

The Alcatel 5660 Network Design System (NDS), formerly the Network Engineering and Design System (NEEDS)\*, is a network design tool from Alcatel that allows customers to realize maximum benefit from their investment in Alcatel products and solutions. The off-line tool can be used to design new networks or to model a network expansion.

### Network design

Designing a new multiservice network can be a daunting task. 5660 simplifies the job by integrating and automating many of the modeling techniques required to produce an efficient and reliable network design. Use the 5660 capacity planning engine to realize the infrastructure required.



An invaluable  
addition  
to your network  
management  
toolbox



## Growth planning

As you plan the growth of your network, 5660 helps to determine when the capacity of your network will be reached. You can download the database of your network into NDS from the Alcatel 5620 Network Manager (NM), formerly the 46020 Network Manager\*, simulator. You then set the expected growth parameters on all or selected sections of your network, and perform a capacity planning exercise. NDS indicates where added trunk capacity will be required.

## Network optimization and cost reduction

As the demands on your network increase, new equipment may need to be purchased. It is important to determine the equipment you actually need before making purchase decisions. The NDS optimization feature can help you to keep your network running at peak performance levels.

## Failure analysis

Without tools, performing a failure analysis on your network is extremely difficult and time consuming. 5660 quickly reports the percentage of traffic that cannot be rerouted in the case of a trunk failure by automatically simulating the failure of each trunk individually.

5660 users can also choose to simulate the failure of a group of trunks simultaneously rather than individually. This method can be used to report the effect on your network when a multiport line card or a node fails.

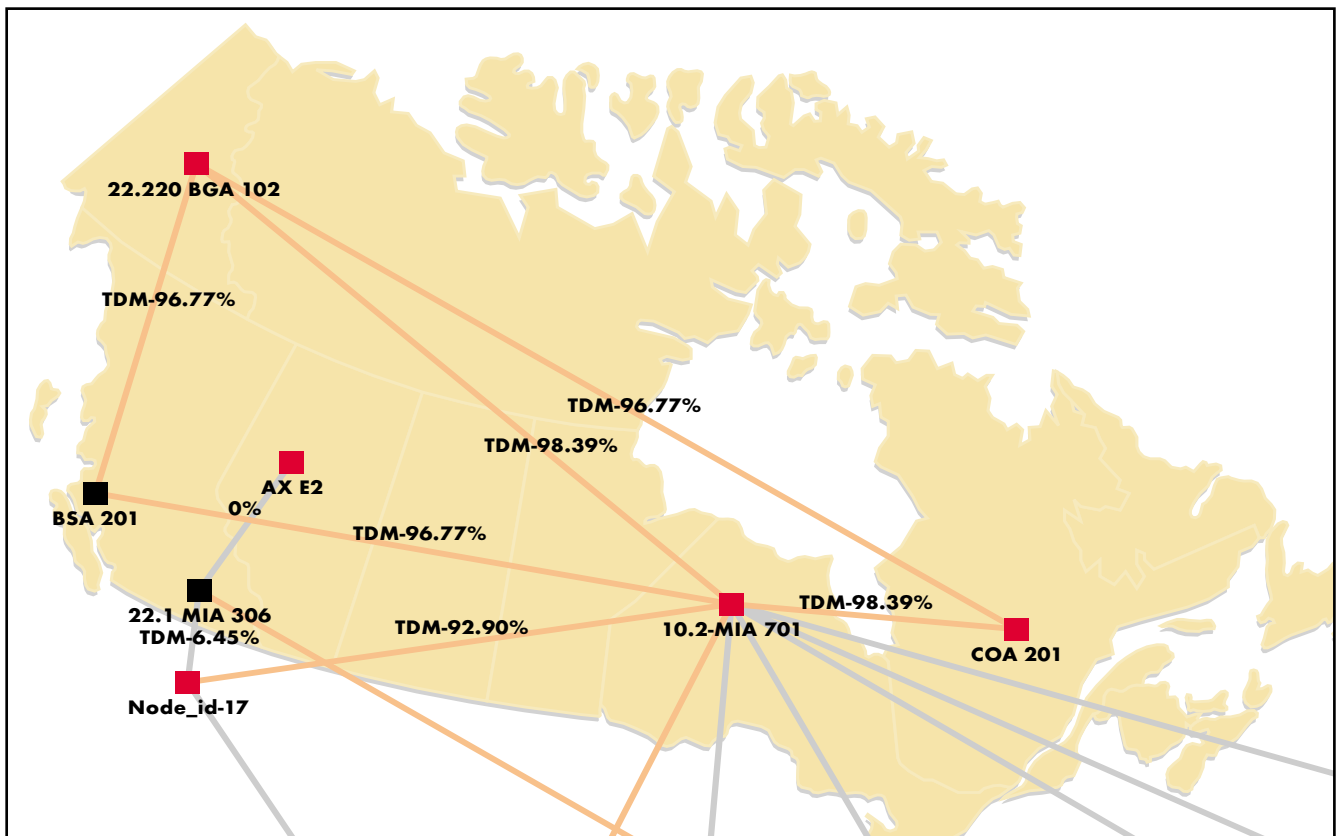
## Network visualization

The ability to visualize changes in network design is a powerful feature of 5660. The colour-coded network diagram allows you to quickly interpret potential problems with your design and to view where spare capacity is available.

## 5660 NDS Batch Mode

A complete design exercise involves many "what if" scenarios. 5660 recognizes this and offers a flexible batch mode feature that allows you to set up many scenarios and run them as one session.

### ▼ Capacity planning with 5660



## Technical Summary

### Features

- ▼ Import your existing network database into 5660 from the 5620 simulator
- ▼ Perform capacity planning on new and existing networks of up to 100,000 paths and 5,000 nodes
- ▼ Perform failure analysis on new and existing networks
- ▼ Optimize your existing network for cost savings
- ▼ View the impact of growth on your evolving network
- ▼ Reduce trunks for efficiency and cost savings
- ▼ Import new network design parameters from Microsoft Excel

### Technologies Supported

- ▼ TDM
- ▼ TDM sub-rate voice and data
- ▼ Frame relay
- ▼ Frame relay over ATM (PVCs, S-PVCs)
- ▼ ATM (PVCs, S-PVCs, SVCs)
- ▼ Circuit emulation

### Platform

- ▼ Minimum platform requirement: Sun Ultra 1 with 256 MB RAM, 8 GB hard drive
- ▼ Sun Solaris v.2.5.1 operating system
- ▼ 5620 Network Manager

### Product Compatibility

- ▼ Can import a database from 5620 (to Release 3.3)
- ▼ Supports CAC algorithm used on Alcatel 7470 Multiservice Platform (MSP), formerly the 36170 Multiservices Switch\* (to Release 4.2)
- ▼ Supports interface types used in Alcatel 7670 Routing Switch Platform (RSP), formerly the 670 RSP\*, Release 1.0, and Alcatel's 3600 MainStreet family of bandwidth managers, Release 8.0

### Visualization Reports

- ▼ Diagram of original network
- ▼ Diagram of network following a design exercise
- ▼ Trunk view between nodes
- ▼ SVC overlay topology

### Text Reports

- ▼ Traffic profiles
- ▼ Traffic routes
- ▼ Number of hops per path
- ▼ Bandwidth utilization for each link
- ▼ Rerouted traffic results for failure analysis
- ▼ Overlay links (SRL, ADPCM, FRLs, VPLs)

\* This product belonged to the Newbridge family. Newbridge was acquired by Alcatel in May 2000.

For more information [www.cid.alcatel.com](http://www.cid.alcatel.com)

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