Two Physical Layers

For 10 Gigabit Ethernet

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Outline

- Observations
- Proposal
- Model
- Objectives
Observations

- HSSG has been arguing about the “speed” objective for months
  - LAN people want the PHY to be optimized for the LAN
  - WAN people want the PHY to be optimized for the WAN
- No apparent way to achieve consensus on a single PHY
- 802.3 has defined multiple PHYs at other speeds
  - 100BASE-T4, 100BASE-X, 100BASE-T2
  - 1000BASE-X, 1000BASE-T
Proposal

- Two PHYs at 10 Gigabit - Compromise, in order to optimize:
  - Data rate
  - Management
  - Framing
  - Coding
  - Clocking
  - Sublayer interfaces
Objectives

- Speed of 10,000 Gb/s at the MAC/PLS service interface
- Define two PHYs:
  - A LAN PHY, operating at a data rate of 10,000 Gb/s
  - A WAN PHY, operating at a data rate which is compatible with the payload rate of OC-192c/SDH VC-4-64c
- Define a mechanism to adapt the MAC/PLS data rate to the data rate of the WAN PHY