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**Maintenance to 802.3u to include Single Mode
Fiber Links - A Fiber Optic Component Supplier's
View**



Agilent Technologies

Justifying maintenance

- **Confusion in the marketplace**
 - **Customers requesting “Single Mode Fast Ethernet Transceivers”**
- **Fast Ethernet still going strong with growth**
- **Incompatibility across fiber optic transceiver vendors**
 - **Fiber optic transceivers are hybrids between OC-3 IR-1 and FDDI single mode specifications**
- **Standard is required to promote Ethernet deployment outside of the Enterprise**

Defining the Standard

- **Define SMF specification for Fast Ethernet**
- **Objectives (100BaseLX?)**
 - **Standard Dual Fiber Operation**
 - **10km or greater links - 1310 nm**
 - **Specify optical parameters only**
 - **No new signaling (4B/5B compatible)**
 - **Accommodate wide temperature range**
 - **Limited development required by fiber optic component suppliers**
 - **Target released fiber optic modules**
 - **Maximize economies of scale for fiber optic transceivers**

Optical Specification

- **Easiest path is to simply reference the SONET OC-3 IR-1 standard**
 - **13 db power budget**
 - **>15 km link (link model)**
 - **Wide wavelength range and spectral width**
 - **Accommodates extended temperature (-40° C to +85° C)**
- **Typically will interoperate with current “ad hoc” standard products**
- **Option 2 - hybrid between FDDI and SONET OC3 IR-1**

Proposed optical specifications

Parameter	SONET OC3 IR-1
Output Power	-8dBm to -15dBm
Received Sensitivity	-28dBm
Extinction Ratio	8.2dB
Wavelength Range	1261nm-1360nm
Spectral Width	7.7 nm
Eye Mask	SONET Eyemask