The History of BASE-T Ethernet

10BASE-T
One of the first Ethernet PHY types. Created to address flaws in StarLAN and LattisNet, such as leveraging existing cabling found in offices (UTP) and point to point connections

1990

1995

100BASE-TX
The 2nd BASE-T PHY, which increased network speeds by 10x over 10BASE-T and utilized the FDDI PCS sublayer. The Auto-Negotiation function was introduced shortly after, creating a mechanism for backwards compatibility

1000BASE-T
This introduced a full-duplex operation to the BASE-T world on all 4 pairs in the Category cable with both ends of the network transmitting at the same time. The necessary echo cancellation required groundbreaking, unprecedented DSP in the PHY

1999

2006

10GBASE-T
The next logical step in the typical 10x IEEE PHY scaling - because the 10G PHY architecture required significantly more power than 1000BASE-T, the Power Back Off feature was included to adjust the transmit power based on link channel length

100BASE-T1
Designed specifically with the needs of the Automotive industry in mind. By limiting operation to 1 pair, the weight and cost of the cabling harness is significantly reduced

2015

2016

25/40GBASE-T
Most 10+ Gpbs copper Ethernet applications are SERDES and have a limited reach of typically less than 5 meters. This supports comparable network speeds and can operate over a reach of 30 meters

1000BASE-T1
The increased throughput in single twisted pair, Ethernet is being used in more applications in the in-car wired network, replacing older architectures such as CAN and MOST

2016

2016

2.5/5GBASE-T
Breaking the 10x speed increase mold, 2.5/5GBASE-T is the more efficient use case for applications that don't need the 10GBASE-T bandwidth. Most notably, wireless access points in the last decade have broken the gigabit barrier, so using a 1000BASE-T backbone was creating a bottleneck