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The Intelligent Building

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One of the benefits of the rapid evolution of information technology has been the development of systems that can measure, evaluate and respond to change.

Intelligent Buildings are designed to incorporate systems for efficiency

An enhanced ability to control change has sparked developments in the way we design our physical environment, in particular, the buildings in which we work. As a result, we are witnessing significant growth in the area of *Intelligent Buildings*—buildings designed to incorporate information technology, communication systems and mechanical systems, making them more comfortable, secure, productive and cost-effective. Healthcare organizations realize that for information technology to have significant impact, fundamental business processes need to change. Using networks to help effect these changes is a strategy that healthcare enterprises are beginning to adopt. Network technologies have the ability to improve customer satisfaction, increase employee efficiency and provide better patient care.

What is an Intelligent Building?

An Intelligent Building is one equipped with the telecommunications infrastructure enabling it to continuously respond and adapt to changing conditions, allowing for a more efficient use of resources and increasing the comfort and security of its occupants. An Intelligent Building provides these benefits through automated control systems such as heating, ventilation and air-conditioning (HVAC), fire safety, security, energy/lighting management and other building management systems. For example, in the event of a fire, the fire alarm communicates with the security system to unlock the doors. The fire alarm system also communicates with the HVAC system to regulate the flow of air to prevent the fire from spreading.

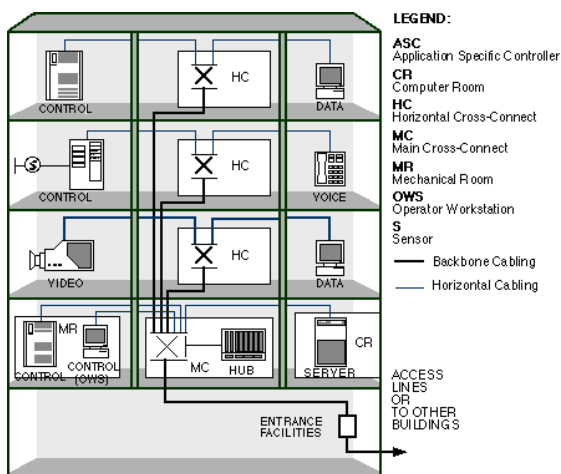
What benefits do Intelligent Buildings offer their owners and occupants?

The introduction in the workplace of computers, printers, photocopiers and fax machines has increased indoor pollution. Electrical and telecommunications facilities in office buildings are under pressure to satisfy the demands created by the rapid growth of computer and networking technologies. These factors have a definite impact on worker productivity. New technology can be used to create Intelligent Buildings that address these problems by providing a healthier, more productive and less energy-intensive work environment. As these are critical factors for business success, owners of Intelligent Buildings have a clear advantage in attracting and retaining 21st-century tenants. In recent years, several factors have forced the healthcare industry to move toward the use of computer networking and the development of electronic health (e-health) strategies to improve the efficiency of their operations. For instance, healthcare has been undergoing consolidation resulting in the emergence of integrated delivery systems. Integrated delivery systems are large, regional providers that need to share clinical and other information among multiple hospitals, clinics, home-care agencies and other facilities. Also, the ability to provide physicians with the capabilities to practice medicine remotely and to assess patients in isolated locations via the Internet, often referred to as *telemedicine*, is becoming important to

healthcare organizations to optimize effectiveness as well as to attract and retain the best physicians.

How do Intelligent Buildings lead to cost savings?

The Intelligent Building concept recognizes the true cost of a building is not simply its cost of construction; it must include operating and maintenance costs over the life span of the structure. Intelligent Buildings yield cost reductions in all of these areas by optimizing automated control, communication and building management systems. They also guard against repair costs, employee time/productivity loss, revenue loss and the loss of customers to competitors.



Can an Intelligent Building infrastructure be installed in existing buildings?

Yes. The transformation of conventional buildings into intelligent ones is achieved through the installation of a single structured cabling system (SCS) network. Standard buildings feature disparate cabling with different designs and administration methods from system to system, which is a less efficient system, more prone to system failures. The installation of a structured cabling system turns a conventional building into an intelligent one, creating increased efficiency and guarding it against system breakdowns both internally and within the network. The SCS is the arteries and veins of the network, enabling the organization to operate efficiently and reliably. The separate voice and

data systems are coming closer together as new technologies are developed. A new generation of multimedia communication systems is required to meet the demands of users. Bandwidth-hungry applications depend on the cabling system that provides voice and Internet communications capability. Voice and data communications are becoming more closely integrated through the adoption of open system architectures connected over a common network infrastructure.

Structured Cabling plays a key role in transforming healthcare services within hospitals, nursing homes, home nursing and outpatient services. Nurses consult a patient's doctor via video network connectivity. Chronically ill patients can send test results and consult with their physicians on-line. Electrocardiograph (ECG) information can be transmitted over the hospital's campus network. Hospital physicians may transmit information from clinics to emergency departments for use. Physicians can make patient appraisals during patient treatment, based on information received from cardiac, blood and respiratory diagnostic devices.

Why are Intelligent Buildings increasingly a business imperative?

Because they contribute to the following business requirements:

- Communication of data, quickly and reliably
- Implementation of greater control over the work environment
- Improvement of productivity and cost-effectiveness

Buildings represent a large, long-term investment that must make good business sense and be shielded from obsolescence in today's fast-paced business environment.

Why choose the Intelligent Building Solution?

Here are some of the reasons why an Intelligent Building Solution may be the right one for you:

- One integrated cabling network for present and future voice, data, video and control applications and Health Information Systems (HIS)
- Standard cabling media (UTP-Category 6 & Fiber)
- Easy administration and maintenance
- Electronic connectivity management
- Easy troubleshooting
- Lower initial and operating costs



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