Introduction to Outside Plant Design Training

Description

Learners can take their existing network cabling knowledge and skills to the next level by gaining a valuable insight into external fibre network distribution strategies, infrastructure components and installation methods. Passive Optical Networking (PON) features heavily as the primary delivery technology for fibre broadband to the home. Methods used for distribution will also feature, exploring the benefits and rationale behind the choice to distribute services underground or overhead.

The duration of this program is five days; the content is comprehensive and detailed allowing network infrastructure professionals to have the potential to add real value to their skills by including these complex areas in their product/service portfolio. A COPT will be undaunted when dealing with complex external fibre networks, able to rationalise the network structure and understand the functions of installed components.

Outlines:

Role of the COPT

- Planning external plant
- Construction of external pathways
- Working in the OSP environment

Regulations, Standards, Codes and Industry Best Practices

- Applicable BSEN Standards
- New Roads and Streetworks Act 1991
- Working in Confined Spaces
- Working at height

Fundamentals of Outside Plant Pathways Under-ground

- Route planning
- Pit and chamber construction

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- Ducts and sub-ducts
- Building entry methods
- Blown fibre tubing
- Pathway security
- Installation methods

Fundamentals of Outside Plant Pathways Overhead

- Route planning
- Telegraph poles and other support structures
- Route stability
- Environmental clearances
- Wayleaves and pole sharing
- Pole route construction
- Installation practices

Passive Optical Networks

- Types; GPON, EPON, GEPON
- Wavelengths and bandwidth
- PON architecture
- PON components
- PON distribution methods

Testing External Fibre Optic Networks

- Tier 1 and Tier 2 testing requirements in the OSP environment
- Effects of passive splitters
- PON test methodology
- HD/TDR test functionality

Fibre To The Everything (FTTx)

- Fibre to the node
- Fibre to the curb
- Fibre to the building
- Fibre to the antenna
- Fibre to the home