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.

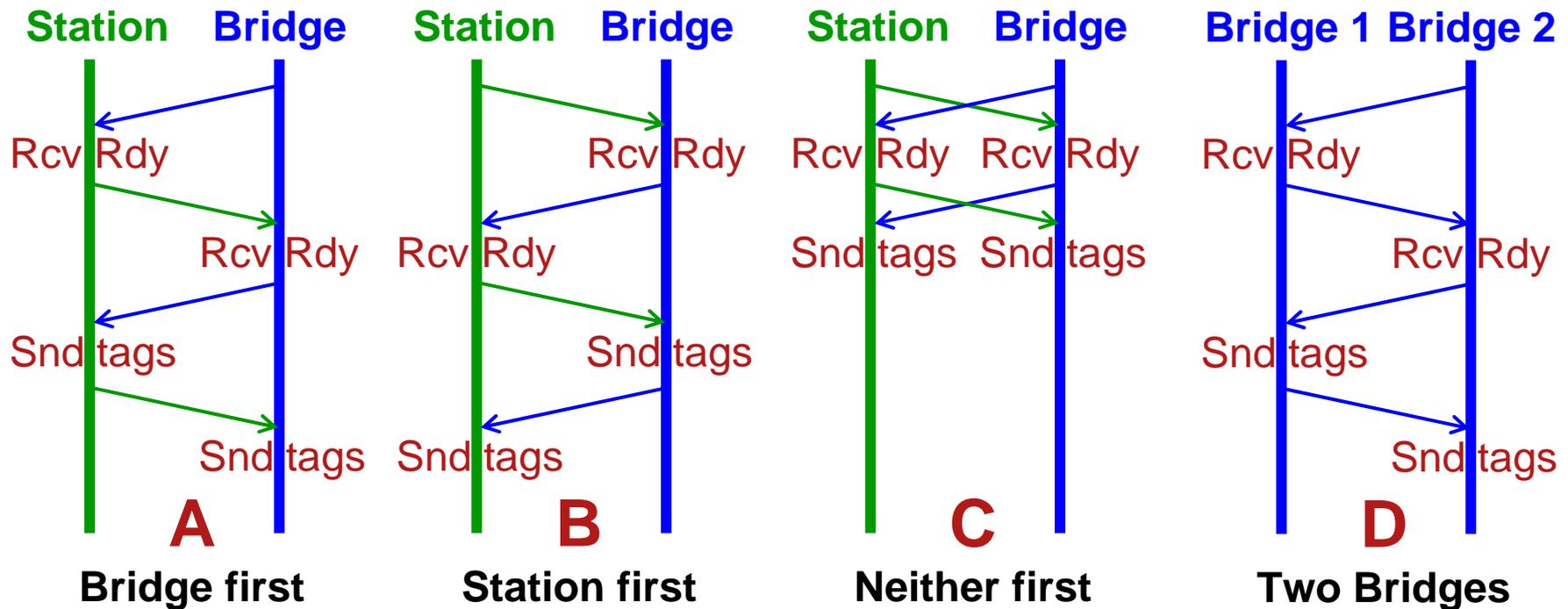# CN Domain Protection

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

A — **Bridge first**
B — **Station first**
C — **Neither first**
D — **Two Bridges**

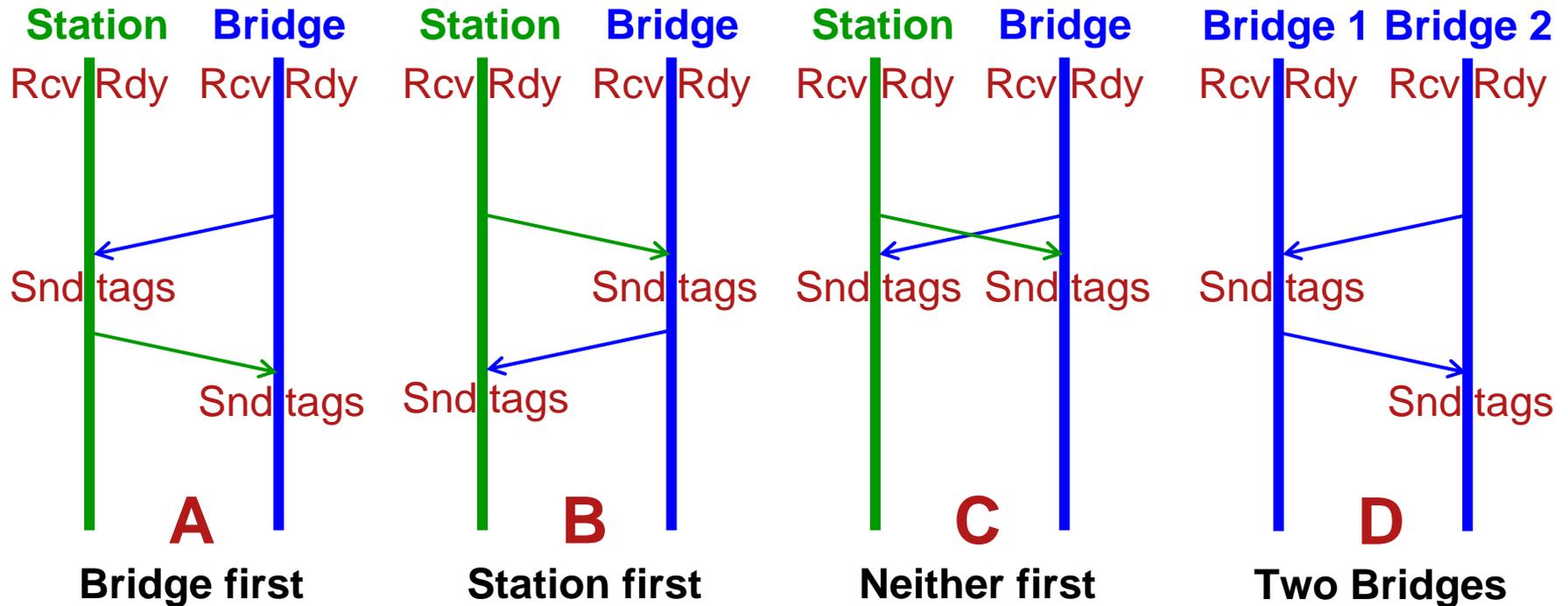(Diagrams A, B, C, D show Station/Bridge handshake sequences with labels: Rcv Rdy, Snd tags)

- 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.
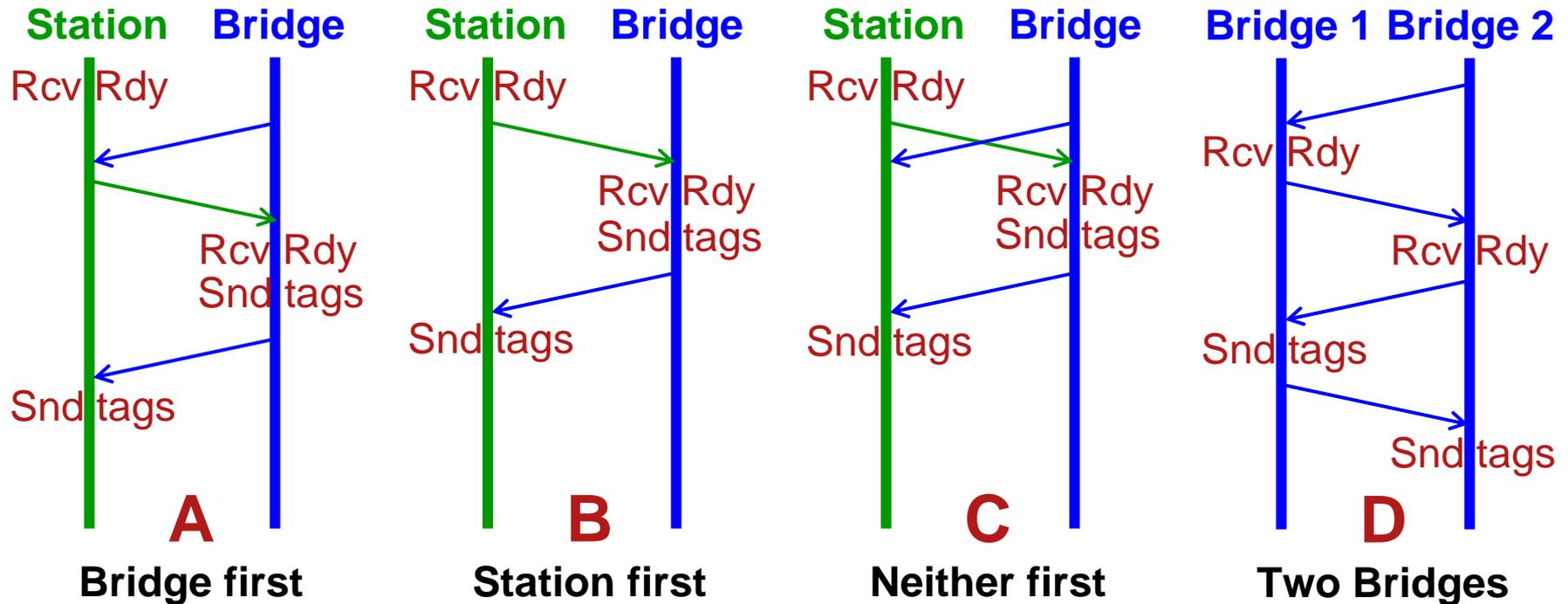
CND Protection 2: Half handshake

Station	Bridge	Station	Bridge	Station	Bridge	Bridge 1	Bridge 2
Rcv Rdy	Rcv Rdy	Rcv Rdy	Rcv Rdy	Rcv Rdy	Rcv Rdy	Rcv Rdy	Rcv Rdy

A Bridge first   **B** Station first   **C** Neither first   **D** Two Bridges

- 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

Station   **Bridge**   **Station**   **Bridge**   **Station**   **Bridge**   **Bridge 1 Bridge 2**

Rcv Rdy

Rcv Rdy
Snd tags

Snd tags

A
Bridge first

Rcv Rdy

Rcv Rdy
Snd tags

Snd tags

B
Station first

Rcv Rdy

Rcv Rdy
Snd tags

Snd tags

C
Neither first

Rcv Rdy

Rcv Rdy

Snd tags

Snd tags

D
Two Bridges

- 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

IEEE 802 plenary, Dallas, Texax, November, 2008

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