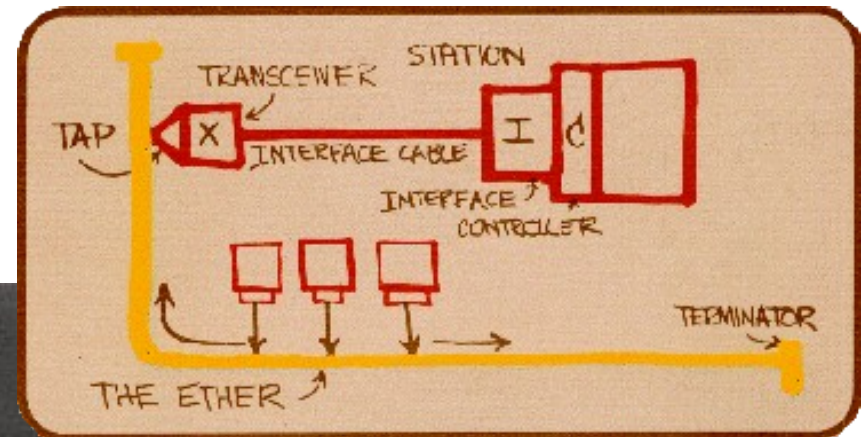
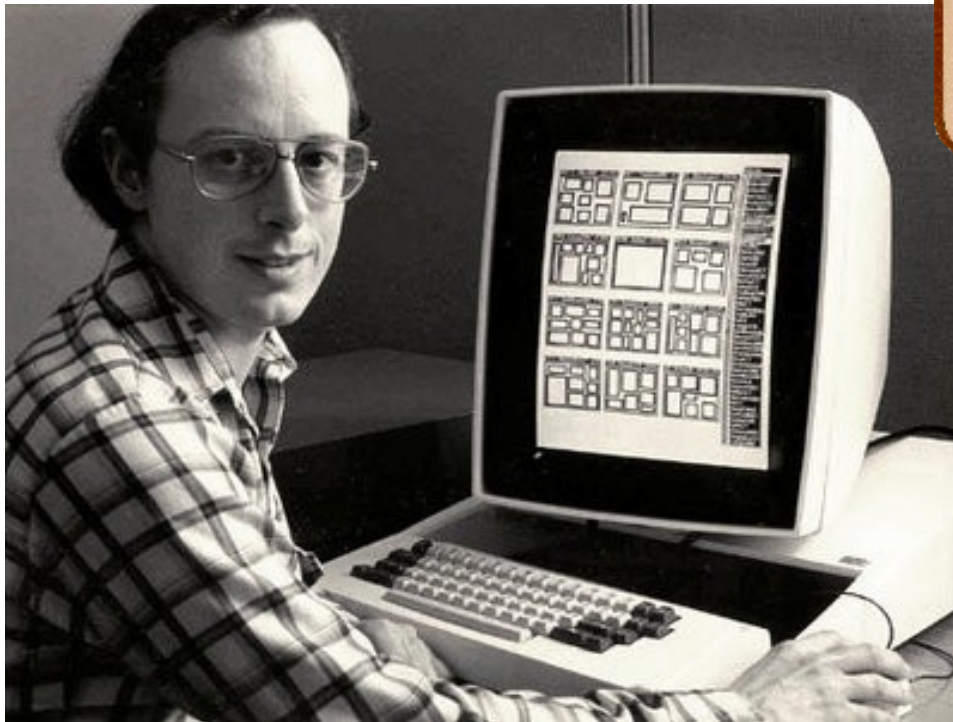


Ethernet
in its many shapes and forms
LAN, MAN, WAN
(Alan's assigned title)

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It started here.



What “was” Ethernet

- High speed (3 MB, 10, 100, 1G, 10G, 40G, 100G)
(Fast enough that xfer speed was constrained by other elements in the system)
- Enterprise/Building – Campus oriented
- Bus oriented
- Different point on rate/reach than telephony
- Packet switched
- Variable packet size
- Global addressing
- Layer 1/ Layer 2 only
- Higher Layer protocol agnostic

What happened to Ethernet/802.3

- Speeds went up
(To stay fast enough that xfer speed was not constrained by other elements in the system)
- Moved from shared channel MA to switched FD
- Moved beyond Enterprise/Building environment
- Moved from Bus to Hub & Spoke
- All about point-to-point links
- Various technologies for various reach markets
- Embraced virtualization
- Outlasted/overcame (wired) competitors

What stayed the same

- Packet format
- Packet size (minor adjustments to max size)
- Addressing
- Layer 1/ Layer 2 only
- Higher Layer protocol agnostic

Where Ethernet/802.3 is now

- Mission accomplished enterprise & campus env.
- WAN has gone from TDM to packet
- Backhaul/Backbone is major growth area (Especially to service WiFi & wireless)
- Data center is the other
- On the brink of new successes

Where Ethernet/802.3 can go

- (Not everything is Ethernet, e.g. pt-to-pt IP)
- Residential access
 - VoIP (vs. POTS)
 - IPTV (vs. cable/satellite)
- Sync opens new areas
 - A/V pro & consumer electronics
 - Industrial
- Timed Token: Avionics
- Low latency: Storage arrays
- Spectrum conservation