resource Type",
17906     "items": {
17907         "maxLength": 64,
17908         "type": "string"
17909     },
17910     "minItems": 1,
17911     "type": "array"
17912 },
17913 "title": {
17914     "description": "A title for the link relation. Can be used by the UI to
17915 provide a context",
17916     "maxLength": 64,
17917     "type": "string"
17918 },
17919 "type": {
17920     "default": "application/cbor",
17921     "description": "A hint at the representation of the resource referenced
17922 by the target URI. This represents the media types that are used for both accepting and emitting",
17923     "items": {
17924         "maxLength": 64,
17925         "type": "string"
17926     },
17927     "minItems": 1,
17928     "type": "array"
17929 }
17930 },
17931 "required": [
17932     "href",
17933     "rt",
17934     "if"

```

```

17935         ],
17936         "type": "object"
17937     },
17938     "type": "array"
17939 }
17940 ]
17941 },
17942 "rts": {
17943     "description": "Defines the list of allowable resource types (for Target and
17944 anchors) in links included in the collection; new links being created can only be from this list",
17945     "items": {
17946         "maxLength": 64,
17947         "type": "string"
17948     },
17949     "minItems": 1,
17950     "readOnly": true,
17951     "type": "array"
17952 }
17953 },
17954 "type": "object"
17955 },
17956 {
17957     "properties": {
17958         "id": {
17959             "description": "Instance ID of this specific resource",
17960             "maxLength": 64,
17961             "readOnly": true,
17962             "type": "string"
17963         },
17964         "if": {
17965             "description": "The interface set supported by this resource",
17966             "items": {
17967                 "enum": [
17968                     "oic.if.baseline",
17969                     "oic.if.ll",
17970                     "oic.if.b",
17971                     "oic.if.lb",
17972                     "oic.if.rw",
17973                     "oic.if.r",
17974                     "oic.if.a",
17975                     "oic.if.s"
17976                 ],
17977                 "type": "string"
17978             },
17979             "minItems": 1,
17980             "readOnly": true,
17981             "type": "array"
17982         },
17983         "n": {
17984             "description": "Friendly name of the resource",
17985             "maxLength": 64,
17986             "readOnly": true,
17987             "type": "string"
17988         },
17989         "rt": {
17990             "items": {
17991                 "enum": [
17992                     "oic.r.consumablecollection",
17993                     "oic.wk.col"
17994                 ]
17995             },
17996             "maxItems": 2,
17997             "minItems": 2,
17998             "type": "array",
17999             "uniqueItems": true
18000         },
18001         "rts": {
18002             "items": {
18003                 "anyOf": [
18004                     {
18005                         "enum": [

```

```

18006         "oic.r.consumable",
18007         "oic.r.value.conditional"
18008     ],
18009 },
18010 {
18011     "enum": [
18012         "oic.r.consumable"
18013     ]
18014 },
18015 ],
18016 },
18017 "maxItems": 2,
18018 "minItems": 1,
18019 "type": "array",
18020 "uniqueItems": true
18021 },
18022 "supportedconsumables": {
18023     "description": "Array of possible consumables the device measures.",
18024     "items": {
18025         "type": "string"
18026     },
18027     "readOnly": true,
18028     "type": "array"
18029 }
18030 },
18031 },
18032 ],
18033 "type": "object"
18034 }
18035 }
18036 }
18037 }
18038

```

#### 18039 B.25.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
if	배열: schema 참조		예	이 resource 에 의해 지원되는 인터페이스 집합
href	스트링	예		이것은 target URI 이고, 상대 참조 또는 완전한 URI 로 규정될 수 있다. 상대 참조는 고유하도록 di 파라미터와 함께 사용되어야 한다.
type	배열: schema 참조			target URI 에 의해 참조되는 resource 의 표현에 대한 힌트. 수락 및



				방출 모두를 위해 사용되는 Media 유형을 나타낸다.
rt	배열: schema 참조	예		Resource Type
title	스트링			link 관계에 대한 제목. 컨텍스트를 제공하기 위하여 UI 에 의해 사용될 수 있다.
anchor	스트링			이것은 컨텍스트 URI 를 무시하기 위하여, 예를 들어, collection 을 포함하는 URI 를 무시하기 위해 사용된다.
eps	배열: schema 참조			타깃 Resource 의 Endpoint 정보
di	스트링			Device 에 대한 고유 식별자 (UUID)
p	객체: schema 참조			타깃 URI 에 의해 참조되는 Resource 에 대한 framework 정책을 규정한다.
rel	복수 타입: schema 참조			link 에 의해 참조되는 target URI 의 컨텍스트 URI 에 대한 관계
ins	복수 타입: schema 참조			collection 에서 사용된 web link 배열 내의 web link 에 대한 개체

				식별자
if	배열: schema 참조	예	Read Only	이 resource 에 의해 지원되는 인터페이스 집합
n	스트링		Read Only	resource 의 친근한 명칭
rts	배열: schema 참조			
rt	배열: schema 참조	예		
supportedconsumables	배열: schema 참조		Read Only	device 가 판단 가능한 소모품의 배열
id	스트링		Read Only	특정 resource 의 개체 ID

#### 18040 B.25.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ConsumablesBaselineResURI		get			

#### 18041 B.26 접촉 센서

##### 18042 B.26.1 개요

18043 이 resource 는 접촉 센서가 개방 또는 단락 되었는지를 기술한다. 전형적인 사용은 창 또는 도어가  
18044 개방된 것을 검출하는 보안 시스템의 경우이다. 값은 Boolean 형이다. 'true' 값은 접촉이  
18045 끊어졌음(개방)을 의미한다. 'false' 값은 접촉이 이루어졌음(폐쇄)을 의미한다.

18046

18047

18048

##### 18049 B.26.2 URI 예

18050 /ContactResURI

##### 18051 B.26.3 Resource Type

18052 resource type (rt)는 ['oic.r.sensor.contact']로 정의된다.

##### 18053 B.26.4 Swagger2.0 정의

```
18054 {
18055   "swagger": "2.0",
18056   "info": {
18057     "title": "Contact Sensor",
```

```

18058     "version": "v1.1.0-20160519",
18059     "license": {
18060         "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18061         "x-description": "Redistribution and use in source and binary forms, with or without
18062 modification, are permitted provided that the following conditions are met:\n      1.
18063 Redistributions of source code must retain the above copyright notice, this list of conditions and
18064 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
18065 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
18066 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
18067 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
18068 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
18069 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
18070 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
18071 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
18072 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
18073 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18074 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18075 OF SUCH DAMAGE.\n"
18076     },
18077 },
18078 "schemes": ["http"],
18079 "consumes": ["application/json"],
18080 "produces": ["application/json"],
18081 "paths": {
18082     "/ContactResURI" : {
18083         "get": {
18084             "description": "This resource describes whether a contact sensor has been tripped or
18085 not.\nTypical use case is in Security Systems detecting window or door open.\nThe value is a
18086 boolean.\nA value of 'true' means that contact has been broken (open).\nA value of 'false' means
18087 that contact is in place (closed).\n",
18088             "parameters": [
18089                 { "$ref": "#/parameters/interface" }
18090             ],
18091             "responses": {
18092                 "200": {
18093                     "description": "",
18094                     "x-example":
18095                     {
18096                         "rt": ["oic.r.sensor.contact"],
18097                         "id": "unique_example_id",
18098                         "value": true
18099                     }
18100                 },
18101                 "schema": { "$ref": "#/definitions/Contact" }
18102             }
18103         }
18104     }
18105 },
18106 },
18107 "parameters": {
18108     "interface" : {
18109         "in" : "query",
18110         "name" : "if",
18111         "type" : "string",
18112         "enum" : ["oic.if.s", "oic.if.baseline"]
18113     }
18114 },
18115 "definitions": {
18116     "Contact" :
18117     {
18118         "allOf": [
18119             {
18120                 "properties": {
18121                     "precision": {
18122                         "description": "Accuracy granularity of the exposed value",
18123                         "readOnly": true,
18124                         "type": "number"
18125                     },
18126                     "range": {
18127                         "description": "The valid range for the value Property",
18128                         "items": {

```

```

18129         "anyOf": [
18130             {
18131                 "type": "number"
18132             },
18133             {
18134                 "type": "integer"
18135             }
18136         ],
18137     },
18138     "maxItems": 2,
18139     "minItems": 2,
18140     "readOnly": true,
18141     "type": "array"
18142 },
18143 "step": {
18144     "anyOf": [
18145         {
18146             "type": "integer"
18147         },
18148         {
18149             "type": "number"
18150         }
18151     ],
18152     "description": "Step value across the defined range",
18153     "readOnly": true
18154 },
18155 "value": {
18156     "description": "true = sensed, false = not sensed.",
18157     "readOnly": true,
18158     "type": "boolean"
18159 },
18160 },
18161 "type": "object"
18162 },
18163 ],
18164 "required": [
18165     "value"
18166 ]
18167 }
18168 }
18169 }
18170 }
18171

```

#### 18172 B.26.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	boolean	예	Read Only	true = 감지 false = 미 감지
precision	숫자		Read Only	노출된 값의 정확도

#### 18173 B.26.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
----------	--------	------	--------	--------	--------

/ContactResURI		get			
----------------	--	-----	--	--	--

## B.27 지연 제상

### B.27.1 개요

이 resource 는 US Energy Star 스펙에 의해 정의된 지연 제상 기능을 기술한다. Energy Star Refrigerator Requirements Version 5 섹션

4)G(<https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version%205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf>)를 참조하기 바란다.

Status 는 기능이 on 인지를 나타내는 Boolean 형이고, off 이면, Defrost 는 정상 device 동작의 일부로 예정된다. oir.r.time.period (mandatory)로부터의 startTime 은 제상이 발생하지 않아야 하는 간격에 대한 ISO8601 인코딩된 start time 이다.

oir.r.time.period 로부터의 stopTime 은 제상이 발생하지 않아야 하는 간격에 대한 ISO8601 인코딩된 stop time 이다. 추가적인 범위 제한을 갖는 oir.r.time.period 로부터의 interval 은 startTime 에서 시작하는 기간의 분 단위의 시간이다(만약 존재하지 않는다면, default 는 240 이다). stopTime 과 interval 은 상호 배타적이라 둘 다가 하나의 Resource instance 내에서 존재할 수는 없다. 현재의 지연 제상 기능 상태를 검색한다.

### B.27.2 URI 예

/DelayDefrostResURI

### B.27.3 Resource Type

resource type (rt)는 ['oic.r.delaydefrost']로 정의된다.

### B.27.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Delay Defrost",
    "version": "OCF_v1.0.0-2016____",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \n\"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
```

```

18215 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
18216 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND ON
18217 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18218 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18219 OF SUCH DAMAGE.\n"
18220 }
18221 },
18222 "schemes": ["http"],
18223 "consumes": ["application/json"],
18224 "produces": ["application/json"],
18225 "paths": {
18226     "/DelayDefrostResURI" : {
18227         "get": {
18228             "description": "This resource describes the delay defrost function as defined by the US
18229 Energy Star Specifications.\nSee Energy Star Refrigerator Requirements Version 5 Section
18230 4)G\n(https://www.energystar.gov/sites/default/files/specs//private/ENERGY%20STAR%20Final%20Version
18231 %205.0%20Residential%20Refrigerators%20and%20Freezers%20Program%20Requirements.pdf)\nThe status is
18232 a boolean indicating whether the function is on, if off then defrost is scheduled as part of normal
18233 device operation.\nstartTime, from oic.r.time.period (mandatory) is an ISO8601 encoded start time
18234 for the interval in which defrost shall not occur.\nstopTime, from oic.r.time.period is an ISO8601
18235 encoded stop time for the interval in which defrost shall not occur.\ninterval, from
18236 oic.r.time.period with additional range restrictions is the time in minutes of the period that
18237 starts at starttime (if not present the default is 240).\nstopTime and interval are mutually
18238 exclusive; they cannot both be present in a Resource instance\nRetrieves the current Delay Defrost
18239 function status\n",
18240             "parameters": [
18241                 { "$ref": "#/parameters/interface" }
18242             ],
18243             "responses": {
18244                 "200": {
18245                     "description": "",
18246                     "x-example": {
18247                         "rt": ["oic.r.delaydefrost"],
18248                         "id": "unique_example_id",
18249                         "startTime": "06:00Z",
18250                         "status": false
18251                     }
18252                 },
18253                 "schema": { "$ref": "#/definitions/DelayDefrost" }
18254             }
18255         }
18256     },
18257 },
18258 "post": {
18259     "description": "Activates the desired Delay Defrost functions\n",
18260     "parameters": [
18261         { "$ref": "#/parameters/interface" },
18262         {
18263             "name": "body",
18264             "in": "body",
18265             "required": true,
18266             "schema": { "$ref": "#/definitions/DelayDefrost" },
18267             "x-example": {
18268                 "id": "unique_example_id",
18269                 "status": true,
18270                 "startTime": "06:00Z",
18271                 "interval": 180
18272             }
18273         }
18274     ],
18275     "responses": {
18276         "200": {
18277             "description": "Indicates that the DelayDefrost function was changed.\nThe new
18278 representation may be provided in the response.\n",
18279             "x-example": {
18280                 "id": "unique_example_id",
18281                 "status": true,
18282                 "startTime": "06:00Z",
18283                 "interval": 180
18284             }
18285         }
18286     }
18287 }

```

```

18286         }
18287     },
18288     "schema": { "$ref": "#/definitions/DelayDefrost" }
18289 },
18290 "403": {
18291     "description": "Indicates the update to the time properties was rejected.\nReasons
18292 for rejection:\n invalid time entry\nThe current unchanged representation may be provided in the
18293 response.\n",
18294     "x-example":
18295     {
18296         "id": "unique_example_id",
18297         "status": true,
18298         "startTime": "06:00Z",
18299         "interval": 180
18300     }
18301 },
18302 "schema": { "$ref": "#/definitions/DelayDefrost" }
18303 }
18304 }
18305 }
18306 }
18307 },
18308 "parameters": {
18309     "interface": {
18310         "in": "query",
18311         "name": "if",
18312         "type": "string",
18313         "enum": ["oic.if.a", "oic.if.baseline"]
18314     }
18315 },
18316 "definitions": {
18317     "DelayDefrost": {
18318         {
18319             "allOf": [
18320                 {
18321                     "properties": {
18322                         "interval": {
18323                             "description": "Time interval in minutes after the startTime, if present stopTime
18324 cannot be present",
18325                             "type": "integer"
18326                         },
18327                         "startTime": {
18328                             "description": "Start time for the time period",
18329                             "type": "string"
18330                         },
18331                         "stopTime": {
18332                             "description": "Stop time for the time period, if present interval cannot be
18333 present",
18334                             "type": "string"
18335                         }
18336                     },
18337                     "required": [
18338                         "startTime"
18339                     ],
18340                     "type": "object"
18341                 },
18342                 {
18343                     "properties": {
18344                         "interval": {
18345                             "default": 240,
18346                             "description": "Defrost interval as defined by Energy Star",
18347                             "maximum": 1440,
18348                             "minimum": 1,
18349                             "type": "integer"
18350                         },
18351                         "precision": {
18352                             "description": "Accuracy granularity of the exposed value",
18353                             "readOnly": true,
18354                             "type": "number"
18355                         }
18356                     },
18357                     "range": {

```

```

18357         "description": "The valid range for the value Property",
18358         "items": {
18359             "anyOf": [
18360                 {
18361                     "type": "number"
18362                 },
18363                 {
18364                     "type": "integer"
18365                 }
18366             ]
18367         },
18368         "maxItems": 2,
18369         "minItems": 2,
18370         "readOnly": true,
18371         "type": "array"
18372     },
18373     "status": {
18374         "description": "Indicates whether any supported delay defrost function is active",
18375         "type": "boolean"
18376     },
18377     "step": {
18378         "anyOf": [
18379             {
18380                 "type": "integer"
18381             },
18382             {
18383                 "type": "number"
18384             }
18385         ],
18386         "description": "Step value across the defined range",
18387         "readOnly": true
18388     },
18389     "value": {
18390         "anyOf": [
18391             {
18392                 "type": "array"
18393             },
18394             {
18395                 "type": "string"
18396             },
18397             {
18398                 "type": "boolean"
18399             },
18400             {
18401                 "type": "integer"
18402             },
18403             {
18404                 "type": "number"
18405             },
18406             {
18407                 "type": "object"
18408             }
18409         ],
18410         "description": "The value sensed or actuated by this Resource"
18411     }
18412 },
18413 "required": [
18414     "status"
18415 ]
18416 }
18417 ],
18418 "type": "object"
18419 }
18420 }
18421 }
18422 }
18423

```



18424 **B.27.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
interval	정수			Energy Star 에 의해 정의된 제상 간격
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
status	boolean	예		지원된 임의의 자연 제상 기능이 활성인지를 나타낸다
precision	숫자		Read Only	노출된 값의 정확도

18425 **B.27.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/DelayDefrostResURI		get	post		

18426 **B.28 조광**

18427 **B.28.1 개요**

18428 이 resource 는 조광 기능을 기술한다. 값은 현재의 조광 레벨을 나타내는 정수이다.  
18429 (oic.r.baseresource 로부터) 증분이 존재하면, 조광 값 간의 증가를 나타낸다.

18430  
18431 (oic.r.baseresource 로부터) 범위가 생략되면 범위는 [0,100]이다. 0 의값은 완전히 어두운 것을  
18432 의미하고 100 의 값은 조광을 적용하지 않는 상태를 나타낸다. 현재의 조광 레벨을 검색한다.

18433  
18434  
18435

18436 **B.28.2 URI 예**

18437 /DimmingResURI

## B.28.3 Resource Type

resource type (rt)는 ['oic.r.light.dimming']으로 정의된다.

## B.28.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Dimming",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/DimmingResURI" : {
      "get": {
        "description": "This resource describes a dimming function.\nThe value is an integer
showing the current dimming level.\nIf step (from oic.r.baseresource) is present then it represents
the increment between dimmer values.\nWhen range (from oic.r.baseresource) is omitted, then the
range is [0,100].\nA value of 0 means total dimming; a value of 100 means no dimming.\nRetrieves
the current dimming level.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.light.dimming"],
              "id": "unique_example_id",
              "dimmingSetting": 30,
              "step": 5,
              "range": [0,100]
            },
            "schema": { "$ref": "#/definitions/Dimming" }
          }
        }
      },
      "post": {
        "description": "Sets the desired dimming level.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Dimming" },
            "x-example":
```

```

18505         {
18506             "id": "unique_example_id",
18507             "dimmingSetting": 40
18508         }
18509     ],
18510     "responses": {
18511         "200": {
18512             "description": "Indicates that the dimming was changed.\n\nThe new dimming level is
18513 provided in the response.\n",
18514             "x-example":
18515                 {
18516                     "id": "unique_example_id",
18517                     "dimmingSetting": 40
18518                 },
18519             "schema": { "$ref": "#/definitions/Dimming" }
18520         },
18521         "403": {
18522             "description": "This response is generated by the OIC Server when the client
18523 sends:\n\n An update with an out of range property value for dimmingSetting.\n\nThe server responds
18524 with the current resource representation.\n",
18525             "x-example":
18526                 {
18527                     "id": "unique_example_id",
18528                     "dimmingSetting": 40
18529                 },
18530             "schema": { "$ref": "#/definitions/Dimming" }
18531         }
18532     }
18533 },
18534 "parameters": {
18535     "interface": {
18536         "in": "query",
18537         "name": "if",
18538         "type": "string",
18539         "enum": ["oic.if.a", "oic.if.baseline"]
18540     }
18541 },
18542 "definitions": {
18543     "Dimming": {
18544         "properties": {
18545             "dimmingSetting": {
18546                 "description": "Current dimming value",
18547                 "type": "integer"
18548             },
18549             "precision": {
18550                 "description": "Accuracy granularity of the exposed value",
18551                 "readOnly": true,
18552                 "type": "number"
18553             },
18554             "range": {
18555                 "description": "The valid range for the value Property",
18556                 "items": {
18557                     "anyOf": [
18558                         {
18559                             "type": "number"
18560                         },
18561                         {
18562                             "type": "integer"
18563                         }
18564                     ]
18565                 }
18566             }
18567         },
18568         "maxItems": 2,
18569         "minItems": 2,
18570         "readOnly": true,
18571         "type": "array"
18572     }
18573 }

```

```

18576     },
18577     "step": {
18578       "anyOf": [
18579         {
18580           "type": "integer"
18581         },
18582         {
18583           "type": "number"
18584         }
18585       ],
18586       "description": "Step value across the defined range",
18587       "readOnly": true
18588     },
18589     "value": {
18590       "anyOf": [
18591         {
18592           "type": "array"
18593         },
18594         {
18595           "type": "string"
18596         },
18597         {
18598           "type": "boolean"
18599         },
18600         {
18601           "type": "integer"
18602         },
18603         {
18604           "type": "number"
18605         },
18606         {
18607           "type": "object"
18608         }
18609       ],
18610       "description": "The value sensed or actuated by this Resource"
18611     }
18612   },
18613   "required": [
18614     "dimmingSetting"
18615   ],
18616   "type": "object"
18617 }
18618 }
18619 }
18620 }
18621

```

#### 18622 B.28.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
dimmingSetting	정수	예		현재의 dimming value
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도

step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
------	---------------------	--	-----------	--------------------

## 18623 B.28.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DimmingResURI		get	post		

## 18624 B.29 도어

### 18625 B.29.1 개요

18626 이 resource 는 도어의 개방 상태를 기술한다. 도어는 openState (Open/Closed), openDuration  
18627 (ISO 8601 Time), 및 openAlarm (boolean)에 의해 모델링 된다. 개방 상태에 대해, 값 'Open'은  
18628 도어가 개방된 것을 나타낸다.

18629  
18630 값 'Closed'는 도어가 닫힌 것을 나타낸다. openDuration 의 type 은 ISO 8601 Time 인코딩된  
18631 스트링이다. openAlarm 값 'true' 는 개방 알람이 설정되어 있음을 나타낸다. openAlarm 값  
18632 'false'는 개방 알람이 해제되어 있음을 나타낸다. 도어의 상태를 검색한다.

18633

18634

### 18635 B.29.2 URI 예

18636 /DoorResURI

### 18637 B.29.3 Resource Type

18638 resource type (rt)는 ['oic.r.door']로 정의된다.

### 18639 B.29.4 Swagger2.0 정의

```

18640 {
18641   "swagger": "2.0",
18642   "info": {
18643     "title": "Door",
18644     "version": "v1.1.0-20160519",
18645     "license": {
18646       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18647       "x-description": "Redistribution and use in source and binary forms, with or without
18648 modification, are permitted provided that the following conditions are met:\n      1.
18649 Redistributions of source code must retain the above copyright notice, this list of conditions and
18650 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
18651 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
18652 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
18653 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
18654 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
18655 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
18656 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
18657 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
18658 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
18659 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18660 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18661 OF SUCH DAMAGE.\n"
18662   }

```

```

18663     },
18664     "schemes": ["http"],
18665     "consumes": ["application/json"],
18666     "produces": ["application/json"],
18667     "paths": {
18668         "/DoorResURI" : {
18669             "get": {
18670                 "description": "This resource describes the open state of the door.\nA door is modelled by
18671 means of openState (Open/Closed), openDuration (ISO 8601 Time), and openAlarm (boolean).\nFor
18672 openState, the value 'Open' indicates the door is open.\nThe value 'Closed' indicates the door is
18673 closed.\nThe type of openDuration is an ISO 8601 Time encoded string.\nThe openAlarm value 'true'
18674 indicates that the open alarm is active.\nThe openAlarm value 'false' indicates that open alarm is
18675 not active.\nretrieves the state of the Door.",
18676                 "parameters": [
18677                     { "$ref": "#/parameters/interface-all" }
18678                 ],
18679                 "responses": {
18680                     "200": {
18681                         "description": "",
18682                         "x-example":
18683                             {
18684                                 "rt" : ["oic.r.door"],
18685                                 "id": "unique_example_id",
18686                                 "openState": "Open",
18687                                 "openDuration": "P0Y0M0DT2H25M5S",
18688                                 "openAlarm": true
18689                             }
18690                     },
18691                     "schema": { "$ref": "#/definitions/Door" }
18692                 }
18693             },
18694         },
18695         "post": {
18696             "description": "Sets the current Door properties.\nThe only property that can be set as
18697 part of an update operation is\n the openAlarm.\nThis can be made active (true) or inactive
18698 (false)\n",
18699             "parameters": [
18700                 { "$ref": "#/parameters/interface-actuator" },
18701                 {
18702                     "name": "body",
18703                     "in": "body",
18704                     "required": true,
18705                     "schema": { "$ref": "#/definitions/DoorUpdate" },
18706                     "x-example":
18707                         {
18708                             "id": "unique_example_id",
18709                             "openAlarm": false
18710                         }
18711                 }
18712             ],
18713             "responses": {
18714                 "200": {
18715                     "description": "",
18716                     "x-example":
18717                         {
18718                             "id": "unique_example_id",
18719                             "openAlarm": false
18720                         }
18721                 },
18722                 "schema": { "$ref": "#/definitions/DoorUpdate" }
18723             }
18724         }
18725     }
18726 },
18727 },
18728 "parameters": {
18729     "interface-actuator" : {
18730         "in" : "query",
18731         "name" : "if",
18732         "type" : "string",
18733         "enum" : ["oic.if.a", "oic.if.baseline"]

```

```

18734     },
18735     "interface-all" : {
18736         "in" : "query",
18737         "name" : "if",
18738         "type" : "string",
18739         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
18740     },
18741 },
18742 "definitions": {
18743     "Door" :
18744     {
18745         "properties": {
18746             "openAlarm": {
18747                 "description": "The state of the door open alarm",
18748                 "type": "boolean"
18749             },
18750             "openDuration": {
18751                 "description": "The time duration the door has been open",
18752                 "readOnly": true,
18753                 "type": "string"
18754             },
18755             "openState": {
18756                 "description": "The state of the door (open or closed)",
18757                 "enum": [
18758                     "Open",
18759                     "Closed"
18760                 ],
18761                 "readOnly": true
18762             },
18763             "precision": {
18764                 "description": "Accuracy granularity of the exposed value",
18765                 "readOnly": true,
18766                 "type": "number"
18767             },
18768             "range": {
18769                 "description": "The valid range for the value Property",
18770                 "items": {
18771                     "anyOf": [
18772                         {
18773                             "type": "number"
18774                         },
18775                         {
18776                             "type": "integer"
18777                         }
18778                     ]
18779                 },
18780                 "maxItems": 2,
18781                 "minItems": 2,
18782                 "readOnly": true,
18783                 "type": "array"
18784             },
18785             "step": {
18786                 "anyOf": [
18787                     {
18788                         "type": "integer"
18789                     },
18790                     {
18791                         "type": "number"
18792                     }
18793                 ],
18794                 "description": "Step value across the defined range",
18795                 "readOnly": true
18796             },
18797             "value": {
18798                 "anyOf": [
18799                     {
18800                         "type": "array"
18801                     },
18802                     {
18803                         "type": "string"
18804                     }
18805                 ],

```

```

18805         {
18806             "type": "boolean"
18807         },
18808         {
18809             "type": "integer"
18810         },
18811         {
18812             "type": "number"
18813         },
18814         {
18815             "type": "object"
18816         }
18817     ],
18818     "description": "The value sensed or actuated by this Resource"
18819 },
18820 },
18821 "required": [
18822     "openState"
18823 ],
18824 "type": "object"
18825 }
18826
18827 ,
18828 "DoorUpdate" :
18829 {
18830     "properties": {
18831         "openAlarm": {
18832             "description": "The state of the door open alarm",
18833             "type": "boolean"
18834         },
18835         "precision": {
18836             "description": "Accuracy granularity of the exposed value",
18837             "readOnly": true,
18838             "type": "number"
18839         },
18840         "range": {
18841             "description": "The valid range for the value Property",
18842             "items": {
18843                 "anyOf": [
18844                     {
18845                         "type": "number"
18846                     },
18847                     {
18848                         "type": "integer"
18849                     }
18850                 ]
18851             },
18852             "maxItems": 2,
18853             "minItems": 2,
18854             "readOnly": true,
18855             "type": "array"
18856         },
18857         "step": {
18858             "anyOf": [
18859                 {
18860                     "type": "integer"
18861                 },
18862                 {
18863                     "type": "number"
18864                 }
18865             ],
18866             "description": "Step value across the defined range",
18867             "readOnly": true
18868         },
18869         "value": {
18870             "anyOf": [
18871                 {
18872                     "type": "array"
18873                 },
18874                 {
18875                     "type": "string"

```



```

18876         },
18877         {
18878             "type": "boolean"
18879         },
18880         {
18881             "type": "integer"
18882         },
18883         {
18884             "type": "number"
18885         },
18886         {
18887             "type": "object"
18888         }
18889     ],
18890     "description": "The value sensed or actuated by this Resource"
18891 },
18892 },
18893 "type": "object"
18894 }
18895 }
18896 }
18897 }
18898

```

#### 18899 B.29.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
openDuration	string		Read Only	도어가 개방된 지속 시간
openState	복수 타입: schema 참조	예	Read Only	도어의 상태 (open 또는 closed)
openAlarm	boolean			도어개방 알람의 상태
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

precision	숫자		Read Only	노출된 값의 정확도
openAlarm	boolean			도어개방 알람의 상태

## 18900 B.29.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DoorResURI		get	post		

## 18901 B.30 Demand Response Load Control (DRLC).

### 18902 B.30.1 개요

18903 이 resource 는 적용될 임의의 또는 현재 적용되는 DRLC 신호를 기술한다. DRType 은 Zigbee/HA  
 18904 Smart Energy Profile 2.0 에서 정의된 ApplianceLoadReductionType 이다. Start 는 ISO8601  
 18905 인코딩된 start time 을 포함하는 스트링이다. Duration 값은 분 단위이다. Override 는 소비자가  
 18906 request 를 무시하였는지(true) 또는 무시하지 않았는지(false)를 나타낸다. 적용되고 있는 현재의  
 18907 DRLC 작용을 제공한다.

18908

18909

### 18910 B.30.2 URI 예

18911 /DRLCResURI

### 18912 B.30.3 Resource Type

18913 resource type (rt)는 ['oic.r.energy.drlc']로 정의된다.

### 18914 B.30.4 Swagger2.0 정의

```

18915 {
18916   "swagger": "2.0",
18917   "info": {
18918     "title": "Demand Response Load Control (DRLC).",
18919     "version": "v1.1.0-20160519",
18920     "license": {
18921       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
18922       "x-description": "Redistribution and use in source and binary forms, with or without
18923 modification, are permitted provided that the following conditions are met:\n      1.
18924 Redistributions of source code must retain the above copyright notice, this list of conditions and
18925 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
18926 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
18927 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
18928 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
18929 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
18930 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
18931 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
18932 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
18933 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
18934 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
18935 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
18936 OF SUCH DAMAGE.\n"
18937     }
18938   }

```

```

18938     },
18939     "schemes": ["http"],
18940     "consumes": ["application/json"],
18941     "produces": ["application/json"],
18942     "paths": {
18943         "/DRLCResURI" : {
18944             "get": {
18945                 "description": "This resource describes any to be applied or currently being applied DRLC
18946 signal.\n\nThe DRTYPE is the ApplianceLoadReductionType defined in Zigbee/HA Smart Energy Profile
18947 2.0.\n\nStart is a string containing an ISO8601 encoded start time.\n\nThe duration value is in
18948 minutes.\n\nOverride indicates whether the consumer has overridden the request (true) or not
18949 (false).\n\nProvides the current DRLC action that is being applied.\n\n",
18950                 "parameters": [
18951                     { "$ref": "#/parameters/interface" }
18952                 ],
18953                 "responses": {
18954                     "200": {
18955                         "description": "",
18956                         "x-example":
18957                         {
18958                             "rt": ["oic.r.energy.drlc"],
18959                             "id": "unique_example_id",
18960                             "DRTYPE": 1,
18961                             "start": "2015-01-09T16:45Z",
18962                             "duration": 10,
18963                             "override": false
18964                         },
18965                         ,
18966                         "schema": { "$ref": "#/definitions/DRLC" }
18967                     }
18968                 },
18969             },
18970             "put": {
18971                 "description": "Provides the DRLC action to be applied to the device or updates an existing
18972 action.\n\n",
18973                 "parameters": [
18974                     { "$ref": "#/parameters/interface" },
18975                     {
18976                         "name": "body",
18977                         "in": "body",
18978                         "required": true,
18979                         "schema": { "$ref": "#/definitions/DRLC" },
18980                         "x-example":
18981                         {
18982                             "rt": ["oic.r.energy.drlc"],
18983                             "id": "unique_example_id",
18984                             "DRTYPE": 1,
18985                             "start": "2015-01-09T16:45Z",
18986                             "duration": 10
18987                         }
18988                     }
18989                 ],
18990                 "responses": {
18991                     "200": {
18992                         "description": "Indicates that the target DRLC resource was changed.\n\nThe new
18993 resource attributes are provided in the response.\n\n",
18994                         "x-example":
18995                         {
18996                             "DRTYPE": 1,
18997                             "id": "unique_example_id",
18998                             "start": "2015-01-09T17:00Z",
18999                             "duration": 15,
19000                             "override": false
19001                         }
19002                     },
19003                     "201": {
19004                         "description": "Indicates successful creation of the DRLC resource with the
19005 attributes provided.\n\nThe response includes the URI of the created resource.\n\n",
19006                         "x-example":

```

```

19009         {
19010             "ResURI":    "/MyDevice/MyDRLCURI"
19011         }
19012     },
19013     "schema": { "$ref": "#/definitions/CreateResponse" }
19014 }
19015 }
19016 }
19017 },
19018 },
19019 "parameters": {
19020     "interface" : {
19021         "in" : "query",
19022         "name" : "if",
19023         "type" : "string",
19024         "enum" : ["oic.if.b", "oic.if.baseline"]
19025     }
19026 },
19027 "definitions": {
19028     "DRLC" :
19029     {
19030         "properties": {
19031             "DRType": {
19032                 "description": "The to be applied demand-response type",
19033                 "type": "integer"
19034             },
19035             "duration": {
19036                 "description": "The duration of the to be applied DR type",
19037                 "type": "integer"
19038             },
19039             "override": {
19040                 "description": "Whether the consumer has overridden the application of DR",
19041                 "type": "boolean"
19042             },
19043             "precision": {
19044                 "description": "Accuracy granularity of the exposed value",
19045                 "readOnly": true,
19046                 "type": "number"
19047             },
19048             "range": {
19049                 "description": "The valid range for the value Property",
19050                 "items": {
19051                     "anyOf": [
19052                         {
19053                             "type": "number"
19054                         },
19055                         {
19056                             "type": "integer"
19057                         }
19058                     ]
19059                 },
19060                 "maxItems": 2,
19061                 "minItems": 2,
19062                 "readOnly": true,
19063                 "type": "array"
19064             },
19065             "start": {
19066                 "description": "The start time for the application of DR",
19067                 "type": "string"
19068             },
19069             "step": {
19070                 "anyOf": [
19071                     {
19072                         "type": "integer"
19073                     },
19074                     {
19075                         "type": "number"
19076                     }
19077                 ],
19078                 "description": "Step value across the defined range",
19079                 "readOnly": true

```

```

19080     },
19081     "value": {
19082       "anyOf": [
19083         {
19084           "type": "array"
19085         },
19086         {
19087           "type": "string"
19088         },
19089         {
19090           "type": "boolean"
19091         },
19092         {
19093           "type": "integer"
19094         },
19095         {
19096           "type": "number"
19097         },
19098         {
19099           "type": "object"
19100         }
19101       ],
19102       "description": "The value sensed or actuated by this Resource"
19103     }
19104   },
19105   "required": [
19106     "DRType"
19107   ],
19108   "type": "object"
19109 }
19110
19111 'CreateResponse' :
19112 {
19113   "properties": {
19114     "ResURI": {
19115       "type": "string"
19116     }
19117   },
19118   "type": "object"
19119 }
19120 }
19121 }
19122 }
19123 }
19124

```

### 19125 B.30.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
DRType	정수	예		적용될 demand-response type
precision	숫자		Read Only	노출된 값의 정확도
duration	정수			적용될 DR type 의 지속시간
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
override	boolean			DR 의 적용을 소비자가

				무시하였는지 여부
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
start	스트링			DR 의 적용에 대한 시작 시각
ResURI	스트링			

## 19126 B.30.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/DRLCResURI	put	get			

## 19127 B.31 에코 모드

### 19128 B.31.1 개요

19129 이 resource 는 Device 가 지원하는 현재 활성 상태인 에코 모드를 규정한다. Resource 는  
 19130 supportedMode 및 Mode Property 의 모집단이 "disabled", "enabled", "notsupported"로 주어진  
 19131 값의 집합으로 제한된다는 제약을 갖는 Mode (oic.r.mode)에 대한 기존의 schema 를 사용한다.  
 19132 adminforced Property 는 값이 다른 당사자에 의해(예: 일부 오프보드 Smart Energy 상호작용을  
 19133 통해) 설정되었음을 나타낸다.

19134

19135

19136

### 19137 B.31.2 URI 예

19138 /EcomodeResURI

### 19139 B.31.3 Resource Type

19140 resource type (rt)는 ['oic.r.ecomode']로 정의된다.

### 19141 B.31.4 Swagger2.0 정의

```

19142 {
19143   "swagger": "2.0",
19144   "info": {
19145     "title": "Eco Mode",
19146     "version": "OCF-v1.0.0-20160620",
19147     "license": {
19148       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19149       "x-description": "Redistribution and use in source and binary forms, with or without
19150 modification, are permitted provided that the following conditions are met:\n      1.
19151 Redistributions of source code must retain the above copyright notice, this list of conditions and
```

```

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19153 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19154 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
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19158 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
19159 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
19160 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND ON
19161 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19162 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19163 OF SUCH DAMAGE.\n"
19164     }
19165   },
19166   "schemes": ["http"],
19167   "consumes": ["application/json"],
19168   "produces": ["application/json"],
19169   "paths": {
19170     "/EcomodeResURI" : {
19171       "get": {
19172         "description": "This resource specifies the supported and currently active Eco Mode of a
19173 Device\nThe Resource uses the existing schema for Mode (oic.r.mode) with a restriction that the
19174 population of supportedmodes and modes Properties is restricted to the set of values given
19175 below:\n\n\"disabled\", \"enabled\", \"notsupported\"\n\nThe adminforced Property indicates that the
19176 value has been set by another party (e.g. via some offboard Smart Energy interaction)\n",
19177         "parameters": [
19178           { "$ref": "#/parameters/interface" }
19179         ],
19180         "responses": {
19181           "200": {
19182             "description": "",
19183             "x-example": {
19184               {
19185                 "rt": ["oic.r.ecomode"],
19186                 "id": "unique_example_id",
19187                 "supportedModes": ["disabled", "enabled"],
19188                 "modes": ["disabled"],
19189                 "adminforced": false
19190               }
19191             },
19192             "schema": { "$ref": "#/definitions/ecomode" }
19193           }
19194         }
19195       },
19196       "post": {
19197         "description": "",
19198         "parameters": [
19199           { "$ref": "#/parameters/interface" },
19200           {
19201             "name": "body",
19202             "in": "body",
19203             "required": true,
19204             "schema": { "$ref": "#/definitions/ecomode-update" },
19205             "x-example": {
19206               {
19207                 "id": "unique_example_id",
19208                 "modes": ["enabled"]
19209               }
19210             }
19211           }
19212         ],
19213         "responses": {
19214           "200": {
19215             "description": "",
19216             "x-example": {
19217               {
19218                 "id": "unique_example_id",
19219                 "modes": ["enabled"]
19220               }
19221             },
19222             "schema": { "$ref": "#/definitions/ecomode-update" }
19223           }
19224         }
19225       }
19226     }
19227   }

```

```

19223     }
19224   }
19225 }
19226 },
19227 "parameters": {
19228   "interface" : {
19229     "in" : "query",
19230     "name" : "if",
19231     "type" : "string",
19232     "enum" : ["oic.if.a", "oic.if.baseline"]
19233   }
19234 },
19235 "definitions": {
19236   "ecomode" :
19237   {
19238     "allOf": [
19239       {
19240         "properties": {
19241           "modes": {
19242             "description": "Array of the currently active mode(s)",
19243             "items": {
19244               "type": "string"
19245             },
19246             "type": "array"
19247           },
19248           "supportedModes": {
19249             "description": "Array of possible modes the device supports.",
19250             "items": {
19251               "type": "string"
19252             },
19253             "readOnly": true,
19254             "type": "array"
19255           }
19256         },
19257         "type": "object"
19258       },
19259       {
19260         "properties": {
19261           "adminforced": {
19262             "description": "Indicator that the current mode of operation has been forced by
19263 admin action.",
19264             "readOnly": true,
19265             "type": "boolean"
19266           },
19267           "precision": {
19268             "description": "Accuracy granularity of the exposed value",
19269             "readOnly": true,
19270             "type": "number"
19271           },
19272           "range": {
19273             "description": "The valid range for the value Property",
19274             "items": {
19275               "anyOf": [
19276                 {
19277                   "type": "number"
19278                 },
19279                 {
19280                   "type": "integer"
19281                 }
19282               ]
19283             },
19284             "maxItems": 2,
19285             "minItems": 2,
19286             "readOnly": true,
19287             "type": "array"
19288           },
19289           "step": {
19290             "anyOf": [
19291               {
19292                 "type": "integer"
19293               }

```



```

19294         {
19295             "type": "number"
19296         }
19297     ],
19298     "description": "Step value across the defined range",
19299     "readOnly": true
19300 },
19301 "value": {
19302     "anyOf": [
19303         {
19304             "type": "array"
19305         },
19306         {
19307             "type": "string"
19308         },
19309         {
19310             "type": "boolean"
19311         },
19312         {
19313             "type": "integer"
19314         },
19315         {
19316             "type": "number"
19317         },
19318         {
19319             "type": "object"
19320         }
19321     ],
19322     "description": "The value sensed or actuated by this Resource"
19323 }
19324 }
19325 }
19326 ],
19327 "required": [
19328     "supportedModes",
19329     "modes"
19330 ],
19331 "type": "object"
19332 }
19333
19334 ,
19335 "ecomode-update" :
19336 {
19337     "allOf": [
19338         {
19339             "properties": {
19340                 "modes": {
19341                     "description": "Desired mode",
19342                     "items": {
19343                         "type": "string"
19344                     },
19345                     "type": "array"
19346                 },
19347                 "precision": {
19348                     "description": "Accuracy granularity of the exposed value",
19349                     "readOnly": true,
19350                     "type": "number"
19351                 },
19352                 "range": {
19353                     "description": "The valid range for the value Property",
19354                     "items": {
19355                         "anyOf": [
19356                             {
19357                                 "type": "number"
19358                             },
19359                             {
19360                                 "type": "integer"
19361                             }
19362                         ]
19363                     },
19364                     "maxItems": 2,

```

```

19365         "minItems": 2,
19366         "readOnly": true,
19367         "type": "array"
19368     },
19369     "step": {
19370         "anyOf": [
19371             {
19372                 "type": "integer"
19373             },
19374             {
19375                 "type": "number"
19376             }
19377         ],
19378         "description": "Step value across the defined range",
19379         "readOnly": true
19380     },
19381     "value": {
19382         "anyOf": [
19383             {
19384                 "type": "array"
19385             },
19386             {
19387                 "type": "string"
19388             },
19389             {
19390                 "type": "boolean"
19391             },
19392             {
19393                 "type": "integer"
19394             },
19395             {
19396                 "type": "number"
19397             },
19398             {
19399                 "type": "object"
19400             }
19401         ],
19402         "description": "The value sensed or actuated by this Resource"
19403     },
19404     },
19405     "type": "object"
19406 }
19407 ],
19408 "required": [
19409     "modes"
19410 ],
19411 "type": "object"
19412 }
19413 }
19414 }
19415 }
19416

```

#### 19417 B.31.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
adminforced	boolean		Read Only	동작의 현재 모드가 Admin 동작에 의해

				강제되었음을 나타내는 표시자.
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
Mode	배열: schema 참조	예		요구되는 모드
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

19418 **B.31.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/EcomodeResURI		get	post		

19419 **B.32 에너지 소비**

19420 **B.32.1 개요**

19421 이 resource 는 전원이 투입된 이후 device 에 의해 소비된 에너지 (에너지 값의 단위는 Watt Hours  
19422 [Wh]) 및 resource 가 조회되었을 때 device 의 순간적인 전력 인출 (전력 값의 단위는 Watts  
19423 [W])를 기술한다. 전력 값의 단위는 Watts [W]이다. 에너지 값의 단위는 Watt Hours [Wh]이다.  
19424 현재의 전력 인출 및 누적 에너지 사용을 제공한다.

19425

19426

19427

19428

## B.32.2 URI 예

/EnergyConsumptionResURI

## B.32.3 Resource Type

resource type (rt)는 ['oic.r.energy.consumption']로 정의된다.

## B.32.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy Consumption",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
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Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
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ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyConsumptionResURI" : {
      "get": {
        "description": "This resource describes the energy consumed by the device since power up
(the energy value is in Watt Hours [Wh]) \nand the instantaneous power draw of the device (the
power value is in Watts [W]) at the time the resource was queried.\nThe power value is in Watts
[W].\nThe energy value is in Watt Hours [Wh].\nProvides the current power draw and cumulative
energy usage.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.energy.consumption"],
              "id": "unique_example_id",
              "power": 2000.1,
              "energy": 3500.4
            },
            "schema": { "$ref": "#/definitions/Consumption" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",

```

```

19493         "type" : "string",
19494         "enum" : ["oic.if.s", "oic.if.baseline"]
19495     },
19496 },
19497 "definitions": {
19498     "Consumption" :
19499     {
19500         "properties": {
19501             "energy": {
19502                 "description": "Energy consumed",
19503                 "readOnly": true,
19504                 "type": "number"
19505             },
19506             "power": {
19507                 "description": "Instantaneous Power",
19508                 "readOnly": true,
19509                 "type": "number"
19510             },
19511             "precision": {
19512                 "description": "Accuracy granularity of the exposed value",
19513                 "readOnly": true,
19514                 "type": "number"
19515             },
19516             "range": {
19517                 "description": "The valid range for the value Property",
19518                 "items": {
19519                     "anyOf": [
19520                         {
19521                             "type": "number"
19522                         },
19523                         {
19524                             "type": "integer"
19525                         }
19526                     ]
19527                 },
19528                 "maxItems": 2,
19529                 "minItems": 2,
19530                 "readOnly": true,
19531                 "type": "array"
19532             },
19533             "step": {
19534                 "anyOf": [
19535                     {
19536                         "type": "integer"
19537                     },
19538                     {
19539                         "type": "number"
19540                     }
19541                 ],
19542                 "description": "Step value across the defined range",
19543                 "readOnly": true
19544             },
19545             "value": {
19546                 "anyOf": [
19547                     {
19548                         "type": "array"
19549                     },
19550                     {
19551                         "type": "string"
19552                     },
19553                     {
19554                         "type": "boolean"
19555                     },
19556                     {
19557                         "type": "integer"
19558                     },
19559                     {
19560                         "type": "number"
19561                     },
19562                     {
19563                         "type": "object"

```

```
19564         }
19565     },
19566     "description": "The value sensed or actuated by this Resource"
19567 }
19568 },
19569 "required": [
19570     "power",
19571     "energy"
19572 ],
19573 "type": "object"
19574 }
19575 }
19576 }
19577 }
19578 }
```

19579 **B.32.5 Property 정의**

Property name	Value type	필수	엑세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
energy	숫자	예	Read Only	소비된 에너지
power	숫자	예	Read Only	순간 전력
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

19580 **B.32.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/EnergyConsumptionResURI		get			

19581 **B.33 에너지 과부하/회로 차단기**

19582 **B.33.1 개요**

19583 이 resource 는 에너지 과부하 검출기/회로 차단기가 현재 개방 또는 단락 되었는지를 기술한다.  
19584 값은 Boolean 형이다. 'true' 값은 에너지 과부하가 검출 되었음을 의미한다. 'false' 값은 에너지  
19585 과부하가 검출되지 않았음을 의미한다.

19586  
19587  
19588

## B.33.2 URI 예

/EnergyOverloadResURI

## B.33.3 Resource Type

resource type (rt)는 ['oic.r.energy.overload']로 정의된다.

## B.33.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Energy Overload/Circuit Breaker",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/EnergyOverloadResURI" : {
      "get": {
        "description": "This resource describes whether an energy overload detector/circuit
breaker\n is currently tripped.\nThe value is a boolean.\nA value of 'true' means that energy
overload has been tripped.\nA value of 'false' means that energy overload has not been tripped.\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.energy.overload"],
              "id": "unique_example_id",
              "value": true
            }
          },
          "schema": { "$ref": "#/definitions/EnergyOverload" }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  }
}
```

```

19653 },
19654 "definitions": {
19655   "EnergyOverload" :
19656     {
19657       "allOf": [
19658         {
19659           "properties": {
19660             "precision": {
19661               "description": "Accuracy granularity of the exposed value",
19662               "readOnly": true,
19663               "type": "number"
19664             },
19665             "range": {
19666               "description": "The valid range for the value Property",
19667               "items": {
19668                 "anyOf": [
19669                   {
19670                     "type": "number"
19671                   },
19672                   {
19673                     "type": "integer"
19674                   }
19675                 ]
19676               },
19677               "maxItems": 2,
19678               "minItems": 2,
19679               "readOnly": true,
19680               "type": "array"
19681             },
19682             "step": {
19683               "anyOf": [
19684                 {
19685                   "type": "integer"
19686                 },
19687                 {
19688                   "type": "number"
19689                 }
19690               ],
19691               "description": "Step value across the defined range",
19692               "readOnly": true
19693             },
19694             "value": {
19695               "description": "true = sensed, false = not sensed.",
19696               "readOnly": true,
19697               "type": "boolean"
19698             }
19699           },
19700           "type": "object"
19701         }
19702       ],
19703       "required": [
19704         "value"
19705       ]
19706     }
19707   }
19708 }
19709 }
19710

```

### 19711 B.33.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	true = 감지 false = 미 감지
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값



range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도

### 19712 B.33.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/EnergyOverloadResURI		get			

## 19713 B.34 에너지 사용

### 19714 B.34.1 개요

19715 이 resource 는 누적되는 시간 기반 에너지 사용의 조회를 기술한다. 이 resource 는 TimePeriod  
19716 Resource 및 EnergyConsumption Resource 의 collection 으로 구성되는 복합 resource 이다.  
19717 시간에 걸친 소비의 복합물로서 에너지 사용 정보를 검색한다.

19718

19719

19720

### 19721 B.34.2 URI 예

19722 /EnergyUsageResURI

### 19723 B.34.3 Resource Type

19724 resource type (rt)는 ['oic.r.energy.usage']로 정의된다.

### 19725 B.34.4 Swagger2.0 정의

```

19726 {
19727   "swagger": "2.0",
19728   "info": {
19729     "title": "Energy Usage",
19730     "version": "v1.1.0-20160519",
19731     "license": {
19732       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
19733       "x-description": "Redistribution and use in source and binary forms, with or without
19734 modification, are permitted provided that the following conditions are met:\n      1.
19735 Redistributions of source code must retain the above copyright notice, this list of conditions and
19736 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
19737 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
19738 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
19739 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
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19741 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
19742 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
19743 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
19744 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
19745 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
19746 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
19747 OF SUCH DAMAGE.\n"
19748     }
19749   }

```

```

19749     },
19750     "schemes": ["http"],
19751     "consumes": ["application/json"],
19752     "produces": ["application/json"],
19753     "paths": {
19754         "/EnergyUsageResURI" : {
19755             "get": {
19756                 "description": "This resource describes a cumulative time-based energy usage query.\n\nThe
19757 resource is a composite resource being made up as a collection of:\n TimePeriod Resource\n
19758 EnergyConsumption Resource\nRetrieves the energy usage information as a composite of consumption
19759 over time.\n",
19760                 "parameters": [
19761                     { "$ref": "#/parameters/interface" }
19762                 ],
19763                 "responses": {
19764                     "200": {
19765                         "description": "",
19766                         "x-example":
19767                         {
19768                             "rt": ["oic.r.energy.usage"],
19769                             "id": "unique_example_id",
19770                             "resources": [
19771                                 {
19772                                     "href": "/TimeIntervalResURI",
19773                                     "rel": "contains",
19774                                     "rt": ["oic.r.time.period"],
19775                                     "if": ["oic.if.a"],
19776                                     "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
19777                                 },
19778                                 {
19779                                     "href": "/EnergyConsumptionResURI",
19780                                     "rel": "contains",
19781                                     "rt": ["oic.r.energy.consumption"],
19782                                     "if": ["oic.if.s"],
19783                                     "eps": [{"ep": "coaps://[fe80::b1d6]:1122"}]
19784                                 }
19785                             ]
19786                         }
19787                     },
19788                     "schema": { "$ref": "#/definitions/Usage" }
19789                 }
19790             }
19791         }
19792     },
19793     "parameters": {
19794         "interface" : {
19795             "in" : "query",
19796             "name" : "if",
19797             "type" : "string",
19798             "enum" : ["oic.if.ll", "oic.if.b", "oic.if.baseline"]
19799         }
19800     },
19801     "definitions": {
19802         "Usage" :
19803         {
19804             "properties": {
19805                 "precision": {
19806                     "description": "Accuracy granularity of the exposed value",
19807                     "readOnly": true,
19808                     "type": "number"
19809                 },
19810                 "range": {
19811                     "description": "The valid range for the value Property",
19812                     "items": {
19813                         "anyOf": [
19814                             {
19815                                 "type": "number"
19816                             },
19817                             {
19818                                 "type": "integer"
19819                             }

```

```

19820         }
19821     ]
19822 },
19823 "maxItems": 2,
19824 "minItems": 2,
19825 "readOnly": true,
19826 "type": "array"
19827 },
19828 "resources": {
19829     "items": {
19830         "properties": {
19831             "anchor": {
19832                 "description": "This is used to override the context URI e.g. override the URI of
19833 the containing collection",
19834                 "format": "uri",
19835                 "maxLength": 256,
19836                 "type": "string"
19837             },
19838             "di": {
19839                 "description": "Unique identifier for device (UUID)",
19840                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
19841 F0-9]{12}$",
19842                 "type": "string"
19843             },
19844             "eps": {
19845                 "description": "the Endpoint information of the target Resource",
19846                 "items": {
19847                     "properties": {
19848                         "ep": {
19849                 "description": "URI with Transport Protocol Suites + Endpoint Locator as
19850 specified in 10.2.1",
19851                 "format": "uri",
19852                 "type": "string"
19853             },
19854             "pri": {
19855                 "description": "The priority among multiple Endpoints as specified in
19856 10.2.3",
19857                 "minimum": 1,
19858                 "type": "integer"
19859             }
19860         },
19861         "type": "object"
19862     },
19863     "type": "array"
19864 },
19865 "href": {
19866     "description": "This is the target URI, it can be specified as a Relative
19867 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
19868 make it unique.",
19869     "format": "uri",
19870     "maxLength": 256,
19871     "type": "string"
19872 },
19873 "if": {
19874     "description": "The interface set supported by this resource",
19875     "items": {
19876         "enum": [
19877             "oic.if.baseline",
19878             "oic.if.ll",
19879             "oic.if.b",
19880             "oic.if.rw",
19881             "oic.if.r",
19882             "oic.if.a",
19883             "oic.if.s"
19884         ],
19885         "type": "string"
19886     },
19887     "minItems": 1,
19888     "type": "array"
19889 },
19890 "ins": {

```

```

19891         "description": "The instance identifier for this web link in an array of web
19892 links - used in collections",
19893         "oneOf": [
19894             {
19895                 "description": "An ordinal number that is not repeated - must be unique in
19896 the collection context",
19897                 "type": "integer"
19898             },
19899             {
19900                 "description": "Any unique string including a URI",
19901                 "format": "uri",
19902                 "maxLength": 256,
19903                 "type": "string"
19904             },
19905             {
19906                 "description": "Unique identifier (UUID)",
19907                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
19908 fA-F0-9]{12}$",
19909                 "type": "string"
19910             }
19911         ],
19912     },
19913     "p": {
19914         "description": "Specifies the framework policies on the Resource referenced by
19915 the target URI",
19916         "properties": {
19917             "bm": {
19918                 "description": "Specifies the framework policies on the Resource referenced
19919 by the target URI for e.g. observable and discoverable",
19920                 "type": "integer"
19921             }
19922         },
19923         "required": [
19924             "bm"
19925         ],
19926         "type": "object"
19927     },
19928     "rel": {
19929         "description": "The relation of the target URI referenced by the link to the
19930 context URI",
19931         "oneOf": [
19932             {
19933                 "default": [
19934                     "hosts"
19935                 ],
19936                 "items": {
19937                     "maxLength": 64,
19938                     "type": "string"
19939                 },
19940                 "minItems": 1,
19941                 "type": "array"
19942             },
19943             {
19944                 "default": "hosts",
19945                 "maxLength": 64,
19946                 "type": "string"
19947             }
19948         ],
19949     },
19950     "rt": {
19951         "description": "Resource Type",
19952         "items": {
19953             "maxLength": 64,
19954             "type": "string"
19955         },
19956         "minItems": 1,
19957         "type": "array"
19958     },
19959     "title": {
19960         "description": "A title for the link relation. Can be used by the UI to provide a
19961 context",

```

```

19962         "maxLength": 64,
19963         "type": "string"
19964     },
19965     "type": {
19966         "default": "application/cbor",
19967         "description": "A hint at the representation of the resource referenced by the
19968 target URI. This represents the media types that are used for both accepting and emitting",
19969         "items": {
19970             "maxLength": 64,
19971             "type": "string"
19972         },
19973         "minItems": 1,
19974         "type": "array"
19975     }
19976 },
19977 "required": [
19978     "href",
19979     "rt",
19980     "if"
19981 ],
19982 "type": "object"
19983 },
19984 "maxItems": 2,
19985 "minItems": 2,
19986 "type": "array"
19987 },
19988 "step": {
19989     "anyOf": [
19990         {
19991             "type": "integer"
19992         },
19993         {
19994             "type": "number"
19995         }
19996     ],
19997     "description": "Step value across the defined range",
19998     "readOnly": true
19999 },
20000 "value": {
20001     "anyOf": [
20002         {
20003             "type": "array"
20004         },
20005         {
20006             "type": "string"
20007         },
20008         {
20009             "type": "boolean"
20010         },
20011         {
20012             "type": "integer"
20013         },
20014         {
20015             "type": "number"
20016         },
20017         {
20018             "type": "object"
20019         }
20020     ],
20021     "description": "The value sensed or actuated by this Resource"
20022 }
20023 },
20024 "type": "object"
20025 }
20026 }
20027 }
20028 }
20029

```

20030 **B.34.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
resource	배열: schema 참조			
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

20031 **B.34.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/EnergyUsageResURI		get			

20032 **B.35 일반 센서**

20033 **B.35.1 개요**

20034 이 resource 는 일부 값, property 또는개체가 감지되었는지 여부를 기술한다. 값은 boolean 형이다.  
20035 'true' 값은 목표가 감지되었음을 의미한다. 'false' 값은 목표가 감지되지 않았음을 의미한다.

20036

20037

20038

20039 **B.35.2 URI 예**

20040 /GenericSensorResURI

20041 **B.35.3 Resource Type**

20042 resource type (rt)는 ['oic.r.sensor']로 정의된다.

20043 **B.35.4 Swagger2.0 정의**

20044 {  
20045 "swagger": "2.0",  
20046 "info": {  
20047 "title": "Generic Sensor",  
20048 "version": "v1.1.0-20160519",  
20049 "license": {  
20050 "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",

```

20051         "x-description": "Redistribution and use in source and binary forms, with or without
20052 modification, are permitted provided that the following conditions are met:\n        1.
20053 Redistributions of source code must retain the above copyright notice, this list of conditions and
20054 the following disclaimer.\n        2. Redistributions in binary form must reproduce the above
20055 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20056 other materials provided with the distribution.\n\n        THIS SOFTWARE IS PROVIDED BY THE Open
20057 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20058 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20059 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n        IN NO EVENT SHALL THE Open Connectivity
20060 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
20061 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
20062 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n        HOWEVER CAUSED AND ON
20063 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20064 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20065 OF SUCH DAMAGE.\n"
20066     },
20067 },
20068 "schemes": ["http"],
20069 "consumes": ["application/json"],
20070 "produces": ["application/json"],
20071 "paths": {
20072     "/GenericSensorResURI" : {
20073         "get": {
20074             "description": "This resource describes whether some value or property or entity has been
20075 sensed or not.\nThe value is a boolean.\nA value of 'true' means that the target has been
20076 sensed.\nA value of 'false' means that the target has not been sensed.\n",
20077             "parameters": [
20078                 {"$ref": "#/parameters/interface"}
20079             ],
20080             "responses": {
20081                 "200": {
20082                     "description": "",
20083                     "x-example":
20084                         {
20085                             "rt": ["oic.r.sensor"],
20086                             "id": "unique_example_id",
20087                             "value": true
20088                         },
20089                     "schema": { "$ref": "#/definitions/Sensor" }
20090                 }
20091             }
20092         }
20093     }
20094 },
20095 },
20096 "parameters": {
20097     "interface" : {
20098         "in" : "query",
20099         "name" : "if",
20100         "type" : "string",
20101         "enum" : ["oic.if.s", "oic.if.baseline"]
20102     }
20103 },
20104 "definitions": {
20105     "Sensor" :
20106     {
20107         "properties": {
20108             "precision": {
20109                 "description": "Accuracy granularity of the exposed value",
20110                 "readOnly": true,
20111                 "type": "number"
20112             },
20113             "range": {
20114                 "description": "The valid range for the value Property",
20115                 "items": {
20116                     "anyOf": [
20117                         {
20118                             "type": "number"
20119                         },
20120                         {
20121                             "type": "integer"

```

```

20122         }
20123     ]
20124 },
20125 "maxItems": 2,
20126 "minItems": 2,
20127 "readOnly": true,
20128 "type": "array"
20129 },
20130 "step": {
20131     "anyOf": [
20132         {
20133             "type": "integer"
20134         },
20135         {
20136             "type": "number"
20137         }
20138     ],
20139     "description": "Step value across the defined range",
20140     "readOnly": true
20141 },
20142 "value": {
20143     "description": "true = sensed, false = not sensed.",
20144     "readOnly": true,
20145     "type": "boolean"
20146 },
20147 },
20148 "type": "object"
20149 }
20150 }
20151 }
20152 }
20153

```

#### 20154 B.35.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	boolean		Read Only	true = 감지 false = 미 감지

#### 20155 B.35.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/GenericSensorResURI		get			



## 20156 **B.36 지리 위치**

### 20157 **B.36.1 개요**

20158 이 resource 는 현재의 지리 위치 좌표와 관련된 property 를 기술한다. 지리 위치는 지리 위치 좌표  
20159 데이터이다. Latitude 는 device 의 현재의 위도 좌표(도)(°)이다.

20160  
20161 Longitude 는 device 의 현재의 경도 좌표(도)(°)이다. Altitude 는 device 의 현재의 고도  
20162 위치(미터)이다.

20163  
20164 Accuracy 는 위도 및 경도 좌표(미터)의 정확도를 나타낸다. altitudeAccuracy 는 고도 좌표(미터)의  
20165 정확도를 나타낸다. Heading 은 device 의 이동 방향(도)(°)을 나타낸다. Speed 는 device 의 현재  
20166 속도(초당 미터)를 나타낸다. 현재의 지리 위치 좌표를 검색한다.

### 20169 **B.36.2 URI 예**

20170 /GeolocationResURI

### 20171 **B.36.3 Resource Type**

20172 resource type (rt)는 ['oic.r.sensor.geolocation']으로 정의된다.

### 20173 **B.36.4 Swagger2.0 정의**

```
20174 {  
20175   "swagger": "2.0",  
20176   "info": {  
20177     "title": "Geolocation",  
20178     "version": "v1.1.0-20160519",  
20179     "license": {  
20180       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
20181       "x-description": "Redistribution and use in source and binary forms, with or without  
20182 modification, are permitted provided that the following conditions are met:\n      1.  
20183 Redistributions of source code must retain the above copyright notice, this list of conditions and  
20184 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
20185 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
20186 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
20187 Connectivity Foundation, INC. \\\n      AS IS\\n      AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
20188 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
20189 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity  
20190 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,  
20191 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR  
20192 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON  
20193 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
20194 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
20195 OF SUCH DAMAGE.\n    }  
20196   },  
20197 },  
20198 "schemes": ["http"],  
20199 "consumes": ["application/json"],  
20200 "produces": ["application/json"],  
20201 "paths": {  
20202   "/GeolocationResURI" : {  
20203     "get": {  
20204       "description": "This resource describes the properties associated with the current
```

```

geolocation coordinate.\nGeolocation is a geolocation coordinate data.\nLatitude is a device's
current Latitude coordinate (degrees).\nLongitude is a device's current Longitude coordinate
(degrees).\nAltitude is a device's current Altitude position (metres).\nAccuracy is the accuracy
level of the latitude and longitude coordinates (metres).\naltitudeAccuracy is the accuracy level
of the altitude coordinates (metres).\nheading is a direction of travel of device (degree).\nspeed
is a device's current velocity (metres per second).\nRetrieves the current geolocation
coordinates.\n",
  "parameters": [
    { "$ref": "#/parameters/interface" }
  ],
  "responses": {
    "200": {
      "description": "",
      "x-example": {
        "rt": ["oic.r.sensor.geolocation"],
        "id": "unique_example_id",
        "latitude": 55.070859,
        "longitude": -3.60512,
        "alt": 12.07,
        "accuracy": 65.0,
        "altitudeAccuracy": 0.0,
        "heading": 90.0,
        "speed": 0.0
      }
    },
    "schema": { "$ref": "#/definitions/Geolocation" }
  }
},
"parameters": {
  "interface": {
    "in": "query",
    "name": "if",
    "type": "string",
    "enum": ["oic.if.s", "oic.if.baseline"]
  }
},
"definitions": {
  "Geolocation": {
    "allOf": [
      {
        "properties": {
          "alt": {
            "description": "The current height of the position (metres)",
            "minimum": 0,
            "readOnly": true,
            "type": "number"
          }
        },
        "type": "object"
      },
      {
        "properties": {
          "accuracy": {
            "description": "The accuracy level of the latitude and longitude coordinates
(metres)",
            "minimum": 0,
            "readOnly": true,
            "type": "number"
          },
          "altitudeAccuracy": {
            "description": "The accuracy level of the altitude coordinates (metres)",
            "minimum": 0,
            "readOnly": true,
            "type": "number"
          },
          "heading": {

```

```

20276         "description": "Direction of travel of device (degree)",
20277         "maximum": 360,
20278         "minimum": 0,
20279         "readOnly": true,
20280         "type": "number"
20281     },
20282     "latitude": {
20283         "description": "Device's Current Latitude coordinate (degrees)",
20284         "readOnly": true,
20285         "type": "number"
20286     },
20287     "longitude": {
20288         "description": "Device's Current Longitude coordinate (degrees)",
20289         "readOnly": true,
20290         "type": "number"
20291     },
20292     "precision": {
20293         "description": "Accuracy granularity of the exposed value",
20294         "readOnly": true,
20295         "type": "number"
20296     },
20297     "range": {
20298         "description": "The valid range for the value Property",
20299         "items": {
20300             "anyOf": [
20301                 {
20302                     "type": "number"
20303                 },
20304                 {
20305                     "type": "integer"
20306                 }
20307             ]
20308         },
20309         "maxItems": 2,
20310         "minItems": 2,
20311         "readOnly": true,
20312         "type": "array"
20313     },
20314     "speed": {
20315         "description": "Device's current velocity (metres per second)",
20316         "minimum": 0,
20317         "readOnly": true,
20318         "type": "number"
20319     },
20320     "step": {
20321         "anyOf": [
20322             {
20323                 "type": "integer"
20324             },
20325             {
20326                 "type": "number"
20327             }
20328         ],
20329         "description": "Step value across the defined range",
20330         "readOnly": true
20331     },
20332     "value": {
20333         "anyOf": [
20334             {
20335                 "type": "array"
20336             },
20337             {
20338                 "type": "string"
20339             },
20340             {
20341                 "type": "boolean"
20342             },
20343             {
20344                 "type": "integer"
20345             },
20346             {

```

```

20347         "type": "number"
20348     },
20349     {
20350         "type": "object"
20351     }
20352 ],
20353 "description": "The value sensed or actuated by this Resource"
20354 }
20355 }
20356 }
20357 ],
20358 "required": [
20359     "latitude",
20360     "longitude",
20361     "alt"
20362 ],
20363 "type": "object"
20364 }
20365 }
20366 }
20367 }
20368

```

### 20369 B.36.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
altitudeAccuracy	숫자		Read Only	고도 좌표(미터)의 정확도 레벨
longitude	숫자	예	Read Only	Device 의 현재의 경도 좌표(도)(°)
speed	숫자		Read Only	Device 의 현재의 속도 (초당 미터)
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
accuracy	숫자		Read Only	위도 및 경도 좌표(미터)의 정확도 레벨
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
heading	숫자		Read Only	Device 의 이동 방향 (도)(°)
precision	숫자		Read Only	노출된 값의 정확도
latitude	숫자	예	Read Only	Device 의 현재의

				위도 좌표 (도)(°)
--	--	--	--	--------------

## 20370 B.36.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/GeolocationResURI		get			

## 20371 B.37 유리 파손 센서

### 20372 B.37.1 개요

20373 이 resource 는 유리 파손 센서를 기술한다. 값은 boolean 형이다. 'true' 값은 유리 파손이  
20374 감지되었음을 의미한다. 'false' 의 값은 유리 파손이 감지되지 않았음을 의미한다.

20375

20376

20377

### 20378 B.37.2 URI 예

20379 /GlassBreakResURI

### 20380 B.37.3 Resource Type

20381 resource type (rt)는 ['oic.r.sensor.glassbreak']로 정의된다.

### 20382 B.37.4 Swagger2.0 정의

```

20383 {
20384   "swagger": "2.0",
20385   "info": {
20386     "title": "Glass Break Sensor",
20387     "version": "v1.1.0-20160519",
20388     "license": {
20389       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20390       "x-description": "Redistribution and use in source and binary forms, with or without
20391 modification, are permitted provided that the following conditions are met:\n      1.
20392 Redistributions of source code must retain the above copyright notice, this list of conditions and
20393 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
20394 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20395 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
20396 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20397 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20398 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
20399 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
20400 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
20401 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
20402 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20403 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20404 OF SUCH DAMAGE.\n"
20405     }
20406   },
20407   "schemes": ["http"],
20408   "consumes": ["application/json"],
20409   "produces": ["application/json"],
20410   "paths": {
20411     "/GlassBreakResURI" : {
20412       "get": {
20413         "description": "This resource describes a glass break sensor.\nThe value is a boolean.\nA
20414 value of 'true' means that glass break has been sensed.\nA value of 'false' means that glass break
20415 not been sensed.\n",

```

```

20416     "parameters": [
20417         {"$ref": "#/parameters/interface"}
20418     ],
20419     "responses": {
20420         "200": {
20421             "description": "",
20422             "x-example":
20423                 {
20424                     "rt": ["oic.r.sensor.glassbreak"],
20425                     "id": "unique_example_id",
20426                     "value": true
20427                 },
20428             "schema": { "$ref": "#/definitions/GlassBreak" }
20429         }
20430     }
20431 }
20432 }
20433 },
20434 {
20435     "parameters": {
20436         "interface": {
20437             "in": "query",
20438             "name": "if",
20439             "type": "string",
20440             "enum": ["oic.if.s", "oic.if.baseline"]
20441         }
20442     },
20443     "definitions": {
20444         "GlassBreak": {
20445             "allOf": [
20446                 {
20447                     "properties": {
20448                         "precision": {
20449                             "description": "Accuracy granularity of the exposed value",
20450                             "readOnly": true,
20451                             "type": "number"
20452                         },
20453                         "range": {
20454                             "description": "The valid range for the value Property",
20455                             "items": {
20456                                 "anyOf": [
20457                                     {
20458                                         "type": "number"
20459                                     },
20460                                     {
20461                                         "type": "integer"
20462                                     }
20463                                 ]
20464                             },
20465                             "maxItems": 2,
20466                             "minItems": 2,
20467                             "readOnly": true,
20468                             "type": "array"
20469                         },
20470                         "step": {
20471                             "anyOf": [
20472                                 {
20473                                     "type": "integer"
20474                                 },
20475                                 {
20476                                     "type": "number"
20477                                 }
20478                             ],
20479                             "description": "Step value across the defined range",
20480                             "readOnly": true
20481                         },
20482                         "value": {
20483                             "description": "true = sensed, false = not sensed.",
20484                             "readOnly": true,
20485                             "type": "boolean"
20486                         }

```

```

20487         }
20488     },
20489     "type": "object"
20490 }
20491 ],
20492 "required": [
20493     "value"
20494 ]
20495 }
20496 }
20497 }
20498 }
20499

```

### 20500 B.37.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
value	boolean	예	Read Only	true = 감지 false = 미 감지
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

### 20501 B.37.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/GlassBreakResURI		get			

## 20502 B.38 심박수 존

### 20503 B.38.1 개요

20504 이 resource 는 Zoladz 방법을 사용하여 현재 Zone 에 의해 측정된 심장 박동수를 기술한다. Zoladz  
20505 방법은 최대 심장 박동수에 기초하여 Zone 을 정의한다; Zone 1 은 가장 낮고, Zone 5 는 가장 높다.  
20506 heartRateZone 은: "Zone1", "Zone2", "Zone3", "Zone4", 및 "Zone5" 중 하나를 포함하는  
20507 열거형이다.

20508

20509

### 20510 B.38.2 URI 예

20511 /HeartRateZoneResURI

### 20512 B.38.3 Resource Type

20513 resource type (rt)는 ['oic.r.sensor.heart.zone']으로 정의된다.

## B.38.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Heart Rate Zone",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/HeartRateZoneResURI" : {
      "get": {
        "description": "This resource describes a measured heart rate by the current Zone using the
Zoladz method\nThe Zoladz method defines Zones based on maximum heart rate; Zone 1 is the lowest,
Zone 5 is the highest.\nThe heartRateZone is an enumeration containing one of: \"Zone1\", \"Zone2\",
\"Zone3\", \"Zone4\", \"Zone5\".\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.heart.zone"],
              "id": "unique_example_id",
              "heartRateZone": "Zone3"
            },
            "schema": { "$ref": "#/definitions/heartRateZone" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "heartRateZone" : {
      "properties": {
        "heartRateZone": {
          "description": "Current heart rate zone based on the Zoladz system.",
          "enum": [
            "Zone1",
```



```

20584         "Zone2",
20585         "Zone3",
20586         "Zone4",
20587         "Zone5"
20588     ],
20589     "readOnly": true
20590 },
20591 "precision": {
20592     "description": "Accuracy granularity of the exposed value",
20593     "readOnly": true,
20594     "type": "number"
20595 },
20596 "range": {
20597     "description": "The valid range for the value Property",
20598     "items": {
20599         "anyOf": [
20600             {
20601                 "type": "number"
20602             },
20603             {
20604                 "type": "integer"
20605             }
20606         ]
20607     },
20608     "maxItems": 2,
20609     "minItems": 2,
20610     "readOnly": true,
20611     "type": "array"
20612 },
20613 "step": {
20614     "anyOf": [
20615         {
20616             "type": "integer"
20617         },
20618         {
20619             "type": "number"
20620         }
20621     ],
20622     "description": "Step value across the defined range",
20623     "readOnly": true
20624 },
20625 "value": {
20626     "anyOf": [
20627         {
20628             "type": "array"
20629         },
20630         {
20631             "type": "string"
20632         },
20633         {
20634             "type": "boolean"
20635         },
20636         {
20637             "type": "integer"
20638         },
20639         {
20640             "type": "number"
20641         },
20642         {
20643             "type": "object"
20644         }
20645     ],
20646     "description": "The value sensed or actuated by this Resource"
20647 }
20648 },
20649 "required": [
20650     "heartRateZone"
20651 ]
20652 }
20653 }
20654 }

```

20655 }  
20656

20657 **B.38.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
heartRateZone	복수 타입: schema 참조	예	Read Only	Zoladz 시스템에 기초한 현재의 심장 박동수 존
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

20658 **B.38.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/HeartRateZoneResURI		get			

20659 **B.39 가열 존**

20660 **B.39.1 개요**

20661 이 resource 는 레인지 상부의 가열 영역의 상태에 관한 정보를 제공한다. 이는 동적으로 작동  
20662 가능한(즉, device 가 냄비를 인식하는) 영역을 갖는 레인지 상부의 경우를 기술한다.

20663  
20664 maxheatinglevel 은 가열 영역에 대한 최대 레벨을 정의한다. heatinglevel 은 영역의 현재의 가열  
20665 레벨을 나타낸다. 각 요소에 대해 값 범위는 0(영역이 미 가열 상태임을 표시)으로부터  
20666 maxheatinglevel 까지이다. 현재의 가열 존 정보를 검색한다.

20667

20668

20669

20670 **B.39.2 URI 예**

20671 /HeatingZoneResURI

### 20672 B.39.3 Resource Type

20673 resource type (rt)는 ['oic.r.heatingzone']으로 정의된다.

### 20674 B.39.4 Swagger2.0 정의

```
20675 {
20676   "swagger": "2.0",
20677   "info": {
20678     "title": "Heating Zone",
20679     "version": "OCF1.0-20160722",
20680     "license": {
20681       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20682       "x-description": "Redistribution and use in source and binary forms, with or without
20683 modification, are permitted provided that the following conditions are met:\n      1.
20684 Redistributions of source code must retain the above copyright notice, this list of conditions and
20685 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
20686 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20687 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
20688 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20689 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20690 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
20691 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
20692 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
20693 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
20694 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20695 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20696 OF SUCH DAMAGE.\n"
20697     }
20698   },
20699   "schemes": ["http"],
20700   "consumes": ["application/json"],
20701   "produces": ["application/json"],
20702   "paths": {
20703     "/HeatingZoneResURI" : {
20704       "get": {
20705         "description": "This Resource provides information about the status of a heating zone of a
20706 Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
20707 device implements pot recognition).\nmaxheatinglevel defines the max level for the heating
20708 zone\nheatinglevel is the current heating level of the zone\n For each element the value range is
20709 from 0 (indication that the zone is not heating) to maxheatinglevel,\nRetrieves the current heating
20710 zone information.\n",
20711         "parameters": [
20712           { "$ref": "#/parameters/interface" }
20713         ],
20714         "responses": {
20715           "200": {
20716             "description": "",
20717             "x-example":
20718               {
20719                 "rt": ["oic.r.heatingzone"],
20720                 "id": "unique_example_id",
20721                 "maxheatinglevel": 6,
20722                 "heatinglevel": 0
20723               }
20724             ,
20725             "schema": { "$ref": "#/definitions/HeatingZone" }
20726           }
20727         }
20728       }
20729     }
20730   },
20731   "parameters": {
20732     "interface" : {
20733       "in" : "query",
20734       "name" : "if",
20735       "type" : "string",
20736       "enum" : ["oic.if.s", "oic.if.baseline"]
20737     }
20738   },
20739 }
```

```

20739 "definitions": {
20740   "HeatingZone" :
20741     {
20742       "properties": {
20743         "heatinglevel": {
20744           "description": "Current heating level for the zone indicated.",
20745           "readOnly": true,
20746           "type": "integer"
20747         },
20748         "maxheatinglevel": {
20749           "description": "Maximum heating level for the zone indicated.",
20750           "readOnly": true,
20751           "type": "integer"
20752         },
20753         "precision": {
20754           "description": "Accuracy granularity of the exposed value",
20755           "readOnly": true,
20756           "type": "number"
20757         },
20758         "range": {
20759           "description": "The valid range for the value Property",
20760           "items": {
20761             "anyOf": [
20762               {
20763                 "type": "number"
20764               },
20765               {
20766                 "type": "integer"
20767               }
20768             ]
20769           },
20770           "maxItems": 2,
20771           "minItems": 2,
20772           "readOnly": true,
20773           "type": "array"
20774         },
20775         "step": {
20776           "anyOf": [
20777             {
20778               "type": "integer"
20779             },
20780             {
20781               "type": "number"
20782             }
20783           ],
20784           "description": "Step value across the defined range",
20785           "readOnly": true
20786         },
20787         "value": {
20788           "anyOf": [
20789             {
20790               "type": "array"
20791             },
20792             {
20793               "type": "string"
20794             },
20795             {
20796               "type": "boolean"
20797             },
20798             {
20799               "type": "integer"
20800             },
20801             {
20802               "type": "number"
20803             },
20804             {
20805               "type": "object"
20806             }
20807           ],
20808           "description": "The value sensed or actuated by this Resource"
20809         }

```

```

20810     },
20811     "required": [
20812         "maxheatinglevel",
20813         "heatinglevel"
20814     ],
20815     "type": "object"
20816 }
20817 }
20818 }
20819 }
20820

```

### 20821 B.39.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
maxheatinglevel	정수	예	Read Only	표시된 영역에 대한 최대 가열 레벨
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
heatinglevel	정수	예	Read Only	표시된 영역에 대한 현재의 가열 레벨
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

### 20822 B.39.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneResURI		get			

## 20823 B.40 가열 존 Collection

### 20824 B.40.1 개요

20825 이 resource 는 레인지 상부의 가열 영역의 상태에 관한 정보를 제공한다. 이는 동적으로 작동  
 20826 가능한(즉, device 가 냄비를 인식하는) 영역을 갖는 레인지 상부의 경우를 기술한다.

20827  
 20828 resource 는 개별적인 레인지 상부 영역을 기술하는 oic.r.heatingzone 의 개체의 collection 이다.  
 20829 현재의 가열 존 정보를 검색한다.

20830  
20831

## 20832 **B.40.2 URI 예**

20833 /HeatingZoneBaselineResURI

## 20834 **B.40.3 Resource Type**

20835 resource type (rt)는 ['oic.r.heatingzonecollection', 'oic.wk.col']로 정의된다.

## 20836 **B.40.4 Swagger2.0 정의**

```
20837 {
20838   "swagger": "2.0",
20839   "info": {
20840     "title": "Heating Zone Collection",
20841     "version": "OCF1.0-20160722",
20842     "license": {
20843       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
20844       "x-description": "Redistribution and use in source and binary forms, with or without
20845 modification, are permitted provided that the following conditions are met:\n      1.
20846 Redistributions of source code must retain the above copyright notice, this list of conditions and
20847 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
20848 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
20849 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
20850 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
20851 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
20852 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
20853 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
20854 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
20855 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
20856 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
20857 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
20858 OF SUCH DAMAGE.\n"
20859     },
20860   },
20861   "schemes": ["http"],
20862   "consumes": ["application/json"],
20863   "produces": ["application/json"],
20864   "paths": {
20865     "/HeatingZoneLLResURI" : {
20866       "get": {
20867         "description": "This Resource provides information about the status of the heating zones of
20868 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
20869 device implements pot recognition).\nThe resource is a collection of instances of oic.r.heatingzone
20870 detailing the individual cooktop zones\n",
20871         "parameters": [
20872           { "$ref": "#/parameters/interface-11" }
20873         ],
20874         "responses": {
20875           "200": {
20876             "description": "",
20877             "x-example":
20878               [
20879                 { "href": "/myZone1ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"], "eps":
20880 [{"ep": "coaps://[fe80::bld6]:1122"}] },
20881                 { "href": "/myZone2ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"], "eps":
20882 [{"ep": "coaps://[fe80::bld6]:1122"}] },
20883                 { "href": "/myZone3ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"], "eps":
20884 [{"ep": "coaps://[fe80::bld6]:1122"}] },
20885                 { "href": "/myZone4ResURI", "rt": ["oic.r.heatingzone"], "if": ["oic.if.s"], "eps":
20886 [{"ep": "coaps://[fe80::bld6]:1122"}] }
20887               ],
20888             ,
20889             "schema": { "$ref": "#/definitions/HeatingZone-11" }
20890           }
20891         }
20892       }
20893     }
20894   }
20895 }
```

```

20891     }
20892   },
20893 },
20894 "/HeatingZoneBaselineResURI" : {
20895   "get": {
20896     "description": "This Resource provides information about the status of the heating zones of
20897 a Cook-Top.\nIt describes the case of a Cook-Top whose zones can be activated dynamically (i.e. the
20898 device implements pot recognition).\nThe resource is a collection of instances of oic.r.heatingzone
20899 detailing the individual cooktop zones\nRetrieves the current heating zone information.\n",
20900     "parameters": [
20901       { "$ref": "#/parameters/interface-baseline" }
20902     ],
20903     "responses": {
20904       "200": {
20905         "description": "",
20906         "x-example": {
20907           {
20908             "rt": [ "oic.r.heatingzonecollection", "oic.wk.col" ],
20909             "id": "unique_example_id",
20910             "links": [
20911               { "href": "/myZone1ResURI", "rt": [ "oic.r.heatingzone" ], "if":
20912 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
20913               { "href": "/myZone2ResURI", "rt": [ "oic.r.heatingzone" ], "if":
20914 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
20915               { "href": "/myZone3ResURI", "rt": [ "oic.r.heatingzone" ], "if":
20916 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] },
20917               { "href": "/myZone4ResURI", "rt": [ "oic.r.heatingzone" ], "if":
20918 ["oic.if.s", "oic.if.baseline"], "eps": [ { "ep": "coaps://[fe80::b1d6]:1122" } ] }
20919             ]
20920           }
20921         },
20922         "schema": { "$ref": "#/definitions/HeatingZone" }
20923       }
20924     }
20925   }
20926 },
20927 },
20928 "parameters": {
20929   "interface-ll" : {
20930     "in" : "query",
20931     "name" : "if",
20932     "type" : "string",
20933     "enum" : [ "oic.if.ll" ]
20934   },
20935   "interface-baseline" : {
20936     "in" : "query",
20937     "name" : "if",
20938     "type" : "string",
20939     "enum" : [ "oic.if.baseline" ]
20940   }
20941 },
20942 "definitions": {
20943   "HeatingZone-ll" :
20944   {
20945     "allOf": [
20946       {
20947         "description": "All forms of links in a collection",
20948         "oneOf": [
20949           {
20950             "description": "A set (array) of simple or individual OIC Links. In addition to
20951 properties required for an OIC Link, the identifier for that link in this set is also required",
20952             "items": {
20953               "properties": {
20954                 "anchor": {
20955                   "description": "This is used to override the context URI e.g. override the
20956 URI of the containing collection",
20957                   "format": "uri",
20958                   "maxLength": 256,
20959                   "type": "string"
20960                 },
20961                 "di": {

```

```

20962         "description": "Unique identifier for device (UUID)",
20963         "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-
20964 fa-F0-9]{12}$",
20965         "type": "string"
20966     },
20967     "eps": {
20968         "description": "the Endpoint information of the target Resource",
20969         "items": {
20970             "properties": {
20971                 "ep": {
20972                     "description": "URI with Transport Protocol Suites + Endpoint Locator
20973 as specified in 10.2.1",
20974                     "format": "uri",
20975                     "type": "string"
20976                 },
20977                 "pri": {
20978                     "description": "The priority among multiple Endpoints as specified in
20979 10.2.3",
20980                     "minimum": 1,
20981                     "type": "integer"
20982                 }
20983             },
20984             "type": "object"
20985         },
20986         "type": "array"
20987     },
20988     "href": {
20989         "description": "This is the target URI, it can be specified as a Relative
20990 Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
20991 make it unique.",
20992         "format": "uri",
20993         "maxLength": 256,
20994         "type": "string"
20995     },
20996     "if": {
20997         "description": "The interface set supported by this resource",
20998         "items": {
20999             "enum": [
21000                 "oic.if.baseline",
21001                 "oic.if.ll",
21002                 "oic.if.b",
21003                 "oic.if.rw",
21004                 "oic.if.r",
21005                 "oic.if.a",
21006                 "oic.if.s"
21007             ],
21008             "type": "string"
21009         },
21010         "minItems": 1,
21011         "type": "array"
21012     },
21013     "ins": {
21014         "description": "The instance identifier for this web link in an array of web
21015 links - used in collections",
21016         "oneOf": [
21017             {
21018                 "description": "An ordinal number that is not repeated - must be unique
21019 in the collection context",
21020                 "type": "integer"
21021             },
21022             {
21023                 "description": "Any unique string including a URI",
21024                 "format": "uri",
21025                 "maxLength": 256,
21026                 "type": "string"
21027             },
21028             {
21029                 "description": "Unique identifier (UUID)",
21030                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
21031 [a-fA-F0-9]{12}$",
21032                 "type": "string"

```



```

21033         }
21034     ]
21035 },
21036 "p": {
21037     "description": "Specifies the framework policies on the Resource referenced
by the target URI",
21038     "properties": {
21039         "bm": {
21040             "description": "Specifies the framework policies on the Resource
referenced by the target URI for e.g. observable and discoverable",
21041             "type": "integer"
21042         }
21043     },
21044     "required": [
21045         "bm"
21046     ],
21047     "type": "object"
21048 },
21049 "rel": {
21050     "description": "The relation of the target URI referenced by the link to the
context URI",
21051     "oneOf": [
21052         {
21053             "default": [
21054                 "hosts"
21055             ],
21056             "items": {
21057                 "maxLength": 64,
21058                 "type": "string"
21059             },
21060             "minItems": 1,
21061             "type": "array"
21062         },
21063         {
21064             "default": "hosts",
21065             "maxLength": 64,
21066             "type": "string"
21067         }
21068     ],
21069     "rt": {
21070         "description": "Resource Type",
21071         "items": {
21072             "maxLength": 64,
21073             "type": "string"
21074         },
21075         "minItems": 1,
21076         "type": "array"
21077     },
21078     "title": {
21079         "description": "A title for the link relation. Can be used by the UI to
provide a context",
21080         "maxLength": 64,
21081         "type": "string"
21082     },
21083     "type": {
21084         "default": "application/cbor",
21085         "description": "A hint at the representation of the resource referenced by
the target URI. This represents the media types that are used for both accepting and emitting",
21086         "items": {
21087             "maxLength": 64,
21088             "type": "string"
21089         },
21090         "minItems": 1,
21091         "type": "array"
21092     }
21093 },
21094 "required": [
21095     "href",
21096     "rt",
21097     "if"
21098 ]
21099 }
21100 }
21101 }
21102 }
21103 }

```

```

21104         ],
21105         "type": "object"
21106     },
21107     "type": "array"
21108 }
21109 ]
21110 }
21111 ]
21112 }
21113
21114 ,
21115 "HeatingZone" :
21116 {
21117     "allOf": [
21118     {
21119         "description": "A collection is a set (array) of tagged-link or set (array) of simple
21120 links along with additional properties to describe the collection itself",
21121         "properties": {
21122             "di": {
21123                 "description": "The device ID which is an UUIDv4 string; used for backward
21124 compatibility with Spec A definition of /oic/res",
21125                 "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-
21126 9]{12}$",
21127                 "type": "string"
21128             },
21129             "drel": {
21130                 "description": "When specified this is the default relationship to use when an OIC
21131 Link does not specify an explicit relationship with *rel* parameter",
21132                 "type": "string"
21133             },
21134             "id": {
21135                 "anyOf": [
21136                 {
21137                     "description": "A number that is unique to that collection; like an ordinal
21138 number that is not repeated",
21139                     "type": "integer"
21140                 },
21141                 {
21142                     "description": "A unique string that could be a hash or similarly unique",
21143                     "type": "string"
21144                 },
21145                 {
21146                     "description": "A unique string that could be a UUIDv4",
21147                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-
21148 F0-9]{12}$",
21149                     "type": "string"
21150                 }
21151             ],
21152             "description": "ID for the collection. Can be an value that is unique to the use
21153 context or a UUIDv4"
21154         },
21155         "links": {
21156             "description": "All forms of links in a collection",
21157             "oneOf": [
21158             {
21159                 "description": "A set (array) of simple or individual OIC Links. In addition to
21160 properties required for an OIC Link, the identifier for that link in this set is also required",
21161                 "items": {
21162                     "properties": {
21163                         "anchor": {
21164                             "description": "This is used to override the context URI e.g. override
21165 the URI of the containing collection",
21166                             "format": "uri",
21167                             "maxLength": 256,
21168                             "type": "string"
21169                         },
21170                         "di": {
21171                             "description": "Unique identifier for device (UUID)",
21172                             "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-
21173 [a-fA-F0-9]{12}$",
21174                             "type": "string"

```

```

21175         },
21176         "eps": {
21177             "description": "the Endpoint information of the target Resource",
21178             "items": {
21179                 "properties": {
21180                     "ep": {
21181                         "description": "URI with Transport Protocol Suites + Endpoint
Locator as specified in 10.2.1",
21182                         "format": "uri",
21183                         "type": "string"
21184                     },
21185                     "pri": {
21186                         "description": "The priority among multiple Endpoints as specified
in 10.2.3",
21187                         "minimum": 1,
21188                         "type": "integer"
21189                     }
21190                 },
21191                 "type": "object"
21192             },
21193             "type": "array"
21194         },
21195         "href": {
21196             "description": "This is the target URI, it can be specified as a Relative
Reference or fully-qualified URI. Relative Reference should be used along with the di parameter to
make it unique.",
21197             "format": "uri",
21198             "maxLength": 256,
21199             "type": "string"
21200         },
21201         "if": {
21202             "description": "The interface set supported by this resource",
21203             "items": {
21204                 "enum": [
21205                     "oic.if.baseline",
21206                     "oic.if.ll",
21207                     "oic.if.b",
21208                     "oic.if.rw",
21209                     "oic.if.x",
21210                     "oic.if.a",
21211                     "oic.if.s"
21212                 ],
21213                 "type": "string"
21214             },
21215             "minItems": 1,
21216             "type": "array"
21217         },
21218         "ins": {
21219             "description": "The instance identifier for this web link in an array of
web links - used in collections",
21220             "oneOf": [
21221                 {
21222                     "description": "An ordinal number that is not repeated - must be
unique in the collection context",
21223                     "type": "integer"
21224                 },
21225                 {
21226                     "description": "Any unique string including a URI",
21227                     "format": "uri",
21228                     "maxLength": 256,
21229                     "type": "string"
21230                 },
21231                 {
21232                     "description": "Unique identifier (UUID)",
21233                     "pattern": "^[a-fA-F0-9]{8}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{4}-[a-fA-F0-9]{12}$",
21234                     "type": "string"
21235                 }
21236             ]
21237         },
21238         "p": {

```

```

21246         "description": "Specifies the framework policies on the Resource
21247 referenced by the target URI",
21248         "properties": {
21249             "bm": {
21250                 "description": "Specifies the framework policies on the Resource
21251 referenced by the target URI for e.g. observable and discoverable",
21252                 "type": "integer"
21253             }
21254         },
21255         "required": [
21256             "bm"
21257         ],
21258         "type": "object"
21259     },
21260     "rel": {
21261         "description": "The relation of the target URI referenced by the link to
21262 the context URI",
21263         "oneOf": [
21264             {
21265                 "default": [
21266                     "hosts"
21267                 ],
21268                 "items": {
21269                     "maxLength": 64,
21270                     "type": "string"
21271                 },
21272                 "minItems": 1,
21273                 "type": "array"
21274             },
21275             {
21276                 "default": "hosts",
21277                 "maxLength": 64,
21278                 "type": "string"
21279             }
21280         ]
21281     },
21282     "rt": {
21283         "description": "Resource Type",
21284         "items": {
21285             "maxLength": 64,
21286             "type": "string"
21287         },
21288         "minItems": 1,
21289         "type": "array"
21290     },
21291     "title": {
21292         "description": "A title for the link relation. Can be used by the UI to
21293 provide a context",
21294         "maxLength": 64,
21295         "type": "string"
21296     },
21297     "type": {
21298         "default": "application/cbor",
21299         "description": "A hint at the representation of the resource referenced
21300 by the target URI. This represents the media types that are used for both accepting and emitting",
21301         "items": {
21302             "maxLength": 64,
21303             "type": "string"
21304         },
21305         "minItems": 1,
21306         "type": "array"
21307     }
21308 },
21309 "required": [
21310     "href",
21311     "rt",
21312     "if"
21313 ],
21314 "type": "object"
21315 },
21316 "type": "array"

```

```

21317     }
21318   ]
21319 },
21320 "rts": {
21321   "description": "Defines the list of allowable resource types (for Target and
anchors) in links included in the collection; new links being created can only be from this list",
21322   "items": {
21323     "maxLength": 64,
21324     "type": "string"
21325   },
21326   "minItems": 1,
21327   "readOnly": true,
21328   "type": "array"
21329 },
21330 },
21331 },
21332 "type": "object"
21333 },
21334 {
21335   "properties": {
21336     "id": {
21337       "description": "Instance ID of this specific resource",
21338       "maxLength": 64,
21339       "readOnly": true,
21340       "type": "string"
21341     },
21342     "if": {
21343       "description": "The interface set supported by this resource",
21344       "items": {
21345         "enum": [
21346           "oic.if.baseline",
21347           "oic.if.ll",
21348           "oic.if.b",
21349           "oic.if.lb",
21350           "oic.if.rw",
21351           "oic.if.r",
21352           "oic.if.a",
21353           "oic.if.s"
21354         ],
21355         "type": "string"
21356       },
21357       "minItems": 1,
21358       "readOnly": true,
21359       "type": "array"
21360     },
21361     "n": {
21362       "description": "Friendly name of the resource",
21363       "maxLength": 64,
21364       "readOnly": true,
21365       "type": "string"
21366     },
21367     "rt": {
21368       "items": {
21369         "enum": [
21370           "oic.r.heatingzonecollection",
21371           "oic.wk.col"
21372         ]
21373       },
21374       "maxItems": 2,
21375       "minItems": 2,
21376       "type": "array",
21377       "uniqueItems": true
21378     },
21379     "rts": {
21380       "items": {
21381         "anyOf": [
21382           {
21383             "enum": [
21384               "oic.r.heatingzone",
21385               "oic.r.value.conditional"
21386             ]
21387           }

```

```

21388         {
21389             "enum": [
21390                 "oic.r.heatingzone"
21391             ]
21392         }
21393     ],
21394 },
21395 "maxItems": 2,
21396 "minItems": 1,
21397 "type": "array",
21398 "uniqueItems": true
21399 }
21400 },
21401 },
21402 ],
21403 "type": "object"
21404 }
21405 }
21406 }
21407 }
21408

```

#### 21409 B.40.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
title	스트링			link 관계에 대한 제목. 컨텍스트를 제공하기 위하여 UI 에 의해 사용될 수 있다.
di	스트링			Device 에 대한 고유 식별자 (UUID)
rt	배열: schema 참조	예		Resource Type
eps	배열: schema 참조			target Resource 의 Endpoint 정보
ins	복수 타입: schema 참조			collection 에서 사용된 web link 배열 내의 web link 에 대한 개체 식별자
if	배열: schema 참조	예		이 resource 에 의해 지원되는 인터페이스 집합
anchor	스트링			이것은 컨텍스트 URI 를 무시하기

				위하여, 예를 들어, collection 을 포함하는 URI 를 무시하기 위해 사용된다.
type	배열: schema 참조			target URI 에 의해 참조되는 resource 의 표현에 대한 힌트. 수락 및 방출 모두를 위해 사용되는 Media 유형을 나타낸다.
href	스트링	예		이것은 target URI 이고, 상대 참조 또는 완전한 URI 로 규정될 수 있다. 상대 참조는 고유하도록 di 파라미터와 함께 사용되어야 한다.
p	객체: schema 참조			타겟 URI 에 의해 참조되는 Resource 에 대한 framework 정책을 규정한다.
rel	복수 타입: schema 참조			link 에 의해 참조되는 target URI 의 컨텍스트 URI 에 대한 관계
rts	배열: schema 참조			
id	스트링		Read Only	특정 resource 의 개체 ID
rt	배열:	예		

	schema 참조			
n	스트링		Read Only	Resource 의 친근한 명칭
if	배열: schema 참조	예	Read Only	이 resource 에 의해 지원되는 인터페이스 집합

## 21410 B.40.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HeatingZoneBaselineResURI		get			

## 21411 B.41 높이

### 21412 B.41.1 개요

21413 이 resource 는 물체의 물리적 크기의 높이와 관련된 property 를 기술한다. Height(height)는  
21414 물체의 높이이다. 물체의 높이를 검색한다.

21415

21416

### 21417 B.41.2 URI 예

21418 /HeightResURI

### 21419 B.41.3 Resource Type

21420 resource type (rt)는 ['oic.r.height']로 정의된다.

### 21421 B.41.4 Swagger2.0 정의

```

21422 {
21423   "swagger": "2.0",
21424   "info": {
21425     "title": "Height",
21426     "version": "v1.1.0-20160519",
21427     "license": {
21428       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
21429       "x-description": "Redistribution and use in source and binary forms, with or without
21430 modification, are permitted provided that the following conditions are met:\n      1.
21431 Redistributions of source code must retain the above copyright notice, this list of conditions and
21432 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
21433 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
21434 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
21435 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
21436 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
21437 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
21438 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
21439 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
21440 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
21441 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
21442 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
21443 OF SUCH DAMAGE.\n"
21444   }
21445 },
21446 "schemes": ["http"],

```



```

21447     "consumes": ["application/json"],
21448     "produces": ["application/json"],
21449     "paths": {
21450         "/HeightResURI" : {
21451             "get": {
21452                 "description": "This resource describes the properties associated with height of an
21453 object's physical size.\nHeight (height) is height of an object.\nRetrieves height of an object.\n",
21454                 "parameters": [
21455                     { "$ref": "#/parameters/interface" }
21456                 ],
21457                 "responses": {
21458                     "200": {
21459                         "description": "",
21460                         "x-example":
21461                             {
21462                                 "rt": ["oic.r.height"],
21463                                 "id": "unique_example_id",
21464                                 "height": 100.0
21465                             }
21466                         ,
21467                         "schema": { "$ref": "#/definitions/Height" }
21468                     }
21469                 },
21470             },
21471             "post": {
21472                 "description": "Sets the Height.\n",
21473                 "parameters": [
21474                     { "$ref": "#/parameters/interface" },
21475                     {
21476                         "name": "body",
21477                         "in": "body",
21478                         "required": true,
21479                         "schema": { "$ref": "#/definitions/Height" },
21480                         "x-example":
21481                             {
21482                                 "id": "unique_example_id",
21483                                 "height": 200.0
21484                             }
21485                     }
21486                 ],
21487                 "responses": {
21488                     "200": {
21489                         "description": "Indicates that the height was successfully changed.\nThe new height
21490 is provided in the response.\n",
21491                         "x-example":
21492                             {
21493                                 "id": "unique_example_id",
21494                                 "height": 200.0
21495                             }
21496                         ,
21497                         "schema": { "$ref": "#/definitions/Height" }
21498                     },
21499                     "403": {
21500                         "description": "Indicates that OIC client sent an invalid property value to the
21501 server.\nThe server responds with the current resource representation.\n",
21502                         "x-example":
21503                             {
21504                                 "id": "unique_example_id",
21505                                 "height": 200.0
21506                             }
21507                         ,
21508                         "schema": { "$ref": "#/definitions/Height" }
21509                     }
21510                 }
21511             }
21512         }
21513     },
21514     "parameters": {
21515         "interface" : {
21516             "in" : "query",
21517             "name" : "if",

```

```

21518         "type" : "string",
21519         "enum" : ["oic.if.a", "oic.if.baseline"]
21520     },
21521 },
21522 "definitions": {
21523     "Height" :
21524     {
21525         "properties": {
21526             "height": {
21527                 "description": "Height of an object",
21528                 "minimum": 0,
21529                 "type": "number"
21530             },
21531             "precision": {
21532                 "description": "Accuracy granularity of the exposed value",
21533                 "readOnly": true,
21534                 "type": "number"
21535             },
21536             "range": {
21537                 "description": "The valid range for the value Property",
21538                 "items": {
21539                     "anyOf": [
21540                         {
21541                             "type": "number"
21542                         },
21543                         {
21544                             "type": "integer"
21545                         }
21546                     ]
21547                 },
21548                 "maxItems": 2,
21549                 "minItems": 2,
21550                 "readOnly": true,
21551                 "type": "array"
21552             },
21553             "step": {
21554                 "anyOf": [
21555                     {
21556                         "type": "integer"
21557                     },
21558                     {
21559                         "type": "number"
21560                     }
21561                 ],
21562                 "description": "Step value across the defined range",
21563                 "readOnly": true
21564             },
21565             "value": {
21566                 "anyOf": [
21567                     {
21568                         "type": "array"
21569                     },
21570                     {
21571                         "type": "string"
21572                     },
21573                     {
21574                         "type": "boolean"
21575                     },
21576                     {
21577                         "type": "integer"
21578                     },
21579                     {
21580                         "type": "number"
21581                     },
21582                     {
21583                         "type": "object"
21584                     }
21585                 ],
21586                 "description": "The value sensed or actuated by this Resource"
21587             }
21588         },

```

```

21589         "required": [
21590             "height"
21591         ],
21592         "type": "object"
21593     }
21594 }
21595 }
21596 }
21597

```

#### 21598 B.41.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
Height	숫자	예		물체의 높이
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

#### 21599 B.41.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HeightResURI		get	post		

### 21600 B.42 습도

#### 21601 B.42.1 개요

21602 이 resource 는 감지되거나 요구되는 습도를 기술한다. 값 humidity 는 측정된 상대 습도의  
21603 백분율을 기술하는 정수이다. 값 desiredHumidity 는 요구되는 상대 습도를 나타내는 정수 이다.  
21604 현재의 (상대) 습도 레벨을 검색한다.

21605

21606

#### 21607 B.42.2 URI 예

21608 /HumidityResURI

#### 21609 B.42.3 Resource Type

21610 resource type (rt)는 ['oic.r.humidity']로 정의된다.

## B.42.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Humidity",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/HumidityResURI" : {
      "get": {
        "description": "This resource describes a sensed or desired humidity.\nThe value humidity
is an integer describing the percentage measured relative humidity.\nThe value desiredHumidity is
an integer showing the desired target relative humidity.\nRetrieves the current (relative) humidity
level.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.humidity"],
              "id": "unique_example_id",
              "humidity": 40,
              "desiredHumidity": 40
            }
          },
          "schema": { "$ref": "#/definitions/Humidity" }
        }
      },
      "post": {
        "description": "Sets the desired relative humidity level.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/HumidityUpdate" },
            "x-example": {
              "id": "unique_example_id",
              "desiredHumidity": 45
            }
          }
        ],
        "responses": {
```

```

21681         "200": {
21682             "description": "Indicates that the relative humidity level was changed.\nThe new
21683 relative humidity level is provided in the response.\n",
21684             "x-example":
21685                 {
21686                     "id": "unique_example_id",
21687                     "desiredHumidity": 45
21688                 }
21689             ,
21690             "schema": { "$ref": "#/definitions/HumidityUpdate" }
21691         }
21692     }
21693 }
21694 },
21695 "parameters": {
21696     "interface" : {
21697         "in" : "query",
21698         "name" : "if",
21699         "type" : "string",
21700         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
21701     }
21702 },
21703 "definitions": {
21704     "Humidity" :
21705         {
21706             "properties": {
21707                 "desiredHumidity": {
21708                     "description": "Desired value for Humidity",
21709                     "type": "integer"
21710                 },
21711                 "humidity": {
21712                     "description": "Current sensed value for Humidity",
21713                     "readOnly": true,
21714                     "type": "integer"
21715                 },
21716                 "precision": {
21717                     "description": "Accuracy granularity of the exposed value",
21718                     "readOnly": true,
21719                     "type": "number"
21720                 },
21721                 "range": {
21722                     "description": "The valid range for the value Property",
21723                     "items": {
21724                         "anyOf": [
21725                             {
21726                                 "type": "number"
21727                             },
21728                             {
21729                                 "type": "integer"
21730                             }
21731                         ]
21732                     },
21733                     "maxItems": 2,
21734                     "minItems": 2,
21735                     "readOnly": true,
21736                     "type": "array"
21737                 },
21738                 "step": {
21739                     "anyOf": [
21740                         {
21741                             "type": "integer"
21742                         },
21743                         {
21744                             "type": "number"
21745                         }
21746                     ],
21747                     "description": "Step value across the defined range",
21748                     "readOnly": true
21749                 },
21750                 "value": {
21751

```

```

21752         "anyOf": [
21753             {
21754                 "type": "array"
21755             },
21756             {
21757                 "type": "string"
21758             },
21759             {
21760                 "type": "boolean"
21761             },
21762             {
21763                 "type": "integer"
21764             },
21765             {
21766                 "type": "number"
21767             },
21768             {
21769                 "type": "object"
21770             }
21771         ],
21772         "description": "The value sensed or actuated by this Resource"
21773     },
21774     "required": [
21775         "humidity"
21776     ],
21777     "type": "object"
21778 }
21779
21780
21781 ,
21782 "HumidityUpdate" :
21783 {
21784     "properties": {
21785         "desiredHumidity": {
21786             "description": "Desired value for Humidity",
21787             "type": "integer"
21788         },
21789         "precision": {
21790             "description": "Accuracy granularity of the exposed value",
21791             "readOnly": true,
21792             "type": "number"
21793         },
21794         "range": {
21795             "description": "The valid range for the value Property",
21796             "items": {
21797                 "anyOf": [
21798                     {
21799                         "type": "number"
21800                     },
21801                     {
21802                         "type": "integer"
21803                     }
21804                 ]
21805             },
21806             "maxItems": 2,
21807             "minItems": 2,
21808             "readOnly": true,
21809             "type": "array"
21810         },
21811         "step": {
21812             "anyOf": [
21813                 {
21814                     "type": "integer"
21815                 },
21816                 {
21817                     "type": "number"
21818                 }
21819             ],
21820             "description": "Step value across the defined range",
21821             "readOnly": true
21822         },

```

```

21823     "value": {
21824         "anyOf": [
21825             {
21826                 "type": "array"
21827             },
21828             {
21829                 "type": "string"
21830             },
21831             {
21832                 "type": "boolean"
21833             },
21834             {
21835                 "type": "integer"
21836             },
21837             {
21838                 "type": "number"
21839             },
21840             {
21841                 "type": "object"
21842             }
21843         ],
21844         "description": "The value sensed or actuated by this Resource"
21845     },
21846     "type": "object"
21847 }
21848 }
21849 }
21850 }
21851 }
21852

```

#### 21853 B.42.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
desiredHumidity	정수			습도에 대해 요구되는 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
습도	정수	예	Read Only	습도에 대해 현재 감지된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
desiredHumidity	정수			습도에 대해

				요구되는 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

## 21854 B.42.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/HumidityResURI		get	post		

## 21855 B.43 제빙기

### 21856 B.43.1 개요

21857 이 resource 는 제빙기의 동작 상태를 기술한다. Status 는 가능한 제빙기 상태의 집합으로부터  
21858 하나의 값을 포함하는 하나의 스트링이다. 가능한 상태는 열거형 [on, off, full]에 의해 정의된다.

21859  
21860 'on' 상태는 제빙기가 동작중인 것을 나타낸다. 'off' 상태는 제빙기가 동작하지 않음을 나타낸다.

21861  
21862 'full' 상태는 얼음 통이 채워져 있음 (제빙기가 동작 중)을 나타낸다. 현재의 제빙기 상태를 검색한다.

21863

21864

### 21865 B.43.2 URI 예

21866 /IceMakerResURI

### 21867 B.43.3 Resource Type

21868 resource type (rt)는 ['oic.r.icemaker']로 정의된다.

### 21869 B.43.4 Swagger2.0 정의

```

21870 {
21871   "swagger": "2.0",
21872   "info": {
21873     "title": "Ice Maker",
21874     "version": "v1.1.0-20160519",
21875     "license": {
21876       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
21877       "x-description": "Redistribution and use in source and binary forms, with or without
21878 modification, are permitted provided that the following conditions are met:\n      1.
21879 Redistributions of source code must retain the above copyright notice, this list of conditions and/or
21880 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
21881 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
21882 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
21883 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT

```



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```

    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/IceMakerResURI" : {
      "get": {
        "description": "This resource describes an the operational state of an Ice Maker.\nThe status is a string containing a value from the set of possible ice maker statuses.\nThe possible statuses are defined by the enumeration [on, off, full]\nA status of 'on' means that the Ice Maker is operating.\nA status of 'off' means that the Ice Maker is not operating.\nA status of 'full' means that the ice collection bin is full (Ice Maker is operating).\nRetrieves the current Ice Maker status.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.icemaker"],
              "id": "unique_example_id",
              "status": "on"
            },
            "schema": { "$ref": "#/definitions/IceMaker" }
          }
        }
      },
      "post": {
        "description": "Sets the desired Ice Maker status.\nOnly valid settings for status in a Post shall be [on,off].\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/IceMakerUpdate" },
            "x-example": {
              "id": "unique_example_id",
              "status": "off"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "Indicates that the Ice Maker status was changed.\nThe new status is provided in the response.\n",
            "x-example": {
              "id": "unique_example_id",
              "status": "off"
            },
            "schema": { "$ref": "#/definitions/IceMakerUpdate" }
          },
          "403": {
            "description": "This response is generated by the OIC Server when the client sends:\n An update with an invalid property value for status.\nThe server responds with the

```

```

21955 current resource representation.\n",
21956     "x-example":
21957     {
21958         "id": "unique_example_id",
21959         "status": "off"
21960     }
21961     ,
21962     "schema": { "$ref": "#/definitions/IceMakerUpdate" }
21963 }
21964 }
21965 }
21966 },
21967 {
21968     "parameters": {
21969         "interface" : {
21970             "in" : "query",
21971             "name" : "if",
21972             "type" : "string",
21973             "enum" : ["oic.if.a", "oic.if.baseline"]
21974         }
21975     },
21976     "definitions": {
21977         "IceMaker" :
21978         {
21979             "properties": {
21980                 "precision": {
21981                     "description": "Accuracy granularity of the exposed value",
21982                     "readOnly": true,
21983                     "type": "number"
21984                 },
21985                 "range": {
21986                     "description": "The valid range for the value Property",
21987                     "items": {
21988                         "anyOf": [
21989                             {
21990                                 "type": "number"
21991                             },
21992                             {
21993                                 "type": "integer"
21994                             }
21995                         ]
21996                     },
21997                     "maxItems": 2,
21998                     "minItems": 2,
21999                     "readOnly": true,
22000                     "type": "array"
22001                 },
22002                 "status": {
22003                     "description": "Status of the Ice Maker",
22004                     "enum": [
22005                         "on",
22006                         "off",
22007                         "full"
22008                     ]
22009                 },
22010                 "step": {
22011                     "anyOf": [
22012                         {
22013                             "type": "integer"
22014                         },
22015                         {
22016                             "type": "number"
22017                         }
22018                     ],
22019                     "description": "Step value across the defined range",
22020                     "readOnly": true
22021                 },
22022                 "value": {
22023                     "anyOf": [
22024                         {
22025                             "type": "array"

```

```

22026         },
22027         {
22028             "type": "string"
22029         },
22030         {
22031             "type": "boolean"
22032         },
22033         {
22034             "type": "integer"
22035         },
22036         {
22037             "type": "number"
22038         },
22039         {
22040             "type": "object"
22041         }
22042     ],
22043     "description": "The value sensed or actuated by this Resource"
22044 },
22045 },
22046 "required": [
22047     "status"
22048 ],
22049 "type": "object"
22050 }
22051
22052 ,
22053 "IceMakerUpdate" :
22054 {
22055     "properties": {
22056         "precision": {
22057             "description": "Accuracy granularity of the exposed value",
22058             "readOnly": true,
22059             "type": "number"
22060         },
22061         "range": {
22062             "description": "The valid range for the value Property",
22063             "items": {
22064                 "anyOf": [
22065                     {
22066                         "type": "number"
22067                     },
22068                     {
22069                         "type": "integer"
22070                     }
22071                 ]
22072             },
22073             "maxItems": 2,
22074             "minItems": 2,
22075             "readOnly": true,
22076             "type": "array"
22077         },
22078         "status": {
22079             "description": "Set the status of the Ice Maker",
22080             "enum": [
22081                 "on",
22082                 "off"
22083             ]
22084         },
22085         "step": {
22086             "anyOf": [
22087                 {
22088                     "type": "integer"
22089                 },
22090                 {
22091                     "type": "number"
22092                 }
22093             ],
22094             "description": "Step value across the defined range",
22095             "readOnly": true
22096         },

```

```

22097     "value": {
22098         "anyOf": [
22099             {
22100                 "type": "array"
22101             },
22102             {
22103                 "type": "string"
22104             },
22105             {
22106                 "type": "boolean"
22107             },
22108             {
22109                 "type": "integer"
22110             },
22111             {
22112                 "type": "number"
22113             },
22114             {
22115                 "type": "object"
22116             }
22117         ],
22118         "description": "The value sensed or actuated by this Resource"
22119     },
22120 },
22121 "required": [
22122     "status"
22123 ],
22124 "type": "object"
22125 }
22126
22127 }
22128 }
22129

```

#### 22130 B.43.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
status	복수 타입 schema 참조	예		제빙기의 상태
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도

step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
status	복수 타입: schema 참조	예		제빙기의 상태 설정

## 22131 B.43.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/IceMakerResURI		get	post		

## 22132 B.44 조도 센서

### 22133 B.44.1 개요

22134 이 resource 는 조도 센서를 기술한다. 조도는 부동 소수점 형이고, 단위 면적당 감지된 광속을 lux  
22135 단위로 표현한다.

22136

### 22137 B.44.2 URI 예

22138 /IlluminanceSensorResURI

### 22139 B.44.3 Resource Type

22140 resource type (rt)는 ['oic.r.sensor.illuminance']로 정의된다.

### 22141 B.44.4 Swagger2.0 정의

```

22142 {
22143   "swagger": "2.0",
22144   "info": {
22145     "title": "Illuminance Sensor",
22146     "version": "v1.1.0-20160519",
22147     "license": {
22148       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22149       "x-description": "Redistribution and use in source and binary forms, with or without
22150 modification, are permitted provided that the following conditions are met:\n      1.
22151 Redistributions of source code must retain the above copyright notice, this list of conditions and
22152 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22153 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
22154 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
22155 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
22156 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
22157 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
22158 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
22159 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
22160 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
22161 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22162 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22163 OF SUCH DAMAGE.\n"
22164     }
22165   },
22166   "schemes": ["http"],

```

```

22167     "consumes": ["application/json"],
22168     "produces": ["application/json"],
22169     "paths": {
22170         "/IlluminanceSensorResURI" : {
22171             "get": {
22172                 "description": "This resource describes an illuminance sensor.\nIlluminance is a float and
22173 represents the sensed luminous flux per unit area in lux.\n",
22174                 "parameters": [
22175                     {"$ref": "#/parameters/interface"}
22176                 ],
22177                 "responses": {
22178                     "200": {
22179                         "description": "",
22180                         "x-example":
22181                             {
22182                                 "rt": ["oic.r.sensor.illuminance"],
22183                                 "id": "unique_example_id",
22184                                 "illuminance": 450.0
22185                             },
22186                         "schema": { "$ref": "#/definitions/Illuminance" }
22187                     }
22188                 }
22189             }
22190         }
22191     },
22192     "parameters": {
22193         "interface" : {
22194             "in" : "query",
22195             "name" : "if",
22196             "type" : "string",
22197             "enum" : ["oic.if.s", "oic.if.baseline"]
22198         }
22199     },
22200     "definitions": {
22201         "Illuminance" :
22202             {
22203                 "properties": {
22204                     "illuminance": {
22205                         "description": "Sensed luminous flux per unit area in lux.",
22206                         "readOnly": true,
22207                         "type": "number"
22208                     },
22209                     "precision": {
22210                         "description": "Accuracy granularity of the exposed value",
22211                         "readOnly": true,
22212                         "type": "number"
22213                     },
22214                     "range": {
22215                         "description": "The valid range for the value Property",
22216                         "items": {
22217                             "anyOf": [
22218                                 {
22219                                     "type": "number"
22220                                 },
22221                                 {
22222                                     "type": "integer"
22223                                 }
22224                             ]
22225                         },
22226                         "maxItems": 2,
22227                         "minItems": 2,
22228                         "readOnly": true,
22229                         "type": "array"
22230                     },
22231                     "step": {
22232                         "anyOf": [
22233                             {
22234                                 "type": "integer"
22235                             },
22236                             {

```

```

22238         "type": "number"
22239     }
22240 ],
22241     "description": "Step value across the defined range",
22242     "readOnly": true
22243 },
22244     "value": {
22245         "anyOf": [
22246             {
22247                 "type": "array"
22248             },
22249             {
22250                 "type": "string"
22251             },
22252             {
22253                 "type": "boolean"
22254             },
22255             {
22256                 "type": "integer"
22257             },
22258             {
22259                 "type": "number"
22260             },
22261             {
22262                 "type": "object"
22263             }
22264         ],
22265         "description": "The value sensed or actuated by this Resource"
22266     }
22267 },
22268     "required": [
22269         "illuminance"
22270     ]
22271 }
22272 }
22273 }
22274 }
22275

```

#### 22276 B.44.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
illuminance	숫자	예	Read Only	단위 면적당 lux 단위의 감지된 광속

22277 **B.44.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/IlluminanceSensorResURI		get			

22278 **B.45 잠금 코드**

22279 **B.45.1 개요**

22280 잠금 코드를 기술하는 Resource. lockCodeList 는 잠금 관련 가능 코드의 배열이다. 이들은 모두  
22281 스트링으로 제공된다. 현재의 자물쇠 코드 값을 검색한다.

22282

22283

22284

22285 **B.45.2 URI 예**

22286 /LockCodeResURI

22287 **B.45.3 Resource Type**

22288 resource type (rt)는 ['oic.r.lock.code']로 정의된다.

22289 **B.45.4 Swagger2.0 정의**

```

22290 {
22291   "swagger": "2.0",
22292   "info": {
22293     "title": "Lock Code",
22294     "version": "v1.1.0-20160519",
22295     "license": {
22296       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22297       "x-description": "Redistribution and use in source and binary forms, with or without
22298 modification, are permitted provided that the following conditions are met:\n      1.
22299 Redistributions of source code must retain the above copyright notice, this list of conditions and
22300 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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22309 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22310 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22311 OF SUCH DAMAGE.\n"
22312   },
22313 },
22314 "schemes": ["http"],
22315 "consumes": ["application/json"],
22316 "produces": ["application/json"],
22317 "paths": {
22318   "/LockCodeResURI" : {
22319     "get": {
22320       "description": "Resource describing a lock code.\nThe lockCodeList is an array of possible
22321 codes that may be associated with a lock.\nThese are all presented as strings.\nRetrieves the
22322 current lock code values.\n",
22323       "parameters": [
22324         {"$ref": "#/parameters/interface"}

```



```

22325     ],
22326     "responses": {
22327         "200": {
22328             "description": "",
22329             "x-example":
22330                 {
22331                     "rt": ["oic.r.lock.code"],
22332                     "id": "unique_example_id",
22333                     "lockCodeList": ["012345", "112233"]
22334                 }
22335             ,
22336             "schema": { "$ref": "#/definitions/LockCode" }
22337         }
22338     },
22339 },
22340 "post": {
22341     "description": "Updates the current lock code values.\n",
22342     "parameters": [
22343         { "$ref": "#/parameters/interface" },
22344         {
22345             "name": "body",
22346             "in": "body",
22347             "required": true,
22348             "schema": { "$ref": "#/definitions/LockCode" },
22349             "x-example":
22350                 {
22351                     "id": "unique_example_id",
22352                     "lockCodeList": ["543210", "332211"]
22353                 }
22354         }
22355     ],
22356     "responses": {
22357         "200": {
22358             "description": "",
22359             "x-example":
22360                 {
22361                     "id": "unique_example_id",
22362                     "lockCodeList": ["543210", "332211"]
22363                 }
22364             ,
22365             "schema": { "$ref": "#/definitions/LockCode" }
22366         }
22367     }
22368 },
22369 },
22370 },
22371 "parameters": {
22372     "interface": {
22373         "in": "query",
22374         "name": "if",
22375         "type": "string",
22376         "enum": ["oic.if.a", "oic.if.baseline"]
22377     }
22378 },
22379 "definitions": {
22380     "LockCode": {
22381         {
22382             "properties": {
22383                 "lockCodeList": {
22384                     "items": {
22385                         "description": "Value for the lock code",
22386                         "type": "string"
22387                     },
22388                     "type": "array"
22389                 },
22390                 "precision": {
22391                     "description": "Accuracy granularity of the exposed value",
22392                     "readOnly": true,
22393                     "type": "number"
22394                 },
22395                 "range": {

```

```

22396         "description": "The valid range for the value Property",
22397         "items": {
22398             "anyOf": [
22399                 {
22400                     "type": "number"
22401                 },
22402                 {
22403                     "type": "integer"
22404                 }
22405             ]
22406         },
22407         "maxItems": 2,
22408         "minItems": 2,
22409         "readOnly": true,
22410         "type": "array"
22411     },
22412     "step": {
22413         "anyOf": [
22414             {
22415                 "type": "integer"
22416             },
22417             {
22418                 "type": "number"
22419             }
22420         ],
22421         "description": "Step value across the defined range",
22422         "readOnly": true
22423     },
22424     "value": {
22425         "anyOf": [
22426             {
22427                 "type": "array"
22428             },
22429             {
22430                 "type": "string"
22431             },
22432             {
22433                 "type": "boolean"
22434             },
22435             {
22436                 "type": "integer"
22437             },
22438             {
22439                 "type": "number"
22440             },
22441             {
22442                 "type": "object"
22443             }
22444         ],
22445         "description": "The value sensed or actuated by this Resource"
22446     }
22447 },
22448 "required": [
22449     "lockCodeList"
22450 ],
22451 "type": "object"
22452 }
22453 }
22454 }
22455 }
22456

```

#### B.45.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한

				유효 범위
lockCodeList	배열: schema 참조	예		
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도

#### 22458 B.45.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/LockCodeResURI		get	post		

#### 22459 B.46 잠금

##### 22460 B.46.1 개요

22461 잠금을 기술하는 Resource. lockState 의 type 에 대해 값 'Locked'는 도어가 잠겨 있는 상태를  
22462 나타낸다. 값 'Unlocked' 는 도어가 잠겨 있지 않은 상태를 나타낸다.

22463

22464

22465

##### 22466 B.46.2 URI 예

22467 /LockStatusResURI

##### 22468 B.46.3 Resource Type

22469 resource type (rt)는 ['oic.r.lock.status']로 정의된다.

##### 22470 B.46.4 Swagger2.0 정의

```

22471 {
22472   "swagger": "2.0",
22473   "info": {
22474     "title": "Lock",
22475     "version": "v1.1.0-20160519",
22476     "license": {
22477       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22478       "x-description": "Redistribution and use in source and binary forms, with or without
22479 modification, are permitted provided that the following conditions are met:\n      1.
22480 Redistributions of source code must retain the above copyright notice, this list of conditions and
22481 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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22483 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
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```

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```

    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/LockStatusResURI" : {
      "get": {
        "description": "Resource describing a lock.\nFor the type of lockState, the value 'Locked'
        indicates that the door is Locked.\nThe value 'Unlocked' indicates that the door is
        Unlocked.\nRetrieves the state of the lock.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.lock.status"],
              "id": "unique_example_id",
              "lockState": "Locked"
            },
            "schema": { "$ref": "#/definitions/Lock" }
          }
        }
      },
      "post": {
        "description": "Sets the current lock state.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" },
          {
            "name": "body",
            "in": "body",
            "required": true,
            "schema": { "$ref": "#/definitions/Lock" },
            "x-example": {
              "id": "unique_example_id",
              "lockState": "Unlocked"
            }
          }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "id": "unique_example_id",
              "lockState": "Unlocked"
            },
            "schema": { "$ref": "#/definitions/Lock" }
          },
          "403": {
            "description": "This response is generated by the OIC Server when the client
            sends:\n An update with an invalid property value for lockState.\nThe server responds with the
            current resource representation.\n",
            "x-example": {
              "lockState": "Unlocked"
            }
          }
        }
      }
    }
  }
}

```

```

22557         "schema": { "$ref": "#/definitions/Lock" }
22558     }
22559 }
22560 }
22561 }
22562 },
22563 "parameters": {
22564     "interface" : {
22565         "in" : "query",
22566         "name" : "if",
22567         "type" : "string",
22568         "enum" : ["oic.if.a", "oic.if.baseline"]
22569     }
22570 },
22571 "definitions": {
22572     "Lock" :
22573     {
22574         "properties": {
22575             "lockState": {
22576                 "description": "State of the lock.",
22577                 "enum": [
22578                     "Locked",
22579                     "Unlocked"
22580                 ],
22581                 "type": "string"
22582             },
22583             "precision": {
22584                 "description": "Accuracy granularity of the exposed value",
22585                 "readOnly": true,
22586                 "type": "number"
22587             },
22588             "range": {
22589                 "description": "The valid range for the value Property",
22590                 "items": {
22591                     "anyOf": [
22592                         {
22593                             "type": "number"
22594                         },
22595                         {
22596                             "type": "integer"
22597                         }
22598                     ]
22599                 },
22600                 "maxItems": 2,
22601                 "minItems": 2,
22602                 "readOnly": true,
22603                 "type": "array"
22604             },
22605             "step": {
22606                 "anyOf": [
22607                     {
22608                         "type": "integer"
22609                     },
22610                     {
22611                         "type": "number"
22612                     }
22613                 ],
22614                 "description": "Step value across the defined range",
22615                 "readOnly": true
22616             },
22617             "value": {
22618                 "anyOf": [
22619                     {
22620                         "type": "array"
22621                     },
22622                     {
22623                         "type": "string"
22624                     },
22625                     {
22626                         "type": "boolean"
22627                     }

```

```

22628         {
22629             "type": "integer"
22630         },
22631         {
22632             "type": "number"
22633         },
22634         {
22635             "type": "object"
22636         }
22637     ],
22638     "description": "The value sensed or actuated by this Resource"
22639 },
22640 },
22641 "required": [
22642     "lockState"
22643 ],
22644 "type": "object"
22645 }
22646 }
22647 }
22648 }
22649

```

#### 22650 B.46.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
lockState	스트링	예		자물쇠의 상태
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

#### 22651 B.46.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/LockStatusResURI		get	post		

### 22652 B.47 자계 방향 센서

#### 22653 B.47.1 개요

22654 이 resource 는 공간 내에서 Observer 의 현재 지점에서 지구 자계의 방향을 기술한다. 일반적인  
22655 사용의 경우는 개인용 device 상에서 나침반 판독 값의 측정을 포함한다. 값은 각각이 부동 소수점  
22656 형인 Hx, Hy, 및 Hz (이 순서대로)를 포함하는 배열이다. Hx, Hy, 및 Hz 의 각각은 A/m 로 표현된다.  
22657

22658  
22659

## 22660 **B.47.2 URI 예**

22661 /MagneticFieldDirectionResURI

## 22662 **B.47.3 Resource Type**

22663 resource type (rt)는 ['oic.r.sensor.magneticfielddirection']로 정의된다.

## 22664 **B.47.4 Swagger2.0 정의**

```
22665 {
22666   "swagger": "2.0",
22667   "info": {
22668     "title": "Magnetic Field Direction Sensor",
22669     "version": "v1.1.0-20160519",
22670     "license": {
22671       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22672       "x-description": "Redistribution and use in source and binary forms, with or without
22673 modification, are permitted provided that the following conditions are met:\n      1.
22674 Redistributions of source code must retain the above copyright notice, this list of conditions and
22675 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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22684 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22685 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22686 OF SUCH DAMAGE.\n"
22687     },
22688   },
22689   "schemes": ["http"],
22690   "consumes": ["application/json"],
22691   "produces": ["application/json"],
22692   "paths": {
22693     "/MagneticFieldDirectionResURI" : {
22694       "get": {
22695         "description": "This resource describes the direction of the Earth's magnetic field at the
22696 observer's current point in space.\nTypical use case includes measurement of compass readings on a
22697 personal device.\nThe value is an array containing Hx, Hy, Hz (in that order) each of which are
22698 floats.\nEach of Hx, Hy and Hz are expressed in A/m (Amperes per metre)\n",
22699         "parameters": [
22700           { "$ref": "#/parameters/interface" }
22701         ],
22702         "responses": {
22703           "200": {
22704             "description": "",
22705             "x-example": {
22706               "rt": ["oic.r.sensor.magneticfielddirection"],
22707               "id": "unique_example_id",
22708               "value": [100.0,15.0,90.0]
22709             }
22710           },
22711           "schema": { "$ref": "#/definitions/magneticFieldDirection" }
22712         }
22713       }
22714     }
22715   },
22716 },
22717 },
22718 "parameters": {
```

```

22719     "interface" : {
22720         "in" : "query",
22721         "name" : "if",
22722         "type" : "string",
22723         "enum" : ["oic.if.s", "oic.if.baseline"]
22724     },
22725     "definitions": {
22726         "magneticFieldDirection" :
22727         {
22728             "properties": {
22729                 "precision": {
22730                     "description": "Accuracy granularity of the exposed value",
22731                     "readOnly": true,
22732                     "type": "number"
22733                 },
22734                 "range": {
22735                     "description": "The valid range for the value Property",
22736                     "items": {
22737                         "anyOf": [
22738                             {
22739                                 "type": "number"
22740                             },
22741                             {
22742                                 "type": "integer"
22743                             }
22744                         ]
22745                     },
22746                     "maxItems": 2,
22747                     "minItems": 2,
22748                     "readOnly": true,
22749                     "type": "array"
22750                 },
22751                 "step": {
22752                     "anyOf": [
22753                         {
22754                             "type": "integer"
22755                         },
22756                         {
22757                             "type": "number"
22758                         }
22759                     ],
22760                     "description": "Step value across the defined range",
22761                     "readOnly": true
22762                 },
22763                 "value": {
22764                     "description": "Array containing Hx, Hy, Hz.",
22765                     "items": {
22766                         "type": "number"
22767                     },
22768                     "maxItems": 3,
22769                     "minItems": 3,
22770                     "readOnly": true,
22771                     "type": "array"
22772                 }
22773             },
22774             "required": [
22775                 "value"
22776             ]
22777         }
22778     }
22779 }
22780 }
22781 }
22782

```

#### 22783 B.47.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의



				정확도
range	배열 schema 참조		Read Only	value Property 에 대한 유효 범위
value	배열: schema 참조	예	Read Only	Hx, Hy, 및 Hz 를 포함하는 배열.
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

#### 22784 B.47.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MagneticFieldDirectionResURI		get			

#### 22785 B.48 Media

##### 22786 B.48.1 개요

22787 이 resource 는 OCF Serve 가 지원하는 Media 유형을 규정한다. Resource 는 Media 요소의  
22788 배열이다. 각 요소는 다음을 포함한다: 규정된 Media 유형이 액세스될 수 있는 URL. SDP 를  
22789 사용하는 Media 의 정의를 포함하는 스트링 배열. sdp 배열 내의 각 entry 는 SDP 라인이다. 각  
22790 라인은 SDP 스펙에서 정의된 SDP 구문을 따라야 한다.

22791  
22792 SDP 스펙은 <http://tools.ietf.org/html/rfc4566> 에서 찾을 수 있다. 현재의 Media Source 를  
22793 검색한다.

22794  
22795

##### 22796 B.48.2 URI 예

22797 /MediaResURI

##### 22798 B.48.3 Resource Type

22799 resource type (rt)는 ['oic.r.media']로 정의된다.

##### 22800 B.48.4 Swagger2.0 정의

```

22801 {
22802   "swagger": "2.0",
22803   "info": {
22804     "title": "Media",
22805     "version": "v1.1.0-20160519",
22806     "license": {
22807       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
22808       "x-description": "Redistribution and use in source and binary forms, with or without
22809 modification, are permitted provided that the following conditions are met:\n      1.
22810 Redistributions of source code must retain the above copyright notice, this list of conditions and
22811 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
22812 copyright notice, this list of conditions and the following disclaimer in the documentation and/or

```

```

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22818 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
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22820 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
22821 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
22822 OF SUCH DAMAGE.\n"
22823 }
22824 },
22825 "schemes": ["http"],
22826 "consumes": ["application/json"],
22827 "produces": ["application/json"],
22828 "paths": {
22829   "/MediaResURI" : {
22830     "get": {
22831       "description": "This resource specifies the media types that an OCF Server supports.\nThe
22832 resource is an array of media elements. Each element contains:\n  A URL at which the specified
22833 media type can be accessed.\n  A string array containing the definition of the media using SDP.\n
22834 Each entry in the sdp array is an SDP line.\n  Each line shall follow the SDP description syntax
22835 as defined in the SDP specification.\nThe SDP specification can be found at
22836 http://tools.ietf.org/html/rfc4566.\nRetrieves the current media resource.\n",
22837       "parameters": [
22838         { "$ref": "#/parameters/interface" }
22839       ],
22840       "responses": {
22841         "200": {
22842           "description": "",
22843           "x-example":
22844             {
22845               "rt": ["oic.r.media"],
22846               "id": "unique_example_id",
22847               "media": [
22848                 {
22849                   "url": "some example url",
22850                   "sdp": [
22851                     "m=video 1 RTP/AVP 96",
22852                     "a=rtpmap:96 H264/9000",
22853                     "a=fmt:96 profile-level-id=42A028;packetization-mode=1"
22854                   ]
22855                 },
22856                 {
22857                   "url": "some other example1 url",
22858                   "sdp": [
22859                     "m=audio 2 RTP/AVP 97",
22860                     "a=rtpmap:97 MP4A-LATM/90000"
22861                   ]
22862                 },
22863                 {
22864                   "url": "some other example2 url",
22865                   "sdp": [
22866                     "m=video 3 RTP/AVP 98",
22867                     "a=rtpmap:98 jpeg/90000",
22868                     "a=fmt:98 sampling=YCbCr-4:2:0;width=256;height=256"
22869                   ]
22870                 }
22871               ]
22872             }
22873       },
22874       "schema": { "$ref": "#/definitions/Media" }
22875     }
22876   }
22877 },
22878 },
22879 },
22880 "parameters": {
22881   "interface" : {
22882     "in" : "query",
22883     "name" : "if",

```

```

22884         "type" : "string",
22885         "enum" : ["oic.if.s", "oic.if.baseline"]
22886     },
22887 },
22888 "definitions": {
22889     "Media" :
22890     {
22891         "properties": {
22892             "media": {
22893                 "items": {
22894                     "properties": {
22895                         "sdp": {
22896                             "description": "Array of strings, one per SDP line",
22897                             "items": {
22898                                 "description": "SDP media or attribute line",
22899                                 "type": "string"
22900                             },
22901                             "type": "array"
22902                         },
22903                         "url": {
22904                             "description": "url for the media instance",
22905                             "type": "string"
22906                         }
22907                     },
22908                     "type": "object"
22909                 },
22910                 "type": "array"
22911             },
22912             "precision": {
22913                 "description": "Accuracy granularity of the exposed value",
22914                 "readOnly": true,
22915                 "type": "number"
22916             },
22917             "range": {
22918                 "description": "The valid range for the value Property",
22919                 "items": {
22920                     "anyOf": [
22921                         {
22922                             "type": "number"
22923                         },
22924                         {
22925                             "type": "integer"
22926                         }
22927                     ]
22928                 },
22929                 "maxItems": 2,
22930                 "minItems": 2,
22931                 "readOnly": true,
22932                 "type": "array"
22933             },
22934             "step": {
22935                 "anyOf": [
22936                     {
22937                         "type": "integer"
22938                     },
22939                     {
22940                         "type": "number"
22941                     }
22942                 ],
22943                 "description": "Step value across the defined range",
22944                 "readOnly": true
22945             },
22946             "value": {
22947                 "anyOf": [
22948                     {
22949                         "type": "array"
22950                     },
22951                     {
22952                         "type": "string"
22953                     },
22954                     {

```

```

22955         "type": "boolean"
22956     },
22957     {
22958         "type": "integer"
22959     },
22960     {
22961         "type": "number"
22962     },
22963     {
22964         "type": "object"
22965     }
22966 ],
22967 "description": "The value sensed or actuated by this Resource"
22968 },
22969 },
22970 "required": [
22971     "media"
22972 ]
22973 }
22974 }
22975 }
22976 }
22977

```

#### 22978 B.48.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
media	배열: schema 참조	예		

#### 22979 B.48.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MediaResURI		get			

### 22980 B.49 Media Source

#### 22981 B.49.1 개요

22982 이 resource 는 device 상에 존재하는 Media Source 를 정의한다. sources 는 입력 Source 또는  
22983 출력 Source 가 될 수 있고, 이 resource 는 이에 관계 없이 기능한다. sourceName 은 미리-정의된  
22984 Media 입력 또는 출력 (예: "HDMI", "DVI")을 규정한다. sourceNumber 는 개체(예: "PC", 1)를

22985 규정하기 위한 숫자형 식별자이다. sourceType 은 Source 가 오디오, 비디오 또는 둘 다인지를  
22986 정의하기 위한 열거형이다. Status 는 특정 Source 개체가 선택되었는지 여부를 결정하기 위한  
22987 Boolean 형이다. true 의 status 는 Source 개체가 선택되었음을 의미한다. false 의 status 는 Source  
22988 개체가 선택되지 않았음을 의미한다.

22989

22990

## 22991 **B.49.2 URI 예**

22992 /mediaSourceResURI

## 22993 **B.49.3 Resource Type**

22994 resource type (rt)는 ['oic.r.mediasource']로 정의된다.

## 22995 **B.49.4 Swagger2.0 정의**

```
22996 {  
22997   "swagger": "2.0",  
22998   "info": {  
22999     "title": "Media Source",  
23000     "version": "v1.1.0-20160519",  
23001     "license": {  
23002       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
23003       "x-description": "Redistribution and use in source and binary forms, with or without  
23004 modification, are permitted provided that the following conditions are met:\n      1.  
23005 Redistributions of source code must retain the above copyright notice, this list of conditions and  
23006 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
23007 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
23008 other materials provided with the distribution.\n      THIS SOFTWARE IS PROVIDED BY THE Open  
23009 Connectivity Foundation, INC. \\\n      AS IS\\n AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
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23012 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,  
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23014 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON  
23015 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
23016 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
23017 OF SUCH DAMAGE.\n    }  
23018   },  
23019   "schemes": ["http"],  
23020   "consumes": ["application/json"],  
23021   "produces": ["application/json"],  
23022   "paths": {  
23023     "/mediaSourceResURI" : {  
23024       "get": {  
23025         "description": "This resource defines a media source that exists on a device.\n      The source  
23026 can be an input source or output source, this resource is agnostic of that.\n      The sourceName  
23027 specifies a pre-defined media input or output (e.g.\n      \"HDMI\", \"DVI\")\n      The sourceNumber is a  
23028 numeric identifier to specify the instance (e.g. \"PC\", 1)\n      The sourceType is an enumeration  
23029 defining whether the source is audio, video or both.\n      The status is a boolean that determines if  
23030 the specific source instance is selected or not.\n      A status of true means that the source  
23031 instance is selected.\n      A status of false means that the source instance is not selected.\n    },  
23032     "parameters": [  
23033       {  
23034         \"$ref\": \"#/parameters/interface\"  
23035       }  
23036     ],  
23037     "responses": {  
23038       "200": {  
23039         "description": "",  
23040         "x-example": {  
23041           "rt": ["oic.r.mediasource"],  
23042           "id": "unique_example_id",
```

```

23043         "sourceName": "HDMI-CEC",
23044         "sourceNumber": "1",
23045         "sourceType": "videoPlusAudio",
23046         "status": true
23047     }
23048 },
23049     "schema": { "$ref": "#/definitions/mediaSource" }
23050 }
23051 },
23052 },
23053 "post": {
23054     "description": "Changes the status of the source.\nAllows changes of the sourceName and the
23055 status.\n",
23056     "parameters": [
23057         { "$ref": "#/parameters/interface" },
23058         {
23059             "name": "body",
23060             "in": "body",
23061             "required": true,
23062             "schema": { "$ref": "#/definitions/mediaSource" },
23063             "x-example":
23064                 {
23065                     "id": "unique_example_id",
23066                     "sourceName": "my new name",
23067                     "sourceNumber": "1",
23068                     "status": true
23069                 }
23070         ]
23071     },
23072     "responses": {
23073         "200": {
23074             "description": "",
23075             "x-example":
23076                 {
23077                     "id": "unique_example_id",
23078                     "sourceName": "my new name",
23079                     "sourceNumber": "1",
23080                     "status": true
23081                 }
23082         },
23083         "schema": { "$ref": "#/definitions/mediaSource" }
23084     }
23085 }
23086 },
23087 },
23088 },
23089 "parameters": {
23090     "interface": {
23091         "in": "query",
23092         "name": "if",
23093         "type": "string",
23094         "enum": ["oic.if.a", "oic.if.baseline"]
23095     }
23096 },
23097 "definitions": {
23098     "mediaSource":
23099         {
23100             "properties": {
23101                 "precision": {
23102                     "description": "Accuracy granularity of the exposed value",
23103                     "readOnly": true,
23104                     "type": "number"
23105                 },
23106                 "range": {
23107                     "description": "The valid range for the value Property",
23108                     "items": {
23109                         "anyOf": [
23110                             {
23111                                 "type": "number"
23112                             }
23113                         ]
23114                     }
23115                 }
23116             }
23117         }
23118     }
23119 }

```

```

23114         "type": "integer"
23115     }
23116 ]
23117 },
23118 "maxItems": 2,
23119 "minItems": 2,
23120 "readOnly": true,
23121 "type": "array"
23122 },
23123 "sourceName": {
23124     "description": "Specifies a pre-defined media input or output",
23125     "type": "string"
23126 },
23127 "sourceNumber": {
23128     "description": "Numeric identifier to specify the instance",
23129     "readOnly": true,
23130     "type": [
23131         "integer",
23132         "string"
23133     ]
23134 },
23135 "sourceType": {
23136     "description": "Specifies the type of the source",
23137     "enum": [
23138         "audioOnly",
23139         "videoOnly",
23140         "audioPlusVideo"
23141     ],
23142     "readOnly": true
23143 },
23144 "status": {
23145     "description": "Specifies if the specific source instance is selected or not",
23146     "type": "boolean"
23147 },
23148 "step": {
23149     "anyOf": [
23150         {
23151             "type": "integer"
23152         },
23153         {
23154             "type": "number"
23155         }
23156     ],
23157     "description": "Step value across the defined range",
23158     "readOnly": true
23159 },
23160 "value": {
23161     "anyOf": [
23162         {
23163             "type": "array"
23164         },
23165         {
23166             "type": "string"
23167         },
23168         {
23169             "type": "boolean"
23170         },
23171         {
23172             "type": "integer"
23173         },
23174         {
23175             "type": "number"
23176         },
23177         {
23178             "type": "object"
23179         }
23180     ],
23181     "description": "The value sensed or actuated by this Resource"
23182 }
23183 },
23184 "required": [

```

```

23185         "sourceName",
23186         "status"
23187     ]
23188 }
23189 }
23190 }
23191 }
23192

```

#### 23193 B.49.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
sourceName	스트링	예		미리 정의된 Media 입력 또는 출력을 규정
sourceType	복수 타입: schema 참조		Read Only	소스의 유형을 규정
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
status	boolean	예		특정 Source 개체가 선택되었는지 여부를 규정한다
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
sourceNumber	['정수', '스트링']		Read Only	개체를 규정하기 위한 숫자 식별자
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

#### 23194 B.49.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceResURI		get	post		

### 23195 B.50 Media Source 목록

#### 23196 B.50.1 개요

23197 이 resource 는 device 상에서 사용 가능한 Media Source 의 목록을 제공한다. Sources 는  
 23198 개별적으로 정의된 mediaSource 의 배열이다.



23199  
23200 기본적인 resource type oic.r.mediaSourceList 는 소스가 입력 또는 출력인지의 어떠한 표시도  
23201 제공하지 않는다. 따라서, 이 resource 의 2 가지 사양이 존재한다. Device 가 입력 소스를 노출할 때  
23202 oic.r.media.input 의 resource type 을 갖는 이 resource 의 개체가 노출된다.

23203  
23204 Device 가 출력 소스를 노출할 때, oic.r.media.output 의 resource type 을 갖는 이 resource 의  
23205 개체가 노출된다. Device 가 입력 및 출력 소스를 둘 다 노출할 때 이 resource 의 2 가지 개체, 즉,  
23206 하나의 resource type oic.r.media.input 을 갖는 개체와 oic.r.media.output 의 resource type 을  
23207 갖는 개체를 노출시킨다.

23208

23209

## 23210 **B.50.2 URI 예**

23211 /mediaSourceListResURI

## 23212 **B.50.3 Resource Type**

23213 resource type (rt)는 ['oic.r.mediasourcelist']로 정의된다.

## 23214 **B.50.4 Swagger2.0 정의**

```
23215 {
23216   "swagger": "2.0",
23217   "info": {
23218     "title": "Media Source List",
23219     "version": "v1.1.0-20160519",
23220     "license": {
23221       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23222       "x-description": "Redistribution and use in source and binary forms, with or without
23223 modification, are permitted provided that the following conditions are met:\n      1.
23224 Redistributions of source code must retain the above copyright notice, this list of conditions and
23225 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
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23234 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23235 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23236 OF SUCH DAMAGE.\n"
23237     }
23238   },
23239   "schemes": ["http"],
23240   "consumes": ["application/json"],
23241   "produces": ["application/json"],
23242   "paths": {
23243     "/mediaSourceListResURI" : {
23244       "get": {
23245         "description": "This resource provides the list of media sources available on the
23246 device.\nThe sources are an array of mediaSource(s) as separately defined.\nThe basic resource type
23247 oic.r.mediaSourceList does not provide any indications whether the source is input or
23248 output.\nHence, two specializations of this resource exist.\nWhen a device exposes input sources
23249 then an instance of this resource with a resource type of oic.r.media.input is exposed.\nWhen a
23250 device exposes output sources then an instance of this resource with a resource type of
23251 oic.r.media.output is exposed.\nA device that exposes both input and output media sources then
```

```

23252 exposes two instances of this resource,\none with a resource type of oic.r.media.input and one with
23253 a resource type of oic.r.media.output\n",
23254     "parameters": [
23255         {"$ref": "#/parameters/interface"}
23256     ],
23257     "responses": {
23258         "200": {
23259             "description": "",
23260             "x-example":
23261                 {
23262                     "rt": ["oic.r.mediasourcelist"],
23263                     "id": "unique_example_id",
23264                     "sources": [
23265                         {
23266                             "sourceName": "HDMI-CEC",
23267                             "sourceNumber": "1",
23268                             "sourceType": "audioPlusVideo",
23269                             "status": true
23270                         },
23271                         {
23272                             "sourceName": "dualRCA",
23273                             "sourceNumber": "1",
23274                             "sourceType": "audioOnly",
23275                             "status": false
23276                         }
23277                     ]
23278                 }
23279             ,
23280             "schema": { "$ref": "#/definitions/mediaSourceList" }
23281         }
23282     },
23283 },
23284 "post": {
23285     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
23286 the status.\n",
23287     "parameters": [
23288         {"$ref": "#/parameters/interface"},
23289         {
23290             "name": "body",
23291             "in": "body",
23292             "required": true,
23293             "schema": { "$ref": "#/definitions/mediaSourceList" },
23294             "x-example":
23295                 {
23296                     "id": "unique_example_id",
23297                     "sources": [
23298                         {
23299                             "sourceName": "my new name",
23300                             "sourceNumber": "1",
23301                             "status": true
23302                         }
23303                     ]
23304                 }
23305         }
23306     ],
23307     "responses": {
23308         "200": {
23309             "description": "",
23310             "x-example":
23311                 {
23312                     "id": "unique_example_id",
23313                     "sources": [
23314                         {
23315                             "sourceName": "my new name",
23316                             "sourceNumber": "1",
23317                             "status": true
23318                         }
23319                     ]
23320                 }
23321             ,
23322             "schema": { "$ref": "#/definitions/mediaSourceList" }

```

```

23323     }
23324   }
23325 }
23326 }
23327 },
23328 "parameters": {
23329   "interface" : {
23330     "in" : "query",
23331     "name" : "if",
23332     "type" : "string",
23333     "enum" : ["oic.if.a", "oic.if.baseline"]
23334   }
23335 },
23336 "definitions": {
23337   "mediaSourceList" :
23338   {
23339     "properties": {
23340       "precision": {
23341         "description": "Accuracy granularity of the exposed value",
23342         "readOnly": true,
23343         "type": "number"
23344       },
23345       "range": {
23346         "description": "The valid range for the value Property",
23347         "items": {
23348           "anyOf": [
23349             {
23350               "type": "number"
23351             },
23352             {
23353               "type": "integer"
23354             }
23355           ]
23356         },
23357         "maxItems": 2,
23358         "minItems": 2,
23359         "readOnly": true,
23360         "type": "array"
23361       },
23362       "sources": {
23363         "items": {
23364           "oneOf": [
23365             {
23366               "properties": {
23367                 "sourceName": {
23368                   "description": "Specifies a pre-defined media input or output",
23369                   "type": "string"
23370                 },
23371                 "sourceNumber": {
23372                   "description": "Numeric identifier to specify the instance",
23373                   "readOnly": true,
23374                   "type": [
23375                     "integer",
23376                     "string"
23377                   ]
23378                 },
23379                 "sourceType": {
23380                   "description": "Specifies the type of the source",
23381                   "enum": [
23382                     "audioOnly",
23383                     "videoOnly",
23384                     "audioPlusVideo"
23385                   ],
23386                   "readOnly": true
23387                 },
23388                 "status": {
23389                   "description": "Specifies if the specific source instance is selected or not",
23390                   "type": "boolean"
23391                 }
23392             }
23393           ]
23394         }
23395       }
23396     }
23397   }
23398 }
23399 }

```

```

23394     ]
23395   },
23396   "type": "array"
23397 },
23398 "step": {
23399   "anyOf": [
23400     {
23401       "type": "integer"
23402     },
23403     {
23404       "type": "number"
23405     }
23406   ],
23407   "description": "Step value across the defined range",
23408   "readOnly": true
23409 },
23410 "value": {
23411   "anyOf": [
23412     {
23413       "type": "array"
23414     },
23415     {
23416       "type": "string"
23417     },
23418     {
23419       "type": "boolean"
23420     },
23421     {
23422       "type": "integer"
23423     },
23424     {
23425       "type": "number"
23426     },
23427     {
23428       "type": "object"
23429     }
23430   ],
23431   "description": "The value sensed or actuated by this Resource"
23432 },
23433 },
23434 "required": [
23435   "sources"
23436 ]
23437 }
23438 }
23439 }
23440 }
23441

```

#### B.50.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
sources	배열 schema 참조	예		
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한

				유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

## 23443 B.50.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceListResURI		get	post		

## 23444 B.51 Media Source 입력

### 23445 B.51.1 개요

23446 이 resource 는 device 상에서 사용 가능한 입력 Media Source 의 목록을 제공한다. Sources 는  
23447 개별적으로 정의된 mediaSource 의 배열이다.

23448

### 23449 B.51.2 URI 예

23450 /mediaSourceInputResURI

### 23451 B.51.3 Resource Type

23452 resource type (rt)는 ['oic.r.media.input']로 정의된다.

### 23453 B.51.4 Swagger2.0 정의

```

23454 {
23455   "swagger": "2.0",
23456   "info": {
23457     "title": "Media Source Input",
23458     "version": "v1.1.0-20160519",
23459     "license": {
23460       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23461       "x-description": "Redistribution and use in source and binary forms, with or without
23462 modification, are permitted provided that the following conditions are met:\n      1.
23463 Redistributions of source code must retain the above copyright notice, this list of conditions and
23464 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23465 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23466 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23467 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23468 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23469 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23470 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
23471 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
23472 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
23473 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23474 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23475 OF SUCH DAMAGE.\n"
23476     }
23477   },
23478   "schemes": ["http"],
23479   "consumes": ["application/json"],
23480   "produces": ["application/json"],
23481   "paths": {
23482     "/mediaSourceInputResURI" : {
23483       "get": {
23484         "description": "This resource provides the list of input media sources available on the
23485 device.\nThe sources are an array of mediaSource(s) as separately defined.\n",
23486         "parameters": [

```

```

23487     {"$ref": "#/parameters/interface"}
23488 ],
23489 "responses": {
23490     "200": {
23491         "description": "",
23492         "x-example":
23493             {
23494                 "rt": ["oic.r.media.input"],
23495                 "id": "unique_example_id",
23496                 "sources": [
23497                     {
23498                         "sourceName": "HDMI-CEC",
23499                         "sourceNumber": "1",
23500                         "sourceType": "audioPlusVideo",
23501                         "status": true
23502                     },
23503                     {
23504                         "sourceName": "dualRCA",
23505                         "sourceNumber": "1",
23506                         "sourceType": "audioOnly",
23507                         "status": false
23508                     }
23509                 ]
23510             }
23511         ,
23512         "schema": { "$ref": "#/definitions/mediaSourceList" }
23513     }
23514 },
23515 },
23516 "post": {
23517     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
23518 the status.\n",
23519     "parameters": [
23520         {"$ref": "#/parameters/interface"},
23521         {
23522             "name": "body",
23523             "in": "body",
23524             "required": true,
23525             "schema": { "$ref": "#/definitions/mediaSourceList" },
23526             "x-example":
23527                 {
23528                     "id": "unique_example_id",
23529                     "sources": [
23530                         {
23531                             "sourceName": "my new name",
23532                             "sourceNumber": "1",
23533                             "status": true
23534                         }
23535                     ]
23536                 }
23537         }
23538     ],
23539     "responses": {
23540         "200": {
23541             "description": "",
23542             "x-example":
23543                 {
23544                     "id": "unique_example_id",
23545                     "sources": [
23546                         {
23547                             "sourceName": "my new name",
23548                             "sourceNumber": "1",
23549                             "status": true
23550                         }
23551                     ]
23552                 }
23553             ,
23554             "schema": { "$ref": "#/definitions/mediaSourceList" }
23555         }
23556     }
23557 }

```

```

23558     }
23559   },
23560   "parameters": {
23561     "interface" : {
23562       "in" : "query",
23563       "name" : "if",
23564       "type" : "string",
23565       "enum" : ["oic.if.a", "oic.if.baseline"]
23566     }
23567   },
23568   "definitions": {
23569     "mediaSourceList" :
23570     {
23571       "properties": {
23572         "precision": {
23573           "description": "Accuracy granularity of the exposed value",
23574           "readOnly": true,
23575           "type": "number"
23576         },
23577         "range": {
23578           "description": "The valid range for the value Property",
23579           "items": {
23580             "anyOf": [
23581               {
23582                 "type": "number"
23583               },
23584               {
23585                 "type": "integer"
23586               }
23587             ]
23588           },
23589           "maxItems": 2,
23590           "minItems": 2,
23591           "readOnly": true,
23592           "type": "array"
23593         },
23594         "sources": {
23595           "items": {
23596             "oneOf": [
23597               {
23598                 "properties": {
23599                   "sourceName": {
23600                     "description": "Specifies a pre-defined media input or output",
23601                     "type": "string"
23602                   },
23603                   "sourceNumber": {
23604                     "description": "Numeric identifier to specify the instance",
23605                     "readOnly": true,
23606                     "type": [
23607                       "integer",
23608                       "string"
23609                     ]
23610                   },
23611                   "sourceType": {
23612                     "description": "Specifies the type of the source",
23613                     "enum": [
23614                       "audioOnly",
23615                       "videoOnly",
23616                       "audioPlusVideo"
23617                     ],
23618                     "readOnly": true
23619                   },
23620                   "status": {
23621                     "description": "Specifies if the specific source instance is selected or not",
23622                     "type": "boolean"
23623                   }
23624                 }
23625             }
23626           },
23627           "type": "array"
23628         }

```

```

23629     },
23630     "step": {
23631       "anyOf": [
23632         {
23633           "type": "integer"
23634         },
23635         {
23636           "type": "number"
23637         }
23638       ],
23639       "description": "Step value across the defined range",
23640       "readOnly": true
23641     },
23642     "value": {
23643       "anyOf": [
23644         {
23645           "type": "array"
23646         },
23647         {
23648           "type": "string"
23649         },
23650         {
23651           "type": "boolean"
23652         },
23653         {
23654           "type": "integer"
23655         },
23656         {
23657           "type": "number"
23658         },
23659         {
23660           "type": "object"
23661         }
23662       ],
23663       "description": "The value sensed or actuated by this Resource"
23664     }
23665   },
23666   "required": [
23667     "sources"
23668   ]
23669 }
23670
23671 }
23672 }
23673

```

#### 23674 B.51.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
sources	배열: schema 참조	예		
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나



				작동된 값
--	--	--	--	-------

## 23675 B.51.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/mediaSourceInputResURI		get	post		

## 23676 B.52 Media Source 출력

### 23677 B.52.1 개요

23678 이 resource 는 device 상에서 사용 가능한 출력 Media Source 의 목록을 제공한다. Sources 는  
23679 개별적으로 정의된 mediaSource 의 배열이다.

23680

### 23681 B.52.2 URI 예

23682 /mediaSourceOutputResURI

### 23683 B.52.3 Resource Type

23684 resource type (rt)는 ['oic.r.media.output']으로 정의된다.

### 23685 B.52.4 Swagger2.0 정의

```

23686 {
23687   "swagger": "2.0",
23688   "info": {
23689     "title": "Media Source Output",
23690     "version": "v1.1.0-20160519",
23691     "license": {
23692       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23693       "x-description": "Redistribution and use in source and binary forms, with or without
23694 modification, are permitted provided that the following conditions are met:\n      1.
23695 Redistributions of source code must retain the above copyright notice, this list of conditions and
23696 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23697 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23698 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23699 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23700 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23701 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
23702 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
23703 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
23704 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
23705 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23706 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23707 OF SUCH DAMAGE.\n"
23708     }
23709   },
23710   "schemes": ["http"],
23711   "consumes": ["application/json"],
23712   "produces": ["application/json"],
23713   "paths": {
23714     "/mediaSourceOutputResURI" : {
23715       "get": {
23716         "description": "This resource provides the list of output media sources available on the
23717 device.\nThe sources are an array of mediaSource(s) as separately defined.\n",
23718         "parameters": [
23719           {"$ref": "#/parameters/interface"}
23720         ],
23721         "responses": {
23722           "200": {

```

```

23723         "description" : "",
23724         "x-example":
23725         {
23726             "rt": ["oic.r.media.output"],
23727             "id": "unique_example_id",
23728             "sources": [
23729                 {
23730                     "sourceName": "HDMI-CEC",
23731                     "sourceNumber": "1",
23732                     "sourceType": "audioPlusVideo",
23733                     "status": true
23734                 },
23735                 {
23736                     "sourceName": "dualRCA",
23737                     "sourceNumber": "1",
23738                     "sourceType": "audioOnly",
23739                     "status": false
23740                 }
23741             ]
23742         }
23743     ,
23744     "schema": { "$ref": "#/definitions/mediaSourceList" }
23745 }
23746 },
23747 },
23748 "post": {
23749     "description": "Changes the status of the source(s).\nAllows changes of the sourceName and
23750 the status.\n",
23751     "parameters": [
23752         { "$ref": "#/parameters/interface" },
23753         {
23754             "name": "body",
23755             "in": "body",
23756             "required": true,
23757             "schema": { "$ref": "#/definitions/mediaSourceList" },
23758             "x-example":
23759             {
23760                 "id": "unique_example_id",
23761                 "sources": [
23762                     {
23763                         "sourceName": "my new name",
23764                         "sourceNumber": "1",
23765                         "status": true
23766                     }
23767                 ]
23768             }
23769         }
23770     ],
23771     "responses": {
23772         "200": {
23773             "description" : "",
23774             "x-example":
23775             {
23776                 "id": "unique_example_id",
23777                 "sources": [
23778                     {
23779                         "sourceName": "my new name",
23780                         "sourceNumber": "1",
23781                         "status": true
23782                     }
23783                 ]
23784             }
23785         },
23786         "schema": { "$ref": "#/definitions/mediaSourceList" }
23787     }
23788 },
23789 },
23790 },
23791 },
23792 "parameters": {
23793     "interface" : {

```

```

23794     "in" : "query",
23795     "name" : "if",
23796     "type" : "string",
23797     "enum" : ["oic.if.a", "oic.if.baseline"]
23798   }
23799 },
23800 "definitions": {
23801   "mediaSourceList" :
23802   {
23803     "properties": {
23804       "precision": {
23805         "description": "Accuracy granularity of the exposed value",
23806         "readOnly": true,
23807         "type": "number"
23808       },
23809       "range": {
23810         "description": "The valid range for the value Property",
23811         "items": {
23812           "anyOf": [
23813             {
23814               "type": "number"
23815             },
23816             {
23817               "type": "integer"
23818             }
23819           ]
23820         },
23821         "maxItems": 2,
23822         "minItems": 2,
23823         "readOnly": true,
23824         "type": "array"
23825       },
23826       "sources": {
23827         "items": {
23828           "oneOf": [
23829             {
23830               "properties": {
23831                 "sourceName": {
23832                   "description": "Specifies a pre-defined media input or output",
23833                   "type": "string"
23834                 },
23835                 "sourceNumber": {
23836                   "description": "Numeric identifier to specify the instance",
23837                   "readOnly": true,
23838                   "type": [
23839                     "integer",
23840                     "string"
23841                   ]
23842                 },
23843                 "sourceType": {
23844                   "description": "Specifies the type of the source",
23845                   "enum": [
23846                     "audioOnly",
23847                     "videoOnly",
23848                     "audioPlusVideo"
23849                   ],
23850                   "readOnly": true
23851                 },
23852                 "status": {
23853                   "description": "Specifies if the specific source instance is selected or not",
23854                   "type": "boolean"
23855                 }
23856               }
23857             }
23858           ]
23859         },
23860         "type": "array"
23861       },
23862       "step": {
23863         "anyOf": [
23864           {

```

```

23865         "type": "integer"
23866     },
23867     {
23868         "type": "number"
23869     }
23870 ],
23871 "description": "Step value across the defined range",
23872 "readOnly": true
23873 },
23874 "value": {
23875     "anyOf": [
23876         {
23877             "type": "array"
23878         },
23879         {
23880             "type": "string"
23881         },
23882         {
23883             "type": "boolean"
23884         },
23885         {
23886             "type": "integer"
23887         },
23888         {
23889             "type": "number"
23890         },
23891         {
23892             "type": "object"
23893         }
23894     ],
23895     "description": "The value sensed or actuated by this Resource"
23896 }
23897 },
23898 "required": [
23899     "sources"
23900 ]
23901 }
23902
23903 }
23904 }
23905

```

#### 23906 B.52.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
sources	배열: schema 참조	예		
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
precision	숫자		Read Only	노출된 값의 정확도

23907 **B.52.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/mediaSourceOutputResURI		get	post		

23908 **B.53 모드**

23909 **B.53.1 개요**

23910 이 resource 는 하나의 device 가 제공할 수 있는 동작 모드를 기술한다. 모드는 판독 또는 설정될 수  
 23911 있다. supportedMode 는 device 가 지원 가능한 모드의 배열이다. modes 는 현재 활성화된 모드의  
 23912 배열이다. 현재의 모드를 검색한다.

23913

23914

23915

23916 **B.53.2 URI 예**

23917 /ModeResURI

23918 **B.53.3 Resource Type**

23919 resource type (rt)는 ['oic.r.mode']로 정의된다.

23920 **B.53.4 Swagger2.0 정의**

```

23921 {
23922   "swagger": "2.0",
23923   "info": {
23924     "title": "Mode",
23925     "version": "v1.1.0-20160519",
23926     "license": {
23927       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
23928       "x-description": "Redistribution and use in source and binary forms, with or without
23929 modification, are permitted provided that the following conditions are met:\n      1.
23930 Redistributions of source code must retain the above copyright notice, this list of conditions and
23931 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
23932 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
23933 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
23934 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
23935 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
23936 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
23937 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
23938 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
23939 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
23940 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
23941 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
23942 OF SUCH DAMAGE.\n"
23943     }
23944   },
23945   "schemes": ["http"],
23946   "consumes": ["application/json"],
23947   "produces": ["application/json"],
23948   "paths": {
23949     "/ModeResURI" : {
23950       "get": {
23951         "description": "This resource describes the modes of operation that a device can
23952 provide.\nThe mode can be read or set.\nThe supportedModes is an array of possible modes the device
23953 supports.\nThe modes are an array of the currently active mode(s).\nRetrieves the current mode.\n",

```

```

23954     "parameters": [
23955         { "$ref": "#/parameters/interface" }
23956     ],
23957     "responses": {
23958         "200": {
23959             "description": "",
23960             "x-example":
23961                 {
23962                     "rt": ["oic.r.mode"],
23963                     "id": "unique_example_id",
23964                     "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
23965                     "modes": ["active"]
23966                 },
23967             "schema": { "$ref": "#/definitions/Mode" }
23968         },
23969     },
23970 },
23971 },
23972 "post": {
23973     "description": "Sets the desired mode.\n",
23974     "parameters": [
23975         { "$ref": "#/parameters/interface" },
23976         {
23977             "name": "body",
23978             "in": "body",
23979             "required": true,
23980             "schema": { "$ref": "#/definitions/ModeUpdate" },
23981             "x-example":
23982                 {
23983                     "id": "unique_example_id",
23984                     "modes": ["armedAway"]
23985                 }
23986         },
23987     ],
23988     "responses": {
23989         "200": {
23990             "description": "",
23991             "x-example":
23992                 {
23993                     "id": "unique_example_id",
23994                     "modes": ["armedAway"]
23995                 },
23996             "schema": { "$ref": "#/definitions/ModeUpdate" }
23997         },
23998         "403": {
23999             "description": "This response is generated by the OIC Server when the client
24000 sends:\n An update with an value for mode that is not found in supportedModes.\nThe server
24001 responds with the current resource representation.\n",
24002             "x-example":
24003                 {
24004                     "id": "unique_example_id",
24005                     "supportedModes": ["active", "armedAway", "armedStay", "armedInstant"],
24006                     "modes": ["active"]
24007                 },
24008             "schema": { "$ref": "#/definitions/Mode" }
24009         },
24010     },
24011 },
24012 },
24013 },
24014 },
24015 },
24016 "parameters": {
24017     "interface": {
24018         "in": "query",
24019         "name": "if",
24020         "type": "string",
24021         "enum": ["oic.if.a", "oic.if.baseline"]
24022     }
24023 },
24024 "definitions": {

```

```

24025 "Mode" :
24026 {
24027   "properties": {
24028     "modes": {
24029       "description": "Array of the currently active mode(s)",
24030       "items": {
24031         "type": "string"
24032       },
24033       "type": "array"
24034     },
24035     "precision": {
24036       "description": "Accuracy granularity of the exposed value",
24037       "readOnly": true,
24038       "type": "number"
24039     },
24040     "range": {
24041       "description": "The valid range for the value Property",
24042       "items": {
24043         "anyOf": [
24044           {
24045             "type": "number"
24046           },
24047           {
24048             "type": "integer"
24049           }
24050         ]
24051       },
24052       "maxItems": 2,
24053       "minItems": 2,
24054       "readOnly": true,
24055       "type": "array"
24056     },
24057     "step": {
24058       "anyOf": [
24059         {
24060           "type": "integer"
24061         },
24062         {
24063           "type": "number"
24064         }
24065       ],
24066       "description": "Step value across the defined range",
24067       "readOnly": true
24068     },
24069     "supportedModes": {
24070       "description": "Array of possible modes the device supports.",
24071       "items": {
24072         "type": "string"
24073       },
24074       "readOnly": true,
24075       "type": "array"
24076     },
24077     "value": {
24078       "anyOf": [
24079         {
24080           "type": "array"
24081         },
24082         {
24083           "type": "string"
24084         },
24085         {
24086           "type": "boolean"
24087         },
24088         {
24089           "type": "integer"
24090         },
24091         {
24092           "type": "number"
24093         },
24094         {
24095           "type": "object"

```

```

24096     }
24097   ],
24098   "description": "The value sensed or actuated by this Resource"
24099 }
24100 },
24101 "required": [
24102   "supportedModes",
24103   "modes"
24104 ],
24105 "type": "object"
24106 }
24107
24108 ,
24109 "ModeUpdate" :
24110 {
24111   "properties": {
24112     "modes": {
24113       "description": "Desired mode",
24114       "items": {
24115         "type": "string"
24116       },
24117       "type": "array"
24118     },
24119     "precision": {
24120       "description": "Accuracy granularity of the exposed value",
24121       "readOnly": true,
24122       "type": "number"
24123     },
24124     "range": {
24125       "description": "The valid range for the value Property",
24126       "items": {
24127         "anyOf": [
24128           {
24129             "type": "number"
24130           },
24131           {
24132             "type": "integer"
24133           }
24134         ]
24135       },
24136       "maxItems": 2,
24137       "minItems": 2,
24138       "readOnly": true,
24139       "type": "array"
24140     },
24141     "step": {
24142       "anyOf": [
24143         {
24144           "type": "integer"
24145         },
24146         {
24147           "type": "number"
24148         }
24149       ],
24150       "description": "Step value across the defined range",
24151       "readOnly": true
24152     },
24153     "value": {
24154       "anyOf": [
24155         {
24156           "type": "array"
24157         },
24158         {
24159           "type": "string"
24160         },
24161         {
24162           "type": "boolean"
24163         },
24164         {
24165           "type": "integer"
24166         }

```



```

24167         {
24168             "type": "number"
24169         },
24170         {
24171             "type": "object"
24172         }
24173     ],
24174     "description": "The value sensed or actuated by this Resource"
24175 },
24176 },
24177 "required": [
24178     "modes"
24179 ],
24180 "type": "object"
24181 }
24182 }
24183 }
24184 }
24185

```

### 24186 B.53.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
supportedMode	배열: schema 참조	예	Read Only	device 가 지원 가능한 모드의 배열
Mode	배열: schema 참조	예		현재 활성화된 모드의 배열
precision	숫자		Read Only	노출된 값의 정확도
precision	숫자		Read Only	노출된 값의 정확도
Mode	배열: schema 참조	예		요구되는 모드
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
-------	---------------------	--	--	-----------------------------------

### 24187 B.53.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ModeResURI		get	post		

## 24188 B.54 모션 센서

### 24189 B.54.1 개요

24190 이 resource 는 움직임이 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 움직임이  
24191 감지되었음을 의미한다. 'false' 값은 움직임이 감지되지 않았음을 의미한다.

24192

24193

24194

### 24195 B.54.2 URI 예

24196 /MotionResURI

### 24197 B.54.3 Resource Type

24198 resource type (rt)는 ['oic.r.sensor.motion']으로 정의된다.

### 24199 B.54.4 Swagger2.0 정의

```

24200 {
24201   "swagger": "2.0",
24202   "info": {
24203     "title": "Motion Sensor",
24204     "version": "v1.1.0-20160519",
24205     "license": {
24206       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24207       "x-description": "Redistribution and use in source and binary forms, with or without
24208 modification, are permitted provided that the following conditions are met:\n      1.
24209 Redistributions of source code must retain the above copyright notice, this list of conditions and
24210 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24211 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24212 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24213 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24214 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24215 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24216 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
24217 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
24218 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
24219 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24220 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24221 OF SUCH DAMAGE.\n"
24222   },
24223 },
24224 "schemes": ["http"],
24225 "consumes": ["application/json"],
24226 "produces": ["application/json"],
24227 "paths": {
24228   "/MotionResURI" : {

```

```

24229     "get": {
24230         "description": "This resource describes whether motion has been sensed or not.\n\nThe value
24231 is a boolean.\n\nA value of 'true' means that motion has been sensed.\n\nA value of 'false' means that
24232 motion not been sensed.\n",
24233         "parameters": [
24234             { "$ref": "#/parameters/interface" }
24235         ],
24236         "responses": {
24237             "200": {
24238                 "description": "",
24239                 "x-example":
24240                 {
24241                     "rt": ["oic.r.sensor.motion"],
24242                     "id": "unique_example_id",
24243                     "value": true
24244                 },
24245                 "schema": { "$ref": "#/definitions/Motion" }
24246             }
24247         }
24248     }
24249 },
24250 },
24251 },
24252 "parameters": {
24253     "interface": {
24254         "in": "query",
24255         "name": "if",
24256         "type": "string",
24257         "enum": ["oic.if.s", "oic.if.baseline"]
24258     }
24259 },
24260 "definitions": {
24261     "Motion":
24262     {
24263         "allOf": [
24264             {
24265                 "properties": {
24266                     "precision": {
24267                         "description": "Accuracy granularity of the exposed value",
24268                         "readOnly": true,
24269                         "type": "number"
24270                     },
24271                     "range": {
24272                         "description": "The valid range for the value Property",
24273                         "items": {
24274                             "anyOf": [
24275                                 {
24276                                     "type": "number"
24277                                 },
24278                                 {
24279                                     "type": "integer"
24280                                 }
24281                             ]
24282                         },
24283                         "maxItems": 2,
24284                         "minItems": 2,
24285                         "readOnly": true,
24286                         "type": "array"
24287                     },
24288                     "step": {
24289                         "anyOf": [
24290                             {
24291                                 "type": "integer"
24292                             },
24293                             {
24294                                 "type": "number"
24295                             }
24296                         ],
24297                         "description": "Step value across the defined range",
24298                         "readOnly": true
24299                     }

```

```

24300         "value": {
24301             "description": "true = sensed, false = not sensed.",
24302             "readOnly": true,
24303             "type": "boolean"
24304         },
24305     },
24306     "type": "object"
24307 },
24308 ],
24309 "required": [
24310     "value"
24311 ]
24312 }
24313 }
24314 }
24315 }
24316

```

#### 24317 B.54.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	true = 감지 false = 미 감지
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도

#### 24318 B.54.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MotionResURI		get			

### 24319 B.55 이동

#### 24320 B.55.1 개요

24321 이 resource 는 선형 이동을 규정한다. movementSettings 는 가능한 이동 값(예: 회전, 정지, 좌측,  
24322 우측)을 포함하는 스트링의 배열이다. Movement 는 현재 선택된 이동 값이다.  
24323 movementModifier 는 이동 값에 대한 변경자 (예: "회전", "90")이다.

24324

24325

24326

#### 24327 B.55.2 URI 예

24328 /MovementResURI

### 24329 B.55.3 Resource Type

24330 resource type (rt)는 ['oic.r.movement.linear']로 정의된다.

### 24331 B.55.4 Swagger2.0 정의

```
24332 {
24333   "swagger": "2.0",
24334   "info": {
24335     "title": "Movement",
24336     "version": "v1.1.0-20160519",
24337     "license": {
24338       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24339       "x-description": "Redistribution and use in source and binary forms, with or without
24340 modification, are permitted provided that the following conditions are met:\n      1.
24341 Redistributions of source code must retain the above copyright notice, this list of conditions and
24342 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24343 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24344 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24345 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24346 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24347 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24348 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
24349 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
24350 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
24351 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24352 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24353 OF SUCH DAMAGE.\n"
24354     },
24355   },
24356   "schemes": ["http"],
24357   "consumes": ["application/json"],
24358   "produces": ["application/json"],
24359   "paths": {
24360     "/MovementResURI" : {
24361       "get": {
24362         "description": "This resource specifies linear movement.\nThe movementSettings is an array
24363 of strings containing possible movement values (e.g. spin, stop, left, right).\nThe movement is the
24364 currently selected movement value.\nThe movementModifier is a modifier to the movement value (e.g.
24365 \\"spin\\", \\"90\\")\n",
24366         "parameters": [
24367           {"$ref": "#/parameters/interface"}
24368         ],
24369         "responses": {
24370           "200": {
24371             "description": "",
24372             "x-example":
24373               {
24374                 "rt": ["oic.r.movement.linear"],
24375                 "id": "unique_example_id",
24376                 "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
24377                 "movement": "rotate",
24378                 "movementModifier": "90"
24379               },
24380             "schema": { "$ref": "#/definitions/movement" }
24381           }
24382         }
24383       },
24384     },
24385     "post": {
24386       "description": "Sets the current device movement\n",
24387       "parameters": [
24388         {"$ref": "#/parameters/interface"},
24389         {
24390           "name": "body",
24391           "in": "body",
24392           "required": true,
24393           "schema": { "$ref": "#/definitions/movement" },
24394           "x-example":
24395             {
```

```

24396         "id": "unique_example_id",
24397         "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
24398         "movement": "stop"
24399     }
24400 }
24401 ],
24402 "responses": {
24403     "200": {
24404         "description": "",
24405         "x-example":
24406         {
24407             "id": "unique_example_id",
24408             "movementSettings": ["stop", "left", "right", "rotate", "forward", "backward"],
24409             "movement": "stop"
24410         }
24411     },
24412     "schema": { "$ref": "#/definitions/movement" }
24413 }
24414 }
24415 }
24416 }
24417 },
24418 "parameters": {
24419     "interface": {
24420         "in": "query",
24421         "name": "if",
24422         "type": "string",
24423         "enum": ["oic.if.s", "oic.if.baseline"]
24424     }
24425 },
24426 "definitions": {
24427     "movement":
24428     {
24429         "properties": {
24430             "movement": {
24431                 "description": "Current movement value",
24432                 "type": "string"
24433             },
24434             "movementModifier": {
24435                 "description": "Modifier to the movement value (e.g. spin-90, left-20), units are
24436 device dependent",
24437                 "type": "string"
24438             },
24439             "movementSettings": {
24440                 "description": "array of possible movement values",
24441                 "items": {
24442                     "type": "string"
24443                 },
24444                 "readOnly": true,
24445                 "type": "array"
24446             },
24447             "precision": {
24448                 "description": "Accuracy granularity of the exposed value",
24449                 "readOnly": true,
24450                 "type": "number"
24451             },
24452             "range": {
24453                 "description": "The valid range for the value Property",
24454                 "items": {
24455                     "anyOf": [
24456                         {
24457                             "type": "number"
24458                         },
24459                         {
24460                             "type": "integer"
24461                         }
24462                     ]
24463                 },
24464                 "maxItems": 2,
24465                 "minItems": 2,
24466                 "readOnly": true,

```

```

24467         "type": "array"
24468     },
24469     "step": {
24470         "anyOf": [
24471             {
24472                 "type": "integer"
24473             },
24474             {
24475                 "type": "number"
24476             }
24477         ],
24478         "description": "Step value across the defined range",
24479         "readOnly": true
24480     },
24481     "value": {
24482         "anyOf": [
24483             {
24484                 "type": "array"
24485             },
24486             {
24487                 "type": "string"
24488             },
24489             {
24490                 "type": "boolean"
24491             },
24492             {
24493                 "type": "integer"
24494             },
24495             {
24496                 "type": "number"
24497             },
24498             {
24499                 "type": "object"
24500             }
24501         ],
24502         "description": "The value sensed or actuated by this Resource"
24503     }
24504 },
24505 "required": [
24506     "movementSettings",
24507     "movement"
24508 ],
24509 "type": "object"
24510 }
24511 }
24512 }
24513 }
24514

```

#### 24515 B.55.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
movementSettings	배열: schema 참조	예	Read Only	가능한 이동 값의 배열
movement	스트링	예		현재의 이동 값
movementModifier	스트링			이동 값에 대한

				변경자(예: 회전 90, 좌측 20). 단위는 device 에 의존한다.
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

## 24516 B.55.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/MovementResURI		get	post		

## 24517 B.56 야간 모드

### 24518 B.56.1 개요

24519 이 resource 는 야간 모드 on/off 기능을 기술한다. 'true'의 nightMode 값은 기능이 on 임을  
24520 의미한다. 'false' 의 nightMode 값은 기능이 off 임을 의미한다.

24521

24522

### 24523 B.56.2 URI 예

24524 /NightModeResURI

### 24525 B.56.3 Resource Type

24526 resource type (rt)는 ['oic.r.nightmode']로 정의된다.

### 24527 B.56.4 Swagger2.0 정의

```

24528 {
24529   "swagger": "2.0",
24530   "info": {
24531     "title": "Night Mode",
24532     "version": "v1.1.0-20160519",
24533     "license": {
24534       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24535       "x-description": "Redistribution and use in source and binary forms, with or without
24536 modification, are permitted provided that the following conditions are met:\n      1.
24537 Redistributions of source code must retain the above copyright notice, this list of conditions and
24538 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24539 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24540 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24541 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24542 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24543 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24544 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
24545 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
24546 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON

```



```

24547 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24548 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24549 OF SUCH DAMAGE.\n"
24550 }
24551 },
24552 "schemes": ["http"],
24553 "consumes": ["application/json"],
24554 "produces": ["application/json"],
24555 "paths": {
24556   "/NightModeResURI" : {
24557     "get": {
24558       "description": "This resource describes a night mode on/off feature.\nA nightMode value of
24559 'true' means that the feature is on.\nA nightMode value of 'false' means that the feature is
24560 off.\n",
24561       "parameters": [
24562         { "$ref": "#/parameters/interface" }
24563       ],
24564       "responses": {
24565         "200": {
24566           "description": "",
24567           "x-example":
24568             {
24569               "rt": ["oic.r.nightmode"],
24570               "id": "unique_example_id",
24571               "nightMode": false
24572             },
24573           "schema": { "$ref": "#/definitions/NightMode" }
24574         }
24575       }
24576     },
24577     "post": {
24578       "description": "",
24579       "parameters": [
24580         { "$ref": "#/parameters/interface" },
24581         {
24582           "name": "body",
24583           "in": "body",
24584           "required": true,
24585           "schema": { "$ref": "#/definitions/NightMode" },
24586           "x-example":
24587             {
24588               "id": "unique_example_id",
24589               "nightMode": true
24590             }
24591         }
24592       ],
24593       "responses": {
24594         "200": {
24595           "description": "",
24596           "x-example":
24597             {
24598               "id": "unique_example_id",
24599               "nightMode": true
24600             },
24601           "schema": { "$ref": "#/definitions/NightMode" }
24602         }
24603       }
24604     }
24605   }
24606 },
24607 },
24608 },
24609 "parameters": {
24610   "interface" : {
24611     "in" : "query",
24612     "name" : "if",
24613     "type" : "string",
24614     "enum" : ["oic.if.a", "oic.if.baseline"]
24615   }
24616 },
24617 "definitions": {

```

```

24618 "NightMode" :
24619 {
24620   "properties": {
24621     "nightMode": {
24622       "description": "Status of the Night Mode",
24623       "type": "boolean"
24624     },
24625     "precision": {
24626       "description": "Accuracy granularity of the exposed value",
24627       "readOnly": true,
24628       "type": "number"
24629     },
24630     "range": {
24631       "description": "The valid range for the value Property",
24632       "items": {
24633         "anyOf": [
24634           {
24635             "type": "number"
24636           },
24637           {
24638             "type": "integer"
24639           }
24640         ]
24641       },
24642       "maxItems": 2,
24643       "minItems": 2,
24644       "readOnly": true,
24645       "type": "array"
24646     },
24647     "step": {
24648       "anyOf": [
24649         {
24650           "type": "integer"
24651         },
24652         {
24653           "type": "number"
24654         }
24655       ],
24656       "description": "Step value across the defined range",
24657       "readOnly": true
24658     },
24659     "value": {
24660       "anyOf": [
24661         {
24662           "type": "array"
24663         },
24664         {
24665           "type": "string"
24666         },
24667         {
24668           "type": "boolean"
24669         },
24670         {
24671           "type": "integer"
24672         },
24673         {
24674           "type": "number"
24675         },
24676         {
24677           "type": "object"
24678         }
24679       ],
24680       "description": "The value sensed or actuated by this Resource"
24681     }
24682   },
24683   "required": [
24684     "nightMode"
24685   ],
24686   "type": "object"
24687 }
24688

```

24689 }  
24690 }  
24691

24692 **B.56.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
nightMode	boolean	예		야간 모드의 상태

24693 **B.56.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/NightModeResURI		get	post		

24694 **B.57 개방도**

24695 **B.57.1 개요**

24696 이 resource 는 창, 도어, 블라인드, 또는 셔터와 같은 개체가 얼마나 개방되어 있는지를 기술한다.  
24697 openLevel 은 판독될 수 있다 (센서로 작용). openLevel 은 또한 설정될 수 있다 (액추에이터로  
24698 작용).

24699  
24700 openLevel 은 제공된 범위에 걸쳐 device 에 의존한다. (oic.r.baseresource 로 부터의) 범위가  
24701 생략되면 0 내지 100 이 가정되고, 여기에서 0 은 폐쇄를 의미하고, 100 은 완전 개방을 의미한다.  
24702 하나의 범위가 제공되면, 하한=폐쇄이고, 상한=개방이다. (oic.r.baseresource 로부터의) 증분이  
24703 제공되면 가능한 값 사이의 증가를 표현하고 제공되지 않는다면, 1 이 가정된다. 현재의 개방도를  
24704 검색한다.

24705

24706

24707 **B.57.2 URI 예**

24708 /OpenLevelResURI

### 24709 B.57.3 Resource Type

24710 resource type (rt)는 ['oic.r.openlevel']로 정의된다.

### 24711 B.57.4 Swagger2.0 정의

```
24712 {
24713   "swagger": "2.0",
24714   "info": {
24715     "title": "Open Level",
24716     "version": "v1.1.0-20160519",
24717     "license": {
24718       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24719       "x-description": "Redistribution and use in source and binary forms, with or without
24720 modification, are permitted provided that the following conditions are met:\n      1.
24721 Redistributions of source code must retain the above copyright notice, this list of conditions and
24722 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
24723 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24724 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
24725 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24726 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24727 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
24728 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
24729 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
24730 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
24731 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24732 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24733 OF SUCH DAMAGE.\n"
24734     },
24735   },
24736   "schemes": ["http"],
24737   "consumes": ["application/json"],
24738   "produces": ["application/json"],
24739   "paths": {
24740     "/OpenLevelResURI" : {
24741       "get": {
24742         "description": "This resource describes how open or ajar an entity such as a window, door,
24743 blind or shutter is.\nThe openLevel can be read (acting as a sensor).\nThe openLevel can also be
24744 set (acting as an actuator).\nThe openLevel is device dependent across the range provided.\nWhen
24745 range (from oic.r.baseresource) is omitted then 0 to 100 is assumed where 0 means closed, 100 means
24746 fully open.\nIf a range is provided then the lower bound=closed, upper bound=open.\nIf step (from
24747 oic.r.baseresource) is present then it represents the increment between possible values; if not
24748 provided 1 is assumed.\nRetrieves the current openLevel.\n",
24749         "parameters": [
24750           { "$ref": "#/parameters/interface" }
24751         ],
24752         "responses": {
24753           "200": {
24754             "description": "",
24755             "x-example":
24756               {
24757                 "rt": ["oic.r.openlevel"],
24758                 "id": "unique_example_id",
24759                 "openLevel": 50,
24760                 "step": 2,
24761                 "range": [0,100]
24762               },
24763             ,
24764             "schema": { "$ref": "#/definitions/OpenLevel" }
24765           }
24766         }
24767       },
24768       "post": {
24769         "description": "Sets the desired openLevel.\n",
24770         "parameters": [
24771           { "$ref": "#/parameters/interface" },
24772           {
24773             "name": "body",
24774             "in": "body",
24775             "required": true,
```

```

24776         "schema": { "$ref": "#/definitions/OpenLevel" },
24777         "x-example":
24778         {
24779             "id": "unique_example_id",
24780             "openLevel": 0
24781         }
24782     },
24783 ],
24784 "responses": {
24785     "200": {
24786         "description": "",
24787         "x-example":
24788         {
24789             "id": "unique_example_id",
24790             "openLevel": 0
24791         }
24792     },
24793     "schema": { "$ref": "#/definitions/OpenLevel" }
24794 },
24795     "403": {
24796         "description": "This response is generated by the OIC Server when the client
24797 sends:\n An update with an out of range property value for openLevel.\nThe server responds with
24798 the current resource representation.\n",
24799         "x-example":
24800         {
24801             "id": "unique_example_id",
24802             "openLevel": 50,
24803             "step": 2,
24804             "range": [0,100]
24805         }
24806     },
24807     "schema": { "$ref": "#/definitions/OpenLevel" }
24808 }
24809 }
24810 }
24811 }
24812 },
24813 "parameters": {
24814     "interface": {
24815         "in": "query",
24816         "name": "if",
24817         "type": "string",
24818         "enum": ["oic.if.a", "oic.if.baseline"]
24819     }
24820 },
24821 "definitions": {
24822     "OpenLevel": {
24823         {
24824             "properties": {
24825                 "increment": {
24826                     "description": "Deprecated, use 'step' instead.",
24827                     "readOnly": true,
24828                     "type": "integer"
24829                 },
24830                 "openLevel": {
24831                     "description": "How open or ajar the entity is",
24832                     "type": "integer"
24833                 },
24834                 "precision": {
24835                     "description": "Accuracy granularity of the exposed value",
24836                     "readOnly": true,
24837                     "type": "number"
24838                 },
24839                 "range": {
24840                     "description": "The valid range for the value Property",
24841                     "items": {
24842                         "anyOf": [
24843                             {
24844                                 "type": "number"
24845                             }
24846                         ]

```

```

24847         "type": "integer"
24848     }
24849 ]
24850 },
24851 "maxItems": 2,
24852 "minItems": 2,
24853 "readOnly": true,
24854 "type": "array"
24855 },
24856 "step": {
24857     "anyOf": [
24858         {
24859             "type": "integer"
24860         },
24861         {
24862             "type": "number"
24863         }
24864     ],
24865     "description": "Step value across the defined range",
24866     "readOnly": true
24867 },
24868 "value": {
24869     "anyOf": [
24870         {
24871             "type": "array"
24872         },
24873         {
24874             "type": "string"
24875         },
24876         {
24877             "type": "boolean"
24878         },
24879         {
24880             "type": "integer"
24881         },
24882         {
24883             "type": "number"
24884         },
24885         {
24886             "type": "object"
24887         }
24888     ],
24889     "description": "The value sensed or actuated by this Resource"
24890 }
24891 },
24892 "required": [
24893     "openLevel"
24894 ],
24895 "type": "object"
24896 }
24897 }
24898 }
24899 }
24900

```

#### 24901 B.57.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
increment	정수		Read Only	사용 중지, 대신에 'step'을 사용
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
openLevel	정수	예		개체가 얼마나 개방되어 있는지

#### 24902 B.57.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/OpenLevelResURI		get	post		

#### 24903 B.58 동작 상태

##### 24904 B.58.1 개요

24905 이 resource 는 device 에 대한 동작 및 작업 상태를 기술한다. states 는 판독 또는 설정될 수 있고,  
24906 setting 은 요구되는 상태를 나타낸다.

24907  
24908 Device 는 불리한 동작 특성을 초래할 수 있는 상태로의 설정 시도를 거부할 수 있다.  
24909 machineStates 는 가능한 동작 상태의 배열이다. currentMachineState 는 device 동작의 현재의  
24910 상태이다. jobStates 는 가능한 작업 상태의 배열이다. currentJobState 는 현재 활성인 job 상태이다.

24911  
24912 runningTime 은 현재의 동작상태내에서 ISO8601 인코딩된 경과 시간이다. remainingTime 은  
24913 현재의 동작상태의 완료까지 ISO8601 인코딩된 시간이다. progressPercentage 는 현재 jobState 의  
24914 완료도를 백분율로 표시한다. 현재의 동작 및 작업 상태를 검색한다.

24915

24916

24917

##### 24918 B.58.2 URI 예

24919 /OperationalStateResURI

##### 24920 B.58.3 Resource Type

24921 resource type (rt)는 ['oic.r.operational.state']로 정의된다.

##### 24922 B.58.4 Swagger2.0 정의

24923 {  
24924 "swagger": "2.0",

```

24925     "info": {
24926         "title": "Operational State",
24927         "version": "v1.1.0-20160519",
24928         "license": {
24929             "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
24930             "x-description": "Redistribution and use in source and binary forms, with or without
24931 modification, are permitted provided that the following conditions are met:\n          1.
24932 Redistributions of source code must retain the above copyright notice, this list of conditions and
24933 the following disclaimer.\n          2. Redistributions in binary form must reproduce the above
24934 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
24935 other materials provided with the distribution.\n\n          THIS SOFTWARE IS PROVIDED BY THE Open
24936 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
24937 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
24938 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n          IN NO EVENT SHALL THE Open Connectivity
24939 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
24940 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
24941 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n          HOWEVER CAUSED AND ON
24942 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
24943 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
24944 OF SUCH DAMAGE.\n"
24945         }
24946     },
24947     "schemes": ["http"],
24948     "consumes": ["application/json"],
24949     "produces": ["application/json"],
24950     "paths": {
24951         "/OperationalStateResURI" : {
24952             "get": {
24953                 "description": "This resource describes the operational and job states on a device.\nThe
24954 states can be read or set, setting indicates a desired state.\nA device may reject an attempt to
24955 set a state that would result\nin adverse operational characteristics.\nThe machineStates is an
24956 array of the possible operational states.\nThe currentMachineState is the current state of
24957 operation of the device.\nThe jobStates is an array of the possible job states.\nThe
24958 currentJobState is the currently active jobState.\nThe runningTime is the ISO8601 encoded elapsed
24959 time in the current operational state.\nThe remainingTime is the ISO8601 encoded time till
24960 completion of the current operational state.\nThe progressPercentage is the percentage completeness
24961 of the current jobState.\nRetrieves the current operational and job states.\n",
24962                 "parameters": [
24963                     { "$ref": "#/parameters/interface" }
24964                 ],
24965                 "responses": {
24966                     "200": {
24967                         "description": "",
24968                         "x-example":
24969                         {
24970                             "rt": ["oic.r.operational.state"],
24971                             "id": "unique_example_id",
24972                             "machineStates": ["pause", "stopped", "idle", "active"],
24973                             "currentMachineState": "active",
24974                             "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
24975 "wrinklePrevent"],
24976                             "currentJobState": "rinse",
24977                             "runningTime": "PT15M20S",
24978                             "remainingTime": "PT10M40S",
24979                             "progressPercentage": 75
24980                         },
24981                         "schema": { "$ref": "#/definitions/Operation" }
24982                     }
24983                 }
24984             },
24985             "post": {
24986                 "description": "Sets the desired operational or job state.\n",
24987                 "parameters": [
24988                     { "$ref": "#/parameters/interface" },
24989                     {
24990                         "name": "body",
24991                         "in": "body",
24992                         "required": true,
24993                         "schema": { "$ref": "#/definitions/OperationUpdate" },
24994                         "x-example":

```



```

24996         {
24997             "id": "unique_example_id",
24998             "currentMachineState": "pause",
24999             "currentJobState": "wash"
25000         }
25001     },
25002     "responses": {
25003         "200": {
25004             "description": "",
25005             "x-example": {
25006                 "id": "unique_example_id",
25007                 "currentMachineState": "pause",
25008                 "currentJobState": "wash"
25009             }
25010         },
25011         "403": {
25012             "description": "This response is generated by the OIC Server when the client
25013 sends:\n An update with an value for currentMachineState that is not found in machineStates.\n An
25014 update with an value for currentJobState that is not found in jobStates.\nThe server responds with
25015 the current resource representation.\n",
25016             "x-example": {
25017                 "id": "unique_example_id",
25018                 "machineStates": ["pause", "stopped", "idle", "active"],
25019                 "currentMachineState": "active",
25020                 "jobStates": ["preWash", "wash", "rinse", "spin", "dry", "airDry",
25021 "wrinklePrevent"],
25022                 "currentJobState": "rinse",
25023                 "runningTime": "PT15M20S",
25024                 "remainingTime": "PT10M40S",
25025                 "progressPercentage": 75
25026             },
25027             "schema": { "$ref": "#/definitions/Operation" }
25028         }
25029     }
25030 },
25031 "parameters": {
25032     "interface": {
25033         "in": "query",
25034         "name": "if",
25035         "type": "string",
25036         "enum": ["oic.if.a", "oic.if.baseline"]
25037     }
25038 },
25039 "definitions": {
25040     "Operation": {
25041         "properties": {
25042             "currentJobState": {
25043                 "description": "Currently active jobState",
25044                 "type": "string"
25045             },
25046             "currentMachineState": {
25047                 "description": "Current state of operation of the device.",
25048                 "type": "string"
25049             },
25050             "jobStates": {
25051                 "description": "array of the possible job states.",
25052                 "items": {
25053                     "type": "string"
25054                 },
25055                 "readOnly": true,
25056                 "type": "array"
25057             }
25058         }
25059     }
25060 }
25061

```

```

25067 "machineStates": {
25068     "description": "array of the possible operational states.",
25069     "items": {
25070         "type": "string"
25071     },
25072     "readOnly": true,
25073     "type": "array"
25074 },
25075 "precision": {
25076     "description": "Accuracy granularity of the exposed value",
25077     "readOnly": true,
25078     "type": "number"
25079 },
25080 "progressPercentage": {
25081     "description": "Percentage completeness of the current jobState",
25082     "readOnly": true,
25083     "type": "integer"
25084 },
25085 "range": {
25086     "description": "The valid range for the value Property",
25087     "items": {
25088         "anyOf": [
25089             {
25090                 "type": "number"
25091             },
25092             {
25093                 "type": "integer"
25094             }
25095         ]
25096     },
25097     "maxItems": 2,
25098     "minItems": 2,
25099     "readOnly": true,
25100     "type": "array"
25101 },
25102 "remainingTime": {
25103     "description": "Time till completion of the current operational state",
25104     "readOnly": true,
25105     "type": "string"
25106 },
25107 "runningTime": {
25108     "description": "Elapsed time in the current operational state",
25109     "readOnly": true,
25110     "type": "string"
25111 },
25112 "step": {
25113     "anyOf": [
25114         {
25115             "type": "integer"
25116         },
25117         {
25118             "type": "number"
25119         }
25120     ],
25121     "description": "Step value across the defined range",
25122     "readOnly": true
25123 },
25124 "value": {
25125     "anyOf": [
25126         {
25127             "type": "array"
25128         },
25129         {
25130             "type": "string"
25131         },
25132         {
25133             "type": "boolean"
25134         },
25135         {
25136             "type": "integer"
25137         }

```

```

25138         {
25139             "type": "number"
25140         },
25141         {
25142             "type": "object"
25143         }
25144     ],
25145     "description": "The value sensed or actuated by this Resource"
25146 },
25147 },
25148 "required": [
25149     "machineStates",
25150     "currentMachineState"
25151 ],
25152 "type": "object"
25153 }
25154
25155 ,
25156 "OperationUpdate" :
25157 {
25158     "properties": {
25159         "currentJobState": {
25160             "description": "Currently active jobState",
25161             "type": "string"
25162         },
25163         "currentMachineState": {
25164             "description": "Current state of operation of the device.",
25165             "type": "string"
25166         },
25167         "precision": {
25168             "description": "Accuracy granularity of the exposed value",
25169             "readOnly": true,
25170             "type": "number"
25171         },
25172         "range": {
25173             "description": "The valid range for the value Property",
25174             "items": {
25175                 "anyOf": [
25176                     {
25177                         "type": "number"
25178                     },
25179                     {
25180                         "type": "integer"
25181                     }
25182                 ]
25183             },
25184             "maxItems": 2,
25185             "minItems": 2,
25186             "readOnly": true,
25187             "type": "array"
25188         },
25189         "step": {
25190             "anyOf": [
25191                 {
25192                     "type": "integer"
25193                 },
25194                 {
25195                     "type": "number"
25196                 }
25197             ],
25198             "description": "Step value across the defined range",
25199             "readOnly": true
25200         },
25201         "value": {
25202             "anyOf": [
25203                 {
25204                     "type": "array"
25205                 },
25206                 {
25207                     "type": "string"
25208                 }

```

```

25209         {
25210             "type": "boolean"
25211         },
25212         {
25213             "type": "integer"
25214         },
25215         {
25216             "type": "number"
25217         },
25218         {
25219             "type": "object"
25220         }
25221     ],
25222     "description": "The value sensed or actuated by this Resource"
25223 },
25224 },
25225 "type": "object"
25226 }
25227 }
25228 }
25229 }
25230

```

### 25231 B.58.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
runningTime	스트링		Read Only	현재의 동작 상태에서 경과 시간
jobStates	배열 schema 참조		Read Only	가능한 작업 상태의 배열
precision	숫자		Read Only	노출된 값의 정확도
currentJobState	스트링			현재 활성화인 작업 상태
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
progressPercentage	정수		Read Only	현재 작업 상태의 완료도의 백분율
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
machineStates	배열: schema 참조	예	Read Only	가능한 동작 상태의 배열
currentMachineState	스트링	예		device 동작의

				현재 상태
remainingTime	스트링		Read Only	현재의 동작 상태의 완료까지의 시간
precision	숫자		Read Only	노출된 값의 정확도
currentJobState	스트링			현재 활성화인 작업 상태
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
currentMachineState	스트링			device 동작의 현재 상태
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

#### 25232 B.58.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/OperationalStateResURI		get	post		

### 25233 B.59 존재 센서

#### 25234 B.59.1 개요

25235 이 resource 는 존재가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 존재가  
 25236 감지되었음을 의미한다. 'false' 값은 존재가 감지되지 않았음을 의미한다.

25237

25238

25239

#### 25240 B.59.2 URI 예

25241 /PresenceResURI

#### 25242 B.59.3 Resource Type

25243 resource type (rt)는 ['oic.r.sensor.presence']로 정의된다.

## B.59.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Presence Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/PresenceResURI" : {
      "get": {
        "description": "This resource describes whether presence has been sensed or not.\nThe value
is a boolean.\nA value of 'true' means that presence has been sensed.\nA value of 'false' means
that presence not been sensed.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.presence"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/Presence" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in": "query",
      "name": "if",
      "type": "string",
      "enum": ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "Presence" : {
      "allOf": [
        {
          "properties": {
            "precision": {
              "description": "Accuracy granularity of the exposed value",
              "readOnly": true,
```

```

25314         "type": "number"
25315     },
25316     "range": {
25317         "description": "The valid range for the value Property",
25318         "items": {
25319             "anyOf": [
25320                 {
25321                     "type": "number"
25322                 },
25323                 {
25324                     "type": "integer"
25325                 }
25326             ]
25327         },
25328         "maxItems": 2,
25329         "minItems": 2,
25330         "readOnly": true,
25331         "type": "array"
25332     },
25333     "step": {
25334         "anyOf": [
25335             {
25336                 "type": "integer"
25337             },
25338             {
25339                 "type": "number"
25340             }
25341         ],
25342         "description": "Step value across the defined range",
25343         "readOnly": true
25344     },
25345     "value": {
25346         "description": "true = sensed, false = not sensed.",
25347         "readOnly": true,
25348         "type": "boolean"
25349     }
25350 },
25351 "type": "object"
25352 }
25353 ],
25354 "required": [
25355     "value"
25356 ]
25357 }
25358 }
25359 }
25360 }
25361

```

#### 25362 B.59.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	boolean	예	Read Only	true = 감지 false = 미 감지

25363 **B.59.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/PresenceResURI		get			

25364 **B.60 팬 틸트 줌 동작**

25365 **B.60.1 개요**

25366 이 resource 는 device 의 회전 경사 및 줌 기능을 규정한다. resource rt 는 동적이고, 값이  
 25367 device 의 물리적인 움직임에 적용되지는 또는 이미지에 대한 디지털/버추얼 향상에 적용되는지를  
 25368 반영한다. 물리적인 움직임에 대해, rt 는 'oic.r.movement.ptz'이다. 디지털/버추얼 이미지 향상에  
 25369 대해, rt 는 'oic.r.image.ptz'이다. 회전 및 경사는 도(°)로 규정된다.

25370  
 25371 줌 인자는 선형 (광학) 줌에 대해 1-100 범위의 값이다. 디지털 줌에 대해 줌 인자는 [1x, 2x, 4x, 8x,  
 25372 16x, 32x] 범위의 값이다. 설정할 줌 값이 없다면, 줌 인자는 '1x'가 된다. 0 도의 값은 중간을  
 25373 의미하고, 이것은 제조사가 정의한 설정이다. 이 resource 가 물리적인 움직임에 대한 오프셋을  
 25374 생성하기 위해 사용될 수도 있다. 이러한 경우, rt 값은 oic.r.movement.offset.ptz 이다.

25375  
 25376 이 resource 가 이미지 움직임에 대한 오프셋을 생성하기 위해 사용될 수도 있다. 이러한 경우, rt 값은  
 25377 oic.r.image.offset.ptz 이다. pan\_range 값이 생략되면 범위는 [-180.0,180.0]이다. Pan 이 지원되지  
 25378 않는다면, 범위는 [0.0,0.0]이다. tilt\_range 값이 생략되면 범위는 [ - 180.0,180.0]이다. tilt 가  
 25379 지원되지 않는다면, 범위는 [0.0,0.0]이다. 현재의 pan, tilt, 및 zoom 설정을 검색한다.

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25386 **B.60.2 URI 예**

25387 /PanTiltZoomResURI

25388 **B.60.3 Resource Type**

25389 resource type (rt)는 ['oic.r.ptz']로 정의된다.

25390 **B.60.4 Swagger2.0 정의**

```

25391 {
25392   "swagger": "2.0",
25393   "info": {
25394     "title": "Pan Tilt Zoom Movement",
25395     "version": "v1.1.0-20160519",
25396     "license": {
25397       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",

```



```

25398         "x-description": "Redistribution and use in source and binary forms, with or without
25399 modification, are permitted provided that the following conditions are met:\n        1.
25400 Redistributions of source code must retain the above copyright notice, this list of conditions and
25401 the following disclaimer.\n        2. Redistributions in binary form must reproduce the above
25402 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25403 other materials provided with the distribution.\n\n        THIS SOFTWARE IS PROVIDED BY THE Open
25404 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25405 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25406 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n        IN NO EVENT SHALL THE Open Connectivity
25407 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
25408 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
25409 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n        HOWEVER CAUSED AND ON
25410 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25411 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25412 OF SUCH DAMAGE.\n"
25413     },
25414 },
25415 "schemes": ["http"],
25416 "consumes": ["application/json"],
25417 "produces": ["application/json"],
25418 "paths": {
25419     "/PanTiltZoomResURI" : {
25420         "get": {
25421             "description": "This resource specifies the pan tilt and zoom capabilities of a
25422 device.\nThe resource rt is dynamic and reflects whether the values apply to\n physical movement
25423 of the device or digital/virtual enhancements to the image.\nFor physical movement the rt is
25424 'oic.r.movement.ptz'.\nFor digital/virtual image enhancements the rt is 'oic.r.image.ptz'.
25425 The Pan and Tilt are specified in degrees.\nThe Zoom Factor is a value in the range 1-100 for linear
25426 (optical) zoom.\nThe Zoom Factor is a value in the range [1x, 2x, 4x, 8x, 16x, 32x] for digital
25427 zoom.\nIf there is no zoom value to set the Zoom Factor shall be '1x'.
25428 The value 0 degrees means neutral, this is the vendor defined setting.\nNote that this resource also can be used to create an
25429 offset for physical movement.\nWhen that is the case, the rt value is:
25430 oic.r.movement.offset.ptz\nNote that this resource also can be used to create an offset for image
25431 movement.\nWhen that is the case, the rt value is: oic.r.image.offset.ptz\nWhen the pan_range value
25432 is omitted, then the range is [-180.0,180.0].\nIf pan is not supported then the range shall be
25433 [0.0,0.0]\nWhen the tilt_range value is omitted, then the range is [-180.0,180.0].\nIf tilt is not
25434 supported then the range shall be [0.0,0.0]\nRetrieves the current pan, tilt and zoom setting.\n",
25435             "parameters": [
25436                 { "$ref": "#/parameters/interface" }
25437             ],
25438             "responses": {
25439                 "200": {
25440                     "description": "",
25441                     "x-example":
25442                     {
25443                         "rt": ["oic.r.ptz"],
25444                         "id": "unique_example_id",
25445                         "pan": 0.0,
25446                         "tilt": 0.0,
25447                         "zoomFactor": "2x"
25448                     },
25449                     "schema": { "$ref": "#/definitions/PanTiltZoom" }
25450                 }
25451             }
25452         },
25453     },
25454     "post": {
25455         "description": "Sets the current pan, tilt and zoom value\n",
25456         "parameters": [
25457             { "$ref": "#/parameters/interface" },
25458             {
25459                 "name": "body",
25460                 "in": "body",
25461                 "required": true,
25462                 "schema": { "$ref": "#/definitions/PanTiltZoom" },
25463                 "x-example":
25464                 {
25465                     "id": "unique_example_id",
25466                     "pan": 10.0,
25467                     "tilt": -10.0,
25468                     "zoomFactor": "4x"
25469                 }
25470             }
25471         ]
25472     }
25473 }

```

```

25469     }
25470   }
25471 ],
25472 "responses": {
25473   "200": {
25474     "description": "",
25475     "x-example":
25476       {
25477         "id": "unique_example_id",
25478         "pan": 10.0,
25479         "tilt": -10.0,
25480         "zoomFactor": "4x"
25481       }
25482     ,
25483     "schema": { "$ref": "#/definitions/PanTiltZoom" }
25484   }
25485 }
25486 }
25487 },
25488 "parameters": {
25489   "interface": {
25490     "in": "query",
25491     "name": "if",
25492     "type": "string",
25493     "enum": ["oic.if.a", "oic.if.baseline"]
25494   }
25495 },
25496 "definitions": {
25497   "PanTiltZoom":
25498     {
25499       "properties": {
25500         "pan": {
25501           "description": "horizontal pan in degrees",
25502           "type": "number"
25503         },
25504         "pan_range": {
25505           "description": "Min and Max values for the pan setting",
25506           "items": {
25507             "type": "number"
25508           },
25509           "maxItems": 2,
25510           "minItems": 2,
25511           "readOnly": true,
25512           "type": "array"
25513         },
25514         "precision": {
25515           "description": "Accuracy granularity of the exposed value",
25516           "readOnly": true,
25517           "type": "number"
25518         },
25519         "range": {
25520           "description": "The valid range for the value Property",
25521           "items": {
25522             "anyOf": [
25523               {
25524                 "type": "number"
25525               },
25526               {
25527                 "type": "integer"
25528               }
25529             ]
25530           },
25531           "maxItems": 2,
25532           "minItems": 2,
25533           "readOnly": true,
25534           "type": "array"
25535         },
25536         "step": {
25537           "anyOf": [
25538             {
25539

```

```

25540         "type": "integer"
25541     },
25542     {
25543         "type": "number"
25544     }
25545 ],
25546     "description": "Step value across the defined range",
25547     "readOnly": true
25548 },
25549     "tilt": {
25550         "description": "vertical tilt in degrees",
25551         "type": "number"
25552     },
25553     "tilt_range": {
25554         "description": "Min and Max values for the tilt setting",
25555         "items": {
25556             "type": "number"
25557         },
25558         "maxItems": 2,
25559         "minItems": 2,
25560         "readOnly": true,
25561         "type": "array"
25562     },
25563     "value": {
25564         "anyOf": [
25565             {
25566                 "type": "array"
25567             },
25568             {
25569                 "type": "string"
25570             },
25571             {
25572                 "type": "boolean"
25573             },
25574             {
25575                 "type": "integer"
25576             },
25577             {
25578                 "type": "number"
25579             },
25580             {
25581                 "type": "object"
25582             }
25583         ],
25584         "description": "The value sensed or actuated by this Resource"
25585     },
25586     "zoomFactor": {
25587         "description": "The Zoomfactor value",
25588         "type": "string"
25589     },
25590     "zoomFactorRange": {
25591         "description": "allowed Zoom Factor values. Linear equates to a 1-100 min/max.",
25592         "enum": [
25593             "linear",
25594             "1x",
25595             "2x",
25596             "4x",
25597             "8x",
25598             "16x",
25599             "32x"
25600         ],
25601         "readOnly": true,
25602         "type": "string"
25603     }
25604 },
25605     "required": [
25606         "pan",
25607         "tilt",
25608         "zoomFactor"
25609     ],
25610     "type": "object"

```

25611        }  
 25612  
 25613        }  
 25614        }  
 25615

25616    **B.60.5   Property 정의**

Property name	Value type	필수	엑세스 모드	설명
tilt_range	배열: schema 참조		Read Only	경사 설정에 대한 최소 및 최대 값
pan	숫자	예		도(°) 단위의 수평 회전
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
zoomFactorRange	스트링		Read Only	허용된 줌 인자 값. 선형은 1-100 min/max       와 같다.
precision	숫자		Read Only	노출된       값의 정확도
pan_range	배열: schema 참조		Read Only	회전 설정에 대한 최소 및 최대 값
step	복수 타입: schema 참조		Read Only	정의된       범위에 걸친 증분 값
zoomFactor	스트링	예		줌 인자 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
tilt	숫자	예		도(°) 단위의 수직 경사

25617    **B.60.6   CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/PanTiltZoomResURI		get	post		

## 25618 **B.61 램프 타임**

### 25619 **B.61.1 개요**

25620 이 resource 는 조광 기능의 램프 타임을 기술한다. 이것은 2 개의 조광 값 간의 변화의 실제 속도를  
25621 규정한다. Time 은 밀리초[ms]로 규정된다. (oic.r.baseresource 로부터의) 범위가 생략되면  
25622 최대값은 100 ms 이다. 0 ms 의 RampTime 은 구현을 통해 가능한 최소 지연을 나타낸다. 현재의  
25623 Ramp Time 을 검색한다.

25624

25625

25626

### 25627 **B.61.2 URI 예**

25628 /RampTimeResURI

### 25629 **B.61.3 Resource Type**

25630 resource type (rt)는 ['oic.r.light.ramptime']으로 정의된다.

### 25631 **B.61.4 Swagger2.0 정의**

```
25632 {
25633   "swagger": "2.0",
25634   "info": {
25635     "title": "Ramp Time",
25636     "version": "v1.1.0-20160519",
25637     "license": {
25638       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25639       "x-description": "Redistribution and use in source and binary forms, with or without
25640 modification, are permitted provided that the following conditions are met:\n      1.
25641 Redistributions of source code must retain the above copyright notice, this list of conditions and
25642 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25643 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25644 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25645 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25646 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25647 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
25648 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
25649 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
25650 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
25651 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25652 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25653 OF SUCH DAMAGE.\n"
25654   }
25655 },
25656 "schemes": ["http"],
25657 "consumes": ["application/json"],
25658 "produces": ["application/json"],
25659 "paths": {
25660   "/RampTimeResURI" : {
25661     "get": {
25662       "description": "This resource that describes the Ramp Time of a dimming function.\nThis
25663 specifies the actual speed of changing between 2 dimming values.\nTime is specified in milliseconds
25664 [ms].\nWhen range (from oic.r.baseresource) is omitted the maximum value is 100 ms.\nThe RampTime
25665 of 0ms indicates the minimal delay possible by the implementation.\nRetrieves the current
25666 RampTime.\n",
25667       "parameters": [
25668         {"$ref": "#/parameters/interface"}
25669       ],
25670       "responses": {
```

```

25671         "200": {
25672             "description" : "",
25673             "x-example":
25674             {
25675                 "rt": ["oic.r.light.ramptime"],
25676                 "id": "unique_example_id",
25677                 "rampTime": 0,
25678                 "range": [0,100]
25679             }
25680         },
25681         "schema": { "$ref": "#/definitions/RampTime" }
25682     }
25683 },
25684 ],
25685 "post": {
25686     "description": "Sets the current RampTime.\n",
25687     "parameters": [
25688         { "$ref": "#/parameters/interface" },
25689         {
25690             "name": "body",
25691             "in": "body",
25692             "required": true,
25693             "schema": { "$ref": "#/definitions/RampTime" },
25694             "x-example":
25695             {
25696                 "id": "unique_example_id",
25697                 "rampTime": 50
25698             }
25699         }
25700     ],
25701     "responses": {
25702         "200": {
25703             "description" : "",
25704             "x-example":
25705             {
25706                 "id": "unique_example_id",
25707                 "rampTime": 50
25708             }
25709         },
25710         "schema": { "$ref": "#/definitions/RampTime" }
25711     },
25712         "403": {
25713             "description" : "This response is generated by the OIC Server when the client
25714 sends:\n An update with an out of range property value for rampTime.\nThe server responds with the
25715 current resource representation.\n",
25716             "x-example":
25717             {
25718                 "id": "unique_example_id",
25719                 "rampTime": 40
25720             }
25721         },
25722         "schema": { "$ref": "#/definitions/RampTime" }
25723     }
25724 }
25725 }
25726 },
25727 ],
25728 "parameters": {
25729     "interface" : {
25730         "in" : "query",
25731         "name" : "if",
25732         "type" : "string",
25733         "enum" : ["oic.if.a", "oic.if.baseline"]
25734     }
25735 },
25736 "definitions": {
25737     "RampTime" :
25738     {
25739         "properties": {
25740             "precision": {
25741                 "description": "Accuracy granularity of the exposed value",

```

```

25742         "readOnly": true,
25743         "type": "number"
25744     },
25745     "rampTime": {
25746         "description": "Actual speed of changing between 2 dimming values",
25747         "type": "integer"
25748     },
25749     "range": {
25750         "description": "The valid range for the value Property",
25751         "items": {
25752             "anyOf": [
25753                 {
25754                     "type": "number"
25755                 },
25756                 {
25757                     "type": "integer"
25758                 }
25759             ]
25760         },
25761         "maxItems": 2,
25762         "minItems": 2,
25763         "readOnly": true,
25764         "type": "array"
25765     },
25766     "step": {
25767         "anyOf": [
25768             {
25769                 "type": "integer"
25770             },
25771             {
25772                 "type": "number"
25773             }
25774         ],
25775         "description": "Step value across the defined range",
25776         "readOnly": true
25777     },
25778     "value": {
25779         "anyOf": [
25780             {
25781                 "type": "array"
25782             },
25783             {
25784                 "type": "string"
25785             },
25786             {
25787                 "type": "boolean"
25788             },
25789             {
25790                 "type": "integer"
25791             },
25792             {
25793                 "type": "number"
25794             },
25795             {
25796                 "type": "object"
25797             }
25798         ],
25799         "description": "The value sensed or actuated by this Resource"
25800     }
25801 },
25802 "required": [
25803     "rampTime"
25804 ],
25805 "type": "object"
25806 }
25807 }
25808 }
25809 }
25810

```

25811 **B.61.5 Property 정의**

Property name	Value type	필수	액세스 모드	설명
rampTime	정수	예		2 개의 조광 값 간의 변화의 실제 속도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

25812 **B.61.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/RampTimeResURI		get	post		

25813 **B.62 냉장**

25814 **B.62.1 개요**

25815 이 resource 는 냉장 기능을 기술한다. filter 상태는 여과기의 나머지 수명의 백분율을 제공하는  
 25816 읽기 전용 값이다. RapidFreeze 는 존재한다면 신속 동결 성능을 제어하는 boolean 형이다.  
 25817 RapidCool 은 존재한다면 신속 냉각 성능을 제어하는 boolean 형이다.

25818  
 25819 Defrost 는 존재한다면 제상 주기를 제어하는 boolean 형이다. 열거된 Property 중 적어도 하나는  
 25820 Resource instance 에 존재해야 한다. 현재의 냉장 기능 상태를 검색한다. Device 에 의해 지원되는  
 25821 모든 Property 가 리턴 된다.

25822

25823

25824

25825 **B.62.2 URI 예**

25826 /RefrigerationResURI



## 25827 B.62.3 Resource Type

25828 resource type (rt)는 ['oic.r.refrigeration']로 정의된다.

## 25829 B.62.4 Swagger2.0 정의

```
25830 {
25831   "swagger": "2.0",
25832   "info": {
25833     "title": "Refrigeration",
25834     "version": "v1.1.0-20160519",
25835     "license": {
25836       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
25837       "x-description": "Redistribution and use in source and binary forms, with or without
25838 modification, are permitted provided that the following conditions are met:\n      1.
25839 Redistributions of source code must retain the above copyright notice, this list of conditions and
25840 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
25841 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
25842 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
25843 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
25844 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
25845 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
25846 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
25847 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
25848 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
25849 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
25850 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
25851 OF SUCH DAMAGE.\n"
25852     },
25853   },
25854   "schemes": ["http"],
25855   "consumes": ["application/json"],
25856   "produces": ["application/json"],
25857   "paths": {
25858     "/RefrigerationResURI" : {
25859       "get": {
25860         "description": "This resource describes a refrigeration function.\nThe filter state is a
25861 read-only value providing the percentage life time remaining for the water filter.\nRapidFreeze is
25862 a boolean that controls the rapid freeze capability if present.\nRapidCool is a boolean that
25863 controls the rapid cool capability if present.\nDefrost is a boolean that controls the defrost
25864 cycle if present.\nAt least one of the listed Properties shall be present in a Resource
25865 Instance.\nRetrieves the current Refrigeration function status; all Properties supported by the
25866 Device are returned.\n",
25867         "parameters": [
25868           { "$ref": "#/parameters/interface" }
25869         ],
25870         "responses": {
25871           "200": {
25872             "description": "",
25873             "x-example": {
25874               {
25875                 "rt": ["oic.r.refrigeration"],
25876                 "id": "unique_example_id",
25877                 "filter": 75,
25878                 "rapidFreeze": false,
25879                 "rapidCool": false,
25880                 "defrost": true
25881               }
25882             },
25883             "schema": { "$ref": "#/definitions/Refrigeration" }
25884           }
25885         }
25886       },
25887       "post": {
25888         "description": "Activates the desired Refrigeration functions.\nSupported values are
25889 rapidFreeze, rapidCool and defrost.\nAt least one of the supported values shall be provided.\n",
25890         "parameters": [
25891           { "$ref": "#/parameters/interface" },
25892           {
25893             "name": "body",
```

```

25894         "in": "body",
25895         "required": true,
25896         "schema": { "$ref": "#/definitions/RefrigerationUpdate" },
25897         "x-example":
25898             {
25899                 "id": "unique_example_id",
25900                 "rapidFreeze": true
25901             }
25902     },
25903 ],
25904     "responses": {
25905         "200": {
25906             "description": "Indicates that the Refrigeration function was changed.\n\nThe new
25907 status can be provided in the response.\n",
25908             "x-example":
25909                 {
25910                     "id": "unique_example_id",
25911                     "rapidFreeze": true
25912                 },
25913             "schema": { "$ref": "#/definitions/RefrigerationUpdate" }
25914         }
25915     }
25916 },
25917 },
25918 },
25919 },
25920 "parameters": {
25921     "interface": {
25922         "in": "query",
25923         "name": "if",
25924         "type": "string",
25925         "enum": ["oic.if.a", "oic.if.baseline"]
25926     }
25927 },
25928 "definitions": {
25929     "Refrigeration": {
25930         {
25931             "anyOf": [
25932                 {
25933                     "required": [
25934                         "filter"
25935                     ],
25936                 },
25937                 {
25938                     "required": [
25939                         "rapidFreeze"
25940                     ],
25941                 },
25942                 {
25943                     "required": [
25944                         "rapidCool"
25945                     ],
25946                 },
25947                 {
25948                     "required": [
25949                         "defrost"
25950                     ],
25951                 }
25952             ],
25953         },
25954         "properties": {
25955             "defrost": {
25956                 "description": "Indicates whether a defrost cycle is currently active",
25957                 "type": "boolean"
25958             },
25959             "filter": {
25960                 "description": "Percentage life time remaining for the water filter",
25961                 "readOnly": true,
25962                 "type": "integer"
25963             },
25964             "precision": {
25965                 "description": "Accuracy granularity of the exposed value",

```

```

25965         "readOnly": true,
25966         "type": "number"
25967     },
25968     "range": {
25969         "description": "The valid range for the value Property",
25970         "items": {
25971             "anyOf": [
25972                 {
25973                     "type": "number"
25974                 },
25975                 {
25976                     "type": "integer"
25977                 }
25978             ]
25979         },
25980         "maxItems": 2,
25981         "minItems": 2,
25982         "readOnly": true,
25983         "type": "array"
25984     },
25985     "rapidCool": {
25986         "description": "Indicates whether the unit has a rapid cool capability active",
25987         "type": "boolean"
25988     },
25989     "rapidFreeze": {
25990         "description": "Indicates whether the unit has a rapid freeze capability active.",
25991         "type": "boolean"
25992     },
25993     "step": {
25994         "anyOf": [
25995             {
25996                 "type": "integer"
25997             },
25998             {
25999                 "type": "number"
26000             }
26001         ],
26002         "description": "Step value across the defined range",
26003         "readOnly": true
26004     },
26005     "value": {
26006         "anyOf": [
26007             {
26008                 "type": "array"
26009             },
26010             {
26011                 "type": "string"
26012             },
26013             {
26014                 "type": "boolean"
26015             },
26016             {
26017                 "type": "integer"
26018             },
26019             {
26020                 "type": "number"
26021             },
26022             {
26023                 "type": "object"
26024             }
26025         ],
26026         "description": "The value sensed or actuated by this Resource"
26027     }
26028 },
26029 "type": "object"
26030 }
26031
26032 ,
26033 "RefrigerationUpdate" :
26034 {
26035     "anyOf": [

```

```

26036     {
26037         "required": [
26038             "rapidFreeze"
26039         ]
26040     },
26041     {
26042         "required": [
26043             "rapidCool"
26044         ]
26045     },
26046     {
26047         "required": [
26048             "defrost"
26049         ]
26050     }
26051 ],
26052 "properties": {
26053     "defrost": {
26054         "description": "Indicates whether a defrost cycle is currently active",
26055         "type": "boolean"
26056     },
26057     "precision": {
26058         "description": "Accuracy granularity of the exposed value",
26059         "readOnly": true,
26060         "type": "number"
26061     },
26062     "range": {
26063         "description": "The valid range for the value Property",
26064         "items": {
26065             "anyOf": [
26066                 {
26067                     "type": "number"
26068                 },
26069                 {
26070                     "type": "integer"
26071                 }
26072             ]
26073         },
26074         "maxItems": 2,
26075         "minItems": 2,
26076         "readOnly": true,
26077         "type": "array"
26078     },
26079     "rapidCool": {
26080         "description": "Indicates whether the unit has a rapid cool capability active",
26081         "type": "boolean"
26082     },
26083     "rapidFreeze": {
26084         "description": "Indicates whether the unit has a rapid freeze capability active.",
26085         "type": "boolean"
26086     },
26087     "step": {
26088         "anyOf": [
26089             {
26090                 "type": "integer"
26091             },
26092             {
26093                 "type": "number"
26094             }
26095         ],
26096         "description": "Step value across the defined range",
26097         "readOnly": true
26098     },
26099     "value": {
26100         "anyOf": [
26101             {
26102                 "type": "array"
26103             },
26104             {
26105                 "type": "string"
26106             }

```

```

26107     {
26108         "type": "boolean"
26109     },
26110     {
26111         "type": "integer"
26112     },
26113     {
26114         "type": "number"
26115     },
26116     {
26117         "type": "object"
26118     }
26119 ],
26120 "description": "The value sensed or actuated by this Resource"
26121 },
26122 },
26123 "type": "object"
26124 }
26125 }
26126 }
26127 }
26128

```

#### 26129 B.62.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
defrost	boolean	예		제상 주기가 현재 활성인지를 표시
rapidCool	boolean			장치가 신속 냉장 성능을 활성으로 하였는지를 표시
filter	정수		Read Only	여과기 에 대해 남아 있는 수명의 백분율
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 value
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
rapidFreeze	boolean			장치가 신속 동결 성능을 활성으로 하였는지를 표시
precision	숫자		Read Only	노출된 값의 정확도

defrost	boolean	예		제상 주기가 현재 활성인지를 표시
rapidCool	boolean			장치가 신속 냉장 성능을 활성화로 하였는지를 표시
precision	숫자		Read Only	노출된 값의 정확도
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
rapidFreeze	boolean			장치가 신속 동결 성능을 활성화로 하였는지를 표시
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

## 26130 B.62.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/RefrigerationResURI		get	post		

## 26131 B.63 선택 가능 레벨

### 26132 B.63.1 개요

26133 이 resource 는 동작을 위해 선택될 수 있는 device 정의 '레벨'의 집합을 제공한다. 설정될 수 있는  
26134 상이한 습도 레벨을 모델링하는 이산 집합을 가습기가 갖는 예를 든다.

26135  
26136 availablelevels 은 선택될 수 있는 레벨의 배열이고, 이들은 숫자 또는 정수가 될 수 있다.  
26137 targetlevel 은 현재 선택된 레벨이고, 새로운 레벨을 선택하기 위하여 기록된다. 검색될 때,  
26138 targetlevel 은 선택된 실제 값을 제공한다. 현재의 선택 가능한 level 을 검색한다.

26139

26140

26141

26142

## 26143 B.63.2 URI 예

26144 /SelectableLevelsResURI

## 26145 B.63.3 Resource Type

26146 resource type (rt)는 ['oic.r.selectablelevels']로 정의된다.

## 26147 B.63.4 Swagger2.0 정의

```
26148 {
26149   "swagger": "2.0",
26150   "info": {
26151     "title": "Selectable Levels",
26152     "version": "v1.1.0-20160519",
26153     "license": {
26154       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26155       "x-description": "Redistribution and use in source and binary forms, with or without
26156 modification, are permitted provided that the following conditions are met:\n      1.
26157 Redistributions of source code must retain the above copyright notice, this list of conditions and
26158 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
26159 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
26160 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
26161 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
26162 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
26163 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
26164 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
26165 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
26166 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
26167 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26168 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26169 OF SUCH DAMAGE.\n"
26170     },
26171   },
26172   "schemes": ["http"],
26173   "consumes": ["application/json"],
26174   "produces": ["application/json"],
26175   "paths": {
26176     "/SelectableLevelsResURI" : {
26177       "get": {
26178         "description": "This Resource provides a set of device defined 'levels' that can be
26179 selected for an operation.\nFor example where a humidifier has a discrete set that model different
26180 humidity levels that can be set.\navailablelevels is an array of the levels that can be selected,
26181 these can be a number or an integer.\ntargetlevel is the level that has currently been selected and
26182 is written to in order to select a new level.\nWhen retrieved the targetlevel provides the actual
26183 value that has been selected.\nRetrieves the current selectable levels.\n",
26184         "parameters": [
26185           { "$ref": "#/parameters/interface" }
26186         ],
26187         "responses": {
26188           "200": {
26189             "description": "",
26190             "x-example":
26191               {
26192                 "rt": ["oic.r.selectablelevels"],
26193                 "id": "unique_example_id",
26194                 "availablelevels": [0,2,4,6,8],
26195                 "targetlevel": 2
26196               },
26197             "schema": { "$ref": "#/definitions/SelectableLevels" }
26198           }
26199         }
26200       },
26201     },
26202     "post": {
26203       "description": "Sets the current level from the set that is selectable",
26204       "parameters": [
26205         { "$ref": "#/parameters/interface" },
26206       ]
26207     }
26208   }
26209 }
```

```

26207         "name": "body",
26208         "in": "body",
26209         "required": true,
26210         "schema": { "$ref": "#/definitions/UpdateSchema" },
26211         "x-example":
26212             {
26213                 "targetlevel": 4
26214             }
26215     },
26216 ],
26217 "responses": {
26218     "200": {
26219         "description": "",
26220         "x-example":
26221             {
26222                 "targetlevel": 4
26223             }
26224         ,
26225         "schema": { "$ref": "#/definitions/UpdateSchema" }
26226     },
26227     "403": {
26228         "description": "Generated by a Server when an attempt is made to update to a
26229 targetlevel that is not in the set of availablelevels",
26230         "x-example":
26231             {
26232                 "id": "unique_example_id",
26233                 "availablelevels": [0,2,4,6,8],
26234                 "targetlevel": 2
26235             }
26236         ,
26237         "schema": { "$ref": "#/definitions/SelectableLevels" }
26238     }
26239 }
26240 },
26241 },
26242 },
26243 "parameters": {
26244     "interface": {
26245         "in": "query",
26246         "name": "if",
26247         "type": "string",
26248         "enum": ["oic.if.a", "oic.if.baseline"]
26249     }
26250 },
26251 "definitions": {
26252     "SelectableLevels":
26253         {
26254             "properties": {
26255                 "availablelevels": {
26256                     "description": "Set of levels from which one can be selected",
26257                     "items": {
26258                         "anyOf": [
26259                             {
26260                                 "type": "integer"
26261                             },
26262                             {
26263                                 "type": "number"
26264                             }
26265                         ]
26266                     },
26267                     "readOnly": true,
26268                     "type": "array"
26269                 },
26270                 "precision": {
26271                     "description": "Accuracy granularity of the exposed value",
26272                     "readOnly": true,
26273                     "type": "number"
26274                 },
26275                 "range": {
26276                     "description": "The valid range for the value Property",
26277                     "items": {

```



```

26278         "anyOf": [
26279             {
26280                 "type": "number"
26281             },
26282             {
26283                 "type": "integer"
26284             }
26285         ],
26286     },
26287     "maxItems": 2,
26288     "minItems": 2,
26289     "readOnly": true,
26290     "type": "array"
26291 },
26292 "step": {
26293     "anyOf": [
26294         {
26295             "type": "integer"
26296         },
26297         {
26298             "type": "number"
26299         }
26300     ],
26301     "description": "Step value across the defined range",
26302     "readOnly": true
26303 },
26304 "targetlevel": {
26305     "anyOf": [
26306         {
26307             "type": "integer"
26308         },
26309         {
26310             "type": "number"
26311         }
26312     ],
26313     "description": "The target level from the available selectable set"
26314 },
26315 "value": {
26316     "anyOf": [
26317         {
26318             "type": "array"
26319         },
26320         {
26321             "type": "string"
26322         },
26323         {
26324             "type": "boolean"
26325         },
26326         {
26327             "type": "integer"
26328         },
26329         {
26330             "type": "number"
26331         },
26332         {
26333             "type": "object"
26334         }
26335     ],
26336     "description": "The value sensed or actuated by this Resource"
26337 }
26338 },
26339 "required": [
26340     "availablelevels",
26341     "targetlevel"
26342 ],
26343 "type": "object"
26344 }
26345
26346 'UpdateSchema' :
26347 {
26348

```

```

26349 "properties": {
26350   "precision": {
26351     "description": "Accuracy granularity of the exposed value",
26352     "readOnly": true,
26353     "type": "number"
26354   },
26355   "range": {
26356     "description": "The valid range for the value Property",
26357     "items": {
26358       "anyOf": [
26359         {
26360           "type": "number"
26361         },
26362         {
26363           "type": "integer"
26364         }
26365       ]
26366     },
26367     "maxItems": 2,
26368     "minItems": 2,
26369     "readOnly": true,
26370     "type": "array"
26371   },
26372   "step": {
26373     "anyOf": [
26374       {
26375         "type": "integer"
26376       },
26377       {
26378         "type": "number"
26379       }
26380     ],
26381     "description": "Step value across the defined range",
26382     "readOnly": true
26383   },
26384   "targetlevel": {
26385     "description": "The target level from the available selectable set",
26386     "type": [
26387       "integer",
26388       "number"
26389     ]
26390   },
26391   "value": {
26392     "anyOf": [
26393       {
26394         "type": "array"
26395       },
26396       {
26397         "type": "string"
26398       },
26399       {
26400         "type": "boolean"
26401       },
26402       {
26403         "type": "integer"
26404       },
26405       {
26406         "type": "number"
26407       },
26408       {
26409         "type": "object"
26410       }
26411     ],
26412     "description": "The value sensed or actuated by this Resource"
26413   }
26414 },
26415 "required": [
26416   "targetlevel"
26417 ],
26418 "type": "object"
26419 }

```

26420  
26421 }  
26422 }  
26423 }

26424 **B.63.5 Property 정의**

Property name	Value type	필수	엑세스 모드	설명
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
targetlevel	복수 타입: schema 참조	예		사용 가능하고 선택 가능한 집합으로부터의 목표 레벨
availablelevels	배열: schema 참조	예	Read Only	하나를 선택할 수 있는 레벨의 집합
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
targetlevel	['정수','number']	예		사용 가능하고 선택 가능한 집합으로부터의 목표 레벨
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도

## 26425 B.63.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SelectableLevelsResURI		get	post		

## 26426 B.64 신호 강도

### 26427 B.64.1 개요

26428 이 resource 는 lqi 및 rssi 에 의해 신호의 강도를 기술한다. lqi 는 Link Quality 표시자를 나타내는  
 26429 부동 소수점 숫자이다. rssi 는 수신된 신호 강도 표시자를 나타내는 부동 소수점 숫자이다.

26430

26431

### 26432 B.64.2 URI 예

26433 /SignalStrengthResURI

### 26434 B.64.3 Resource Type

26435 resource type (rt)는 ['oic.r.signalstrength']로 정의된다.

### 26436 B.64.4 Swagger2.0 정의

```

26437 {
26438   "swagger": "2.0",
26439   "info": {
26440     "title": "Signal Strength",
26441     "version": "v1.1.0-20160519",
26442     "license": {
26443       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26444       "x-description": "Redistribution and use in source and binary forms, with or without
26445 modification, are permitted provided that the following conditions are met:\n      1.
26446 Redistributions of source code must retain the above copyright notice, this list of conditions and
26447 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
26448 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
26449 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
26450 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
26451 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
26452 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
26453 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
26454 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
26455 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
26456 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26457 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26458 OF SUCH DAMAGE.\n"
26459     },
26460   },
26461   "schemes": ["http"],
26462   "consumes": ["application/json"],
26463   "produces": ["application/json"],
26464   "paths": {
26465     "/SignalStrengthResURI" : {
26466       "get": {
26467         "description": "This resource describes the strength of a signal by means of lqi and
26468 rssi.\nThe lqi is a floating point number that represents Link Quality Indicator.\nThe rssi is a
26469 floating point number that represents the received signal strength indicator.\n",
26470         "parameters": [
26471           {"$ref": "#/parameters/interface"}
26472         ],
26473         "responses": {

```

```

26474         "200": {
26475             "description" : "",
26476             "x-example":
26477                 {
26478                     "rt": ["oic.r.signalstrength"],
26479                     "id": "unique_example_id",
26480                     "lqi": 10.0,
26481                     "rssi": 55.0
26482                 }
26483             ,
26484             "schema": { "$ref": "#/definitions/SignalStrength" }
26485         }
26486     }
26487 }
26488 },
26489 "parameters": {
26490     "interface" : {
26491         "in" : "query",
26492         "name" : "if",
26493         "type" : "string",
26494         "enum" : ["oic.if.s", "oic.if.baseline"]
26495     }
26496 },
26497 "definitions": {
26498     "SignalStrength" :
26499     {
26500         "properties": {
26501             "lqi": {
26502                 "description": "current value of Link Quality Indicator",
26503                 "readOnly": true,
26504                 "type": "number"
26505             },
26506             "precision": {
26507                 "description": "Accuracy granularity of the exposed value",
26508                 "readOnly": true,
26509                 "type": "number"
26510             },
26511             "range": {
26512                 "description": "The valid range for the value Property",
26513                 "items": {
26514                     "anyOf": [
26515                         {
26516                             "type": "number"
26517                         },
26518                         {
26519                             "type": "integer"
26520                         }
26521                     ]
26522                 },
26523                 "maxItems": 2,
26524                 "minItems": 2,
26525                 "readOnly": true,
26526                 "type": "array"
26527             },
26528             "rssi": {
26529                 "description": "current value of Received Signal Strength Indicator",
26530                 "readOnly": true,
26531                 "type": "number"
26532             },
26533             "step": {
26534                 "anyOf": [
26535                     {
26536                         "type": "integer"
26537                     },
26538                     {
26539                         "type": "number"
26540                     }
26541                 ],
26542                 "description": "Step value across the defined range",
26543                 "readOnly": true
26544             }
26545         }
26546     }
26547 }

```

```

26545     },
26546     "value": {
26547       "anyOf": [
26548         {
26549           "type": "array"
26550         },
26551         {
26552           "type": "string"
26553         },
26554         {
26555           "type": "boolean"
26556         },
26557         {
26558           "type": "integer"
26559         },
26560         {
26561           "type": "number"
26562         },
26563         {
26564           "type": "object"
26565         }
26566       ],
26567       "description": "The value sensed or actuated by this Resource"
26568     }
26569   },
26570   "required": [
26571     "lqi",
26572     "rssi"
26573   ],
26574   "type": "object"
26575 }
26576
26577 }
26578 }
26579

```

#### 26580 B.64.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
precision	숫자		Read Only	노출된 값의 정확도
rssi	숫자	예	Read Only	수신된 신호 강도 표시자의 현재 값
lqi	숫자	예	Read Only	Link Quality 표시자의 현재 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

26581 **B.64.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/SignalStrengthResURI		get			

26582 **B.65 취침 센서**

26583 **B.65.1 개요**

26584 이 resource 는 사람의 수면이 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은  
26585 수면이 감지되었음을 의미한다. 'false' 값은 수면이 감지되지 않았음을 의미한다.

26586

26587

26588

26589 **B.65.2 URI 예**

26590 /SleepSensorResURI

26591 **B.65.3 Resource Type**

26592 resource type (rt)는 ['oic.r.sensor.sleep']로 정의된다.

26593 **B.65.4 Swagger2.0 정의**

```

26594 {
26595   "swagger": "2.0",
26596   "info": {
26597     "title": "Sleep Sensor",
26598     "version": "v1.1.0-20160519",
26599     "license": {
26600       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26601       "x-description": "Redistribution and use in source and binary forms, with or without
26602 modification, are permitted provided that the following conditions are met:\n      1.
26603 Redistributions of source code must retain the above copyright notice, this list of conditions and
26604 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
26605 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
26606 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
26607 Connectivity Foundation, INC. \\"AS IS\\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
26608 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
26609 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
26610 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
26611 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
26612 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
26613 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26614 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26615 OF SUCH DAMAGE.\n"
26616   }
26617 },
26618 "schemes": ["http"],
26619 "consumes": ["application/json"],
26620 "produces": ["application/json"],
26621 "paths": {
26622   "/SleepSensorResURI" : {
26623     "get": {
26624       "description": "This resource describes whether human sleep has been sensed or not.\nThe
26625 value is a boolean.\nA value of 'true' means that sleep has been sensed.\nA value of 'false' means
26626 that sleep not been sensed.\n",
26627       "parameters": [
26628         {"$ref": "#/parameters/interface"}
26629       ]
26630     }
26631   }
26632 }

```

```

26629     ],
26630     "responses": {
26631         "200": {
26632             "description" : "",
26633             "x-example":
26634                 {
26635                     "rt":      ["oic.r.sensor.sleep"],
26636                     "id":      "unique_example_id",
26637                     "value":   true
26638                 }
26639             ,
26640             "schema": { "$ref": "#/definitions/sleep" }
26641         }
26642     }
26643 }
26644 },
26645 },
26646 "parameters": {
26647     "interface" : {
26648         "in" : "query",
26649         "name" : "if",
26650         "type" : "string",
26651         "enum" : ["oic.if.s", "oic.if.baseline"]
26652     }
26653 },
26654 "definitions": {
26655     "sleep" :
26656         {
26657             "allOf": [
26658                 {
26659                     "properties": {
26660                         "precision": {
26661                             "description": "Accuracy granularity of the exposed value",
26662                             "readOnly": true,
26663                             "type": "number"
26664                         },
26665                         "range": {
26666                             "description": "The valid range for the value Property",
26667                             "items": {
26668                                 "anyOf": [
26669                                     {
26670                                         "type": "number"
26671                                     },
26672                                     {
26673                                         "type": "integer"
26674                                     }
26675                                 ]
26676                             },
26677                             "maxItems": 2,
26678                             "minItems": 2,
26679                             "readOnly": true,
26680                             "type": "array"
26681                         }
26682                     },
26683                     "step": {
26684                         "anyOf": [
26685                             {
26686                                 "type": "integer"
26687                             },
26688                             {
26689                                 "type": "number"
26690                             }
26691                         ],
26692                         "description": "Step value across the defined range",
26693                         "readOnly": true
26694                     },
26695                     "value": {
26696                         "description": "true = sensed, false = not sensed.",
26697                         "readOnly": true,
26698                         "type": "boolean"
26699                     }
26700                 }
26701             ]
26702         }
26703     }
26704 }

```



```

26700         "type": "object"
26701     }
26702 ],
26703     "required": [
26704         "value"
26705     ]
26706 }
26707
26708 }
26709 }
26710

```

#### 26711 B.65.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
value	boolean	예	Read Only	true = 감지 false = 미 감지
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도

#### 26712 B.65.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SleepSensorResURI		get			

### 26713 B.66 연기 센서

#### 26714 B.66.1 개요

26715 이 resource 는 연기가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 연기가  
26716 감지되었음을 의미한다. 'false' 값은 연기가 감지되지 않았음을 의미한다.

26717

26718

26719

#### 26720 B.66.2 URI 예

26721 /SmokeSensorResURI

#### 26722 B.66.3 Resource Type

26723 resource type (rt)는 ['oic.r.sensor.smoke']로 정의된다.

## B.66.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Smoke Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/SmokeSensorResURI" : {
      "get": {
        "description": "This resource describes whether smoke has been sensed or not.\nThe value is
a boolean.\nA value of 'true' means that smoke has been sensed.\nA value of 'false' means that
smoke not been sensed.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.smoke"],
              "id": "unique_example_id",
              "value": true
            },
            "schema": { "$ref": "#/definitions/smoke" }
          }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "smoke" : {
      "allOf": [
        {
          "properties": {
            "precision": {
              "description": "Accuracy granularity of the exposed value",
              "readOnly": true,
```

```

26794         "type": "number"
26795     },
26796     "range": {
26797         "description": "The valid range for the value Property",
26798         "items": {
26799             "anyOf": [
26800                 {
26801                     "type": "number"
26802                 },
26803                 {
26804                     "type": "integer"
26805                 }
26806             ]
26807         },
26808         "maxItems": 2,
26809         "minItems": 2,
26810         "readOnly": true,
26811         "type": "array"
26812     },
26813     "step": {
26814         "anyOf": [
26815             {
26816                 "type": "integer"
26817             },
26818             {
26819                 "type": "number"
26820             }
26821         ],
26822         "description": "Step value across the defined range",
26823         "readOnly": true
26824     },
26825     "value": {
26826         "description": "true = sensed, false = not sensed.",
26827         "readOnly": true,
26828         "type": "boolean"
26829     }
26830 },
26831 "type": "object"
26832 }
26833 ],
26834 "required": [
26835     "value"
26836 ]
26837 }
26838 }
26839 }
26840 }
26841

```

#### 26842 B.66.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
value	boolean	예	Read Only	true = 감지 false = 미 감지
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

26843 **B.66.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/SmokeSensorResURI		get			

26844 **B.67 음성 합성 TTS**

26845 **B.67.1 개요**

26846 이 resource 는, OCF Client 에 의해 음성을 렌더링할 수 있고 client 가 SSML 문서에 렌더링할  
 26847 텍스트를 제공하는 것을 허용하는 OCF Server 상에서 생성될 수 있거나, 또는 일부 상주  
 26848 애플리케이션에 의해 OCF Server 상에서 생성될 수 있다.

26849  
 26850 렌더링 된 음성은 Server 에 국소적인 본 단계에 존재한다 (즉, 스트리밍 되지 않는다). 발성은 SSML  
 26851 문서이다. supportedLanguages 는 지원되는 RFC 5646 정의 언어 태그의 배열이다.  
 26852 supportedVoices 는 지원되는 음성을 나타내는 SSML 문서의 단편이다.

26853  
 26854 본 예에서의 발성은 적절하게 나온(JSON Rule) SSML 문서이어야 한다. 아래에 예를 보인다.

26855  
 26856 "<?xml version="1.0" encoding="ISO-8859-1"?>  
 26857  
 26858 <speak version="1.1" xmlns=http://www.w3.org/2001/10/synthesis  
 26859  
 26860 xmlns:xsi=http://www.w3.org/2001/XMLSchema-instance  
 26861  
 26862 xsi:schemaLocation=http://www.w3.org/2001/10/synthesis  
 26863  
 26864 http://www.w3.org/TR/speech-synthesis11/synthesis.xsd  
 26865  
 26866 xml:lang="en-US">

26867  
 26868  
 26869  
 26870 The title of the movie is:  
 26871  
 26872 "Monty Pythons The Meaning of Life"  
 26873  
 26874 which is directed by Terry Jones.

26875

26876 </speak"

26877

26878

26879

26880

26881

26882

26883

26884

26885

26886

26887

## 26888 **B.67.2 URI 예**

26889 /SpeechTTSResURI

## 26890 **B.67.3 Resource Type**

26891 resource type (rt)는 ['oic.r.speech.tts']로 정의된다.

## 26892 **B.67.4 Swagger2.0 정의**

```
26893 {
26894   "swagger": "2.0",
26895   "info": {
26896     "title": "Speech Synthesis-TTS",
26897     "version": "v1.1.0-20160519",
26898     "license": {
26899       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
26900       "x-description": "Redistribution and use in source and binary forms, with or without
26901 modification, are permitted provided that the following conditions are met:\n      1.
26902 Redistributions of source code must retain the above copyright notice, this list of conditions and
26903 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
26904 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
26905 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
26906 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
26907 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
26908 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
26909 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
26910 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
26911 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
26912 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
26913 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
26914 OF SUCH DAMAGE.\n"
26915     }
26916   },
26917   "schemes": ["http"],
26918   "consumes": ["application/json"],
26919   "produces": ["application/json"],
26920   "paths": {
26921     "/SpeechTTSResURI" : {
26922       "get": {
26923         "description": "This resource may be created on the OIC Server that is capable of rendering
26924 speech by an OIC Client\n and allows the client to provide an SSML document with text to render\n
26925 or may be created on the OIC Server by some resident application.\nThe audio rendered is at this
26926 stage local to the Server (i.e. not streamed).\nThe utterance is an SSML document.\nThe
26927 supportedLanguages is an array of the RFC 5646 defined language tags that are supported.\nThe
```

```

26928 supportedVoices is an SSML document fragment indicating the voices that are supported.\nUtterance
26929 in the example shall be a properly escaped (JSON rules) SSML document. An example is given below:\n
26930 \<?xml version="1.0" encoding="ISO-8859-1"?>\n\r\n <speech version="1.1"
26931 xmlns="http://www.w3.org/2001/10/synthesis"\n\r\n
26932 \txmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"\n\r\n
26933 \txsi:schemaLocation="http://www.w3.org/2001/10/synthesis\n\r\n
26934 \thttp://www.w3.org/TR/speech-synthesis11/synthesis.xsd"\n\r\n \txml:lang="en-US">\n\r\n
26935 \n\r\n \tThe title of the movie is:\n\r\n \t"Monty Pythons The Meaning of Life"\n\r\n \twhich
26936 is directed by Terry Jones.\n\r\n </speech>\n",
26937     "parameters": [
26938         { "$ref": "#/parameters/interface" }
26939     ],
26940     "responses": {
26941         "200": {
26942             "description": "",
26943             "x-example":
26944                 {
26945                     "rt": ["oic.r.speech.tts"],
26946                     "id": "unique_example_id",
26947                     "utterance": "SSML Document",
26948                     "supportedLanguages": ["en-US", "en-GB", "fr-CA"],
26949                     "supportedVoices": "<voice gender=\"female\" variant=\"2\"></voice>\n\r<voice
26950 name=\"Mike\"></voice>"
26951                 }
26952             ,
26953             "schema": { "$ref": "#/definitions/Speech" }
26954         }
26955     },
26956 },
26957 "post": {
26958     "description": "Changes the utterance being rendered.\nExample shows a change in language
26959 selected.\n",
26960     "parameters": [
26961         { "$ref": "#/parameters/interface" },
26962         {
26963             "name": "body",
26964             "in": "body",
26965             "required": true,
26966             "schema": { "$ref": "#/definitions/Speech" },
26967             "x-example":
26968                 {
26969                     "rt": ["oic.r.speech.tts"],
26970                     "id": "unique_example_id",
26971                     "utterance": "SSML Document"
26972                 }
26973         }
26974     ],
26975     "responses": {
26976         "200": {
26977             "description": "",
26978             "x-example":
26979                 {
26980                     "rt": ["oic.r.speech.tts"],
26981                     "id": "unique_example_id",
26982                     "utterance": "SSML Document"
26983                 }
26984             ,
26985             "schema": { "$ref": "#/definitions/Speech" }
26986         }
26987     }
26988 },
26989 },
26990 },
26991 "parameters": {
26992     "interface": {
26993         "in": "query",
26994         "name": "if",
26995         "type": "string",
26996         "enum": ["oic.if.a", "oic.if.baseline"]
26997     }
26998 },

```

```

26999 "definitions": {
27000   "Speech" :
27001     {
27002       "properties": {
27003         "precision": {
27004           "description": "Accuracy granularity of the exposed value",
27005           "readOnly": true,
27006           "type": "number"
27007         },
27008         "range": {
27009           "description": "The valid range for the value Property",
27010           "items": {
27011             "anyOf": [
27012               {
27013                 "type": "number"
27014               },
27015               {
27016                 "type": "integer"
27017               }
27018             ]
27019           },
27020           "maxItems": 2,
27021           "minItems": 2,
27022           "readOnly": true,
27023           "type": "array"
27024         },
27025         "step": {
27026           "anyOf": [
27027             {
27028               "type": "integer"
27029             },
27030             {
27031               "type": "number"
27032             }
27033           ],
27034           "description": "Step value across the defined range",
27035           "readOnly": true
27036         },
27037         "supportedLanguages": {
27038           "description": "array of supported language tags",
27039           "items": {
27040             "type": "string"
27041           },
27042           "readOnly": true,
27043           "type": "array"
27044         },
27045         "supportedVoices": {
27046           "description": "SSML document fragment indicating supported voices",
27047           "readOnly": true,
27048           "type": "string"
27049         },
27050         "utterance": {
27051           "description": "SSML document including the speech body",
27052           "type": "string"
27053         },
27054         "value": {
27055           "anyOf": [
27056             {
27057               "type": "array"
27058             },
27059             {
27060               "type": "string"
27061             },
27062             {
27063               "type": "boolean"
27064             },
27065             {
27066               "type": "integer"
27067             },
27068             {
27069               "type": "number"

```

```

27070         },
27071         {
27072             "type": "object"
27073         }
27074     ],
27075     "description": "The value sensed or actuated by this Resource"
27076 },
27077 },
27078 "required": [
27079     "utterance"
27080 ],
27081 "type": "object"
27082 }
27083 }
27084 }
27085 }
27086

```

#### 27087 B.67.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
supportedVoices	스트링		Read Only	지원되는 음성을 나타내는 SSML 문서의 단편
utterance	스트링	예		음성 본문을 포함하는 SSML 문서
supportedLanguages	배열: schema 참조		Read Only	지원되는 언어 태그의 배열
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

#### 27088 B.67.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/SpeechTTSResURI		get	post		



## 27089 **B.68 온도**

### 27090 **B.68.1 개요**

27091 이 resource 는 감지되거나 작동된 온도 값을 기술한다. temperature 는 측정된 현재의 값을  
27092 기술한다. units 는 C, F 또는 K 중 하나인 단일 값이다.

27093  
27094 이는 온도 값에 대한 측정 단위를 제공한다. 이것은 server 가 제공하는 읽기 전용 값이다. units  
27095 Property 가 없으면 default 는 섭씨[C]이다. (oic.r.baseresource 로부터의) 범위가 생략되면  
27096 default 는 +/- MAXINT 이다. 현재의 온도 값을 검색한다.

27097  
27098 Client 는 query 파라미터의 사용에 의해 요청된 온도에 대한 단위를 규정할 수 있다. 어떠한 query  
27099 파라미터도 제공되지 않는다면 sever 는 default 측정치 또는 설정 값을 제공한다.

27100

27101

### 27102 **B.68.2 URI 예**

27103 /TemperatureResURI

### 27104 **B.68.3 Resource Type**

27105 resource type (rt)는 ['oic.r.temperature']로 정의된다.

### 27106 **B.68.4 Swagger2.0 정의**

```
27107 {  
27108   "swagger": "2.0",  
27109   "info": {  
27110     "title": "Temperature",  
27111     "version": "v1.1.0-20160519",  
27112     "license": {  
27113       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",  
27114       "x-description": "Redistribution and use in source and binary forms, with or without  
27115 modification, are permitted provided that the following conditions are met:\n      1.  
27116 Redistributions of source code must retain the above copyright notice, this list of conditions and  
27117 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above  
27118 copyright notice, this list of conditions and the following disclaimer in the documentation and/or  
27119 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open  
27120 Connectivity Foundation, INC. \n      AS IS\n      AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT  
27121 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR  
27122 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity  
27123 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,  
27124 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR  
27125 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON  
27126 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR  
27127 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY  
27128 OF SUCH DAMAGE.\n    }  
27129   },  
27130 },  
27131 "schemes": ["http"],  
27132 "consumes": ["application/json"],  
27133 "produces": ["application/json"],  
27134 "paths": {  
27135   "/TemperatureResURI" : {  
27136     "get": {  
27137       "description": "This resource describes a sensed or actuated Temperature value.\nThe
```

```

27138 temperature describes the current value measured.\n
27139 The units is a single value that is one of C, F
27140 or K.\n
27141 It provides the unit of measurement for the temperature value.\n
27142 It is a read-only value that is provided by the server.\n
27143 If the units Property is missing the default is Celsius [C].\n
27144 When range (from oic.r.baseresource) is omitted the default is +/- MAXINT.\n
27145 Retrieves the current temperature value.\n
27146 A client can specify the units for the requested temperature by use of a query parameter.\n
27147 If no query parameter is provided the server provides its default measure or set value.\n
27148 ",
27149 "parameters": [
27150   {
27151     "$ref": "#/parameters/interface",
27152     {
27153       "in": "query",
27154       "description": "Units",
27155       "type": "string",
27156       "enum": ["C", "F", "K"],
27157       "name": "units"
27158     }
27159   ],
27160   "responses": {
27161     "200": {
27162       "description": "",
27163       "x-example": {
27164         "rt": ["oic.r.temperature"],
27165         "id": "unique_example_id",
27166         "temperature": 20.0,
27167         "units": "C",
27168         "range": [0.0,100.0]
27169       },
27170       "schema": { "$ref": "#/definitions/Temperature" }
27171     },
27172     "403": {
27173       "description": "This response is generated by the OIC Server when the client
27174 sends:\n
27175 A retrieve with q queryParameter indicating a unit that the server does not support.\n
27176 The server responds with the current resource representation including the\n
27177 nunits property illustrating the supported units and the error.\n
27178 ",
27179       "x-example": {
27180         "id": "unique_example_id",
27181         "temperature": 20.0,
27182         "units": "C"
27183       },
27184       "schema": { "$ref": "#/definitions/Temperature" }
27185     }
27186   },
27187   "post": {
27188     "description": "Sets the desired temperature value.\n
27189 If a unit is included and the server does not support the unit indicated the request will fail.\n
27190 If the units are omitted value is taken to be in C.\n
27191 ",
27192     "parameters": [
27193       {
27194         "$ref": "#/parameters/interface",
27195         {
27196           "name": "body",
27197           "in": "body",
27198           "required": true,
27199           "schema": { "$ref": "#/definitions/Temperature" },
27200           "x-example": {
27201             "id": "unique_example_id",
27202             "temperature": 18.0
27203           }
27204         }
27205       ],
27206       "responses": {
27207         "200": {
27208           "description": "",
27209           "x-example": {
27210             "id": "unique_example_id",

```

```

27209         "temperature": 18.0
27210     }
27211     ,
27212     "schema": { "$ref": "#/definitions/Temperature" }
27213 },
27214 "403": {
27215     "description": "This response is generated by the OIC Server when the client
27216 sends:\n An update with an out of range property value for temperature.\n An update with an
27217 unsupported unit for this server.\nThe server responds with the current resource representation
27218 including\nthe range property illustrating the supported range and the error.\n",
27219     "x-example":
27220     {
27221         "id": "unique_example_id",
27222         "temperature": 20.0,
27223         "units": "C",
27224         "range": [0.0,100.0]
27225     }
27226     ,
27227     "schema": { "$ref": "#/definitions/Temperature" }
27228 }
27229 }
27230 }
27231 }
27232 },
27233 "parameters": {
27234     "interface" : {
27235         "in" : "query",
27236         "name" : "if",
27237         "type" : "string",
27238         "enum" : ["oic.if.a", "oic.if.s", "oic.if.baseline"]
27239     }
27240 },
27241 "definitions": {
27242     "Temperature" :
27243     {
27244         "properties": {
27245             "precision": {
27246                 "description": "Accuracy granularity of the exposed value",
27247                 "readOnly": true,
27248                 "type": "number"
27249             },
27250             "range": {
27251                 "description": "The valid range for the value Property",
27252                 "items": {
27253                     "anyOf": [
27254                         {
27255                             "type": "number"
27256                         },
27257                         {
27258                             "type": "integer"
27259                         }
27260                     ]
27261                 },
27262                 "maxItems": 2,
27263                 "minItems": 2,
27264                 "readOnly": true,
27265                 "type": "array"
27266             },
27267             "step": {
27268                 "anyOf": [
27269                     {
27270                         "type": "integer"
27271                     },
27272                     {
27273                         "type": "number"
27274                     }
27275                 ],
27276                 "description": "Step value across the defined range",
27277                 "readOnly": true
27278             },
27279             "temperature": {

```

```

27280         "description": "Current temperature setting or measurement",
27281         "type": "number"
27282     },
27283     "units": {
27284         "description": "Units for the temperature value",
27285         "enum": [
27286             "C",
27287             "F",
27288             "K"
27289         ],
27290         "readOnly": true
27291     },
27292     "value": {
27293         "anyOf": [
27294             {
27295                 "type": "array"
27296             },
27297             {
27298                 "type": "string"
27299             },
27300             {
27301                 "type": "boolean"
27302             },
27303             {
27304                 "type": "integer"
27305             },
27306             {
27307                 "type": "number"
27308             },
27309             {
27310                 "type": "object"
27311             }
27312         ],
27313         "description": "The value sensed or actuated by this Resource"
27314     }
27315 },
27316 "required": [
27317     "temperature"
27318 ],
27319 "type": "object"
27320 }
27321 }
27322 }
27323 }
27324

```

### 27325 B.68.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
temperature	숫자	예		현재의 온도 설정 또는 측정치
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
units	복수 타입: schema 참조		Read Only	온도 값에 대한 단위

value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
-------	---------------------	--	--	-----------------------------------

## 27326 B.68.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/TemperatureResURI		get	post		

## 27327 B.69 3 축 센서

### 27328 B.69.1 개요

27329 이 resource 는 3 축 센서로부터 측정 표현을 제공한다. orientation 은 x-평면, y-평면 및 z-평면  
27330 값을 표현하는 숫자의 배열이다. 각 평면에 대한 측정의 단위는 'g'이다.

27331

27332

### 27333 B.69.2 URI 예

27334 /ThreeAxisResURI

### 27335 B.69.3 Resource Type

27336 resource type (rt)는 ['oic.r.sensor.threeaxis']로 정의된다.

### 27337 B.69.4 Swagger2.0 정의

```

27338 {
27339   "swagger": "2.0",
27340   "info": {
27341     "title": "Three Axis Sensor",
27342     "version": "v1.1.0-20160519",
27343     "license": {
27344       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27345       "x-description": "Redistribution and use in source and binary forms, with or without
27346 modification, are permitted provided that the following conditions are met:\n      1.
27347 Redistributions of source code must retain the above copyright notice, this list of conditions and
27348 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27349 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27350 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27351 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27352 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27353 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n\n      IN NO EVENT SHALL THE Open Connectivity
27354 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
27355 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
27356 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n\n      HOWEVER CAUSED AND ON
27357 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27358 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27359 OF SUCH DAMAGE.\n"
27360     }
27361   },
27362   "schemes": ["http"],
27363   "consumes": ["application/json"],
27364   "produces": ["application/json"],
27365   "paths": {
27366     "/ThreeAxisResURI" : {
27367       "get": {
27368         "description": "This resource provides a representation of the measurement from a three-
```

```

27369 axis sensor.\nThe orientation is an array of numbers representing x-plane, y-plane and z-plane
27370 values.\nThe unit of measurement for each pane is 'g'.\n",
27371     "parameters": [
27372         {"$ref": "#/parameters/interface"}
27373     ],
27374     "responses": {
27375         "200": {
27376             "description": "",
27377             "x-example":
27378                 {
27379                     "rt": ["oic.r.sensor.threeaxis"],
27380                     "id": "unique_example_id",
27381                     "orientation": [0.7, 1.1, -0.2]
27382                 }
27383             ,
27384             "schema": { "$ref": "#/definitions/threeAxis" }
27385         }
27386     }
27387 }
27388 }
27389 },
27390 "parameters": {
27391     "interface" : {
27392         "in" : "query",
27393         "name" : "if",
27394         "type" : "string",
27395         "enum" : ["oic.if.s", "oic.if.baseline"]
27396     }
27397 },
27398 "definitions": {
27399     "threeAxis" :
27400     {
27401         "properties": {
27402             "orientation": {
27403                 "description": "Array containing x-plane, y-plane and z-plane orientation in 'g'.",
27404                 "items": {
27405                     "type": "number"
27406                 },
27407                 "maxItems": 3,
27408                 "minItems": 3,
27409                 "readOnly": true,
27410                 "type": "array"
27411             },
27412             "precision": {
27413                 "description": "Accuracy granularity of the exposed value",
27414                 "readOnly": true,
27415                 "type": "number"
27416             },
27417             "range": {
27418                 "description": "The valid range for the value Property",
27419                 "items": {
27420                     "anyOf": [
27421                         {
27422                             "type": "number"
27423                         },
27424                         {
27425                             "type": "integer"
27426                         }
27427                     ]
27428                 },
27429                 "maxItems": 2,
27430                 "minItems": 2,
27431                 "readOnly": true,
27432                 "type": "array"
27433             },
27434             "step": {
27435                 "anyOf": [
27436                     {
27437                         "type": "integer"
27438                     },
27439                     {

```

```

27440         "type": "number"
27441     }
27442 ],
27443     "description": "Step value across the defined range",
27444     "readOnly": true
27445 },
27446     "value": {
27447         "anyOf": [
27448             {
27449                 "type": "array"
27450             },
27451             {
27452                 "type": "string"
27453             },
27454             {
27455                 "type": "boolean"
27456             },
27457             {
27458                 "type": "integer"
27459             },
27460             {
27461                 "type": "number"
27462             },
27463             {
27464                 "type": "object"
27465             }
27466         ],
27467         "description": "The value sensed or actuated by this Resource"
27468     }
27469 },
27470     "required": [
27471         "orientation"
27472     ]
27473 }
27474 }
27475 }
27476 }
27477

```

#### 27478 B.69.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
orientation	배열 schema 참조	예	Read Only	x-평면, y-평면 및 z-평면의 'g' 단위의 방위를 포함하는 배열
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
range	배열 schema 참조		Read Only	value Property 에 대한 유효 범위

27479 **B.69.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/ThreeAxisResURI		get			

27480 **B.70 기간**

27481 **B.70.1 개요**

27482 이 resource 는 임의의 추가적으로 제공된 정보가 도출되거나 제한되는 기간을 기술한다. startTime  
27483 및 stopTime 은 ISO8601 인코딩된 스트링이다. startTime 은 반드시 있어야 한다.

27484  
27485 interval 은 분 단위의 간격이고, 존재한다면, 이 값은 1 분 이상이어야 한다. stopTime 및 interval 은  
27486 상호 배타적이고; 두 Property 가 하나의 Resource instance 에 함께 존재할 수 없다. 정보 검색,  
27487 동작 또는 다른 작용에 대한 기간을 정의한다.

27488

27489

27490

27491 **B.70.2 URI 예**

27492 /TimePeriodResURI

27493 **B.70.3 Resource Type**

27494 resource type (rt)는 ['oic.r.time.period']로 정의된다.

27495 **B.70.4 Swagger2.0 정의**

```

27496 {
27497   "swagger": "2.0",
27498   "info": {
27499     "title": "Time Period",
27500     "version": "v1.1.0-20160519",
27501     "license": {
27502       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27503       "x-description": "Redistribution and use in source and binary forms, with or without
27504 modification, are permitted provided that the following conditions are met:\n      1.
27505 Redistributions of source code must retain the above copyright notice, this list of conditions and
27506 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
27507 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27508 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27509 Connectivity Foundation, INC. \AS IS\ AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27510 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27511 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
27512 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
27513 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
27514 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
27515 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27516 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27517 OF SUCH DAMAGE.\n"
27518     }
27519   },
27520   "schemes": ["http"],
27521   "consumes": ["application/json"],
27522   "produces": ["application/json"],
27523   "paths": {

```



```

27524     "/TimePeriodResURI" : {
27525         "get": {
27526             "description": "This resource describes the time period over which any additionally
27527 provided\ninformation is derived or bounded.\nThe startTime and stopTime are ISO8601 encoded
27528 strings.  startTime must be present.\nThe interval is the interval of the time period in minutes,
27529 if present this value must be no less than 1 minute.\nstopTime and interval are mutually exclusive;
27530 both Properties cannot be present in a Resource instance.\nDefines a time period for information
27531 retrieval, action or other behaviour.\n",
27532             "parameters": [
27533                 { "$ref": "#/parameters/interface" }
27534             ],
27535             "responses": {
27536                 "200": {
27537                     "description": "",
27538                     "x-example":
27539                     {
27540                         "rt": [ "oic.r.time.period" ],
27541                         "id": "unique_example_id",
27542                         "startTime": "2015-01-09T14:30Z",
27543                         "stopTime": "2015-01-09T14:45Z"
27544                     }
27545                 },
27546                 "schema": { "$ref": "#/definitions/TimePeriod" }
27547             }
27548         },
27549     },
27550     "post": {
27551         "description": "Sets or updates a time period for information retrieval, action or other
27552 behavior.\n",
27553         "parameters": [
27554             { "$ref": "#/parameters/interface" },
27555             {
27556                 "name": "body",
27557                 "in": "body",
27558                 "required": true,
27559                 "schema": { "$ref": "#/definitions/TimePeriod" },
27560                 "x-example":
27561                 {
27562                     "id": "unique_example_id",
27563                     "startTime": "2015-01-09T14:30Z",
27564                     "stopTime": "2015-01-09T14:45Z"
27565                 }
27566             }
27567         ],
27568         "responses": {
27569             "200": {
27570                 "description": "",
27571                 "x-example":
27572                 {
27573                     "id": "unique_example_id",
27574                     "startTime": "2015-01-09T14:30Z",
27575                     "stopTime": "2015-01-09T14:45Z"
27576                 }
27577             },
27578             "schema": { "$ref": "#/definitions/TimePeriod" }
27579         }
27580     }
27581 },
27582 },
27583 },
27584 "parameters": {
27585     "interface" : {
27586         "in" : "query",
27587         "name" : "if",
27588         "type" : "string",
27589         "enum" : [ "oic.if.a", "oic.if.baseline" ]
27590     }
27591 },
27592 "definitions": {
27593     "TimePeriod" :
27594     {

```

```

27595     "properties": {
27596         "interval": {
27597             "description": "Time interval in minutes after the startTime, if present stopTime
27598 cannot be present",
27599             "type": "integer"
27600         },
27601         "precision": {
27602             "description": "Accuracy granularity of the exposed value",
27603             "readOnly": true,
27604             "type": "number"
27605         },
27606         "range": {
27607             "description": "The valid range for the value Property",
27608             "items": {
27609                 "anyOf": [
27610                     {
27611                         "type": "number"
27612                     },
27613                     {
27614                         "type": "integer"
27615                     }
27616                 ]
27617             },
27618             "maxItems": 2,
27619             "minItems": 2,
27620             "readOnly": true,
27621             "type": "array"
27622         },
27623         "startTime": {
27624             "description": "Start time for the time period",
27625             "type": "string"
27626         },
27627         "step": {
27628             "anyOf": [
27629                 {
27630                     "type": "integer"
27631                 },
27632                 {
27633                     "type": "number"
27634                 }
27635             ],
27636             "description": "Step value across the defined range",
27637             "readOnly": true
27638         },
27639         "stopTime": {
27640             "description": "Stop time for the time period, if present interval cannot be present",
27641             "type": "string"
27642         },
27643         "value": {
27644             "anyOf": [
27645                 {
27646                     "type": "array"
27647                 },
27648                 {
27649                     "type": "string"
27650                 },
27651                 {
27652                     "type": "boolean"
27653                 },
27654                 {
27655                     "type": "integer"
27656                 },
27657                 {
27658                     "type": "number"
27659                 },
27660                 {
27661                     "type": "object"
27662                 }
27663             ],
27664             "description": "The value sensed or actuated by this Resource"
27665         }

```

```

27666     },
27667     "required": [
27668         "startTime"
27669     ],
27670     "type": "object"
27671 }
27672
27673 }
27674 }
27675

```

#### 27676 B.70.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
startTime	스트링	예		기간의 시작 시간
precision	숫자		Read Only	노출된 값의 정확도
stopTime	스트링			기간의 종료 시간. 이 property 가 있으면 interval 이 있을 수 없다.
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
interval	정수			startTime 이후 분 단위의 시간 간격. 이 property 가 있으면 stopTime 이 있을 수 없다.
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 충분 값
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값

#### 27677 B.70.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/TimePeriodResURI		get	post		

## B.71 터치 센서

### B.71.1 개요

이 resource 는 터치가 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 터치가 감지되었음을 의미한다. 'false' 값은 터치가 감지되지 않았음을 의미한다.

### B.71.2 URI 예

/TouchResURI

### B.71.3 Resource Type

resource type (rt)는 ['oic.r.sensor.touch']로 정의된다.

### B.71.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Touch Sensor",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
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SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    },
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/TouchResURI" : {
      "get": {
        "description": "This resource describes whether touch has been sensed or not.\nThe value is
a boolean.\nA value of 'true' means that touch has been sensed.\nA value of 'false' means that
touch not been sensed.\n",
        "parameters": [
          {"$ref": "#/parameters/interface"}
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.sensor.touch"],
              "id": "unique_example_id",
```

```

27733         "value": true
27734     }
27735     ,
27736     "schema": { "$ref": "#/definitions/Touch" }
27737 }
27738 }
27739 }
27740 }
27741 },
27742 "parameters": {
27743     "interface" : {
27744         "in" : "query",
27745         "name" : "if",
27746         "type" : "string",
27747         "enum" : ["oic.if.s", "oic.if.baseline"]
27748     }
27749 },
27750 "definitions": {
27751     "Touch" :
27752     {
27753         "allOf": [
27754             {
27755                 "properties": {
27756                     "precision": {
27757                         "description": "Accuracy granularity of the exposed value",
27758                         "readOnly": true,
27759                         "type": "number"
27760                     },
27761                     "range": {
27762                         "description": "The valid range for the value Property",
27763                         "items": {
27764                             "anyOf": [
27765                                 {
27766                                     "type": "number"
27767                                 },
27768                                 {
27769                                     "type": "integer"
27770                                 }
27771                             ]
27772                         },
27773                         "maxItems": 2,
27774                         "minItems": 2,
27775                         "readOnly": true,
27776                         "type": "array"
27777                     },
27778                     "step": {
27779                         "anyOf": [
27780                             {
27781                                 "type": "integer"
27782                             },
27783                             {
27784                                 "type": "number"
27785                             }
27786                         ],
27787                         "description": "Step value across the defined range",
27788                         "readOnly": true
27789                     },
27790                     "value": {
27791                         "description": "true = sensed, false = not sensed.",
27792                         "readOnly": true,
27793                         "type": "boolean"
27794                     }
27795                 },
27796                 "type": "object"
27797             }
27798         ],
27799         "required": [
27800             "value"
27801         ]
27802     }
27803 }

```

27804        }  
27805        }  
27806

## 27807    **B.71.5   Property 정의**

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
value	boolean	예	Read Only	true = 감지 false = 미 감지
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위

## 27808    **B.71.6   CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/TouchResURI		get			

## 27809    **B.72   UV 방출**

### 27810    **B.72.1   개요**

27811    이 resource 는 UV 방출 측정을 규정한다. 측정은 현재 측정된 UV 인덱스이다. 현재의 UV 방출  
27812    값을 검색한다.

27813

27814

### 27815    **B.72.2   URI 예**

27816    /UVRadiationResURI

### 27817    **B.72.3   Resource Type**

27818    resource type (rt)는 ['oic.r.sensor.radiation.uv']로 정의된다.

### 27819    **B.72.4   Swagger2.0 정의**

```
27820 {
27821   "swagger": "2.0",
27822   "info": {
27823     "title": "UV Radiation",
27824     "version": "v1.1.0-20160519",
27825     "license": {
27826       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
27827       "x-description": "Redistribution and use in source and binary forms, with or without
27828 modification, are permitted provided that the following conditions are met:\n      1.
27829 Redistributions of source code must retain the above copyright notice, this list of conditions and
27830 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
```

```

27831 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
27832 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
27833 Connectivity Foundation, INC. \ "AS IS\ " AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
27834 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
27835 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
27836 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
27837 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
27838 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
27839 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
27840 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
27841 OF SUCH DAMAGE.\n"
27842 }
27843 },
27844 "schemes": ["http"],
27845 "consumes": ["application/json"],
27846 "produces": ["application/json"],
27847 "paths": {
27848   "/UVRadiationResURI" : {
27849     "get": {
27850       "description": "This resource specifies UV radiation measurement.\nThe measurement is the
27851 current measured UV Index\nRetrieves the current UV Radiation value\n",
27852       "parameters": [
27853         { "$ref": "#/parameters/interface" }
27854       ],
27855       "responses": {
27856         "200": {
27857           "description": "",
27858           "x-example":
27859             {
27860               "rt": ["oic.r.sensor.radiation.uv"],
27861               "id": "unique_example_id",
27862               "measurement": 3.5
27863             },
27864           "schema": { "$ref": "#/definitions/UVRadiation" }
27865         }
27866       }
27867     }
27868   }
27869 },
27870 },
27871 "parameters": {
27872   "interface" : {
27873     "in" : "query",
27874     "name" : "if",
27875     "type" : "string",
27876     "enum" : ["oic.if.s", "oic.if.baseline"]
27877   }
27878 },
27879 "definitions": {
27880   "UVRadiation" :
27881     {
27882       "properties": {
27883         "measurement": {
27884           "description": "The measured UV Index",
27885           "readOnly": true,
27886           "type": "number"
27887         },
27888         "precision": {
27889           "description": "Accuracy granularity of the exposed value",
27890           "readOnly": true,
27891           "type": "number"
27892         },
27893         "range": {
27894           "description": "The valid range for the value Property",
27895           "items": {
27896             "anyOf": [
27897               {
27898                 "type": "number"
27899               },
27900               {
27901                 "type": "integer"

```

```

27902         }
27903     ]
27904 },
27905 "maxItems": 2,
27906 "minItems": 2,
27907 "readOnly": true,
27908 "type": "array"
27909 },
27910 "step": {
27911     "anyOf": [
27912         {
27913             "type": "integer"
27914         },
27915         {
27916             "type": "number"
27917         }
27918     ],
27919     "description": "Step value across the defined range",
27920     "readOnly": true
27921 },
27922 "value": {
27923     "anyOf": [
27924         {
27925             "type": "array"
27926         },
27927         {
27928             "type": "string"
27929         },
27930         {
27931             "type": "boolean"
27932         },
27933         {
27934             "type": "integer"
27935         },
27936         {
27937             "type": "number"
27938         },
27939         {
27940             "type": "object"
27941         }
27942     ],
27943     "description": "The value sensed or actuated by this Resource"
27944 },
27945 },
27946 "required": [
27947     "measurement"
27948 ],
27949 "type": "object"
27950 }
27951 }
27952 }
27953 }
27954

```

#### 27955 B.72.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
measurement	숫자	예	Read Only	측정된 UV 인덱스
precision	숫자		Read Only	노출된 값의 정확도
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나



				작동된 값
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

## 27956 B.72.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/UVRadiationResURI		get			

## 27957 B.73 값 조건문

### 27958 B.73.1 개요

27959 이 resource 는 임의의 Resource 내에서 Observe 값에 적용될 수 있는 조건을 규정한다. 이들  
27960 조건은 Resource 에 대한 요청으로 인해 임의로 생성된 통지에 Resource 를 노출하는 server 에  
27961 의해 적용된다. Resource 에 대한 unicast RETRIEVE 는 가장 최근의 값을 수신하고, 이는 가장  
27962 최근에 통보된 값이 아닐 수 있다.

27963  
27964 Server 는 Observe 값을 전달하는 Resource 와 관련하여 이 resource 를 노출시킨다. 이것은,  
27965 ["oic.r.<thing being observed>", "oic.r.value.conditional"], 예를 들어, ["oic.r.temperature",  
27966 "oic.r.value.conditional"]의 RT 를 갖는 새로운 Resource 개체에 의해 이루어진다. 자세한 사항은  
27967 공개된 OCF Resource Type 스펙의 섹션 5.7.1 을 참조하기 바란다. Threshold 는 통보가 송신되기  
27968 전에 Observe 되는 것이 변해야 하는 양이다.

27969  
27970 Minnotifyperiod 는 통보가 송신되기 전에 경과해야 하는 ms (밀리초) 단위의 최소 시간이다.  
27971 maxnotifyperiod (ms (밀리초) 단위의 시간)가 경과하면 통보가 송신되어야 한다. maxnotifyperiod  
27972 타이머는 통보가 송신될 때마다 리셋 된다. 임의의 threshold, minnotifyperiod,  
27973 또는 maxnotifyperiod 에 대한 '0'의 값은 성능이 지원되지만 활성이 아닌 것을 의미한다.

27974

27975

27976

### 27977 B.73.2 URI 예

27978 /ValueConditionalResURI

### 27979 B.73.3 Resource Type

27980 resource type (rt)는 ['oic.r.value.conditional']로 정의된다.

## B.73.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Value Conditional",
    "version": "v1.1.0-20161031",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/ValueConditionalResURI" : {
      "get": {
        "description": "This resource specifies conditions that can be applied to an observed value
in any Resource.\nThese conditions are applied by the server exposing the Resource to any generated
notifications because of subscriptions to the Resource.\nA unicast RETRIEVE to the Resource will
receive the most recent value; which may not be the most recent notified value.\nA server exposes
this Resource in association with the Resource conveying the observed value.\nThis is done by means
of a new Resource instance with an RT of [\"oic.r.<thing being observed>\",
\"oic.r.value.conditional\"], e.g [\"oic.r.temperature\", \"oic.r.value.conditional\"]. Please see
Section 5.7.1 of the published OCF Resource Type Specification for more details.\nThe threshold is
the amount by which the thing being observed must change before a notification is sent.\nThe
minnotifyperiod is the minimum time in ms (milliseconds) that must elapse before a notification is
sent.\nIf the maxnotifyperiod (time in ms (milliseconds)) elapses then a notification must be
sent.\nThe maxnotifyperiod timer resets each time a notification is sent.\nA value of '0' for any
of threshold, minnotifyperiod or maxnotifyperiod means that the capability is supported but not
active.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.value.conditional"],
              "id": "unique_example_id",
              "threshold": 2,
              "minnotifyperiod": 2000,
              "maxnotifyperiod": 5000
            }
          },
          "schema": { "$ref": "#/definitions/valueconditional" }
        }
      },
      "post": {
        "description": "body:\n application/json:\n schema: valueconditional\n example: |\n
{\n   \"threshold\": 2,\n   \"minnotifyperiod\": 1500\n }\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],

```

```

28051     "responses": {
28052         "200": {
28053             "description" : "",
28054             "x-example":
28055                 {
28056                     "threshold": 2,
28057                     "minnotifyperiod": 1500
28058                 }
28059             ,
28060             "schema": { "$ref": "#/definitions/valueconditional" }
28061         }
28062     }
28063 },
28064 },
28065 },
28066 "parameters": {
28067     "interface" : {
28068         "in" : "query",
28069         "name" : "if",
28070         "type" : "string",
28071         "enum" : ["oic.if.rw", "oic.if.baseline"]
28072     }
28073 },
28074 "definitions": {
28075     "valueconditional" :
28076     {
28077         "anyOf": [
28078             {
28079                 "required": [
28080                     "threshold"
28081                 ]
28082             },
28083             {
28084                 "required": [
28085                     "minnotifyperiod"
28086                 ]
28087             },
28088             {
28089                 "required": [
28090                     "maxnotifyperiod"
28091                 ]
28092             }
28093         ],
28094         "properties": {
28095             "id": {
28096                 "description": "Instance ID of this specific resource",
28097                 "maxLength": 64,
28098                 "readOnly": true,
28099                 "type": "string"
28100             },
28101             "if": {
28102                 "description": "The interface set supported by this resource",
28103                 "items": {
28104                     "enum": [
28105                         "oic.if.baseline",
28106                         "oic.if.ll",
28107                         "oic.if.b",
28108                         "oic.if.lb",
28109                         "oic.if.rw",
28110                         "oic.if.r",
28111                         "oic.if.a",
28112                         "oic.if.s"
28113                     ],
28114                     "type": "string"
28115                 },
28116                 "minItems": 1,
28117                 "readOnly": true,
28118                 "type": "array"
28119             },
28120             "maxnotifyperiod": {
28121                 "description": "Maximum elapsed time in ms before a notification must be sent.",

```

```

28122         "minimum": 0,
28123         "type": "integer"
28124     },
28125     "minnotifyperiod": {
28126         "description": "Minimum elapsed time in ms before a notification is sent.",
28127         "minimum": 0,
28128         "type": "integer"
28129     },
28130     "n": {
28131         "description": "Friendly name of the resource",
28132         "maxLength": 64,
28133         "readOnly": true,
28134         "type": "string"
28135     },
28136     "rt": {
28137         "description": "Resource Type",
28138         "items": {
28139             "maxLength": 64,
28140             "type": "string"
28141         },
28142         "minItems": 1,
28143         "readOnly": true,
28144         "type": "array"
28145     },
28146     "threshold": {
28147         "description": "Amount by which the measured value must change before a notification is
sent.",
28148         "minimum": 0,
28149         "type": "number"
28150     },
28151 },
28152 },
28153 "type": "object"
28154 }
28155 }
28156 }
28157 }
28158

```

### 28159 B.73.5 Property 정의

Property name	Value type	필수	엑세스 모드	설명
if	배열: schema 참조		Read Only	이 resource 에 의해 지원되는 인터페이스 집합
id	스트링		Read Only	특정 resource 의 개체 ID
rt	배열: schema 참조		Read Only	Resource Type
minnotifyperiod	정수			통보가 송신되기 전에 ms 단위의 최소 경과 시간
n	스트링		Read Only	resource 의 친근한 명칭
maxnotifyperiod	정수	예		통보가 송신되기 전에 ms 단위의 최대 경과 시간

threshold	숫자			통보가 송신되기 전에 측정된 값이 변해야만 하는 양
-----------	----	--	--	------------------------------

## 28160 B.73.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/ValueConditionalResURI		get	post		

## 28161 B.74 수분 센서

### 28162 B.74.1 개요

28163 이 resource 는 수분이 감지되었는지 여부를 기술한다. 값은 Boolean 형이다. 'true' 값은 수분이  
28164 감지되었음을 의미한다. 'false' 값은 수분이 감지되지 않았음을 의미한다.

28165

28166

28167

### 28168 B.74.2 URI 예

28169 /WaterResURI

### 28170 B.74.3 Resource Type

28171 resource type (rt)는 ['oic.r.sensor.water']로 정의된다.

### 28172 B.74.4 Swagger2.0 정의

```

28173 {
28174   "swagger": "2.0",
28175   "info": {
28176     "title": "Water Sensor",
28177     "version": "v1.1.0-20160519",
28178     "license": {
28179       "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
28180       "x-description": "Redistribution and use in source and binary forms, with or without
28181 modification, are permitted provided that the following conditions are met:\n      1.
28182 Redistributions of source code must retain the above copyright notice, this list of conditions and
28183 the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
28184 copyright notice, this list of conditions and the following disclaimer in the documentation and/or
28185 other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
28186 Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
28187 LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
28188 WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
28189 Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
28190 OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
28191 SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
28192 ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
28193 OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
28194 OF SUCH DAMAGE.\n"
28195     }
28196   },
28197   "schemes": ["http"],
28198   "consumes": ["application/json"],
28199   "produces": ["application/json"],
28200   "paths": {
28201     "/WaterResURI" : {

```

```

28202     "get": {
28203         "description": "This resource describes whether water has been sensed or not.\nThe value is
28204 a boolean.\nA value of 'true' means that water has been sensed.\nA value of 'false' means that
28205 water not been sensed.\n",
28206         "parameters": [
28207             {"$ref": "#/parameters/interface"}
28208         ],
28209         "responses": {
28210             "200": {
28211                 "description": "",
28212                 "x-example":
28213                     {
28214                         "rt": ["oic.r.sensor.water"],
28215                         "id": "unique_example_id",
28216                         "value": true
28217                     },
28218                 "schema": { "$ref": "#/definitions/Water" }
28219             }
28220         }
28221     }
28222 }
28223 }
28224 },
28225 "parameters": {
28226     "interface": {
28227         "in": "query",
28228         "name": "if",
28229         "type": "string",
28230         "enum": ["oic.if.s", "oic.if.baseline"]
28231     }
28232 },
28233 "definitions": {
28234     "Water": {
28235         {
28236             "allOf": [
28237                 {
28238                     "properties": {
28239                         "precision": {
28240                             "description": "Accuracy granularity of the exposed value",
28241                             "readOnly": true,
28242                             "type": "number"
28243                         },
28244                         "range": {
28245                             "description": "The valid range for the value Property",
28246                             "items": {
28247                                 "anyOf": [
28248                                     {
28249                                         "type": "number"
28250                                     },
28251                                     {
28252                                         "type": "integer"
28253                                     }
28254                                 ]
28255                             },
28256                             "maxItems": 2,
28257                             "minItems": 2,
28258                             "readOnly": true,
28259                             "type": "array"
28260                         },
28261                         "step": {
28262                             "anyOf": [
28263                                 {
28264                                     "type": "integer"
28265                                 },
28266                                 {
28267                                     "type": "number"
28268                                 }
28269                             ],
28270                             "description": "Step value across the defined range",
28271                             "readOnly": true
28272                         }

```

```

28273         "value": {
28274             "description": "true = sensed, false = not sensed.",
28275             "readOnly": true,
28276             "type": "boolean"
28277         },
28278     },
28279     "type": "object"
28280 }
28281 ],
28282 "required": [
28283     "value"
28284 ]
28285 }
28286 }
28287 }
28288 }
28289

```

#### 28290 B.74.5 Property 정의

Property name	Value type	필수	액세스 모드	설명
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
value	boolean	예	Read Only	true = 감지 false = 미 감지

#### 28291 B.74.6 CRUDN 동작

Resource	Create	Read	Update	Delete	Notify
/WaterResURI		get			

### 28292 B.75 무게

#### 28293 B.75.1 개요

28294 이 resource 는 물체의 무게와 관련된 property 를 기술한다. Weight (weight)는 물체의 무게이다.  
 28295 물체의 무게를 검색한다.

28296

28297

#### 28298 B.75.2 URI 예

28299 /WeightResURI

#### 28300 B.75.3 Resource Type

28301 resource type (rt)는 ['oic.r.weight']로 정의된다.

## B.75.4 Swagger2.0 정의

```
{
  "swagger": "2.0",
  "info": {
    "title": "Weight",
    "version": "v1.1.0-20160519",
    "license": {
      "name": "copyright 2016-2017 Open Connectivity Foundation, Inc. All rights reserved.",
      "x-description": "Redistribution and use in source and binary forms, with or without
modification, are permitted provided that the following conditions are met:\n      1.
Redistributions of source code must retain the above copyright notice, this list of conditions and
the following disclaimer.\n      2. Redistributions in binary form must reproduce the above
copyright notice, this list of conditions and the following disclaimer in the documentation and/or
other materials provided with the distribution.\n\n      THIS SOFTWARE IS PROVIDED BY THE Open
Connectivity Foundation, INC. \"AS IS\" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT
LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE OR
WARRANTIES OF NON-INFRINGEMENT, ARE DISCLAIMED.\n      IN NO EVENT SHALL THE Open Connectivity
Foundation, INC. OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY,
OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR
SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION)\n      HOWEVER CAUSED AND ON
ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR
OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY
OF SUCH DAMAGE.\n"
    }
  },
  "schemes": ["http"],
  "consumes": ["application/json"],
  "produces": ["application/json"],
  "paths": {
    "/WeightResURI" : {
      "get": {
        "description": "This resource describes the properties associated with weight of an
object.\nWeight (weight) is weight of an object.\nRetrieves weight of an object.\n",
        "parameters": [
          { "$ref": "#/parameters/interface" }
        ],
        "responses": {
          "200": {
            "description": "",
            "x-example": {
              "rt": ["oic.r.weight"],
              "id": "unique_example_id",
              "weight": 200.0
            }
          },
          "schema": { "$ref": "#/definitions/Weight" }
        }
      }
    }
  },
  "parameters": {
    "interface" : {
      "in" : "query",
      "name" : "if",
      "type" : "string",
      "enum" : ["oic.if.s", "oic.if.baseline"]
    }
  },
  "definitions": {
    "Weight" : {
      "properties": {
        "precision": {
          "description": "Accuracy granularity of the exposed value",
          "readOnly": true,
          "type": "number"
        },
        "range": {
```



```

28372         "description": "The valid range for the value Property",
28373         "items": {
28374             "anyOf": [
28375                 {
28376                     "type": "number"
28377                 },
28378                 {
28379                     "type": "integer"
28380                 }
28381             ]
28382         },
28383         "maxItems": 2,
28384         "minItems": 2,
28385         "readOnly": true,
28386         "type": "array"
28387     },
28388     "step": {
28389         "anyOf": [
28390             {
28391                 "type": "integer"
28392             },
28393             {
28394                 "type": "number"
28395             }
28396         ],
28397         "description": "Step value across the defined range",
28398         "readOnly": true
28399     },
28400     "value": {
28401         "anyOf": [
28402             {
28403                 "type": "array"
28404             },
28405             {
28406                 "type": "string"
28407             },
28408             {
28409                 "type": "boolean"
28410             },
28411             {
28412                 "type": "integer"
28413             },
28414             {
28415                 "type": "number"
28416             },
28417             {
28418                 "type": "object"
28419             }
28420         ],
28421         "description": "The value sensed or actuated by this Resource"
28422     },
28423     "weight": {
28424         "description": "Weight of an object",
28425         "minimum": 0,
28426         "readOnly": true,
28427         "type": "number"
28428     }
28429 },
28430 "required": [
28431     "weight"
28432 ],
28433 "type": "object"
28434 }
28435 }
28436 }
28437 }
28438

```

28439 **B.75.5 Property 정의**

Property name	Value type	필수	엑세스 모드	설명
precision	숫자		Read Only	노출된 값의 정확도
range	배열: schema 참조		Read Only	value Property 에 대한 유효 범위
Weight	숫자	예	Read Only	물체의 무게
value	복수 타입: schema 참조			이 resource 에 의해 감지되거나 작동된 값
step	복수 타입: schema 참조		Read Only	정의된 범위에 걸친 증분 값

28440 **B.75.6 CRUDN 동작**

Resource	Create	Read	Update	Delete	Notify
/WeightResURI		get			

28441