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Trends Documented in New IEEE 802.3™ Ethernet Bandwidth Assessment Report—More Users, Faster Access Speeds, More Services—All Point Toward Ongoing Ethernet Bandwidth Explosion

IEEE 802.3 report documents rapidly expanding and diversifying Ethernet bandwidth and application needs around the world

PISCATAWAY, NJ, 30 March 2020 – IEEE, the world's largest technical professional organization dedicated to advancing technology for humanity, and [IEEE Standards Association \(IEEE SA\)](#) today announced availability of the IEEE 802.3™ Ethernet Bandwidth Assessment report. Culminating a year-long study of global usage, the [publicly available report](#) is based on contributions of data from individuals and organizations worldwide related to the network-bandwidth growth trends with profound implications for Ethernet wireline applications.

“Trends around traffic drivers such as video, 5G and IEEE 802.11™ ‘Wi-Fi®’ point toward an ongoing bandwidth explosion for Ethernet networks around the world going forward,” said John D’Ambrosia, chair of the IEEE 802.3™ Industry Connections New Ethernet Applications Ad Hoc. “The IEEE 802.3 Ethernet Bandwidth Assessment report details undeniable, simultaneous trends toward more users, faster access speeds, more services, more devices coming online, greater difference between average and peak bandwidth demands on networks, etc. Every single data point from the report’s tremendous volume and breath of information points to continuing growth in bandwidth for Ethernet networks.”

This is the second IEEE 802.3 Ethernet Bandwidth Assessment report. The first, published in 2012, heavily influenced recent years of innovation around [IEEE 802.3—IEEE Standard for Ethernet](#). The 2020 report—reflecting more input from more users, application spaces and geographic markets—also could inform possible future IEEE 802.3 standards activities.

Highlights from the data illuminate both the growth and diversity of demand on Ethernet networks. For example, China and India are shown to be the two countries with the greatest number of Internet users, and yet the percentage of the countries’ population who are Internet users is relatively low (58 percent in China and 41 percent in India). This leaves huge potential for bandwidth growth from China and India, as Ethernet connectivity and Internet access are rolled out to more areas of those two countries. Bandwidth growth in the United States, on the other hand, is shown in the report to be driven likely not as much by new Internet users (as they already make up 89 percent of the U.S. population) but by growth in documented rising numbers of devices per user and high-bandwidth applications.

“The exponential growth of bandwidth recorded in the new IEEE 802.3 Ethernet Bandwidth Assessment report is a clear signal from the market to the standards experts in the IEEE 802® community that we must continue to innovate to satisfy increasing demand,” said Paul Nikolich, chair, IEEE 802 LAN/MAN Standards Committee. “IEEE 802 participants have repeatedly proven their innovation skills by consistently delivering market-relevant and high-quality network standards over the past 40 years. This report emphasizes the need for the continued dedication of current and future participants. We welcome their engagement and contributions.”

Beginning in February 1980, IEEE 802 encompasses a diverse library of standards addressing a broad array of protocols and applications. The standards developed by thousands of IEEE 802 technical experts over the past 40 years have enabled the industry to connect the world. [Deployment of technology defined by IEEE 802 standards is global](#), driven by the ever-growing needs of data networks and new application areas. IEEE 802 standards impact the world from wireless, through twisted-pair cabling, to fiber-optic cabling solutions. The IEEE 802 LAN/MAN Standards Committee is sponsored by the IEEE Computer Society, which advances the theory, practice and application of computer and information-processing science and technology, as well as the professional standing of its members. Individuals and organizations are encouraged to [learn more about and participate in IEEE 802 initiatives](#).

To learn more about IEEE SA or about any of its many market-driven initiatives, visit us on [Facebook](#), follow us on [Twitter](#), connect with us on [LinkedIn](#) or on the [Beyond Standards Blog](#).

About IEEE Standards Association

IEEE Standards Association (IEEE SA) is a collaborative organization where innovators raise the world's standards for technology. IEEE SA provides a globally open, consensus-building environment and platform that empowers people to work together in the development of leading-edge, market-relevant technology standards and industry solutions shaping a better, safer and sustainable world. For more information, visit <https://standards.ieee.org>.

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