FORCE10™

Ethernet-
The Next Generation

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Per IEEE-SA Standards Board Operations Manual, January 2005

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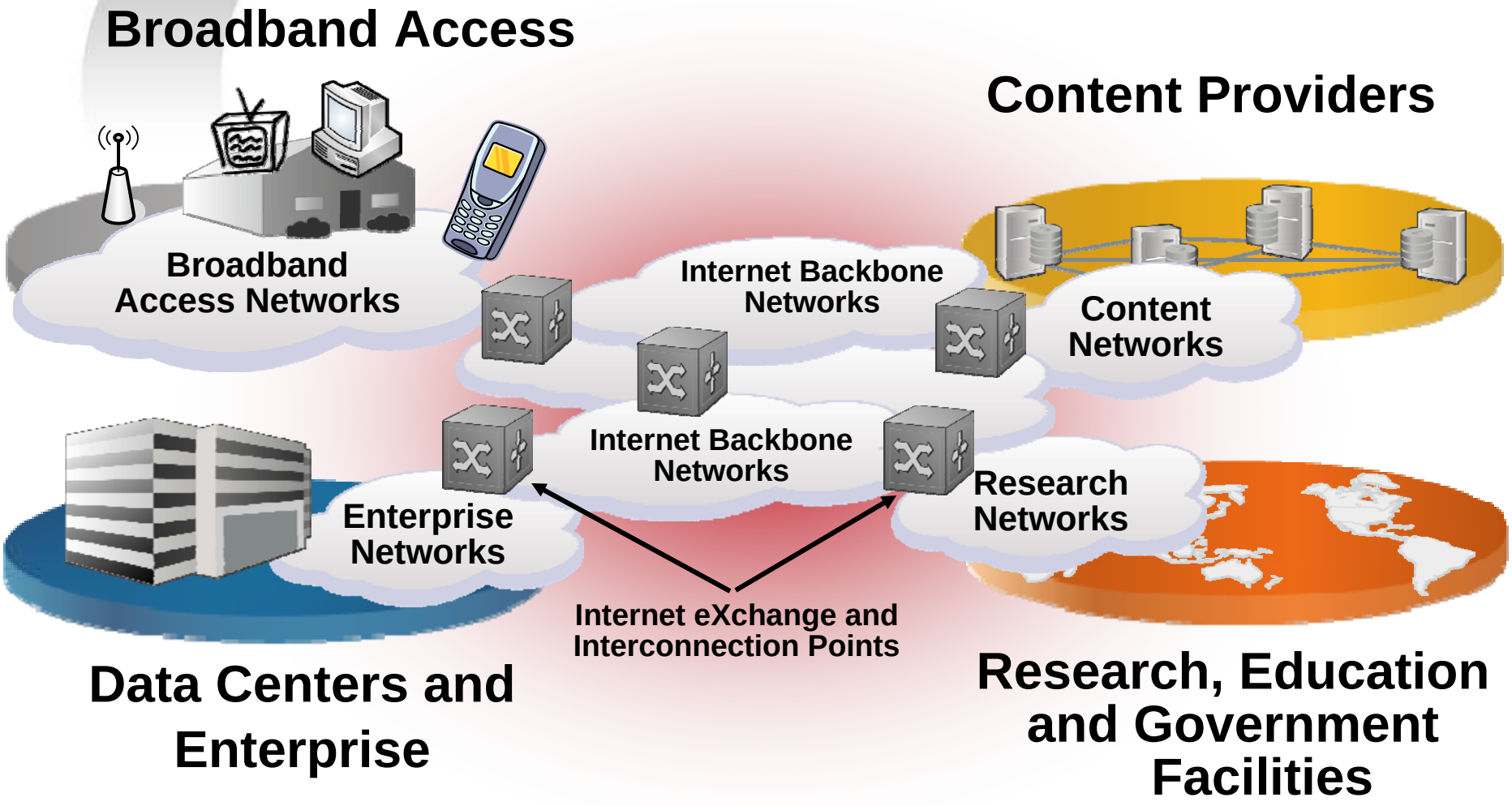
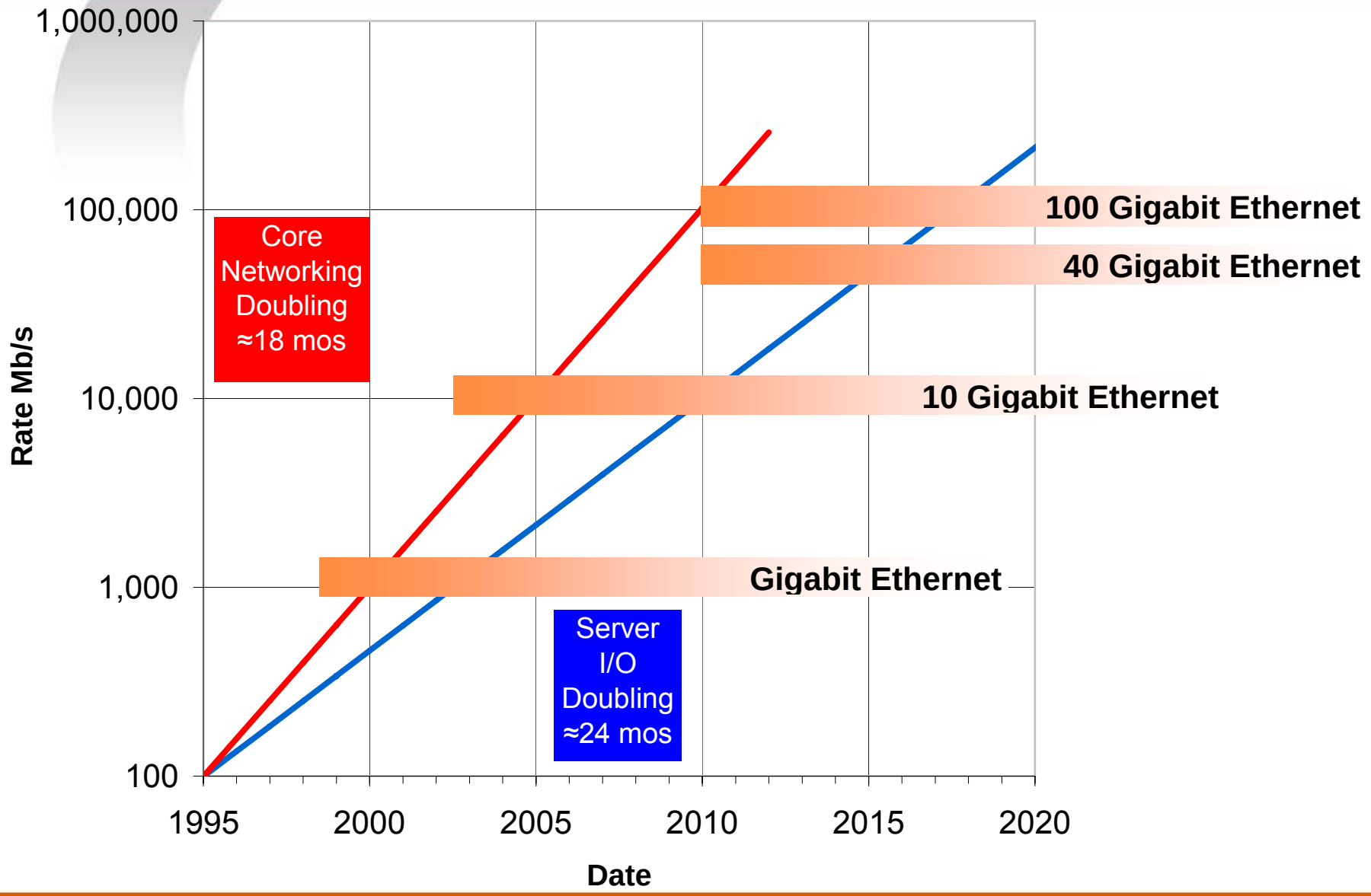
The Ethernet Ecosystem



The Need For Speed



HSSG Objectives

- Support full-duplex operation only
- Preserve the 802.3 / Ethernet frame format utilizing the 802.3 MAC
- Preserve minimum and maximum FrameSize of current 802.3 standard
- Support a BER better than or equal to 10^{-12} at the MAC/PLS service interface
- Provide appropriate support for OTN
- Support a MAC data rate of 40 Gb/s
- Provide Physical Layer specifications which support 40 Gb/s operation over:
  - at least 100m on OM3 MMF
  - at least 10m over a copper cable assembly
  - at least 1m over a backplane
- Support a MAC data rate of 100 Gb/s
- Provide Physical Layer specifications which support 100 Gb/s operation over:
  - at least 40km on SMF
  - at least 10km on SMF
  - at least 100m on OM3 MMF
  - at least 10m over a copper cable assembly

Adopted by HSSG and approved by 802.3 at July 2007 Plenary

Physical Layer Specifications

	40G	100G
At least 1m backplane	√	
At least 10m cu cable	√	√
At least 100m OM3 MMF	√	√
At least 10km SMF		√
At least 40km SMF		√

The Next Generation of Ethernet

- The Higher Speed Study Group will become the IEEE 802.3ba Task Force in Jan 2008
- This effort will produce 1 amendment to the IEEE 802.3 specification in mid 2010.
- 40 GbE and 100 GbE will be delivered together