Cabling Solutions for Intelligent Buildings

An employee enters a building with a badge – his work space is illuminated, network access is provided, HVAC adjustments are made, and nighttime power conservation methods are disabled.

A motion detector is tripped in a secure area – cameras zoom in, video feeds transmit, classified applications are locked down and SMS text, e-mail, and IP phone alerts are forwarded to security personnel.

A fire alarm is activated – emergency lighting and pathway guidance systems are activated, exit doors are unlocked, audio instruction feeds are enabled, emergency shutdowns are initiated and detailed status information is forwarded to rescue personnel.

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ConvergeIT is an intelligent building cabling solution that combines Siemon’s proven quality with advanced copper and fiber cabling technology to create a structured cabling solution that converges critical data, voice, video and low-voltage building automation systems (BAS) onto one integrated physical infrastructure.
ConvergeIT Enables Smarter, Greener Buildings

Properly planned, intelligent buildings offer 2 kinds of “Green”:

Cost Savings
- Less cost to operate
  - Energy savings up to 70%\(^1\)
  - Lower recurring maintenance costs – up to 25%\(^2\)

Worth more to owners and tenants
- Intelligent systems can enhance building asset value by 2-3 times initial investment\(^3\)
- Achieve ROI 3-4 times faster than traditional buildings\(^3\)

Environmental Sustainability
- Energy savings = significantly reduced carbon footprint
- Reduced material waste
  - Cable
  - Pathways
  - Equipment
- Fewer contractors/contractor visits

What can a ConvergeIT network offer?

Reduced Construction/Deployment Costs - Case Study\(^4\)

![Chart showing cost savings](chart.png)

**Case Study Overview**: The data at left is based on the deployment of a comprehensive intelligent building system in a new 1-million ft\(^2\) hospital facility. The analysis details material and labor costs for the installation of all data/low-voltage cabling and pathways, comparing the costs for a conventional non-converged intelligent building against a single, ConvergeIT-style IP-based system.

**Sources of Cost Savings for IP-Based Systems:**

**Material** - Low-voltage systems like audio/video, security, climate control, voice and data run over a single structured cabling network, reducing the materials needed vs. multiple cabling systems and pathways.

**Labor** - With one structured cabling provider installing one low-voltage, voice, data and pathway system, ConvergeIT reduces labor costs and construction time.

Reduced operating costs

**Energy Efficiency**: Intelligent lighting control, HVAC, power management systems and other ConvergeIT enabled technologies help maximize building efficiency

**Simplified Moves, Adds and Changes**: With a single structured cabling infrastructure, MACs happen more quickly, are easier to manage and cost less

**Reduced Maintenance Costs**: ConvergeIT’s open IP infrastructure reduces reliance on specialized contractors and vendor service contracts to maintain proprietary systems

- According to the EPA, intelligent green buildings can reduce energy use by up to 70%\(^1\)
- Structured cabling MACs can cost 20% less with a ConvergeIT system. A zoned cabling topology further streamlines MAC work, boosting these savings by up to 38%\(^4\)
- Working with a single structured cabling contractor for ongoing maintenance can reduce service contract costs by 15%\(^5\)

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Siemon’s ConvergeIT cabling system is a perfect match for Honeywell EBIm (Enterprise Buildings Integrator) to enable the convergence of a building’s systems onto a single IP Ethernet network. Honeywell controls and EBI, combined with Siemon high performance cabling efficiently manages HVAC, Security and Access Control, Fire and Life Safety, CCTV and Digital Video, Asset Tracking and Energy Applications to make smart green buildings a reality.

– Robert Morrow, District Sales Leader, Honeywell Building Solutions

“ConvergeIT harmonizes with Cisco’s Internet Business Solutions Group (IBSG) Connected Real Estate Practice, which emphasizes the ability to facilitate intercommunication and interaction among buildings and digital infrastructures”

- Kevin O’Donnell, Executive Consultant, Internet Business Solutions Group, Cisco

“Siemon’s ConvergeIT greatly improves the efficiency and flexibility of the structured cabling plant, providing a scalable foundation enabling convergence of a building’s systems into a common IP network environment. This helps us deliver to our clients the Johnson Controls® Technology Contracting™ approach of integrated, intelligent, sustainable buildings that have higher performance and productivity with a lower life cycle cost, including lower energy use.”

– Hugh Hudson, Director of Business Development, Johnson Controls

Siemon is a member of the U.S. Green Building Council

References

2 - Innovative Engineering Solutions, LLC - “What’s an Intelligent Building?” - 2009
3 - CABA - “Bright Green Buildings - Convergence of Green and Intelligent Buildings” - 2008
4 - Sinopoli and Associates - “Smart Buildings: How To Integrate Advanced Building Systems” - 2007

To learn more about Siemon’s ConvergeIT structured cabling solution, visit:

www.siemon.com/convergeit