P802.1Qdw text contribution v01 overview

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Overview

- The author would like to express gratitude to Paul Congdon, the contributor of https://www.ieee802.org/1/files/public/docs2022/dw-congdon-individual-text-1122-v01.pdf, as this contribution references or leverages text from it.

- Clause 52, the meat of this text contribution, uses a structure similar to Congestion Notification (Clause 30-33) and Congestion Isolation (Clause 49):
  > SFC Objectives and Principles
  > SFC Entity (bridge and end station) operations
  > SFC Protocol
    - Variables
    - Procedures
    - Encoding of PDUs

Notes

- Add Comparison to Congestion Notification (52.2.6) and Comparison to Congestion Isolation (52.2.7).
- Modify 52.3.3 SFCM Demultiplexer.
  > Merge the ‘Source Port Locator’ function into the ‘SFCM Demultiplexer’.
  > Add sfcProxyEnable variable.
- Modify 52.4 End Station SFC aware forwarding process.
  > Add 52.4.1 End Station SFCM Demultiplexer and modify Figure 52-3.
- Add 52.5.2.5 processSfcmPdu().
- Provide SFCM PDU format options for functionality extensibility (52.5.3).

- Other minor changes and editorial changes.

Discuss & Next Step

- Add Layer 2 SFCM PDU encoding (To ensure the completeness of SFC?)
  - > L2 addressing SFC (can use Congestion Notification as a reference).
  - > Can use EtherType 89-A2 (another Subtype besides the Congestion Isolation Message encapsulation).

- Primary tasks
  - > Complete the unfinished parts in SFCP procedures (52.5.2) and Encoding of the SFCM PDU (52.5.3).
  - > Complete the Variables controlling operation (52.5.1) accordingly.
- Secondary tasks
  - > Managed objects,
  - > YANG data models,
  - > and enhancements to DCBX protocol to advertise the new capabilities.