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Ethernet's 40th birthday sparks reunion at PARC

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MENLO PARK, Calif. – Bob Metcalfe was holding court with a small group of tech journalists over lunch in the Xerox PARC cafeteria when he spotted a former colleague across the room, an artificial intelligence researcher who was in the next office when Metcalfe wrote the memo that marked the birth of Ethernet 40 years ago.

“See that man sitting in the corner--that’s [Danny Bobrow](#), an AI guru and he looks exactly the same as I recall him,” said Metcalfe, who hadn’t been back to PARC since 1975. “My office with the Selectric typewriter on which I wrote the Ethernet memo in 1972 was right next to his office,” Metcalfe said, waving Bobrow over to the table.

The two men embraced briefly, then talked animatedly for a few minutes. “You’re looking very fit. Still playing tennis?” asked Bobrow.

“Bob was very competitive--a very strong tennis and squash player--so it was fun when I could take a squash match from him, and get a ‘Wait till next time, Bobrow!’ Metcalfe recalled later in an email to an *EE Times* reporter.



Metcalfe talks with Dan Bobrow (left) while a journalist listens.

“He hasn’t changed very much since I first knew him 40+ years ago,” said Bobrow, in an email exchange after the brief reunion. “He was a graduate student, and his shock of now beautiful white hair was dark, but he was feisty and sure of himself even then.

“I loved the way he would argue right back with Butler, Chuck and whoever, and he was right as at least as often as he was wrong,” he said. “I don’t remember his use of my typewriter, but my office was always open, so it could certainly have happened,” he added.

“Danny was at BBN where they were developing the Internet a couple decades before AI Gore invented it,” quipped Metcalfe to reporters after Bobrow departed.

Two lessons from Ethernet

Metcalfe had come back to PARC to pitch **an event** celebrating the 40th anniversary of Ethernet and innovation in general. The event will include an innovation contest and a fundraiser for STEM education.

The power of open standards was one of the big lessons Metcalfe took away from the fights to define and establish Ethernet. At the time his archrival was IBM and its Systems Network Architecture, a stew of generally IBM proprietary technologies.

Metcalfe notes that Ethernet was invented at a time when IBM and AT&T were still giants that dominated the computer and communications landscape. "I think Ethernet took IBM by surprised and they never really got it, and I think it was what eventually brought IBM down" from industry dominance, Metcalfe said.

"In the mid '80's IBM lost its power to make inexorable standards by simply announcing them, but it recovered and it's now one of my favorite startups," he quipped.

The other big lesson for Metcalfe is 'build it and they will come.'

"Our original goal with Ethernet was to send a seven-bit ASCII character across and back in seven seconds," Metcalfe said. "Internet traffic now consists of 86 percent video, but when we were developing the Arpanet we were not anticipating YouTube."

Expect the unexpected, and plow through critics who say we don't need more bandwidth, said Metcalfe. He saw Ethernet rise from a few measly kilobits a second to 100 Gbits/s today.

"From the bandwidth viewpoint every single time there's a chorus saying we have enough bandwidth and every single time so far there has been elasticity of demand," he said.