

# **Editor's Report 60802 Draft 0.4**

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**Jordon Woods, Analog Devices**



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# Changes since last editor's report

- Since the report provided during 10/22/2108 Joint Project call:
  - <http://www.ieee802.org/1/files/public/docs2018/60802-woods-D04update-1018-v00.pdf>
- Section 6 - Required Functions for an Industrial network.
  - Adopted standards-based view of required functions
  - For IEEE802.1 standards, references will be to clause 5
  - Added Device classes
- Annex A - PCS proforma
  - Added proposal regarding “quantities” from Dorr contribution
    - <http://www.ieee802.org/1/files/public/docs2018/60802-Dorr-ProfileContribution-0918-v02.pdf>
  - Proposal not yet implemented

# Section 6

- Standards-based view of required functions
  - Editor has focused on ensuring the 802.1Q required functions refer to normative language.
  - Table has been modified to refer only to clause 5.
  - The table now reflects the editor's understanding of the Dorr contribution.
  - This approach will be applied to all other 802.1-based required functions (802.3 is a bit trickier).
  - In the editor's opinion, this provides a much clearer view of which functions are or are not required.

- Added device classes

Table 4 – Device Classes

Device Type	Device Class
Bridge	A
Constrained Bridge	B
End Station	C

# Section 6 - Device Classes

- From Annex Z: Do we need a different class of device for two-port mac relays for instance or a separate profile? (Table 12-24 in 802.1Q-2018 has an example of how this might be done)?

**Table 12-24—UAP table entry**

Name	Data type	Operations supported <sup>a</sup>	Conformance <sup>b</sup>	References
uapISSPortNumber	Port Number	R	BE	12.4.2, 12.5.1
uapComponentID	ComponentID	R	be	12.4.1.5
uapPortNumber	Port Number	R	be	12.4.2
uapSchCdcAdminEnable	Boolean	RW	BE	42.4.2
uapSchCdcAdminRole	enumerated	RW	BE	42.4.2
uapSchCdcAdminChnCap	unsigned [1...167]	RW	BE	42.4.1
uapSchCdcOperChnCap	unsigned [1...167]	R	BE	42.4.8
uapSchAdminCdcSvidPool Low	unsigned [0,2...4094]	RW	BE	42.4.7
uapSchAdminCdcSvidPool High	unsigned [0,2...4094]	RW	BE	42.4.7
uapSchOperState	enumerated	R	BE	42.4.14
uapSchCdcRemoteEnabled	Boolean	R	BE	42.4.14
uapSchCdcRemoteRole	enumerated	R	BE	42.4.12

<sup>a</sup> R = Read-only access; RW = Read/Write access.

<sup>b</sup> B = Required for an EVB Bridge system; E = Required for an EVB station system; b = Optional for an EVB Bridge system;

e = Optional for an EVB station system.

# Annex A – PCS Proforma

- The only change was to move the “quantities” text to the Annex A
  - Proposal:
    - Move this clause to **normative** annex A;
    - Define the relevant **normative** parameters there;
    - Giving quantities is **mandatory** for conformance;
    - Define the required quantities for a limited set of different classes (optional);
    - Allow “wildcard” numbers for the defined parameters.
    - Align terminology (talker/producer, network diameter)
- Concerns
  - The proposal clearly indicates this will be normative language. Is the JWG comfortable with that approach?
  - The text of the clause does not belong in Annex A (PCS Proforma)
    - Should be moved to a separate Annex (normative or informative?)
    - Reporting of conformance/quantities will be part of the proforma

# Next Steps

- Section 6
  - Apply same approach to all other 802.1 required functions.
  - Add device class-based applicability to the table
  - Work on a similar approach for 802.3 (i.e. based upon conformance clauses)
- Annex A
  - Move quantities text to Annex B
  - Generate PCS proforma

# Gaps

1. Regular synchronization of .1Qbv “tick” event to the 802.1AS-Rev clock
2. Distributed and Centralized model “UNI” may need to be expanded.
3. Need mechanism for identifying “In-sync” and “out of Sync” for all time-aware systems in the network.
4. Network diagnostics – <http://www.ieee802.org/1/files/public/docs2018/60802-Steindl-NetworkDiagnostics-0718-v01.pdf>
5. Synchronization – <http://www.ieee802.org/1/files/public/docs2018/60802-Steindl-Synchronization-0718-v02.pdf>
6. Defined range of destination MAC address, do we get our own OUI
7. Do we need a standardized TLV for LLDP to identify the TSN domain
8. Do we need a section to distinguish between constrained devices vs other devices?
9. Need to identify network management access protocols and select data models for management.
10. Define procedures to implement hot-stand-by masters.
11. Do we need an IEC/IEEE translation dictionary?
12. Reference style IEC guides in the profile.
13. Editor’s note: Do we need a standards-based view of required features (i.e. these clauses of 802.3 apply to bridges, end stations, etc.)?
14. Editor’s note: Do we need a different class of device for two-port mac relays for instance or a separate profile? (Table 12-24 in 802.1Q-2018 has an example of how this might be done)?



# Other Gaps

- Bridge FDB and resource requirements
  - It is the editor's perception that concerns exist regarding the implementation specific nature of these requirements.
  - Nonetheless, the concern that adequate resources be available for bridges in industrial applications is understandable.
  - Can we find a way that achieves the same ends without forcing manufacturers into a specific implementation
  - Contributions welcome
- Management Reconciliation
  - <http://www.ieee802.org/1/files/public/docs2018/60802-Steindl-Configuration-0718-v02.pdf>
- Destination MAC address constraints
  - <http://www.ieee802.org/1/files/public/docs2018/60802-Steindl-DaMacConstraints-0718-v02.pdf>

**Thank you**