Celebrating innovation - and how it can propel Ethernet

Innovation is vital. Promotes progress and makes the world a better place to live. Even rely on innovation to solve the problems created by the innovation itself.

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To the extent that the axis of the global economy shifts eastward becomes increasingly vital for the West to ensure that innovation culture remains relevant - while eastern manufacturing giants also must innovate to raise their status beyond the level of factory workers.

Thus, when the network community gathers to celebrate the 40th anniversary of the invention of Ethernet, chooses to focus more on the culture of innovation in past glories.

Celebrating Ethernet

The emergence of Ethernet - and thus of modern networks - goes back to Xerox PARC and the day May 22, 1973, when Bob Metcalfe drew a diagram and sent a memo outlining the concept for the first time Ethernet. As Bob explains: "David Boggs and I were the main inventors of Ethernet, but we had a lot of help." They were also mentioned in the patent Butler Lampson and Chuck Thacker, for their considerable contribution. Tat Lam, a contractor at Xerox PARC, helped develop the transceiver. Then there was David Liddle and the list goes on, tells Metcalfe.

Silicon Valley in the 1970s, and innovation in the air. Despite its relevance, call the Golden Age of Innovation lose sight of the essential. Indeed, the global expansion of Ethernet has created an even more fertile culture of innovation, since Bob assures us: "We did not have Google, we had no Internet. The innovators of today can be found in the blink of an eye, almost all previous work, and the people who work in your field. They can begin to collaborate remotely. So now we have what I call collective intelligence that has been created through the Internet connectivity and is actually accelerating innovation. "

So Ethernet, an innovation of 40 years ago, is paving the way for an even greater future. How can we make this happen? What is the best way to make the most of this opportunity?

PARC - now a wholly owned subsidiary of, but separate, Xerox - The Computer History Museum and the MEF are working together for the 40th anniversary of Ethernet with three consecutive events to be held at the Computer History Museum in Mountain View, California.

The 40th anniversary of Ethernet will be held on May 22 at the Computer History Museum, Mountain View, California. USA.

The May 22 begins with a conference organized by PARC to explore the history of the innovation process and culture that created Ethernet. Then realizaráena gala - which includes a tour of the museum, with a face to face meeting with the famous inventor of Silicon Valley, a charity auction, awards, dinner and opportunities to dialogue with influential characters industry. The museum includes a presentation ranging from the emergence of a 2.94 Mbps Ethernet network installed in a thick coaxial cable to high speed Ethernet today, based on fiber, copper or wireless transmission.

Then on day 23, there will be a summit NetEvents style, with discussions, debates and intense sessions where industry leaders Ethernet - now a market of USD 100 billion annually - will discuss with the press and industry analysts IT over 35 countries worldwide.

Thanks to Carrier Ethernet and MEF pioneering work, the sessions will be transmitted via the Internet to the entire world as an educational opportunity

for young innovators of tomorrow - while providing huge additional coverage for events.

How did it all

according to Bob Metcalfe: "The first Ethernet consisted of a single node, which in itself is not very interesting. It was a transmitting node to itself for testing and debugging. Then we had two nodes - which incidentally called Michelson and Morley, in honor of the two physicists who disproved the existence of ether. We thought it was ironic - and then, finally, the cable was installed throughout the building. "

What was the real innovation, as it was conceived at the time? "In those days our great innovation was to put a computer on every desk - I know it's hard to believe! After installing a computer on every desk, they were connected, one by one, to the coaxial cable running down the middle of the hallway. It grew to spread throughout the building. "

The benefits were immediate, so that other departments wanted to join the network. "Labs wanted to connect, so that by an Internet protocol, we create an Internet that covered all Xerox research labs. It was not until the late seventies we began Ethernet Xerox began spreading from everywhere. "

Bob went on to found 3Com, maker of the first commercial Ethernet cards.After 20 years had led to competition Ethernet networks based on tokens and came to dominate the LAN space, spanning all continents, filling the world with Ethernet connectivity with islands.

But it was not until the last ten years, thanks to the work of the MEF Carrier Ethernet that was developed to enable these data islands be connected via Ethernet, rather than more complex technologies and expensive WAN, such as Frame Relay and ATM.

Appropriately for this celebration, last year marked a turning point for the first time, sales of Carrier Ethernet surpassed all other WAN technologies combined. In other words, Ethernet has almost taken over the world.

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Keep the flame

is easy to feel nostalgia for those pioneering days in a world still dominated by the telephone and typewriter. Bob reflects, "Even then, in the '70s, Silicon Valley had a tradition of innovation dating back decades ago. Within this tradition, it was expected of you that innovarías, and innovation is encouraged. In the '70s, we had everything in our favor here in Silicon Valley ".

That makes it even more vital to identify the key elements of that tradition in order to encourage them today and keep alive the flame of innovation. Bob explains: "It starts with people - people attracted by the free enterprise system, a system with a great respect for science, education, engineering, entrepreneurship and business." And even the pragmatic Bob stops to add ironically: "And by the way, the weather. Did I mention the weather? "

An heir to the great tradition is Steve Hoover, CEO, PARC today. Notes the importance of having an open mind and curious to balance intense commercial pressure for results: "One of the most important things on the road to innovation are also failures. You can then start something and not believe it is possible to fail .... and of course, it is not to fail, failure is not good, but it's about learning ".

Steve compares this innovative culture to a class of children five years: "Always asking why? Why? Why?! That leads to very good innovation because people are coming to the fundamental ideas, which are challenging the status quo, they are ready to change things and break the mold. If your path failures, get up, dust yourself off and takes the next step. "

The important contribution of governments and academics

A key element of the celebrations of the 40th anniversary will be the discussion of the need to promote and maintain the dynamic spirit of innovation in today's

competitive global environment. This goes beyond purely business concerns, innovation is vital to national pride and prosperity - even survival. It is, therefore, a concern which also concerns of governments.

Steve Hoover said that businessmen sometimes forget the contribution of previous governments: "If you look back at the history of the Internet, we find Arpanet, a project initiated by the government. Do not believe the tremendous commercial impact would have occurred without the foresight to invest in these basic skills. "

Steve Hoover: CEO, promotes the spirit of innovation at PARC receptive and open.

"Today at PARC are working to repeat this pattern over and over and over again." Steve manifested great interest in the government's support for this work, pointing out the need to recognize that: "The government identified key areas of research, in which are willing to invest. This partnership - government investment in basic skills in new areas, assuming some higher risk, and the ability of the industry to capitalize and build on the progress - involves a very important partnership. "

In the days of 22 and 23, will also welcome another key partnership - collaboration between business and academia. Among the many roles of Bob Metcalfe is also currently Director of Innovation at the University of Austin, Texas. This gives a unique insight into what really motivates innovators today: "We seek freedom and prosperity, and innovation is the engine that drives this virtuous circle."

Bob Metcalfe, who besides being the co-inventor of Ethernet and Director of the MEF (Metro Ethernet Forum) is Director of Innovation at the University of Texas, says from this perspective the motivations of current innovative. It states: "We

seek freedom and prosperity, and innovation is the engine that drives the virtuous circle between freedom and prosperity. There are, of course, many forms of innovation. The interests us in particular is emanating from Xerox PARC, where professors perform scientific research, it becomes a product, is produced as a product students, and these students become the vehicle, in the embodiment of innovation , to bring it to market. "

This channeling of knowledge to the market has two branches, according to Metcalfe. One is to apply them to existing enterprises and the second, his favorite is the creation of new innovative companies.

Welcome to the future

Carrier Ethernet technology is used to transmit these events sessions everyone. It just shows what Ethernet has already been achieved but, more importantly, seeding new ideas and inspiration for the next generation of innovators and entrepreneurs worldwide.

As Bob explained, networking and the Internet has given this generation seek a "collective intelligence", and many more items you can use, to be able to access everything that has already been achieved: the successes and failures of the past and the present.

Who knows then how will the 50th anniversary of Ethernet in ten years. What awaits the next generation of innovators and entrepreneurs?

Bob Metcalfe: co-inventor of Ethernet: "We want freedom and prosperity, and innovation is the engine that drives this virtuous circle."

For details of the events of 22 and 23 May visit
http://www.netevents.org.uk/portfolio/global-summit

Event Webcast
http://www.netevents.org.uk/global-netevents-summit-live

IT Journal will attend the celebration of the 40th anniversary of Ethernet and the press and analysts summit organized by NetEvents. Also, our CEO sit on the jury of Innovation Awards 2013 . We will be reporting directly from Mountain View, California, next week.