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| Minutes of IEEE 802.1 OmniRAN TG Meeting in San Diego, CA, USA |
| **Date: July 25th – 28th , 2016** |
| **Author(s):** |
| **Name** | **Affiliation** | **Address** | **Phone** | **email** |
| Wang, Hao | Fujitsu |  |  | wangh@cn.fujitsu.com |

## Abstract

Minutes of the IEEE 802.1 OmniRAN TG meeting at the IEEE 802.1 Interim Meeting in San Diego, CA, USA on July 25th – 28th, 2016

# Monday, July 25th, 2016

Chair: Max Riegel

Recording secretary: Wang, Hao

## Call to order

* Meeting called to order by Max Riegel at 16:04 PST.
* Meeting was guided by the slides uploaded and maintained by the chair:
<https://mentor.ieee.org/omniran/dcn/16/omniran-16-0041-00-00TG-july-2016-f2f-meeting-slides.pptx>

## Minutes

* Wang, Hao volunteered to take notes.

## Attendance

* IEEE 802.1 meeting IMAT page was used for recording of attendance
* Participants

|  |  |
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| **Name** | **Affiliation** |
| Max Riegel | Nokia Networks |
| Wang, Hao | Fujitsu |
| Roger Marks | EthAirNet Assoc. |
| Yonggang Fang | ZTE TX |
| Juan Carlos Zuniga | SIGFOX |
| Liang Jin | Spirent Comm. |
| Fulei Liu | ZTE |

## IEEE WG Guidelines

* The chair presented the mandatory IEEE SA guideline slides and asked for anybody willing to make an IPR announcement.
* No IPR declarations were brought up.

## Agenda approval

* Agenda as proposed in the chair’s meeting was presented and discussed.
* The following agenda resulted from the agenda bashing:
* Review of minutes
* Reports
* Review of 802.1CF-D0.1 editor’s draft
* Contributions addressing issues of 802.1CF–D0.1
* Revised and new P802.1CF contributions
* Contributions proposing new content
* Plan for 802.1CF-D0.2 draft
* Bug fixes
* New content
* Timeline and plan for initial TG ballot
* Project planning
* Timeline
* External reviewers of 802.1CF-D0.2
* Contributions to 5G SC
* Status report to IEEE 802 WGs
* AOB
* Agenda approved without further comments.

## Schedule of the topics during the week

* Chair proposed to rearrange the agenda topics in a slightly different order to allow presenters to create and present revisions for final conclusion during the week.
* Group agreed to arrange the discussion topics according to the following plan over the week:

***Monday***

* Revised and new P802.1CF contributions
* AN setup
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0036-01-CF00-an-setup-over-unlicensed-band.docx>

***Tuesday***

* Review of minutes
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0040-00-00TG-jun-2016-confcall-minutes.docx>
* Reports
* Revised and new P802.1CF contributions
* Accounting and monitoring
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0042-00-CF00-text-proposal-for-monitoring-and-accounting.docx>
* Authorization, QoS and policy control
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0043-00-CF00-key-concepts-of-authorization-qos-and-policy-control.pptx>

 ***Wednesday***

* Review of 802.1CF-D0.1 editor’s draft
* Comment resolution and plan for next revision
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0044-00-CF00-omniran-d0-1-comments.xlsx>
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0046-00-CF00-p802-1cf-d0-1-comments.xls>
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0048-00-CF00-p802-1cf-d0-1-comments.xlsx>
* Revised and new P802.1CF contributions
* Association and disassociation
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0047-00-CF00-functional-design-association-and-disassociation.docx
* Network function virtualization
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-00-CF00-network-function-virtualization.docx

***Thursday***

* Revised and new P802.1CF contributions
* Authentication and trust establishment
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0013-01-CF00-chapt-7-4-authentication-functional-description.docx>
* Authorization, QoS and policy control
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0052-00-CF00-functional-description-authorization-qos-policy-control.docx>
* Accounting and monitoring
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0042-01-CF00-text-proposal-for-monitoring-and-accounting.docx>
* Plan for 802.1CF-D0.2 draft
* Bug fixes
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0050-01-CF00-d0-1-collected-comments-resolved.xlsx>
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0049-00-CF00-comments-resolution-for-fdm-chapter.docx>
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0051-00-CF00-comments-resolution-for-fdm-configuration.docx
* Timeline and plan for initial TG ballot
* Project planning
* Timeline
* External reviewers of 802.1CF-D0.2
* Contributions to 5G SC
* Status report to IEEE 802 WGs
* AOB

## Revised and new P802.1CF contributions

* AN setup
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0036-01-CF00-an-setup-over-unlicensed-band.docx>
* Text proposal for section 7.1.4 Network initialization, which was uploaded shortly after the last conference call, was reviewed and terminology was jointly cleaned up to align with the definitions introduced in the latest revision of the NRM.
* According to the agreement in the Budapest meeting, text for section 7.1.5 Network instantiation was removed and the text ready for inclusion into 7.1.4 of the next draft D0.2 was uploaded to mentor under <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0036-02-CF00-an-setup-over-unlicensed-band.docx>
* Discussion about the future location of the text proposed for 7.1.5 led to the conclusion to extend the scope of chapter 8 to ‘Network virtualization functions’ with subsections 8.1 Network instantiation’, 8.2 ‘SDN functional decomposition’ and 8.3 ‘Network Function Virtualization’

Recessed at 18:02

# Tuesday, July 26th, 2016

Reconvened at 16:05

* Call for IPR: No response

## Review of minutes

* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0040-00-00TG-jun-2016-confcall-minutes.docx>
* No comments raised on the minutes.

## Reports

* Status and plans 5G SC
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0112-00-5GSG-5g-sc-opening-status-for-ec.pdf>
* <https://mentor.ieee.org/802-ec/dcn/16/ec-16-0094-06-5GSG-proposed-draft-report-ieee-802-ec-5g-imt-2020-sc.pptx>
* Chair provided short overview about 5G SC activities during the week as well as a verbal update on the outcome of the OmniRAN special session on WP5A.
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0045-01-00TG-july-26-special-session-on-5g-sc-action-a.pptx>
* The discussions during the special session conclude on the following items regarding action A for IEEE 802,
* Continue the contributions and further input to M.1450 seeking international standardization,
* Set up dialog mechanism internally with other standardization groups under IEEE SA, such as IEEE 1904 and formally establish working groups on defining IEEE access network specification, and externally with the other organizations who is interested in the operation of IEEE access networks, e.g cable operators,
* Reuse the output of IEEE 802.1CF TG as a foundation and defines specific profiles for IEEE access network to address the interoperability issues.
* IEEE SDN whitepaper
* <http://sdn.ieee.org/images/files/pdf/towards-5g-software-defined-ecosystems.pdf>
* Chair shortly introduced the white paper and asked for review by the group

## Revised and new P802.1CF contributions

* Accounting and monitoring
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0042-00-CF00-text-proposal-for-monitoring-and-accounting.docx>
* Proposed text was reviewed and several small issues were detected which are up for correction by Wang Hao.
* Overall the text looked fine and seems to be ready for inclusion when the issues are corrected. A revised version was invited and shortly reviewed in the session on Thursday. All issues were resolved.
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0042-01-CF00-text-proposal-for-monitoring-and-accounting.docx>
* Authorization, QoS and policy control
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0043-00-CF00-key-concepts-of-authorization-qos-and-policy-control.pptx>
* Max presented his initial thoughts, which only addressed the very basic features of QoS and policy control.
* Most of the content was agreed by the group, however some of the more advanced features for dynamic service flow management caused discussions and did not yet lead to fully aligned views.
* Max will create a text contribution until latest the Thursday session, which will be reviewed for inclusion into D0.2. Recommendation was given to focus mainly on the introductory aspects.

# Wednesday, July 27th, 2016

## Review of 802.1CF-D0.1 editor’s draft

* Comment resolution and plan for next revision
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0044-00-CF00-omniran-d0-1-comments.xlsx>
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0046-00-CF00-p802-1cf-d0-1-comments.xls>
* [https://mentor.ieee.org/omniran/dcn/16/omniran-16-0048-00-CF01-p802-1cf-d0-1-comments.xlsx](https://mentor.ieee.org/omniran/dcn/16/omniran-16-0048-00-CF00-p802-1cf-d0-1-comments.xlsx)
* The comments were combined into a common working document. All comments were reviewed and resolved. The conclusion of the review of the D0.1 draft is captured in
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0050-01-CF00-d0-1-collected-comments-resolved.xlsx>
* There were two contributions attached to the comments of Wang Hao, which were both accepted.
* [https://mentor.ieee.org/omniran/dcn/16/omniran-16-0049-00-CF00-comments-resolution-for-fdm-chapter.docx](https://mentor.ieee.org/omniran/dcn/16/omniran-16-0051-00-CF00-comments-resolution-for-fdm-configuration.docx)
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0051-00-CF00-comments-resolution-for-fdm-configuration.docx>

## Revised and new P802.1CF contributions

* Association and disassociation
* [https://mentor.ieee.org/omniran/dcn/16/omniran-16-0047-00-CF00-functional-design-association-and-disassociation.docx](https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-00-CF00-network-function-virtualization.docx)
* Max introduced his proposed text on association, which is mainly aligned to the 802.11 behavior. In a subsequent effort the difference of the IEEE 802 technologies to the described behavior has to be documented in the ‘Mapping to IEEE 802 section’.
* Overall the text looked fine and was regarded as appropriate for inclusion into the draft 0.2.
* NFV
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-00-CF00-network-function-virtualization.docx>
* The proposed text was presented and a number of issues were detected during the review.
* In particular the figures in the contribution hardly fit to the P802.1CF design and structure. The group agrees to remove ANC block from the NFVI layer and all management function blocks from the VNF layer, instead, describe these blocks as virtualized functions in plain texts.
* During an ad-hoc session an updated version of the contribution was jointly edited and the figures cleaned up. The output of the effort was regarded as appropriate for inclusion into the draft 0.2
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-02-CF00-network-function-virtualization.docx>

Recessed at 19:33

# Thursday, July 28th, 2016

Reconvened at 10:35

* Call for IPR: No response

## Revised and new P802.1CF contributions

* Authorization, QoS and policy control
* [https://mentor.ieee.org/omniran/dcn/16/omniran-16-0052-00-CF00-functional-description-authorization-qos-policy-control.docx](https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-00-CF00-network-function-virtualization.docx)
* Max presented his proposed text based on the content and outcome of the presentation on Tuesday. The text focuses on the generic concepts and does not contain detailed procedures which raised contentious discussions on Tuesday. No issues were detected in the text and the document was accepted for inclusion into draft 0.2.
* Roger comments that this document provides a good review on how 802 technology pieces fit together and suggests not go into detailed resource reservation protocols defined by IEEE 802.1 standards.
* Authentication and trust establishment
* [https://mentor.ieee.org/omniran/dcn/16/omniran-16-0013-01-CF00-chapt-7-4-authentication-functional-description.docx](https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-00-CF00-network-function-virtualization.docx)
* Max went through the document and introduced the high level approach to address the topic. Discussions came up on some of the stated requirements and Max invited to submit comments, if requirement statements have to be modified. Adoption of the text to the draft 0.2 was agreed.

## Project planning

* Motions to the 802.1 closing plenary
The following two motions were prepared and agreed for the 802.1 closing plenary:
* Conference calls until November plenary meeting
* Approve OmniRAN TG conference calls on:
* September 27th, 09:30 AM ET, 90mins
* October 25th, 09:30 AM ET, 90mins
* Agenda and call-in details will be made available on the 802.1 mailing list and on https://mentor.ieee.org/omniran/bp/StartPage
* Moved: Max Riegel, Second: Wang, Hao
* September interim meeting at the 802 wireless interim in Warsaw
* Authorize OmniRAN TG to hold its interim meeting in September at the IEEE 802 Wireless Interim in Warsaw, PL on September 13-15.
* Proposed: Max Riegel
Second: Wang, Hao
* For\_\_\_\_Against\_\_\_\_Abstain\_\_\_\_

## Plan for 802.1CF-D0.2 draft

* Bug fixes
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0050-01-CF00-d0-1-collected-comments-resolved.xlsx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0051-00-CF00-comments-resolution-for-fdm-configuration.docx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0049-00-CF00-comments-resolution-for-fdm-chapter.docx
* New contents
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0037-02-CF00-network-function-virtualization.docx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0036-02-CF00-an-setup-over-unlicensed-band.docx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0042-01-CF00-text-proposal-for-monitoring-and-accounting.docx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0052-00-CF00-functional-description-authorization-qos-policy-control.docx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0013-01-CF00-chapt-7-4-authentication-functional-description.docx
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0047-00-CF00-functional-design-association-and-disassociation.docx
* Timeline and plan for initial TG ballot
* TG ballot start on Aug 9th, end on Sept 8th
* The timeline of the TG ballot is arranged such that OmniRAN can start with comment resolution at its September interim.
* The OmniRAN chair will also have a comment resolution session at the 802.1 Interim on September 12th in York to discuss comments from 802.1 members in F2F.
* Other IEEE 802 groups like 802.11 will be invited to participate in the TG ballot. Voting members of 802.11 have access to the private 802.1 drafts directory through their 802.11 member credentials. The chair will also inform on the IETF-IEEE802 coordination mailing list about the opening of the OmniRAN P802.1CF ballot. IETF members can get access to the draft by sending an email to the 802.1 chair asking for access.

## Contributions to 5G SC

* A special OmniRAN session on Action A of the 5G SC report was held on Tuesday, July 26th at PM1. The agenda and outcome of this special session is captured in the revised meeting slides, which were also shortly shown in the July 26th 5G SC session.
* https://mentor.ieee.org/omniran/dcn/16/omniran-16-0045-01-00TG-july-26-special-session-on-5g-sc-action-a.pptx

## Status report to IEEE 802 WGs

* The chair drafted the usual slideset, which was amended and complemented by group discussions. The agreed status report has been uploaded:
* <https://mentor.ieee.org/omniran/dcn/16/omniran-16-0053-00-00TG-jul-2016-report-to-802-wgs.pptx>

## AOB

* No other topics were brought up.

Meeting adjourned by chair at 12:40pm