

SYSTIMAX® Solutions

An Introduction to Intelligent Buildings

White Paper

As building owners, facility managers and tenants fully understand the impact modern technology will have on their business operations now and into the future, they will also realize the benefits of network integration of these various systems, devices and applications within their buildings or campuses. Through this network approach, they are able to share the value generated by the knowledge worker to be more efficient and productive, and also information generated by existing and future 'Intelligent Building' systems, devices and applications to contain operational costs and maximize ROI.

Rapid advances in technology and the emergence of enterprise distributed computing platforms created the need to integrate IT systems. This integration of applications required a single, low voltage cable distribution infrastructure. The rapid deployment of integrated voice and data systems based on digital transmission and IP based protocols, set the stage for the next step in the technology evolution process. The advent of integrated voice and data digital transmission techniques, coupled with ever increasing data transmission speeds and customer demand for additional information, led to the proliferation of the Local Area Network (LAN) industry. LAN systems and networked devices provided an economical method to connect and distribute information within organizational work groups.

The evolution of the integrated IT systems and markets has dramatically effected and guided the development of structured cabling systems. A "total end-to-end connectivity solution" offers customers low voltage connectivity that is critically important as the bandwidth, data transfer speeds and mission critical information from various devices attached to the network is transmitted within a building or campus.

Information technology in buildings does not refer only to PCs and telephones, but also Building Automation Systems (BAS), such as security (surveillance and access control), Heating Ventilation Air Conditioning (HVAC), and Fire/Life/Safety (FLS) as they transition from electro/mechanical and pneumatic technology to microprocessor based software driven systems. Leading building automation providers already have state of the art computer based software controlled systems for building management. Most manufacturers of major building automation systems offer computer based, software driven systems, based on distributed processing architectures. These systems are required to interface with other building automation systems and devices, and also to interface with voice, data, LAN and video systems located within a building or campus.

The ongoing protocol standardization, the new cabling infrastructure standard - EIA/TIA 862, new technology developments, and announcements from building automation industry leaders demonstrate the need for common protocols and interfaces for building automation systems, and requirements for structured cabling solutions to provide integrated networking and connectivity over Unshielded Twisted Pair (UTP) and fiber optic cabling.

Many building systems are already automated or are moving rapidly in that direction. The major constraint to the development of the Intelligent Building has been the inability of devices made by different manufacturers to communicate with each other and other sophisticated office automation systems found in any modern facility. Programmable logic controllers (PLC), thermostats, direct digital controllers (DDC), programmable light controls and sophisticated FLS systems require a common wiring platform to communicate and network with each other in the near future.

CommScope Intelligent Building Infrastructure Solutions (IBIS) is the common infrastructure that supports the following customer requirements:

- One system for voice, data, video and building automation
- Faster Building Automation Systems (BAS) implementations
- Reduced costs (initial and ongoing) via enhanced network efficiency Greater ROI and building lifecycle management
- Better utilization of building cabling asset
- Commitment for long term support
- Compliance with all existing building cabling standards
- Global network of sales, marketing and support for multinational organizations of their corporate cabling platform
- 20 year Application Assurance
- Open architecture, multi-vendor support of voice, data, video, LAN and building automation systems and applications
- Expertise of CommScope Labs Research and Development
- Innovative cable management administration via solutions such as iPatch, and VisiPatch



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