

SINGLE, GEOCENTRIC NETWORK VIEW FOR OPTIMIZED INFRASTRUCTURE MANAGEMENT

## OUTSIDE PLANT

### BUSINESS CHALLENGE

Increasing bandwidth consumption driven by video, data, and converged services is outpacing available network capacity worldwide. In response, Communications Service Providers (CSPs) are investing heavily in upgrading their infrastructure. They are deploying LTE, WiMAX, and gigabyte xPON as the preferred choices for access network upgrades while deploying high-capacity fiber in the backbone and moving towards all IP networks. The overall transmission stack is simplifying toward a “flat” IP/MPLS world, but access networks are becoming far more complex. Existing, mature HFC, wireless, and TDM networks are being supplemented with new technologies like FTTP, FTTH, and Ethernet over Copper (EoC).

This changing environment means that CSPs need to transform their networks into more efficient entities in order to improve their business operations, competitive ability, and customer experience management.

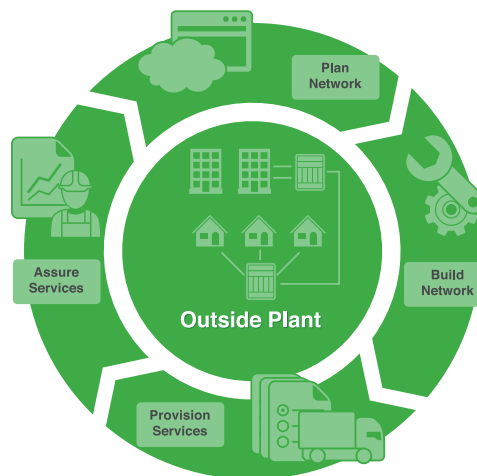
On the road to creating more efficient networks, CSPs face a number of challenges. To begin, network design and rollout as well as capacity management are hampered when adequate location and asset information is lacking. To effectively plan and build networks, CSPs need a clear view of their backyard

assets. This is also essential for on-demand testing, timely change management, network capacity optimization, and long-term OpEx reduction.

In addition, the passive nature of OSP assets and their wide distribution make them invisible to remote, automated discovery. To take preemptive measures in emergencies, CSPs need

*“NetCracker’s solution will give us an opportunity to achieve our business goals through improved operations and innovation. Our aim is not only to maximize our operational efficiency but also to deliver a higher level of service experience and customer satisfaction.”*

Michel Allard,  
VP Technology Development, Videotron



accurate geospatial positioning and precise GIS (geographical information system) mapping at different infrastructure levels. And finally, CSPs must have an in-depth view of OSP assets to achieve high-quality provisioning and assurance of next generation services. Quick resource allocation and proactive network malfunction management

coupled with prompt matching of network fallouts to overlying services are necessary for customer SLA management and the prevention of churn.

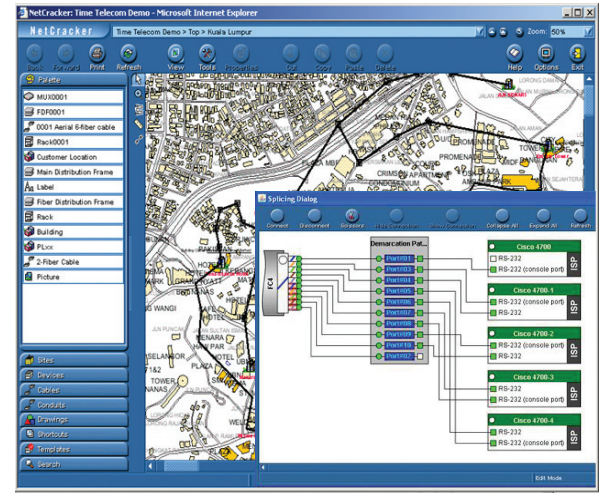
To address these challenges, Outside Plant — part of NetCracker’s TOMS (Telecom Operations and Management Solutions) Suite — integrates with NetCracker’s Resource Inventory and Service Inventory and provides highly detailed, web-based views of the physical and logical assets in an OSP network.

## DETAILS

NetCracker's Outside Plant provides a centralized and dynamic repository of all OSP assets. All connectivity and topology information is stored in this repository, including logical OSP inventory associated with customers and circuit information. NetCracker also provides centralized document management for records and attachments. This information is easily accessible via the 100% web-based user interface.

The NetCracker system is pre-integrated with leading GIS tools through standard APIs provided, for example, by ESRI and MapInfo products. When coupled with GIS, NetCracker's Outside Plant binds OSP resources to coordinates of GIS map objects and generates consistent geospatial views without requiring hours of manual, drag-and-drop operations.

NetCracker's Outside Plant includes OSP Resource Models, GIS Integration, OSP Reports, and Textual & Graphical Presentation:



### OSP RESOURCE MODELS

**Resource Models** allow multiple items to be aggregated into high-level logical items and also enable object information to be stored and tracked:

- OSP container, conduit, and cabling documentation
- Outside link topology and precise geospatial context creation
- Pre-integration with the Resource Inventory data model for the assignment of service or logical connections
- Modeling of actual OSP network structures (vs. adding custom information to geospatial items)

### OSP REPORTS

**OSP Reports** provide comprehensive information for capacity management, assurance, planning, and other activities:

- OSP resource usage reports on capacity utilization
- OSP-dependent service reports on network malfunctions and fallouts for proactive service assurance
- Cross-connect reports with as-built and as-designed schematic views of cable distribution

### GIS INTEGRATION

**GIS Integration** enables integration with external GIS systems and allows service and network infrastructure to be mapped to GIS objects:

- Graphical representation of OSP assets on topographical and landscape maps
- Hierarchical location management
- Leading GIS tools (e.g. ESRI ArcView, MapInfo) and Web Map Services (WMS) integration
- Scaling and layered representation of geographical coordinates as well as network and landscape elements

### TEXTUAL & GRAPHICAL PRESENTATION

**Textual & Graphical Presentation** provides textual and visual tools for facilitated infrastructure management and change tracking as well as enhanced visualization of network projects:

- Textual mode for structured network information arrangement
- Graphical mode enabled by the Network Configurator for user-friendly network modeling and viewing

## BUSINESS BENEFITS

NetCracker's Outside Plant gives CSPs the following benefits:

- A unified view of the outside plant infrastructure to accelerate the provisioning process and improve assurance
- Centralized document management to provide field engineers with ready access to records and attachments
- Tight integration of outside and inside plant physical data models to streamline provisioning and assurance processes