Standards

OVERVIEW

STANDARDS COMMITTEES

The International Organization for Standardization (ISO) is responsible for insuring that all standards requiring universality have the consensus of all member nations. ISO is responsible for standards ranging from manufacturing and quality control procedures to electrical and telecommunications distribution cabling systems.

In North America, there are four standards organizations which have developed or endorsed cabling standards for the North American marketplace.

The American National Standards Institute (ANSI) was formed in the United States in 1918. The organization's major task is the coordination, formalization and adoption of national standards within the U.S. ANSI also represents the United States at ISO technology meetings.

The Telecommunications Industry Association (TIA) is a separate organization accredited by ANSI and affiliated with the Electronics Industries Association (EIA). TIA is best known for developing cabling standards used in the design and installation of today's structured cabling systems, capable of supporting a wide range of applications and the high-speed requirements of tomorrow.

In Canada, all electrical and electronic goods destined for domestic use must be CSA Approved. This approval indicates that the product meets all requirements of the Canadian Electrical Code (CEC). The CEC references CSA standards where applicable. During the development of the cabling standards within TIA/EIA, it was decided that CSA would get involved with further development of structured cabling standards to insure all unique Canadian requirements were included.

HISTORY

Until 1985 there was no standardization of cabling systems, for several reasons. First, local telephone companies always looked after their basic cabling needs. Secondly, companies that used mainframes relied upon their vendor to install wiring that was required for their system. As computer technology began to mature, more and more organizations were installing computer systems, each requiring its own unique cabling and connectors. Customers began to complain loudly, as each time their computer platform changed so did their wiring needs. Wanting to gain and maintain market confidence, the Computer Communications Industry Association (CCIA) approached EIA about developing building cabling standards.

In 1985, discussions began, and it was agreed that standards were required for both voice and data telecommunications designed for commercial and residential use. EIA assigned the task of developing cabling standards to the TR-41 Committee.

The TR-41 committee realized the enormity of the task and established sub-committees and working groups to deal with the wide-ranging issues of developing cabling standards for both commercial and residential buildings. There was reorganization within TIA in 1999 and TR-41 committee was split into two committees. TR-41 retains responsibility for User Premises Equipment standards and a new engineering committee, designated as TR-42, is now responsible for User Premises Telecommunications Cabling Infrastructure standards. Under the umbrella of TR-42 we will now have eight subcommittees whereas previously there were five working groups. The main focus of the committees when developing these standards was to insure that they were independent of both manufacturer and technology.

The following pages are not intended to be a replacement to these standards. They are however, brief summaries and highlights of each of the standards that are important to the planning and design of telecommunications infrastructure. NORDX/CDT strongly recommends that any individual involved in the planning and design of such infrastructure should obtain copies of all of these standards and study them in detail.

HOW TO ORDER STANDARDS

Telecommunications Infrastructure standards are available by calling the appropriate organizations below.

- **TIA/EIA Standards**
  - Global Engineering Documents: (800) 854-7179 (U.S. and Canada)
- **CSA Standards**
  - Pacific Region: (604) 273-4581
  - Western Region: (403) 450-2111
  - Prairie Region: (204) 632-6633
  - Central Region: (416) 747-4044
  - Eastern Region: (514) 694-8110
  - Atlantic Region: (506) 858-9300
- **ISO/IEC Standards** (also available from ANSI)
  - ISO +41 22 34 12 40 (Switzerland)
  - ANSI (212) 642-4900

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CABLE DESIGN TECHNOLOGIES