802.1Qau Draft 1.3 issues

Rev. 2

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Draft 1.3
P802.1Qqu Draft 1.3

- “Reaction Point Identifier” changed to “Flow Identifier”.
- MIB object names added to Clause 12 managed object descriptions.
- Clause 17 greatly expanded with a MIB and completed relationship and security clauses.
- Significant additions and clarifications to the overall protocol descriptions in Clauses 30 and 32.
- Interior and Edge Port explanations improved.
- Subclause on multicast added to Clause 30.
- Default for flow distribution to RPs is one RP per priority.
- Protocol details in Clause 32 brought into alignment with published pseudocode. E.g., cpW and rpGd are now powers of 2, not shift distances.
- cpQDelta restored to the CNM frame format, and remnants of encapsulated frame removed.
CN Domain Protection
CN Domain protection problems

1. **Rcv Rdy**
   a. Bridge does not want to admit non-CN-aware traffic to a CN Priority, because it will subvert the ability of the network’s Congestion Points to throttle traffic.
   
   b. Station may not want to admit non-CN-aware traffic to its CN-aware queues.

2. **Snd tags**
   a. Bridge does not want to transmit CN-tagged traffic to a non-CN aware station or network.
   
   b. End station does not want its CN-aware applications to consider that the link is up unless the neighboring device is CN-aware and compatibly configured.
CND Protection 1: Full handshake

- Two separate handshakes, one for Left-to-Right, one for Right-to-Left.

- First receiver turns off its protection (Rcv Rdy).
  Second sender enables tags (Snd tags).
CND Protection 1: Full handshake

- If the bridge’s (and station’s) only method for protecting the network (queues) is to remap all incoming traffic from a CN Priority to a non-CN priority, then this method ensures that the Rcv Rdy problem is solved.

- Solving the bridges’ Snd tags problem requires that a bridge be able to remove CN-tags on output.

- This technique supports optional CN-tags.
CND Protection 2: Half handshake

- Two separate handshakes, one for Bridge-to-Station, one for Station-to-Bridge.
- First receiver turns off its protection (Rcv Rdy).
  Second sender enables tags (Snd tags).
CND Protection 2: Half handshake

- If the bridge (and station) can:
  - Admit only CN-tagged traffic to a CN Priority; and
  - Deflect non-CN-tagged traffic received on a CN Priority to a non-CN Priority and remove the CN-tag.
  - And, if the CN-tag is required, not optional.

- Then the Bridge and Station can start off in the Rcv Rdy state.
  - They are making the (safe) assumption that CN-tagged traffic is only sent by CN-aware systems.

- This is a quicker handshake, but requires an extra element, an “Ingress CN-tag checker,” in the bridge.
CND Protection 3: 3/4 handshake

- Two separate handshakes, one for Bridge-to-Station, one for Station-to-Bridge.
- First receiver turns off its protection (Rcv Rdy). Second sender enables tags (Snd tags).
CND Protection 3: 3/4 handshake

- Only the station can:
  
  Admit only CN-tagged traffic to a CN Priority.
  
  Deflect non-CN-tagged traffic received on a CN Priority to a non-CN Priority and remove the CN-tag.

- The bridge deflects all CN Priority traffic to a non-CN Priority until it is Rcv Rdy.

- So, only the station can start off in the Rcv Rdy state.

- This requires the least novelty in the bridge.

- This is the solution that is in Draft 1.3.

- This supports optional CN-tags.
Other issues
Other issues

- There are a number of LLDP handshake issues, as brought up at previous meetings.
  The principally interested parties have not met since September.
  The editor suggests an off-line meeting this week.

- CN-tag or not CN-tag?
  CN-tag required; CN-tag optional; No CN-tag, 1 RP; No CN-tag, n RPs.
  The summary is in Annex Z. Any new arguments?

- Other Annex Z issues
  Discuss and resolve.

- Editor’s tasks
  PICS Proforma
  MIB
  Next round of ballot comments