802.1CB improvements

FRER
Setting Stream ID for the output of Elimination (Sequence Recovery)
Topics

- Scenarios
- Proposal
  - Improvement of the Elimination function
- Impact on 802.1CB-2017 and related docs ...
Scenarios Using FRER

Scenario: Elimination inside the network
- Stream identification function
  - Uses "stream_handle"
- Output needs
  - Proper encapsulation i.e., Ethernet header fields

Scenario: Multi-stage FRER
- Multiple FRER function within a node
  - Internal segment(s) for the TSN Stream
  - Packet pipeline may need unambiguous "stream_handle"
802.1CB improvements

Overview

— Target: setting the output stream_handle parameter for the E (elimination) function
— How: via a new “frerSeqRcvyStreamOut” parameter
  — Elimination node
    — Extending the VectorRecoveryAlgorithm (subclause 7.4.3.4 of IEEE 802.1CB-2017) and the MatchRecoveryAlgorithm (subclause 7.4.3.5 of IEEE 802.1CB-2017). The extension is to change the stream_handle parameter of the processed packet before the PRESENT_DATA event, when the algorithms are used for a Sequence Recovery function.

— Note: this may not affect the Individual Recovery function (subclause 7.5 of IEEE 802.1CB-2017)

— Note: R (replication) function has such parameter: “frerSplitOutputIdList”
802.1CB impact
What needs to be changed/added ...

— Elimination node
  — Define a new “frerSeqRcvyStreamOut” parameter
  — Use the new parameter
    — extending the VectorRecoveryAlgorithm (subclause 7.4.3.4 of IEEE 802.1CB-2017) and the MatchRecoveryAlgorithm (subclause 7.4.3.5 of IEEE 802.1CB-2017). Change the “stream_handle” parameter of the processed packet before the PRESENT_DATA event.

...  
PRESENT_DATA  
...  
if (frerSeqRcvyIndividualRecovery = False) {
  stream_handle = frerSeqRcvyStreamOut
}
PRESENT_DATA
Questions ...