YANG

• The YANG representation of the IA-station’s local database seems to be the preferred solution

• Following this decision, the DDS should be a YANG model, too

Open:
Do we miss any YANG models for the 60802?
Many YANG modules for the standards stated in D1.3 are already available:

- **ieee802-ethernet-interface**
  IEEE Standard for Ethernet – YANG Data Model Definitions
  Reference: IEEE Std802.3.2-2019 Clause 5

- **ieee1588-ptp**
  YANG Data Model for the configuration and status of IEEE 1588 clocks
  Reference: IEEE P1588e-D0-1

- **ieee802-dot1g-bridge**
  Bridges and Bridged Networks - Amendment: YANG Data Model
  Reference: IEEE P802.1Qcp/D2.2 Clause 48 and IEEE P802.1Qcw/D1.2 Clause 48

- **ieee802-dot1ab-lldp**
  Station and Media Access Control Connectivity Discovery Amendment: YANG Data Model
  Reference: IEEE P802.1ABcu/D1.6 Clause 12

- **ieee802-dot1g-sched**
  YANG Data Model for scheduled traffic
  Reference: IEEE P802.1Qcw/D1.2 Clause 48

- **ieee802-dot1g-preemption**
  YANG Data Model for Pre-emption
  Reference: IEEE P802.1Qcw/D1.2 Clause 48

- **ieee802-dot1g-lldp-basic-tlv**
  Basic set of IEEE 802.1 Organizationally Specific TLVs
  Reference: IEEE P802.1Qcz/D2.0

- **ieee802-dot1g-psfp**
  YANG Data Model for Per Stream Filtering and Policing
  Reference: IEEE P802.1Qcw/D1.2 Clause 48

- **ieee802-dot1cb-stream-identification**
  Frame Replication and Elimination for Reliability – Amendment: Information Model, YANG Data Model and Management Information Base Module
  Reference: IEEE P802.1CBcv/D1.3 Clause 12

- **ieee802-dot1cb-frer**
  Frame Replication and Elimination for Reliability – Amendment: Information Model, YANG Data Model and Management Information Base Module
  Reference: IEEE P802.1CBcv/D1.3 Clause 12

- **ieee802-dot1x**
  Port-Based Network Access Control
  Reference: IEEE Std 802.1X-2020 Clause 14

At least one is missing:

- **ieee802-dot3-lldp-basic-tlv**
  Basic set of IEEE 802.3 Organizationally Specific TLVs
  Reference: Missing

Thus, we do not have MAU type information in YANG!

-> How can we get this YANG modul?

Open:

Do we have a working YANG modul for MSTP with at least one instance in P802.1Qcp/ P802.1Qcw?
Recap – IA-station model

IA-Station

Functional unit 1

End Station component 1

ESC1-IP1

Bridge component 1

BC1-P1

External port

ESC1-IP1

BC1-P2

ESCx-IPy = internal port y of end station component x
BCx-IPy = (external) port y of Bridge component x

Management entity

Functional unit 2

End Station component 2

ESC2-IP1

Bridge component 2

BC2-P1

External port

ESC2-IP1

BC2-P2

ESCx-IPy = internal port y of end station component x
BCx-IPy = (external) port y of Bridge component x

End Station component 3

ESC3-P1

ESCx-IPy = internal port y of end station component x
BCx-IPy = (external) port y of Bridge component x
Feedback from Wednesday ad-hoc discussions
DDS

• Both, the IA-station model and the YANG models can be used as inputs for the definition of DDS.

• Same definition for offline (e.g. files) and online (e.g. 60802 YANG modul) seams to be preferable

-> Idea:
Use the IA-station to define the structure and the parameters/attributes of existing YANG moduls as content
IA-station
  List of functional units
  Name of functional unit
    List of end station components
    Name of end station
    Parameter/attributes with quantities and/or value ranges
    List of ports
    ...
    Bridge component (or list of)
    Name of bridge
    Parameter/attributes with quantities and/or value ranges
    List of ports
    ...

IA-station

Security quantities and value ranges:
- Needs to be part of DDS
- If possible based on the IETF / IEEE 802 defined YANG modules for security

Vendor/organization specific extensions:
- May e.g. be done using the YANG concept of “augmentation”

Integration into existing vendor/organization specific device descriptions:
- May e.g. be done by referring the file (offline)

Securing the file (offline):
- Should be out of scope for 60802
Conclusion

• This model could be a way forward to develop a DDS contribution, which may be discussed during D1.3 comment resolution.

• How can we get a YANG module for the MAU types?
  -> Idea:
  Port 8023-LLDP-EXT-MIB to YANG as done for 8021-LLDP-EXT-MIB. Could the YANGsters help with this topic?

• Offline/online description of TDME / CNE is still open
Questions?