



The heart of the network . . . A technician at TELECOM CANADA's National Network Operations Centre (NNOC), discusses a potential problem with a colleague in another part of the country.

CURRENT PLANNING

After fundamental plans are set and standards work is well underway, Telecom Canada's Current Planning group begins to implement the fundamental plans. This involves co-ordinating the activities of the member companies so that all facilities are ready on the required date, which may change from the original plan based on the availability of more accurate forecasts as the service date approaches.

This group also prepares forecasts—a critical task as inaccuracies could lead to premature capital expenditure or insufficient circuits to meet demand. Forecasting is complemented by Rates Planning, which attempts to optimize revenues by keeping the network utilization high at all times through reduced rates during off-peak hours.

ENGINEERING & INSTALLATION

When it comes to the actual engineering and installation of facilities, each Telecom Canada member company coordinates this function through their own management systems. In other words, each member company constructs its own facilities to be used for the nationwide network.

OPERATIONAL SUPPORT SYSTEMS

Of course, planning and building these network facilities is never enough. Like all man-made systems, a telecommunications network will break down if it isn't maintained. And it will never run at peak efficiency without constant management and the use of mechanized systems.

At Telecom Canada, a number of operational support systems come into play to help ensure peak operation and maintenance. These systems determine automatically the status of the major network elements. Some of the systems cover the network in general, and some cover specific sections or services.

For example, the leased facilities monitoring system (LFMS) provides information on major leases such as the bandwidth leased to Teleglobe Canada, the nation's overseas carrier, for international transit traffic.

Another system called TRIMMS (TransCanada Remote Interface Monitoring and Management System) provides real time information on major transmission facilities. This system is hierarchial, providing necessary information to the maintenance manager for action, to the provincial status centre, and to the National Network Operations Centre (NNOC) in Ottawa.

The NNOC is the heart of Telecom Canada's network management systems. Here managers work at computer terminals in front of two huge display boards. The current status of all major circuits is reflected on the boards, with more detailed information available through the terminals.

The provision of such information, at points across the country, often allows potential trouble spots to receive attention before the network is seriously affected.

OPERATIONS PLANNING

An integral part of planning new support systems is ensuring that they can be properly maintained. Operations planners are responsible for this activity and work with system developers to ensure that test methods and