ERICSSON

P802.1Qca – D0.3 Editor's Report

Comment Resolution for TG Ballot

János Farkas
janos.farkas@ericsson.com

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Outline

- Statistics
- Time synchronization
- Scheduling
- Reservation
- Conformance
- PCE vs LSP refresh
- Link attributes and constraints
- Paths and trees
  - Description, direction, congruency
- VID ‘reuse’
- Structure
  - Note on explicit, strict, loose, constrained
- Assignment of multiple VIDs for protection

Statistics

CATEGORY	All respondents	
	TOTAL	%
Yes	5	17.2
No	7	24.1
Voting Yes or No	12	41.4
Abs. Time	8	27.6
Abs. Expertise	8	27.6
Abs. Other	1	3.4
Respondents	29	100
Voters	N/A	N/A
Liaisons responding	0	
No. of commenters	10	34.5
No. of comments	110	
TR	45	
ER	1	

For joint session

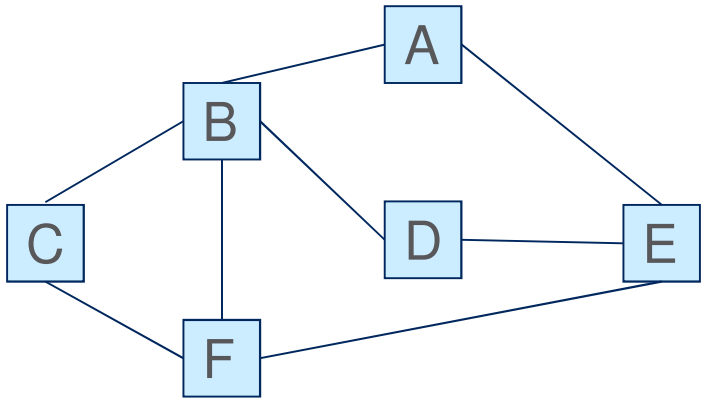
- Subclause 45.4 Distribution of control parameters for time synchronization
  - [83]: remove
  - [5]: decide
- PCE computing Explicit Schedule Database [61]
- Remove sub-TLVs from 45.2 Reservation [75]
- Conformance
  - ISIS-SPB sub-TLVs vs. SPBM-SPBV ‘suite’ [62]
  - Separating conformance requirement for distinct features [13]
  - Add a note on conformance implications to 45.1.2 [24]
- PCE dynamic path updates vs. LSDB integrity [79]

For joint session – cont'd

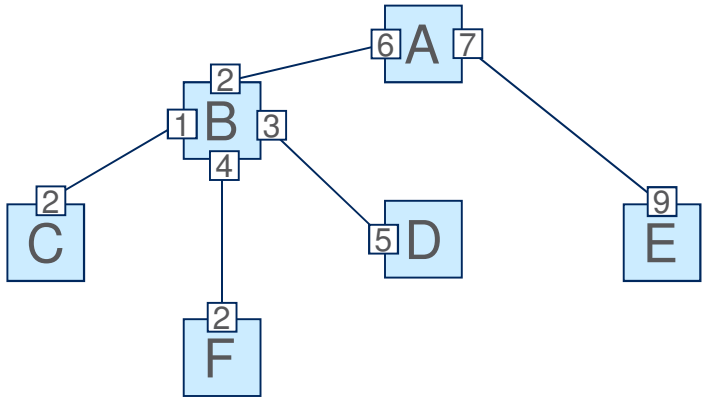
- Link attributes and constraints
  - Current link delay is not satisfactory [64, 65, 1]
    - Link delay vs bridge delay?
  - Define distinct sub-TLVs for the different type of constraints? [31]
  - Constraints TBD by Qcc [2]

Ho to describe a tree?

- What is a tree?
  - In essence, a 1-connected topology (graph), hence loop-free
- How to describe a topology comprised of point-to-point links?
  - e.g. by nodal ID pairs (e.g. in subclause 28.4 for the Topology Digest)
    - B-A, B-D, C-B, D-E, F-C, E-F gives:

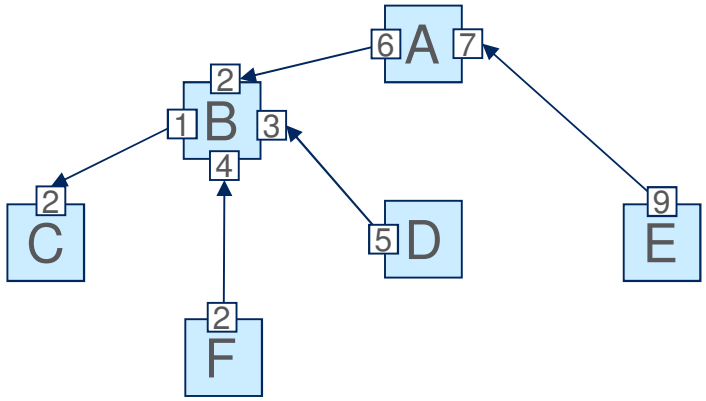


  - A topology, e.g. a tree can also be described by nodal ID + port ID
    - C-2, F-2, D-5, B-2, A-7 gives:
    - Order/sequence does not matter!
    - No need to specify branching!



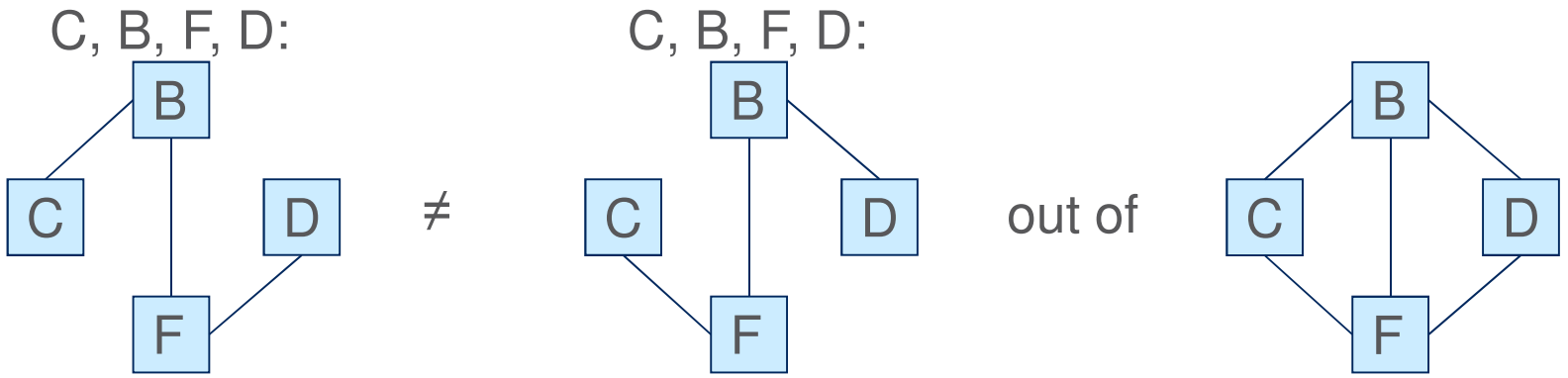
More on trees

- Congruent use
  - Having the tree computed there is no need to dedicate Root for the Active Topology
  - Root and Leaf, i.e. Transmit/Receive (see T/R flags), are only important for the ‘connectivity’ on top: VLAN or I-SID
- Directed tree
  - Requires the specification of the Root and the Direction (to or from the Root)
  - For example, a destination rooted tree:
    - C-2, F-2, D-5, B-2, A-7
    - Root = C
    - Direction = to



Paths and trees

- A point-to-point path is in fact a very simple tree
- Therefore, a list of nodal ID + port ID specifies a path
- However, sequence is important if only nodal IDs are used in the list and port IDs are not:



- How to describe explicit paths/trees then?
- Should we use the same System ID + Port ID based sub-TLV for both paths and trees?
- Should we go for directed trees?

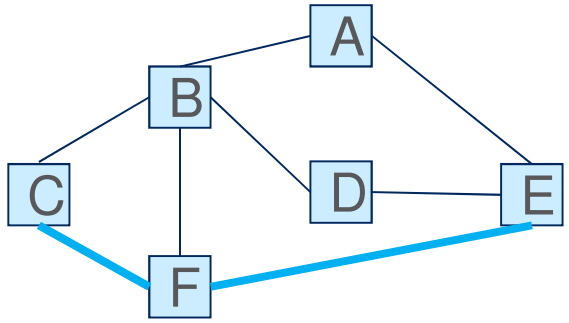
Congruent vs non-congruent paths/trees?

- Congruent paths and trees were kept in mind up to 802.1Qca/D0.3
  - Congruency was the model applied in 802.1Q before
  - Congruency provides desirable features
- Why could we consider non-congruency
  - Some multi-copy protection schemes may leverage/require non-congruent paths/trees, see e.g.
    - http://www.ieee802.org/802_tutorials/2013-07/WR_Tutorial_IEEE.pdf, pages 81-83
- Do we want to allow/support non-congruent paths/trees?
- See related ballot comments on next slide

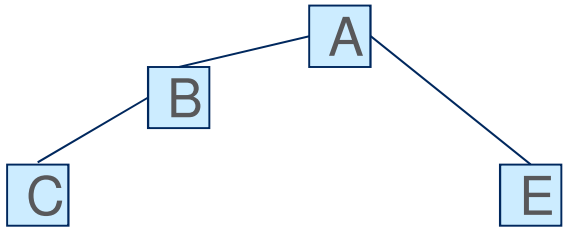
Comments on paths and trees

- Trees and paths
  - congruent (=co-routed bi-directional) vs. uni-directional [27, 35]
  - tree vs path [110]
  - sequence [36, 29]
- Reuse of VIDs
  - [96]: "each VLAN is allocated to one and only one explicit path“
  - [109]: “Is the intent to have one path per Base VID? It seems like that wouldn't scale sufficiently.”
  - [26]: “there need to be guidelines constructed explaining when a VID can be reused”
  - Guidelines to be given for VID reuse! Responsibility is of the PCE!

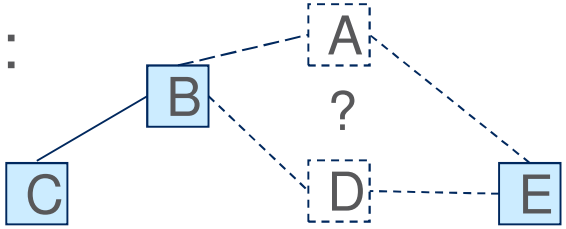
Explicit, strict, loose, constrained



- Shortest (default) path: *C,F,E*



- A fully given explicit path, i.e. strict hops only: *C, B, A, D*



- Explicit path, where *E* is a loose hop: *C, B, E*

- Explicit path with loose hop only, also having a constraint ➔ Constrained Path: *C,E, constraint*
  - Constrained routing = SPF on topology pruned by constraint

For joint session – cont'd

- Use case of loose hops? [3]
- Explicit/constrained Path ID [76]
- LFA [76]
- Structure
  - [99]: Too much clause nesting; Could separate explicit and constrained paths at the 45.n level (explicit ⇔ constrained)

For TSN session

- [58] SRP Domain (vs. SPT Domain)
- -TR: 94

For IWK session

- Preferred to have during joint session
  - Assigning multiple VIDs for protection [47, 48, 44, 80]
    - Use of SPB Instance sub-TLV, i.e. backup VIDs in the SPVID field vs. new sub-TLV
  - # common links as outcome of computation [4]
  - Cautious restoration, “stable” [106]
- Parsing EP sub-TLV? [28, 70]
- Reservation conflicts [41] (proposed to accept the removal)
- -TR: 19