Device	Traffic multiplier
Tablet	1.1
64-bit Laptop/PC	1.9
Internet enabled HDTV	2.9
Gaming console	3.0
Internet enabled 3D TV	3.2

-Growth of broadband speeds by region

Region	2010 (Mb/s)	2015 (Mb/s)	Growth factor
North America	7.5	27	3.7
Latin America	2.8	8	2.9
Western Europe	9.2	36	3.9
Central/Eastern Europe	6.1	20	3.3
Asia Pacific	5.5	25	4.6
Japan	15.5	64	4.1
Middle East & Africa	2.8	7	2.5

The Institute of Electrical and Electronic Engineers (IEEE) wants to define **a new Ethernet standard capable of between 400Gbps and 1Tbps per second**
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The current state of the art for high-speed connectivity is 40 Gigabit Ethernet (40GbE) 100 Gigabit Ethernet (100GbE), both of which were ratified by the IEEE in 2010. Just two years later, the IEEE is forced to re-evaluate the situation.

Earlier this year, the IEEE's own report **802.3 Ethernet Bandwidth Report** showed that at core router level, total traffic is doubling every 18 months. Wired access (cable, DSL) is growing by 25% every year; wireless (WiFi) access is growing 39%; and mobile data (GSM, LTE) is growing by 92% every 12 months.

By 2015, bandwidth requirements will be 10X greater than in 2010. By 2020, the bandwidth requirements will be 100X greater. By 2015, the IEEE predicts core infrastructure will need to support 1Tbps — and by 2020, 10Tbps.

IEEE has now set up the **802.3 Industry Connections Higher Speed Consensus Group**. 802.3 is the Ethernet standard's designation, like 802.11 for wi-fi. There will probably be two new standards: 400GbE and 1TbE (we'll have to learn the new designations for huge storage). Like 10, 40, and 100GbE, the new standard will likely support copper wires (over a few meters), and multi- and single-mode fiber.

Go IEEE's Ethernet Bandwidth Report as a PDF