

802.17b proposals

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Possible variable phy PARs

- Proposal 1: Propose different speeds for different spans in an 802.17 ring
 - E.g. OC-192 and OC-48 spans on the same ring
- Proposal 2: Propose different phys on different spans in an 802.17 ring
 - E.g. OC-192 and 10GbE spans on the same ring
- Proposal 3: Proposing different phys and/or different speeds on spans in an 802.17 ring
 - E.g. OC-48 and GbE spans on a ring.

Why have such a PAR?

- Marketing reasons:
 - Sonet can do it: can't give ammo against RPR?
 - Why pay \$\$\$ for high speed links when only a small part of your ring needs it?
 - Fair number of asymmetric applications – video distribution, Internet hubs, etc., which require larger bandwidth at one location, and lower speeds at other ends.

Technical issues to be tackled

- How to ensure guarantee of class A b/w, etc.
- RPR MAC operation speed – how big is the transit buffer?
- Might need changes to Fairness algorithm?
- Clause 7 changes?
- Protection issue – how to protect over the lower speed span
- Dynamic Ring B/W adjustment
- Phy management issue – different phys have different management needs
- etc

Enhanced Bridging PAR

- Proposal:
 - Enable spatial reuse for bridging applications over an 802.17 ring
 - Improve network bandwidth/media utilization for Layer 2 forwarding
 - Other media (e.g. EPON) would like to benefit from this improved media utilization. 802.1 WG has been engaged.

Why do enhanced bridging?

- Improve bandwidth utilization on ring
- Evangelize 802.17
 - Make 802.17 more palatable to providers using L2 bridges in network and planning to do bridging over 802.17
- Synergistic with 802.3ad

Work involved

- Service interface enhancements?
- May be small changes needed – most changes should occur in 802.1
- Possibly need MAC sublayer to change - address learning?
- Liason and work with 802.1 to drive specs..