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IEEE 802.3™ 'STANDARD FOR ETHERNET' MARKS 30 YEARS OF INNOVATION AND GLOBAL MARKET GROWTH

Thousands of individuals worldwide have contributed to IEEE 802.3 Ethernet's success through its market-driven and open development process

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PISCATAWAY, N.J., USA, 24 June 2013 - IEEE, the world's largest professional organization advancing technology for humanity, today recognized the 30th anniversary of IEEE 802.3™ "Standard for Ethernet." IEEE 802.3, the foundation for today's world of high-speed communications, was first approved as an IEEE standard on 23 June 1983 and since then has been regularly updated to address evolving market demand by delivering increased capacities and features.

"On May 22nd, we celebrated the 40th anniversary of the invention of Ethernet at Xerox PARC. Now, on June 23rd, we celebrate the 30th anniversary of Ethernet's standardization by IEEE 802®. Of course, Ethernet has been standardized many times since 1983, with IEEE 802.3 incorporating rapid Ethernet innovation while maintaining a high degree of backward compatibility. From 2.94 Mb/s to 100 Gb/s, from thick coax to thin, to twisted pairs, to fibers, to 'Wi-Fi®,' from CSMA/CD buses to switching hubs, to access points," said Bob Metcalfe, Ethernet inventor and now Professor of Innovation at The University of Texas at Austin. "By 1983, there were people buying Ethernet whom I did not know personally. By 1985, there were people whom I did not know inventing Ethernet. And they continue doing so today with great success using the open standardization processes of IEEE. Congratulations, and thank you."

With more than 1.2 billion ports deployed in 2012 alone¹, Ethernet is a technology that impacts day-to-day life globally. Initially developed in order to standardize connectivity among computers, printers, servers and other devices inside a local area network (LAN), IEEE 802.3 Ethernet touches a tremendous range of established and emerging technologies, including data-center networks, personal computers, laptops, tablets, smartphones, subscribe access, cellular backhaul, power infrastructure and smart meters, personal medical devices, the Internet of Things and connected cars.

Part of the IEEE 802 suite of end-to-end networking standards, IEEE 802.3's success—from its inception through today—has been its open and transparent development process, which is noted for its rigor and rooted in consensus, due process, openness, right of appeal and balance. The standard's ongoing development process is open to anyone, and all stakeholders directly participate in its ongoing refinement.

"Thousands of individuals throughout the Ethernet ecosystem have participated in the development of IEEE 802.3 Ethernet standard over the last 30 years," said David Law, chair of the IEEE 802.3 Ethernet Working Group and distinguished engineer with HP Networking. "The spectrum of stakeholders in the standard's success is global and diverse, from individuals employed by manufacturers, to individuals employed by users, to individuals in academia, to name just a very few examples. The efforts of all of them have contributed to the standard's amazing success."

Added Paul Nikolich, chair of the IEEE 802 LAN/MAN Standards Committee and IEEE fellow: "The fact that almost all information flowing in the Internet is possible because it is transported over a flexible IEEE 802.3 Ethernet-compliant infrastructure is a tribute everyone who has in some way contributed to the standard's development, refinement and expansion. Throughout its history, the IEEE 802.3 Ethernet Working Group has reacted well to emerging global market needs. I applaud the effort of the thousands of individuals who have contributed through the working group and to the development process itself."

Innovation of IEEE 802.3 Ethernet is incessant. Frontiers of development for the standard address market needs such as reducing the number of wire pairs required to deliver Gigabit Ethernet for in-vehicle networking and infotainment, energy efficiency and power over Ethernet. Ethernet underpins the Internet, Wi-Fi, Big Data, cloud computing, the smart grid, computer gaming, eHealth, industrial automation and numerous other high-tech applications. Also, IEEE in April 2013 announced the launch of an IEEE 802.3 study group to explore development of a 400 Gb/s Ethernet standard to efficiently support exponential network bandwidth growth.

"IEEE 802.3 standardization has always been market-driven and rooted in openness and due process, and its success in contributing to technology innovation and global market growth is indisputable," said Konstantinos Karachalios, managing director of the IEEE Standards Association (IEEE-SA). "We join the global Ethernet ecosystem in celebrating IEEE 802.3's 30th anniversary, and we look forward to the transformations in the way that humanity lives, works and plays that the standard's ongoing innovation enables in the decades to come."

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IEEE

30

YEARS OF ETHERNET STANDARDS

2013 is the 30th Anniversary of IEEE 802.3 Ethernet Standards.

Did you know how much Ethernet impacts our lives every day no matter where we are in the world?

With more than 12 billion ports deployed in 2012 alone, Ethernet is a technology that impacts day-to-day life globally. The IEEE 802.3 Ethernet standard is the foundation for today's world of high-speed communications. Ethernet touches a tremendous range of established and emerging technologies, including data-center networks, personal computers, laptops, tablets, smartphones, subscribe access, cellular backhaul, power infrastructure and smart meters, personal medical devices, the Internet of Things and connected cars.

For more information on the IEEE 802.3 Ethernet standards that help transform the way we communicate in our personal lives, at work and at play, visit: standards.ieee.org/events/ethernet

IEEE 802.3™ ETHERNET STANDARDS MILESTONES

- 28 December 2012 | 2012 Revision of Ethernet Std
- 30 September 2010 | Energy-efficient Ethernet
- 17 June 2010 | 40Gb/s and 100Gb/s Ethernet
- 22 March 2007 | Backplane Ethernet
- 6 April 2005 | Ethernet in First Mile
- 12 June 2003 | Power over Ethernet
- 13 June 2002 | 10Gb/s Ethernet
- 30 March 2000 | Link Aggregation
- 25 June 1998 | 1000Mb/s Ethernet
- 20 March 1997 | Full Duplex Ethernet
- 14 June 1995 | 100Mb/s Ethernet
- 28 September 1990 | 10BASE-T
- 10 December 1987 | 10Mb/s Fiber (FOIRL)
- 12 December 1985 | 10Mb/s Repeater
- 23 June 1983 | 10Mb/s Ethernet
- 23 June 1983 | IEEE 802.3 first approved as an IEEE standard
- 22 May 1973 | Ethernet Invented

Social

Transactions

Work

Information Access

Ethernet-Enabled Communications

LIVE	WORK	PLAY
Medical Imaging	Enterprise	Gaming
Automotive	Email	Television
Retail	Cloud	Social Media
Routers	Server	High Def Media

For more information, please visit the [IEEE 802.3 Ethernet Working Group Web page](http://standards.ieee.org/events/ethernet).

To learn more about Ethernet, please visit the [IEEE 40th Anniversary of Ethernet Web page](http://standards.ieee.org/news/2013/802.3_30anniv.html) or join the conversation at the [IEEE 40th Anniversary of Ethernet Facebook page](#).

To learn more about IEEE-SA, visit us on [Facebook](#), follow us on [Twitter](#), connect with us on [LinkedIn](#) or on the [Standards Insight Blog](#).

About the IEEE Standards Association

The IEEE Standards Association, a globally recognized standards-setting body within IEEE, develops consensus standards through an open process that engages industry and brings together a broad stakeholder community. IEEE standards set specifications and best practices based on current scientific and technological knowledge. The IEEE-SA has a portfolio of over 900 active standards and more than 500 standards under development. For more information visit the [IEEE-SA Web site](#).

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IEEE, a large, global technical professional organization, is dedicated to advancing technology for the benefit of humanity. Through its highly cited publications, conferences, technology standards, and professional and educational activities, IEEE is the trusted voice on a wide variety of areas ranging from aerospace systems, computers and telecommunications to biomedical engineering, electric power and consumer electronics. Learn more at the [IEEE Web site](#).

¹ [CE-ing Carrier Ethernet's Future: The Next Evolution in Connectivity](#), OSP Magazine, by Eric Geelen and Tom Rarick

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