Communication Room:
Cable Management,
Design & Implementation

Presented by
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Introduction

- Cable management is the process of supporting cables routed between two points and the products installed to aid this process.

- The purpose of cable management is to provide a pathway, increase cable organization and increase network “uptime.”
Introduction Cont.

- Everyone in NETS is a “Cable Manager” and should benefit from understanding how cable is managed in our communications rooms.

- Combined 25+ years of installing cable, we work daily on design, installation, documentation, verification, M.A.C. work and the challenges associated with each.
Training Outline

- Design overview:
  - Considerations when designing a communication room; factors simplifying or complicating design.

- Product:
  - Past, present and propose overhead tray, rack infrastructure, and consumables.

- Implementation – *The act of accomplishing some aim or executing some order; carrying into effect.*

*Institute of Electrical and Electronics Engineers (IEEE):
Design Overview

Simplifications:
- Ground-zero builds.
- Having adequate space
- Building codes, standards, and specs.
- New products.

Complications:
- Retrofit installations.
- Inadequate space.
- Building codes, standards, and specs.
- Cable type and size.
- Neighboring services (HVAC).
- Financial constraints
Design: Simplifications

- Ground-zero builds
- Having adequate space
- Building codes, standards and *specs.
  - Section 27 05 26: Grounding and Bonding for Comm. Systems
  - Section 27 05 28: Pathways for Comm. Systems
  - Section 27 11 16: Cabinets Racks, Frames and Enclosures
  - Section 27 11 23: Cable Management and Ladder Rack

- New products.

Design: Complications

- Retrofit installations.
- Inadequate space.
- Building codes/standards.
- Cable type and size.
- Neighboring services (HVAC).
- Financial constraints.
Design: Wrap-up

- Proper cable management design is the framework for a quality installed network.
- Early identification and planning is key to saving $$$.
  - Single largest contributor to cable organization.
  - Reduces time for MAC work.
  - Accepts changing media types and sizes.
  - Scaleable.

- Questions?
Product: Objectives

- Be familiar with the products available to manage cable within a communications room.

- Show the dangers of disregarding cable management.

- Visualize product NETS has employed past and present, and the next generation.
  - Communications rack or cabinet structures.
  - Horizontal managers, rings, spools and through-ports.
  - Adjacent vertical managers and slack receptacles.
  - Overhead or underfoot pathway, typically tray or rack.
  - Drop racks for changes in elevation (2 ft. max)
  - Radius supports, consumables and identifiers.
Product: Cable Management
Challenged:

DO NOT TOUCH ANY OF THESE WIRES!!!!
NETS
Cable Management - Past

Overhead Tray:

Vertical Cable Support

Changes in elevation:

Horizontal Cable Managers

FL4-2060
NETS

Cable Management - Present

Vertical Cable Support

Changes in elevation

Horizontal Cable Managers:

Tiered Overhead Tray

Hydra-Cable Management

FL0-1042
Next Generation Cable Management

F- Upper and Lower Jumper Trays
G- Horizontal Managers
H- Consumables ties and straps
I- Cable spools
J- Radius drops
K- Vertical Cable Managers
L- Front-to-Back Horiz. Managers
M- Single Side Vertical Managers
N- Double Side Vertical Managers
O- Horizontal Managers

Product: Wrap-up

- Cable management is no longer optional.
- Products are becoming more user friendly.
- Products are getting more readily available.
- Larger number of manufacturers in the cable management arena.

- Questions?
Implementation: Objectives

“How Cable Management Gets Done”

- Be familiar with the steps NETS takes when implementing a cable management system.
  - Create a room drawing.
  - Count or estimate T.O’s in comm. Room.
  - Identify conduit entrance locations.
  - Establish rack layout (footprint and equipment).
  - Create a Bill-of- Material (BOM).
  - Create estimate.
  - Install.
Summary of Training

- Proper cable management is key to saving time and money, maintaining uptime and reducing energy cost.
- Dedication to design and implementation of product are the means to establishing proper cable management.
- Diligence to maintaining cable management is the responsibility of everyone touching it!
Questions and/or Comments

Thank You!!