IEC/IEEE 60802
Optional Feature FQTSS or CBS ?

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V01

D1.4 Comment Resolution Results

See Response to #50 and #216 - Common Bridge component options

„Delete all options except items f) [Support FQTSS according to IEEE Std 802.1Q-2018, 5.4.1.5], g) [PSFP] and i) [FRER]. Move item b) [MST] to 5.7.1 [Common Bridge Component Requirements]."

→ delete optional support of: MVRP, CFM, Port and Protocol based VLANs, MMRP, CQF, and Stream Identification

See Response to #51 and #218: Common end station component options

„Delete all options except items c) [Support end station requirements for FQTSS according to IEEE Std 802.1Q-2018, 5.20], g) [Talker FRER] and h) [Listener FRER].

→ delete optional support of: CFM, ETS, PSFP, and CQF

Bridge FQTSS in IEEE 802.1Q-2018

FQTSS is a VLAN Bridge component option.

Support of FQTSS in VLAN Bridge components (802.1Q, 5.4.1.5) requires:

A VLAN Bridge component implementation that conforms to the provisions of this standard for FQTSS shall

a) Support a minimum of two traffic classes on all Ports, of which
   1) A minimum of one traffic class supports the strict priority algorithm for transmission selection (8.6.8.1), and
   2) One traffic class is a stream reservation (SR) class.
b) Support the operation of the credit-based shaper algorithm (8.6.8.2) on all Ports as the transmission selection algorithm used for the SR class.
c) Support SRP domain boundary port priority regeneration override as defined in 6.9.4, and the default priority regeneration override value defined in Table 6-5, for SR class "B."
d) Support the tables and procedures for mapping priorities to traffic classes as defined in 34.5.

I.e., defines a kind of „profile" for AVB including:
Traffic Classes, Strict Priority, Credit-based Shaper and SRP.

End Station FQTSS in IEEE 802.1Q-2018

Support of FQTSS in end stations (802.1Q-2018, 5.20) requires:

An end station implementation that conforms to the provisions of this standard for FQTSS shall

a) Support a minimum of two traffic classes on all Ports, of which
  1) A minimum of one traffic class supports the strict priority algorithm for transmission selection (8.6.8.1), and
  2) One traffic class is an SR class.
b) Support the operation of the credit-based shaper algorithm (8.6.8.2) as the transmission selection algorithm used for frames transmitted for each stream associated with the SR class.
c) Support the operation of the credit-based shaper algorithm (8.6.8.2) on all Ports as the transmission selection algorithm used for the SR class.
d) Use the default priority associated with SR class "B" as shown in Table 6-5 as the priority value carried in transmitted SR class "B" data frames.

I.e., defines a kind of „profile" for AVB including:

Traffic Classes, Strict Priority, Credit-based Shaper and SRP.

FQTSS or CBS in IEC/IEEE 60802 ?

BUT: IEC/IEEE 60802 does not make use of SRP and SR-classes.

In the Example Selection Tables
https://www.ieee802.org/1/files/public/docs2021/60802-Steindl-et-al-ExampleSelectionTables-0221-v33.xlsx

- Credit-based Shaper is listed as common option in the „Constraint Devices Example Selection",

- FQTSS is <u>not</u> mentioned.

Proposal for IEC/IEEE 60802 – next revision

Common Bridge component options:

x) Support the operation of the credit-based shaper algorithm (802.1Q, 8.6.8.2) on all Ports as the transmission selection algorithm for at least 4 traffic classes.

y) Support configuration of the credit-based shaper algorithm (802.1Q, 8.6.8.2) using the YANG features and leaves of the <ieee-cbs> module according to 6.7.10.3.x

Common End Station component options:

u) Support the operation of the credit-based shaper algorithm (802.1Q, 8.6.8.2) on all Ports as the transmission selection algorithm for at least 4 traffic classes.

v) Support configuration of the credit-based shaper algorithm (802.1Q, 8.6.8.2) using the YANG features and leaves of the <ieee-cbs> module according to 6.7.10.3.x

Thank You

Questions?