802.1Qbp – ECMP
Editor's Notes and Issues

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Clauses in 802.1Qbp D0.0

- 1, 3, 4: Overview, Definitions, Abbreviations
  - Placeholders
- 6. Support of the MAC Service
  - Added primitive parameter: filtering_information
  - Added shim for F-TAG processing
- 8. Principles of bridge operation
  - Added new FDB entry type: Dynamic Selection Entry
- 9. Tagged frame format
  - Added description of F-TAG
- 27. Shortest Path Bridging (SPB)
  - Added subclause to 27.17 to describe ECMP
- 28. ISIS-SPB Link State Protocol
  - Added single SPT Set ECMP ECT-ALGORITHMs (28.9)

Clause 6 – Support of the MAC Service

- Added new filtering_information parameter
  - Picked a generic name in case other enhanced filtering features are added in the future (try to avoid new parameter for each)
  - Indicated that the filtering_information is not required – that is, the Relay can filter frames without this additional information
  - Used the same dodge as used for connection_identifier – that is, that protocol entities in the stack that do not specify what they do with filtering_information pass it transparently (so we do not have to touch all the clauses)
- Added clause for Support for Flow Filtering
  - Describes F-TAG processing shim
  - Includes both tag generation and removal/insertion
- Issues/Questions
  - One shim or two (tag generation, tag processing)
  - How to support untagged (no B-TAG) case

Clause 8 – Principles of bridge operation

- Added Dynamic Selection Entry (new FDB entry type)
  - Port map specifies set from which one must be selected
  - Same information structure as Dynamic Filtering Entry
  - Only one Dynamic Filtering/Selection Entry in the FDB for any given FID/MAC
  - Created by ISIS-SPB for individual address ECMP
- Changed filtering process description and Table 8-7
  - Show where Dynamic Selection Entry is used in filtering process
  - Show change to application of individual “wildcard” entry (.1aq)
- Issues/Questions
  - Need to add description of the dynamic selection process (where should this be placed?)
  - Should Table 8-7 be changed in 802.1aq?

Clause 9 – Tagged frame format

- Added F-TAG description
  - Filtering tag (as opposed to VLAN tag)
  - Selection based on discussion in Santa Fe
  - See bp-mackcrane-tag-format-0711.ppt

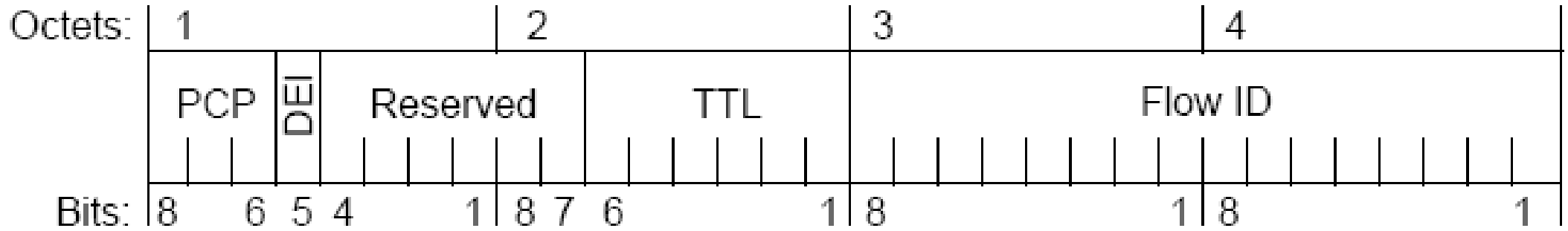

Figure 9-4—Flow FilteringTCI format

Clause 27 – Shortest Path Bridging (SPB)

- Added paragraph to introduction
  - Describes SPBM behavior with ECMP
- Added clause 27.10 Loop Mitigation
  - Describes loop mitigation provided by TTL in F-TAG
- Changed clause 27.17 Equal cost shortest paths, ECTs, and load spreading
  - Added introductory text describing two load spreading methods: ECT VLANs and ECMP
  - Added subclause on ECMP (only high level description so far)
- Issues/Questions
  - Failed to delete text of clause 27.16 (oops! Nothing changed there.)
  - Do we need to add requirements for ECMP in clause 27.1?
  - Do we need an ECMP example in clause 27.18?

Clause 28 – ISIS-SPB Link State Protocol

- Added clause 28.9 ECMP Algorithms
  - Describes ECMP ECT Algorithms using single SPT Sets
  - Table of ECT-ALGORITHM IDs
- Changed SPBM Service Identifier and Unicast Address (ISID-ADDR) TLV
  - As per side discussion in Santa Fe
  - Added option to associate I-SID with ECT-ALGORITHM (rather than B-VID)
- Issues/Questions
  - Can we safely change the I-SID to B-VID association and require that only one B-VID can use each ECT-ALGORITHM?
  - Do we want to support additional multicast load spreading options?

Clauses still needed for 802.1Qbp

- 1, 3, 4: Overview, Definitions, Abbreviations
- 5. Conformance
  - Add conformance requirements for SPBM ECMP support
- 8. Principles of bridge operation
  - Dynamic selection process description (hash-based selection)
- 12. Management
- 17. MIB
- Annex A. PICS
- TBD (depending on issue resolution and further study)
  - CFM clauses (18-22)
  - CN clauses (30-33)
  - SRP (35)