Objectives for Higher Speed 802.3

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HSSG
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Compatibility with 802.3

- **The next generation should fit into the family of 802.3 standards**

- **We should leverage as much a possible on the current standard**

- **The next generation should look and feel like 802.3**

- **Compatibility with previous generations should be paramount**

- **Therefore, some objectives familiar to 802.3z participants**

Proposed Objectives

1. Use 802.3/Ethernet frame format
2. Meet 802 FR, with the possible exception of Hamming Distance
3. Simple forwarding between between all speeds
4. Maintain compatibility with 802.3x flow control and 802.3ac VLAN Tag
5. Support min and max FrameSize of current 802.3 Std
6. Include a specification for an optional Media Independent Interface

Higher Speed

- **10x improvement has proven very good in the market**

- **Recognize the differences in the local, metropolitan and long haul environments**

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5. Support min and max FrameSize of current 802.3 Std
6. Include a specification for an optional Media Independent Interface
7. Support full-duplex operation only
8. Refine MAC in a speed independent way to support operation at:
   a. 10,000 Mb/s at the MAC/PLS service interface in the local area environment
   b. ~10,000 Mb/s at the MAC/PLS service interface in the metropolitan area environment

Where Should Ethernet Standards be Developed

- **802.3 has been very successful in its traditional environments**

- **We need to recognize and enable use in non-traditional environments including metropolitan and long haul**

- **If we don't do it, someone else will**

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9. In the local area environment:

   a. Support star-wired local area topologies

   b. Use media selected from ISO/IEC 11801

10. Provide a family of Physical Layer specifications which support a link distance of:

   a. At least 100m on multimode fiber

   b. At least 3 km on single mode fiber

11. Do not preclude use on distances of 1000km