# The History and Future of Ethernet

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Ethernet 50th Anniversary

- Ethernet technology has become the backbone of modern communication and connectivity, connecting billions of devices to each other and the Internet. **May 23rd 2023** was the **50th anniversary day** of Ethernet's founding.
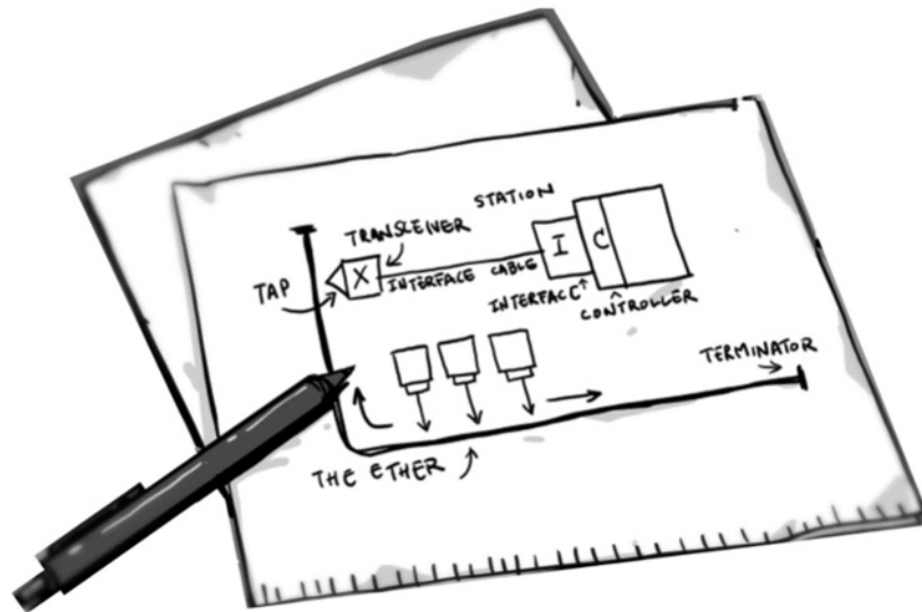
Ethernet's Rise...

In **1978** Xerox implemented 10Mbps Ethernet on coaxial cable, a development known as **X-Wire**. Here, the world's first Ethernet cable sits unassumingly in a room full of printers and copiers at Xerox's PARC subsidiary in Palo Alto.
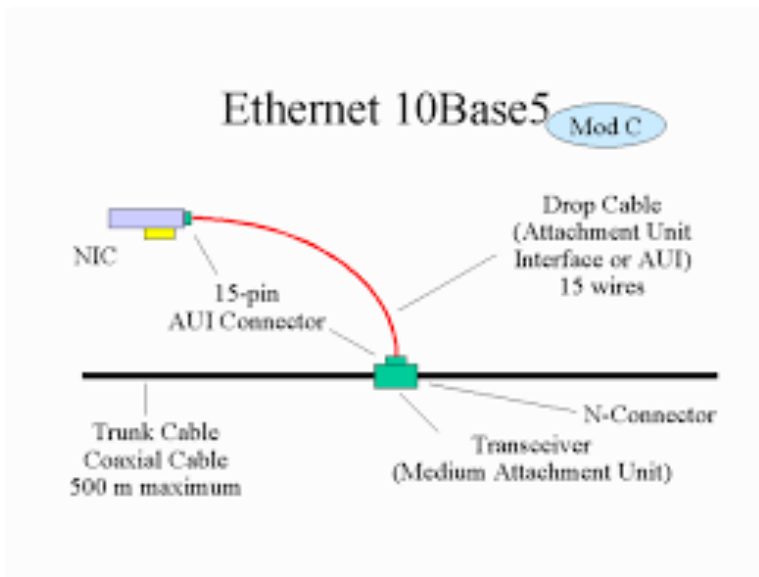

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The Early One(s) In The Industry

- Ethernet inventor Bob Metcalfe founded 3Com in 1979 to commercialize Ethernet products, which helped establish the technology as a dominant standard.
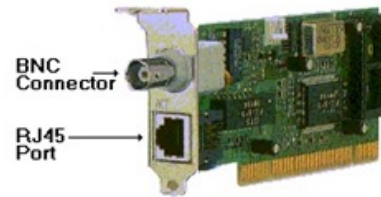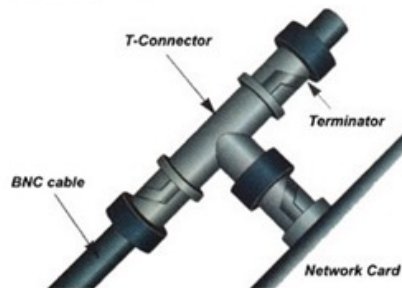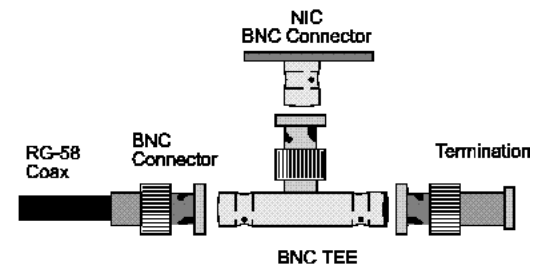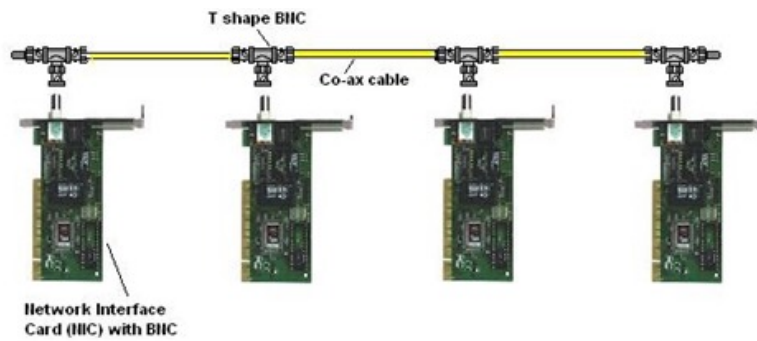

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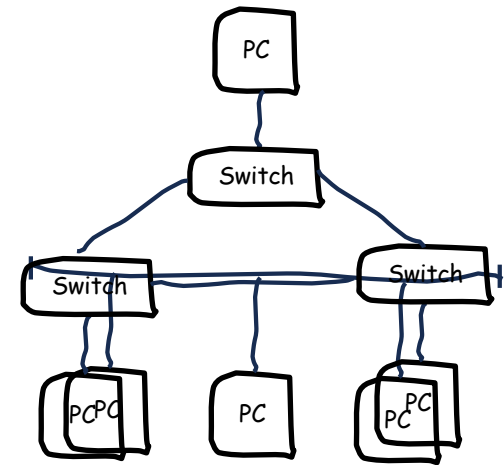# Where it all started... 10BASE5

AUI Cable

Then came 10BASE2...

And finally....Cat5

- Ethernet standards of 10BASE5 and 10BASE2 become obsolete, and the next phase of the Ethernet evolution was a significant leap forward, as it defined the use of twisted pair cable.
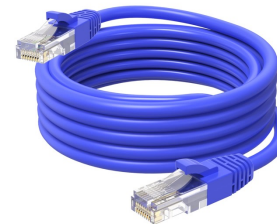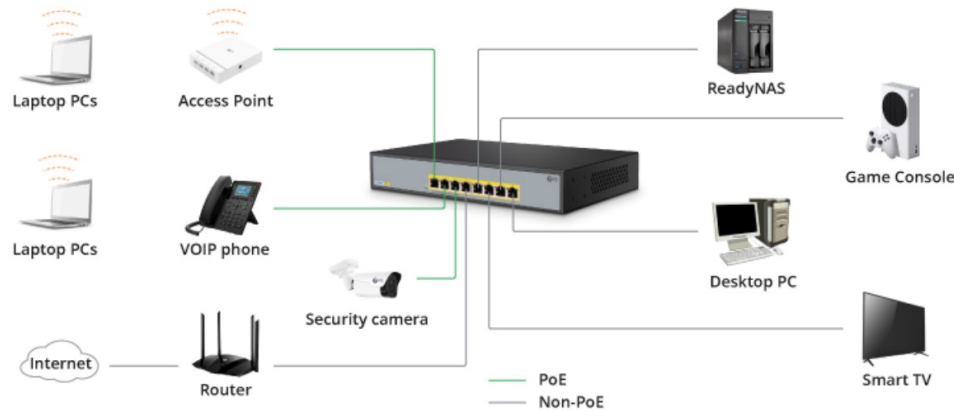
Ethernet switching - WiFi and PoE

Ethernet Highlights in Retrospect

- In 1980, several individuals contributed to the transition from the 2.94 Mbit/s to the upgraded 10 Mbit/s protocol, which became available in the market that same year.

- Ethernet was commercially introduced in 1980 and first standardized in 1983 as IEEE 802.3

- In early 1990s, Fast Ethernet (100Mbps) products began to appear. The IEEE 802.3u standard for 100BASE-T was ratified in 1995.

- In 1994, the IEEE finalized the 10BASE-F standard for Ethernet over fiber

- In 1996, Gigabit Ethernet followed Fast Ethernet as the new standard

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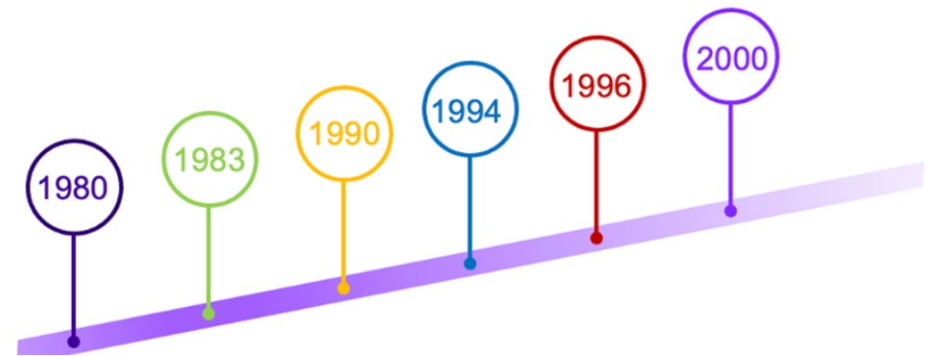
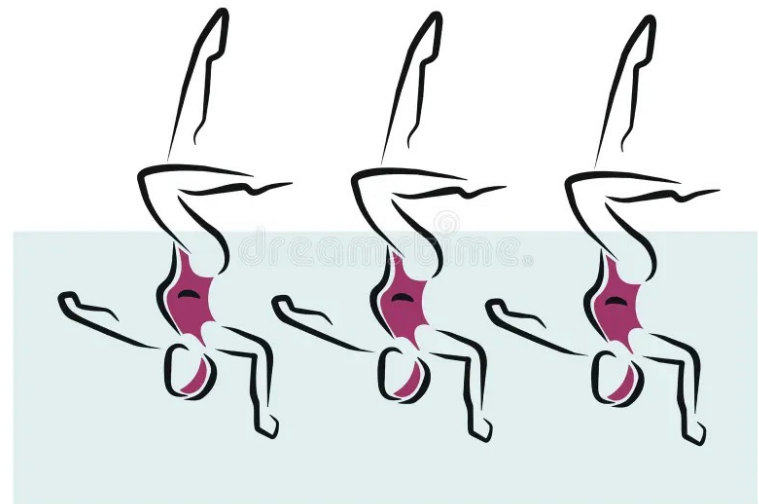# Ethernet Year 2000 and beyond...
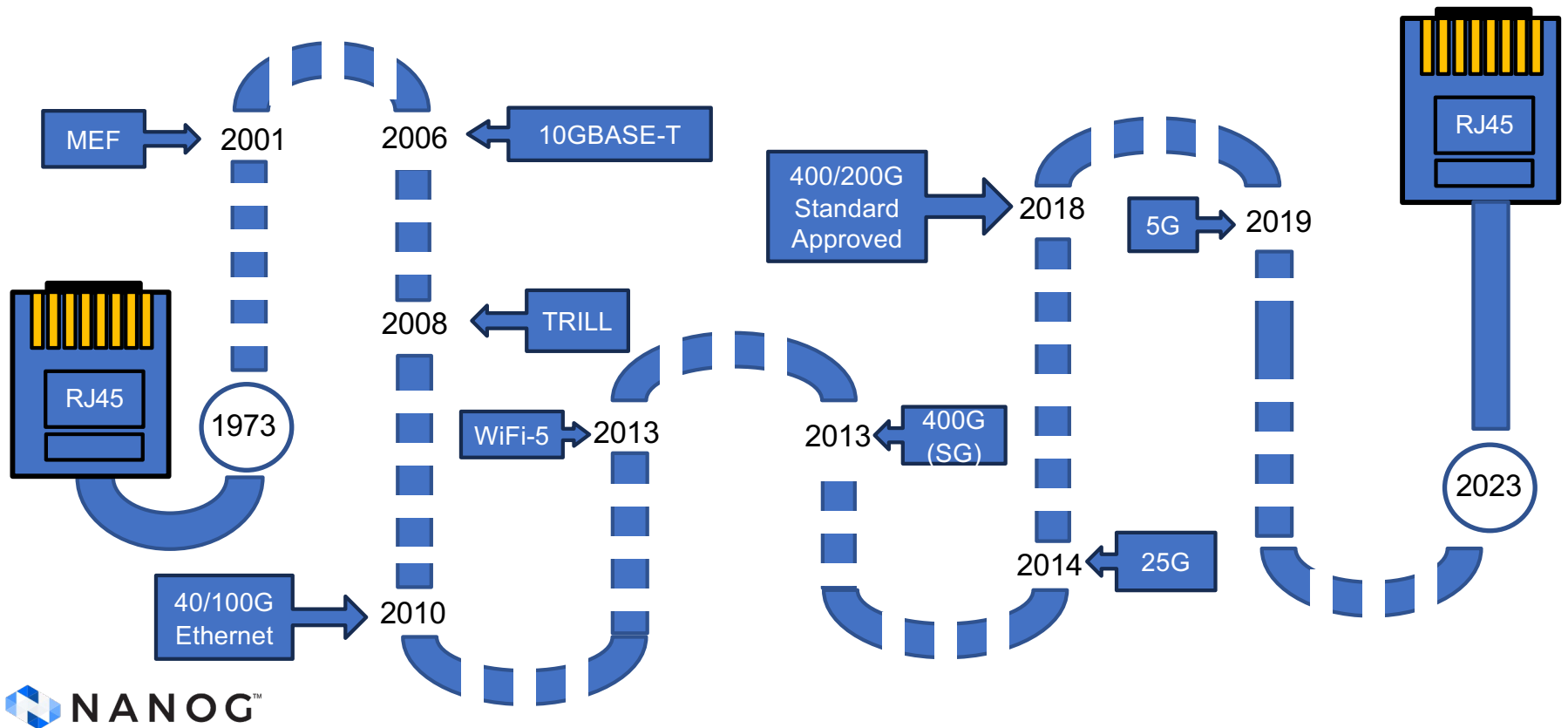
Data Center Fabrics and CNF
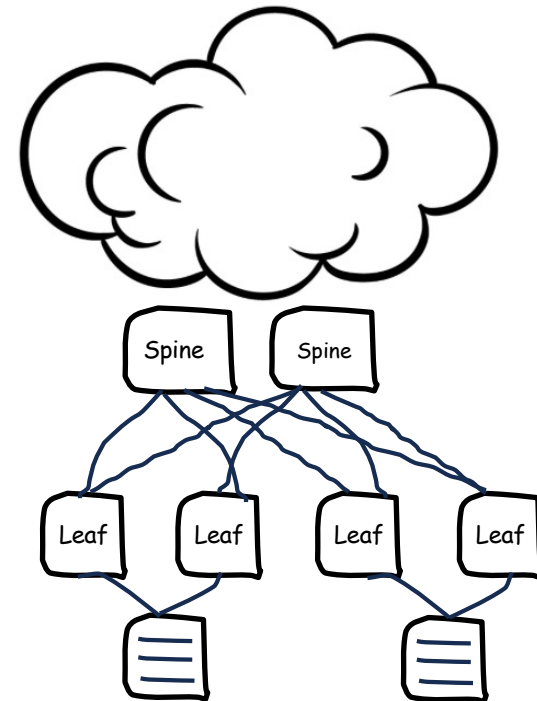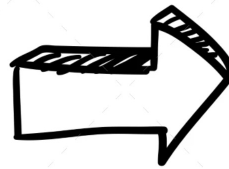
Are we in Sync?

TSN and IEEE 1588v2

Ethernet has evolved to incorporate various applications and technologies. One notable example is Time Sensitive Networking (TSN), which enhances Ethernet to become a deterministic networking technology.

Ethernet – What's Next...

Ethernet, as a ubiquitous network technology, powers infrastructure all across the cosmos, including the new era of cloud-native 5G data
centers that provide the infrastructure for 5G applications. Undoubtedly, 5G won't be the sole network technology capable of fulfilling all requirements. Therefore, wired and wireless networks will complement each other, with the wired networks requiring higher speeds to transport the wide array of new applications and services. We can expect to see Ethernet, this 50-year-old technology, reinvent itself once more

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Thank you

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