

**Proposal to Extend the P1394b S800-S1600 100 m  
Glass Optical Fiber (GOF) Link Specifications,  
Based on 850nm Lasers & 50MMF,  
to Include S100, S200 & S400 Links**

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# Why do we need a low speed GOF PMD?

- User needs an equipment with low entry cost.
- User needs a future proof infrastructure.
- 1394B allows implementation of S100-S400 long PHY silicon.



**Less expensive S100-S400 GOF Transceiver  
&  
Scalable GOF cable compatible  
with S800-1600 PMD**

# Assessment for the Interoperability

- 1) Tone signaling has full interoperability
- 2) Data transfer with byte padding has full interoperability
- 3) Port properties of Section 11.2.3 should be amended as follows

[P1394B Draft 0.10 P.114 Section 11.2.3]

## **A P1394b port**

- a) shall be capable of operating  
at any speed range from S100 ~~upwards,~~  
~~or any speed range from S800 upwards~~  
to the maximum speed class of the port**

# S100-S400 GOF PMD Specification

**A set of PMDs should be specified to provide a less expensive optical transceiver covering the S100-S400 range**

- 850nm Laser Diode 100m GI50MMF link
- Same power budget and connector as that for S800-S1600
  - See the Section 7 "Optical specifications" of P1394b Draft 0.10.
- **Slower response times**
  - Looser rise / fall times should be specified for transceiver operating only in the S100-S400 range in order to achieve lower cost.
  - If the same transceiver is used for the full range, it will need to have the current S800-S1600 rise / fall times.

# Summary of Proposal

1394b specifications for S800-S1600 100 m fiber optic links, based on 850 nm Lasers & 50 um/125 um core/clad diameter (50MMF), are based on the recently completed Gigabit Ethernet (GbE) specifications. 1394b has a requirement for interoperation over the S100-S1600 range. It is straightforward to extend the current S800-S1600 100 m 50MMF link specifications to include S100, S200 & S400 links and thus provide a unified link interface.

## Motion

**Extend the current S800-S1600 100 m 50MMF link specifications to include S100, S200 & S400 links and make the corresponding additions to the next draft of 1394b.**

**By Tomoki Saito (NEC)      Second:**

For \_\_\_\_\_ Oppose \_\_\_\_\_ Abstain \_\_\_\_\_