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## Ethernet: the start, the evolution

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Ethernet is not done yet.

This is according to Bob Metcalfe, co-founder of Ethernet, who gave the opening keynote at the Ethernet **Innovation** Summit in Mountain View, California yesterday.

He described the future of Ethernet using five prepositions: up, over, into, across, and down. Ethernet as a LAN continues up as **data** transfer speeds improve, and is now moving over the airwaves via WiFi. It has travelled across the telechasm between LAN and WAN and is increasingly leaving LAN and moving into WAN. Finally, it is has **evolved** down as it is embedded into network technology, he said.

The Internet, with Ethernet as its plumbing, has disrupted many sectors, said Metcalfe, noting that continued innovation and new kinds of traffic will foster further disruptions – particularly in the energy, transport and education industries.

Outlining the formative years, Metcalfe detailed the Ethernet creation process, demonstrating how far the world has come thanks to this networking technology. "Back then our resources were limited. There was no PowerPoint when Ethernet was created," he said, noting the irony of the fact that he had to scan in drawings he sketched by hand, before adding them to the Powerpoint slides he used as part of his presentation.

Metcalfe stressed that Ethernet was the result of collaboration between multiple parties. "Success has multiple parents but failure is an orphan," joked Bill Hawe in response to this, describing Ethernet as being "particularly promiscuous".

According to Metcalfe, Ethernet saw a movement to distributed computing, going away from a "box-centric" view of the world to a "network-centric" one.

In the beginning, Metcalfe noted that he and co-founder Dave Boggs were not very good at outlining what applications would encompass this networking technology, but they adopted an "if we build, it they will come" mentality – an approach that continues to be a good one 40 years on. This all came about because people wanted to send data to a printer, but it very quickly developed into so much more than that, noted futurist Paul Saffo.

When referring to his now famous "Ether" diagram, which he drew 40 years ago to the day, Metcalfe pointed out that the sketch includes a reference to radio ether, joking that not only is he one of the inventors of Ethernet but he technically can be hailed as an inventor of WiFi too.