Timing Fidelity Reporting
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Agenda

- IEEE 1588 proposal
- Managed objects
- Mapping to 802.1AS

1588 work

- "Enhanced PTP Integrated Synchronization Path Quality Metrics"
  - Opher Ronen (ADVA Optical Networking) proposal in August 2015
  - https://ieee-sa.centraldesktop.com/1588/file/41972309/
- new TLV in management message
  - and maybe appended to announce messages similar to the way the path trace mechanism works

TLV Type (2)
TLV Length (2)
OUI (3)
OrgSubType (3)
GrandMasterID (2)
GrandMasterTimeInaccuracy (4)
MaxStaticInaccuracy (4)
StdStaticInaccuracy (4)
MaxDynamicInaccuracy (4)
StdDynamicInaccuracy (4)

Managed objects

- I propose adopting 1588 terms and define local and cumulative timing inaccuracy reporting

- 1588 is NOT done yet, so we may need to make room for a future change to map their way of doing things into the structures
  - I'm sure they are willing to work together, but schedules may not match

Mapping to 802.1AS

- Adopt 1588 management?
  - overlaps/conflicts with "normal" 802/IETF management
  - better, perhaps, to just define as regular managed objects and let SNMP/NETCONF/1722.1/etc. protocols do this

- Path trace
  - append to Announce just like 1588?
    - note that all systems store received path trace info, so managed objects include both local timing inaccuracy and cumulative inaccuracy
  - 1588 path trace doesn't work for managed time transport paths
    - need something that follows sync tree!

Sync Path Trace

- Proposal … use a new Signaling TLV
  - looks just like 1588 path trace TLV
    - may be identical, but likely updated
  - … plus cumulative time inaccuracy TLV
    - … including "lowest version number" of path to GM
- Accepted only on domain slave port
  - ignored otherwise
- Transmitted on domain master ports
  - when initiated by "management" or when received on domain slave port
  - contains updated path trace and time inaccuracy TLVs

  (send proposal back to 1588)

That's it