FTTx

GIS

FIBER

DUCTS & MICRODUCTS

ROLLOUT MANAGEMENT

COAX

COPPER

PATCH CABLES

SPLICE CLOSURES & CASSETTES

FNT Cable and Outside Plant Management

Centralized Planning, Operation and Management of Passive
Inside and Outside Plant Infrastructure

Data volumes are increasing, and network traffic is growing. These are the realities of the digital age.
To keep up, service providers are scrambling to roll out more fiber and introduce new technologies.
The result is increasing network complexity. Millions of physical assets, logical resources and
connections in the cable network must be managed. Doing so is difficult but essential, as these
networks are the foundation for delivering the services that keep businesses operational.

IT is spreading into all areas of life as both residential and business customers consume and generate massive amounts of data. Network operators must ensure their fiber-optic networks in the transport and mobile fronthaul and backhaul arena, FTTx infrastructures in access networks, and HFC networks can keep pace with traffic. They are therefore laying more fiber, connecting more mobile sites to fiber, and extending fiber closer to end users. While operators are updating infrastructure to provide the capacity needed, they must also maintain full control over the network infrastructures. This is difficult given the diversity of the networks and resources involved and sheer number of connections.

FNT Cable and Outside Plant Management makes it possible to efficiently operate complex passive network infrastructures. It gives full transparency across the network to document, plan and manage any inside and outside plant cable network infrastructure. From a service assurance perspective, this is the best defense against service interruption. From a planning perspective, it ensures changes are based on accurate as-built documentation and that all changes are reflected in a centralized management system.

MANAGE

FNT's solution helps operations teams deliver consistently reliable services and avoid outages. It helps fulfill redundancy requirements from service to cable layer and supports end-to-end signal tracing. It seamlessly works across all devices and cables. Cables and routes can be visualized via both highly configurable schematic network visualizations and geo-referenced map representations based on integrated GIS capability. This enables users to work with fully integrated geo-referenced visualizations of the infrastructure on corresponding maps and use schematic fiber plans for further analysis. Navigation between the maps and the graphical applications facilitates managing the infrastructure.

Using FNT Cable and Outside Plant Management and Telco Active Inventory solutions together enables management of the complete collection of network and service resources of an active telco transport network. All the hierarchically structured services and paths in FNT Telco Active Invento-

ry can be assigned to the appropriate underlying resources in FNT Cable and Outside Plant Management.

DOCUMENT AND PLAN

FNT's solution is based on a central data repository that provides a complete inventory of all network resource data of the passive infrastructure. It covers all physical end-to-end connections and assigns services to signal routes. This repository provides accurate as-is documentation to make cable infrastructure rollouts, extensions and changes easier to plan and more efficient to execute. FNT facilitates network planning with a consistent approach to help ensure that moving, adding and changing assets is a fault-free process. Full-featured auto-routing functionality assists planning entire media-independent signal routes. Work orders are automatically created that can be distributed via workflow tools. Upon completion, documentation is updated automatically to ensure that infrastructure documentation is always current.

// USE CASES

PLANNING & ROLLOUT MANAGEMENT

Fiber rollouts are in high demand. Whether to meet bandwidth requirements for residential and business customers, to split up HFC clusters and move fiber closer to the customer, or to support 4G/5G rollouts, operators must lay more fiber as quickly and efficiently as possible.

- Supports all types of infrastructure:
  - cable (fiber, copper, coax), including patch cables, patch panels, splice closures and splice cassettes
  - passive outside plant, including ducts, micro-ducts, trenches, and manholes

- Supports planning and auto-routing of physical interconnections (signal routes) including patches and splices required to realize the connection

- Automatically creates work orders for the field force team according to planned tasks

- Enables assignment of service usage for every connection

- Provides schematic and geo-referenced representation of physical connections

- Enables workflow integration

- Includes HFC capabilities, such as calculating signal levels and attenuation and remote power supply of amplifiers

CABLE/OSP INFRASTRUCTURE OPERATIONS

Ensuring maximum network uptime requires full control of operational processes and all relevant information about the network. Mitigating service interruption is easier when information about where an outage occurred and what services are affected is readily available. Detailed up-to-date information about the cable infrastructure, the physical interconnections and assigned redundancy information are mandatory to manage the cable and outside plant infrastructure efficiently and with high quality.

- Impact analysis reports on services affected by outage

- End-to-end signal tracing across all devices and cables

- Fault localization for cable issues using cable length information

- GIS based fault localization using OTDR data

- Graphical visualization of cable and OSP/ISP network layout

CAPACITY MANAGEMENT

Efficient capacity management relies on relevant and accurate data. Data that details used and available resources of the cable and passive OSP/ISP infrastructure, external resources used in combination with own resources (dark fibers, etc.), and availability information about what infrastructure resources are available close to a specific address.

- Reports on cable and fiber resources and connections

- Identifies available/used resources in ducts, micro-ducts, splice closures, splices cassettes, etc.

- Manages available resources to optimize CAPEX investments

- Availability reports show what infrastructure resources are available

- Dashboards with graphical representation of capacity data

Major Benefits of FNT Cable and Outside Plant Management

ACCELERATED PLANNING

- Consistent documentation and planning supported by auto-routing
- Automatic creation of work orders for field execution of planned tasks
- Documentation is automatically updated as a result of planning

INCREASED VISIBILITY

- Full transparency across passive inside and outside plant resources
- Schematic views as well as GIS based graphical network visualization
- Improved efficiency in day-to-day operations supported by end-to-end signal tracing

FASTER IMPACT ANALYSIS

- Reduced mean time to repair resulting in greater customer satisfaction
- Optimized costs and process times
- Reduced OPEX

OPTIMIZED UTILIZATION

- Better management of infrastructure capacities and available resources
- Full transparency on capacity utilization across the network
- Reduction of CAPEX

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