

WHAT'S COMING

We have seen many changes in the cabling industry over the last decade. The speed of networking has increased by a factor of 100, starting with the advent of 10BASE-T Ethernet networks in the early 1990s, the transition to 100BASE-TX in the mid-1990s, and the dawn of Gigabit Ethernet (1000BASE-T) today.

Over this period, copper cabling has evolved from the legacy base of Category 3 to the current installed base of Category 5. Category 5 is also shedding its old clothes and putting on a new mantle with the publication of the Category 5e (enhanced Category 5) standard. Category 5e is recommended for new installations and is well-positioned to support gigabit data rates. The next revision of the TIA/EIA 568-B.1 standard will only recognize Category 5e (or higher Category) cabling for the second data outlet.

What is the outlook for cabling in the year 2000? Both the TIA (Telecommunications Industry Association) and the ISO (International Standards Organization) are collaborating to complete the technical work on the next generation Category 6 cabling standard by 2001. The aim of Category 6 is to have a power sum bandwidth of 200 MHz, which is twice that of Category 5/5e. The following objectives have been agreed upon and are unlikely to change:

- A worst-case Category 6 channel that includes up to four connectors for a maximum distance of 100 metres
- A channel bandwidth of 200 MHz, where PSACR > 0
- A cable comprised of 4 balanced pairs having an impedance of 100 Ohms
- An 8-pin modular connector interface at the work area per TIA/EIA 568-A
- Components that are backward compatible with lower Categories.

Though noble objectives, the detailed component requirements needed to satisfy them are still under consideration and are subject to change. There is strong motivation to complete the work and publish a standard for Category 6 cabling as soon as possible. Also, we should see some new developments in the industry for a next generation multi-mode fiber to support 10 Gb/s data transmission rates.

The cabling industry recognizes the importance and need for open standards. Telecommunications cabling standards are continually evolving to meet the ever-increasing demand for bandwidth. Cabling manufacturers' product development efforts are constantly looking forward to the next generation of cabling standards and are working within the standards committees to outline proposals that better define cabling performance.