

Transponder Grooming

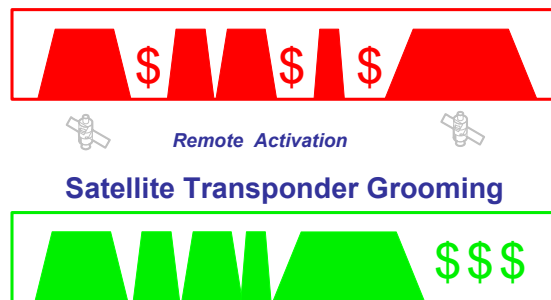


Saving satellite bandwidth for Satellite Network Operators

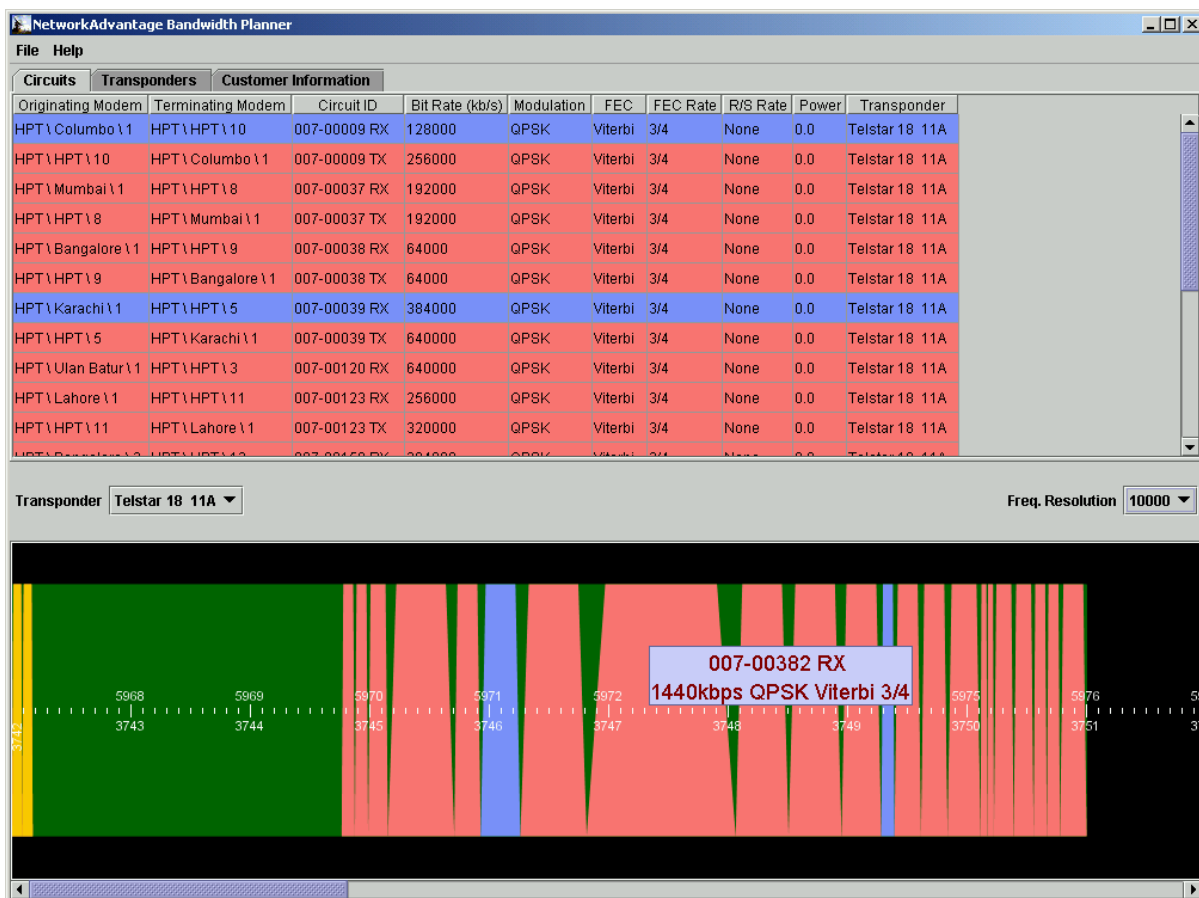
Transponder Grooming allows satellite network operators to plan frequency allocation for efficient transponder utilization, and remotely control customer satellite modems to effect changes - without requiring customer participation.

A cost-effective satellite network management solution:

- ✓ Reduce wasted bandwidth
- ✓ Saving labour costs in satellite network operations
- ✓ Reduce pressure on operations staff
- ✓ Minimize satellite link outage time
- ✓ Improved customer service
= *“Delighted Customers”*



Many satellite operators and teleports frequently need to ‘groom’ transponder bandwidth to ensure that they are using valuable satellite capacity efficiently. This is a labour intensive task not only for the satellite operator or teleport, but also for their customers, who may not have access to skilled technicians to make the necessary configuration changes. Customers do not wish to have their carriers moved too often and may sometimes refuse to cooperate, resulting in wasted satellite bandwidth and increased bandwidth cost overheads.



Building on our expertise in satellite network management, **NetworkAdvantage™** introduce a new tool for Transponder Grooming. The bandwidth planner is used by network operators to allocate customer circuits and manage transponder utilization efficiently. When ready, the new frequency plan is implemented and control data forwarded to the customer’s satellite modems to effect changes - automatically.

Solution

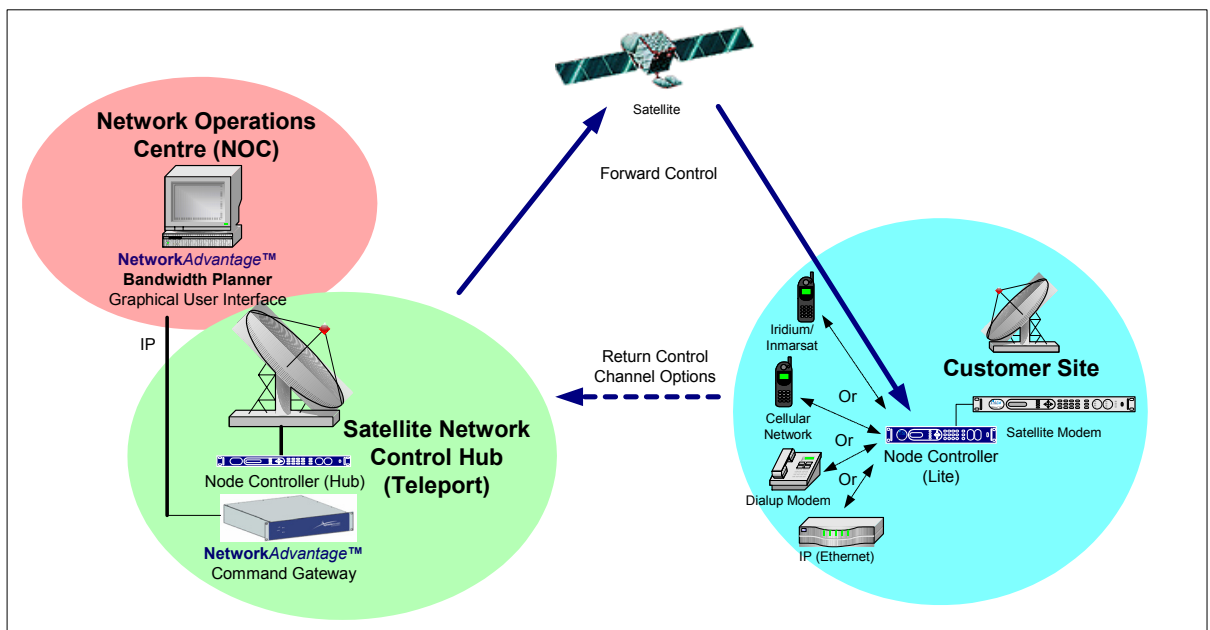
A Network Management System that provides an operator with the tools to 'groom' satellite transponders, notifies customers of the planned change(s) and executes under centralized control. The System commands remote customer site modems to change to a new frequency and modem parameter set.

The satellite network control hub communicates to customer site Node Controllers over satellite with return confirmation messages over either terrestrial or satellite transmission paths.

Simplified Grooming Process

A typical Transponder Grooming process is:

1. Plan frequency allocation to optimize bandwidth utilization
2. Upload the plan to Network Management System
3. Issue message to customers notifying of scheduled link outage and new satellite modem frequencies
4. Execute new frequency plan as scheduled
5. Confirmation message to customers



Components

Customer Site: A **NetworkAdvantage™** Node Controller is connected to the M&C port of the customer's satellite modem(s). A range of satellite modems are supported.

With forward communication over satellite, return confirmation messages are sent by one or more of the following methods (also available as an alternate control path):

- Or IP network (Ethernet connection)
- Or Dial-up modem (a telephone line and connection is required)
- Or Cellular Network (an account with a local cellular service provider is required)
- Or Iridium or Inmarsat-C data terminal (an account for data messaging is required)
- Or Satellite return control channel

Control Hub: Transponder Grooming Management System software installed on **NetworkAdvantage™** Command Gateway.

Node Controller (Hub) interfacing to control transmission method of choice.

Network Operating Centre (NOC): A PC running Graphical User Interface software and connected via IP link to the Command Gateway.

Please contact NetworkAdvantage for further enquiries.

Patent Pending

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