

Higher Speed Study Group

IEEE 802.3 Working Group

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HSSG

- Look into an 802.3 Ethernet standard greater than 10Gbps
- Call for interested (CFI) presented at July 2006 San Diego IEEE 802 plenary
 - 50% votes required
 - Y: 53 N: 3 A: 3
 - Study group formed
 - 6 Month lifetime May request 6 month extension
- September 2006 first HSSG meeting
 - Knoxville, TN IEEE 802.3 interim meeting
- November 2006
 - Dallas, TX IEEE 802.3 plenary

Getting out of Study Group

- Define objectives (design Criteria)
- Evaluate Objectives and number of projects
 - For each project
 - Project Authorization Request (PAR)
 - 5 Criteria

High Speed Study Group (10GE)->802.3ae

- 10GE study group is a good example
- http://www.ieee802.org/3/10G_study/public/nov99/index.html
 - 10 Gb/s Ethernet Tutorial

The 5 Critters



Broad
Market
Potential



Compatibility



Distinct
Identity



Technical
Feasibility



Economic
Feasibility

Objectives

- Design constraints
 - 10Gb/s Examples:
 - **Preserve the 802.3/Ethernet frame format at the MAC Client service interface.**
 - **Support full-duplex operation only.**
 - **Define two families of PHYs**
 - A LAN PHY, operating at a data rate of 10.000 Gb/s
 - A WAN PHY, operating at a data rate compatible with the payload rate of OC-192c/SDH VC-4-64c

Design Discussion

debates

Speed

- Multilane
 - How many lanes?
 - How fast?
- Serial
- Scaleable speed
- 80Gbps
- 100Gbps
 - 10x tradition
 - 10x speed 3x the cost?
- 120Gbps
- Faster? SONET/SDH speed compatibility

Distance

- <10m
- 100m
- 300m
- 2km
- 10km
- 40km
- >40km
- media

Fiber Optics Discussion

- Multimode
- Single mode
- VCSEL
- DWDM or Serial
- Ribbon Cable
- Multi-fiber pairs

More information

- Visit the 802.3 HSSG website
 - <http://www.ieee802.org/3/hssg>
- Study Group Chair
 - John D'Ambrosia
 - IEEE 802.3 HSSG Chair
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