

References

- **Why does an 802.1D bridge not work over an EPON?**
 - <http://www.ieee802.org/1/mirror/8021/docs2002/pon-issues.pdf>
- **How can we make it work?**
 - <http://www.ieee802.org/1/mirror/8021/docs2002/pon-model-4.pdf>

Two Models for IEEE 802.3ah EPONs

- **Baseline and presentations to date blithely connect a “router” to a “native port”. This ignores the fact that there is no standard specifying how a router connects either to end stations, bridges, or other routers, over a P2MP medium. What do we do?**
 - **Ignore the problem, and leave it to 802.1 and/or other standards bodies to deal with P2MP native mode?**
 - **Define a mechanism which 802.1 can use to define an emulation standard that makes the P2MP medium both 1) very close to “native” P2MP in efficiency, and 2) compatible with existing standards which utilize 802.3 media?**

What are the Emulation Issues?

- **Do we provide a means to provision a separation of the EPON into multiple broadcast domains, using methods invisible to the user of the standard 802.3 MAC service? (Hint: Existing standards above MAC layer *cannot* do this.)**
- **Do we provide multiple “Logical OLT MACs” in order to offer a standard 802.3 MAC service, which does not include any “Logical ONU ID” parameter.**
- **If we provide Logical OLT MACs, exactly what connectivity to Logical ONUs do they provide, in order to satisfy the needs of an emulation layer? (Hint: n p2p + one “all ONUs” is *not* sufficient!)**

Only

- **after answering the above questions can we decide on a physical tagging mechanism.**