TSN Configuration
From MIB to YANG – how to proceed?

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IETF IESG issued a statement\(^1\) 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

\(^1\) source: [https://www.ietf.org/iesg/statement/writable-mib-module.html](https://www.ietf.org/iesg/statement/writable-mib-module.html)
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 extend) 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!