

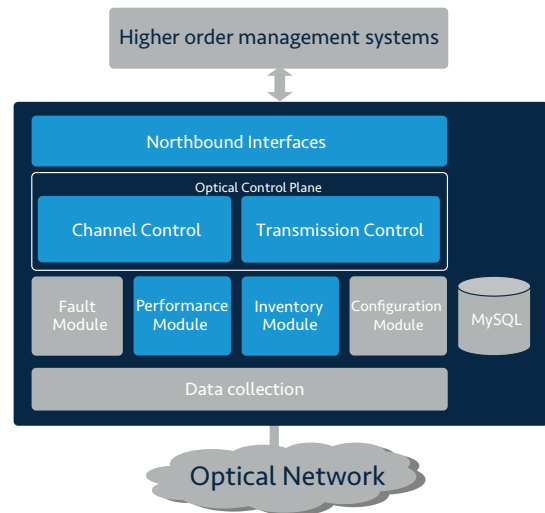
Channel Control

An advanced optical planning application for medium to large size TM-Series networks

Key benefits:

- Increased efficiency of optical planning reducing operational costs associated with planning of optical systems
- Graphical User Interface with routing information for optical channels and sub-channels
- Integrated with the TNM map and features

Channel Control is an optional planning application in the TNM aimed at the optical planner. It provides all the information required for effective optical planning such as routing information for all used and available wavelength channels and wavelength sub-channels (i.e. part of a electrically multiplexed wavelength channel) throughout a network segment.



Planning of optical networks

Network planning without advanced management support is quite a challenge and it is usually difficult to get a quick grasp of how the network is configured.

As the complexity of a network increases, for instance when networks include multiple OADM nodes or even ROADMs, the planning process becomes even more difficult.

The optical planner faces important questions such as:

- What wavelength channels are used in a link or network segment?
- What wavelength channels and/or wavelength sub-channels are available between two nodes?
- How do I maximize the utilization of the fiber infrastructure now and in the future?

The answers to these questions can be found in management systems, inventory systems and in documentation but it is usually time-consuming to find the information and it is usually even more time-consuming to put the information together in a useful way for planning purposes.

Effective optical planning calls for a dedicated optical planning tool.

Channel Control

The Channel Control application moves focus from the collection and understanding of network configuration to value added network planning activities. The result is increased effectiveness of the planning department.

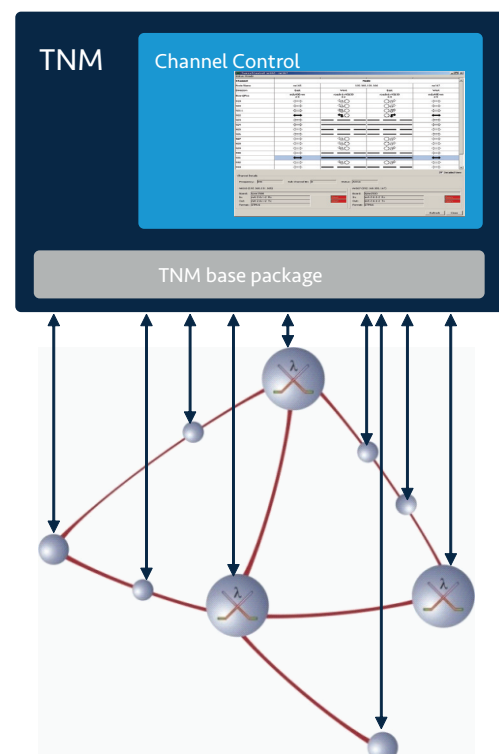


Fig 1. Channel Control automates the collection and presentation of routing information and physical inventory.

The Channel Control application allows the planner to select a network segment from the TNM map. It then presents an overview of used and available physical inventory and the wavelength routing inside the segment in the Graphical User Interface. This information then serves as the basis for effective network planning.

The Channel Control application provides information about:

- Node names, type of boards and board addresses for each node through-out the chosen segment
- Active Channels: wavelength channels and wavelength sub-channels that are carrying traffic
- Possible Channels: wavelength channels and wavelength sub-channels that are pre-provisioned but not used for traffic

- Reserved Channels: wavelength channels and wavelength sub-channels that are pre-provisioned and dedicated for particular future purpose
- Active, possible and reserved add and drop in OADM and ROADMs
- Active, possible and reserved termination points (ports), their signal format and port addresses
- Direct access to detailed inventory information about circuits and ports from the application

The application presents the information about available capacity, various types of nodes and termination points as graphical symbols. These symbols, together with physical inventory information, provide an instant overview of the network topology and configuration for fast and simple network planning.

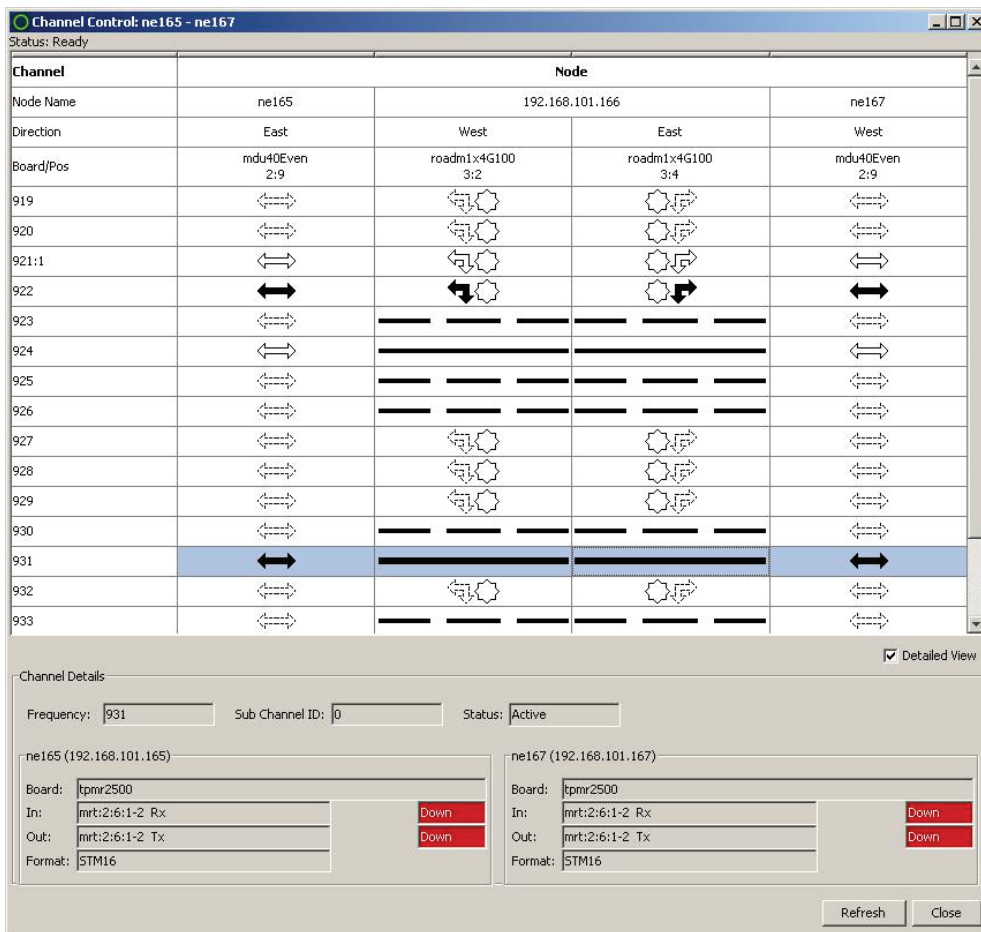


Fig 2. Example of Channel Control, per channel display GUI.

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