Items Related to Several Managed Objects Pertaining to EPON Transport in 802.1AS-Rev

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- nup, ndown: group indices of refraction in upstream and downstream directions, respectively
  - These are used to account for delay asymmetry
  - 13.8.1.2.1, 13.8.1.2.2 (EPON state machine variables)
  - 14.8.32, 14.8.33 (portDS)
  - 14.17.1, 14.17.2 (cmldsEponDS)
  - These are used to account for delay asymmetry
    - Note: An EPON parameter RTT_i (see 13.7.1), which is the round-trip time between OLT and ONU, is also used; however, this is already an 802.3 managed object
- In 802.1AS-2011, nup and ndown are managed objects only in portDS, as 802.1AS-2011 specifies only a single domain
- 802.1AS-Rev allows multiple domains
  - The timing service provided by EPON is below 802.1AS and is, in general, common to all gPTP domains
  - Therefore, in 802.1AS-Rev/D5.0, a common cmldsEponDS is added, to congtain nup and ndown; portDS versions retained for backward compatibility

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- However, since nup and ndown are associated with EPON, they could be 802.3 managed objects, just as RTT_i is an 802.3 managed object
  - If this were done, cmldsEponDS would not be needed
  - However, the portDS members nup and ndown might still be retained for backward compatibility
    - It would need to be decided what to do if both 802.1AS-Rev and 802.3 versions of nup and ndown were present in this case
- If it is decided that nup and ndown should remain 802.1AS-Rev managed objects, it seems that they should not be part of the Common Mean Link Delay Service (CMLDS), as CMLDS is a common peer delay service for full-duplex 802.3 links
  - Instead, they should be part of an EPON data set of an EPON common service, e.g.
    - commonEponService (for the name of the service, in the hierarchy in 14.1)
    - cesPortDS (for the name of the data set that will contain nup and ndown)
    - Note that nup and ndown are used only at the requester (master, or OLT)

Comment 24 against 802.1AS-Rev/D5.0

❑Comment 24

- The CMLDS EPON parameter data set has only 2 members, i.e., the group indices of refraction nup and ndown. There also is a round trip time parameter, RTT, in clause 13; however, this is not a dataset member because it is already in the 802.3 EPON MIB (at least, that is the understanding of this commenter). It seems that nup and ndown would be more appropriate to be included in the 802.3 MIB with RTT, as they are related to EPON.

❑Suggested Remedy

- Consider whether nup and ndown would be more appropriately included in the 802.3 MIB, with RTT. If so, request 802.3 that these be added there (and, if 802.3 agrees, remove the CMLDS EPON parameter dataset).

❑Current Respnse (as of Proposed Disposition Revision 6)

- DISCUSS. For now, defer this until more participants are present. It was mentioned that this really is part of EPON; therefore, if we did keep it in 802.1AS, it should be a separate common service (because it has nothing to do with pdelay). But, it would likely make more sense to include in 802.3 as a managed object there.

Decision Needed

- Should nup and ndown be 802.3 managed objects?
  - If so, should we retain the portDS nup and ndown in 802.1AS-Rev? If so, what should be done if both 802.1AS-Rev and 802.3 versions are present (which ones take precedence)?
  - If so, what are the logistics for accomplishing this?
- Or, should nup and ndown be managed objects only in 802.1AS-Rev?
  - If so, should be common versions be part of a new common service (i.e., other than CMLDS)? If so, what should its name be?
- In either case, supporting the new versions of nup and ndown (i.e., the versions not in portDS) would be mandatory only if one is supporting multiple gPTP domains (i.e., since multiple domains is a new, optional, feature of 802.1AS-Rev)

Thank you