BICSI Data Center Standard

Presented by:
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BICSI Data Center Standard

- *BICSI 002, Data Center Design and Implementation Best Practices*
- Used in conjunction with other standards
  - ANSI/TIA-942
  - AS/NZS 2834
  - CENELEC EN 50173-5
  - ISO/IEC 24764
BICSI 002

• Provides guidance and recommendations
• Best practice often more than minimum requirements specified in other standards
• Addresses subjects that are only briefly addressed, or not addressed at all, in cabling focused standards
• Comprehensive, soup to nuts, standard
Target Audience

- BICSI 002, Data Center Design Standard and Implementation Best Practices is intended for use by the following groups:
  - DC owners and operators
  - IT and Telecom consultants
  - Project managers
  - IT and Telecom installers
  - IT & Telecom Designers
  - IT & Telecom Management
  - Facilities Management
  - Security & Loss Prevention
  - Architects & Engineers
  - Construction Companies
BICSI Data Center Design Standard

- Development of BICSI 002 began in 2004 from an industry need to have a comprehensive document covering all design, implementation and operational factors concerning data centers
- Written in subject based sections to provide both requirement and considerations for data centers
Who Developed the Standard?

- BICSI committee consisting of over 150 subject matter experts from around the world
- Representing a wide variety of data center disciplines
  - Architects
  - Electrical, mechanical, structural data center and network engineers
  - Security, fire protection, telecommunications cabling, and Information technology experts
  - Insurance risk assessors,
  - Consultants, project managers, commissioning agents, and manufacturers
Space Planning

- Power Systems
- Generators
- Cooling Capacity
- DC support space adjacencies
- Utility services
Site Selection

- Location
- Regulation
- Environment
Architectural

• Design Concepts
• Construction
• Planning Consents
• Building Regulations
Structural

- Wind resistance
- Floor loading
- Ceiling hanging loads
- Seismic considerations
Electrical

- Distribution
- UPS
- Standby Power Systems
- Power Monitoring
- Earthing / Grounding
Mechanical

• Environmental Conditions
• Thermal Management
• Mechanical Equipment
Fire Protection

- Design Elements
- Fire Detection
- Fire Suppression
Security

- Risk & Threat Assessment
- Access Control
- Surveillance
- Alarms
Building Automation Systems

- Security
- Building management
- Cameras on generic structured cabling
Telecommunications

- Telecommunications Spaces
- Cabinets and Racks
- Cabling Pathways
- Cabling
- Administration
Information Technology

- DR
- Mirroring
- Computer Room Layout
- Communications
Commissioning

- Phases of commissioning
- Testing
- Load Bank Testing
- Witness Testing
- Legal Requirements
- Documentation
Data Center Maintenance

- Maintenance contracts
- Maintenance schedules
- Manufacturers specifications
- Legal requirements
Design Process

- Project delivery methods
- Facility design phases
- Technology design phases
Reliability

- Risk Analysis
- Reliability Planning
- Components
Conclusion

• Covers all aspects of a Data Center Build
• Intended for a wide audience
• Builds on other standards
• Is written as a Best Practice “How to” document
BICSI 002

• Available for purchase at www.bicsi.org/standards

• Formats include
  – CD-ROM
  – Electronic Download
  – Printed Standard

• BICSI members qualify for a reduced fee

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About the BICSI Standards Program

• Formed in the mid-1990s as the BICSI Standards Committee
• Accredited in 1999 by ANSI
• Two published standards, with five additional standards in development
• Active international membership in North & South America, Europe, Australia, Japan, RoW
About the BICSI Standards Program

• We always need contributors and volunteers with subject matter expertise.

• As always if you can make it better, then help us, please!

• To volunteer you can:
  – Send an email to Andrew or Steve
  – Click on “committees” link on www.bicsi.org