

# TSN Configuration

## From MIB to YANG – how to proceed?



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**May 2017**

# Current situation

- IETF IESG issued a statement<sup>1</sup> regarding writable MIB Modules on March 2, 2014:
  - IETF encourages working groups to use NETCONF/YANG standards for configuration
  - SNMP MIB modules for configuration should only be produced **in cases of clear utility** and consensus to use SNMP write operations, and in consultation with the OPS ADs/MIB doctors
- IEEE 802.1 intends to supply YANG modules for new standards in the future
- **Industrial application space** is a slow moving market
  - Industrial customers have just been moving from command line configuration to SNMP/MIB over the last few years
  - Today, Network Management and Monitoring tools typically use SNMP
  - Most customers are not even aware of recent YANG developments

<sup>1</sup> source: <https://www.ietf.org/iesg/statement/writable-mib-module.html>

# Projections for the industrial market

- Already today, customers discuss management capabilities for TSN
    - Integration into existing Network Management solutions requested
    - As said, these are primarily SNMP-based
      - SNMP will remain prevalent in the industrial market at least until a complete YANG-based network configuration is possible
  - Products existing today will (to some extent) be updated with support for TSN
    - this does not imply migration to new management protocols
    - Implementation of new management protocol is independent activity
    - Resource constraints can prevent parallel MIB and YANG support
  - Partial YANG support (e.g., TSN configuration only) is not suitable for many environments
- Hard cut of support for SNMP (today!) is not viable for the industrial market

# Suggestions for a Way Forward

- Finish work on IEEE P802.1Qcp to provide the YANG bridge model as base for augmentation for other standards parts
- Create customer awareness of future YANG support in IEEE 802.1 standards
  - by making an official statement of IEEE 802.1
  - by highlighting this in IEEE marketing material
  - by ...
- Create YANG models for existing IEEE 802.1 standards (.1Qxx, .CB, .AB, ...)
- Provide MIB modules for current and future standard projects until YANG coverage for existing IEEE 802.1 standards is achieved

**Thank you**

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