MOSCAD Network Fault Management for Monitoring and Control

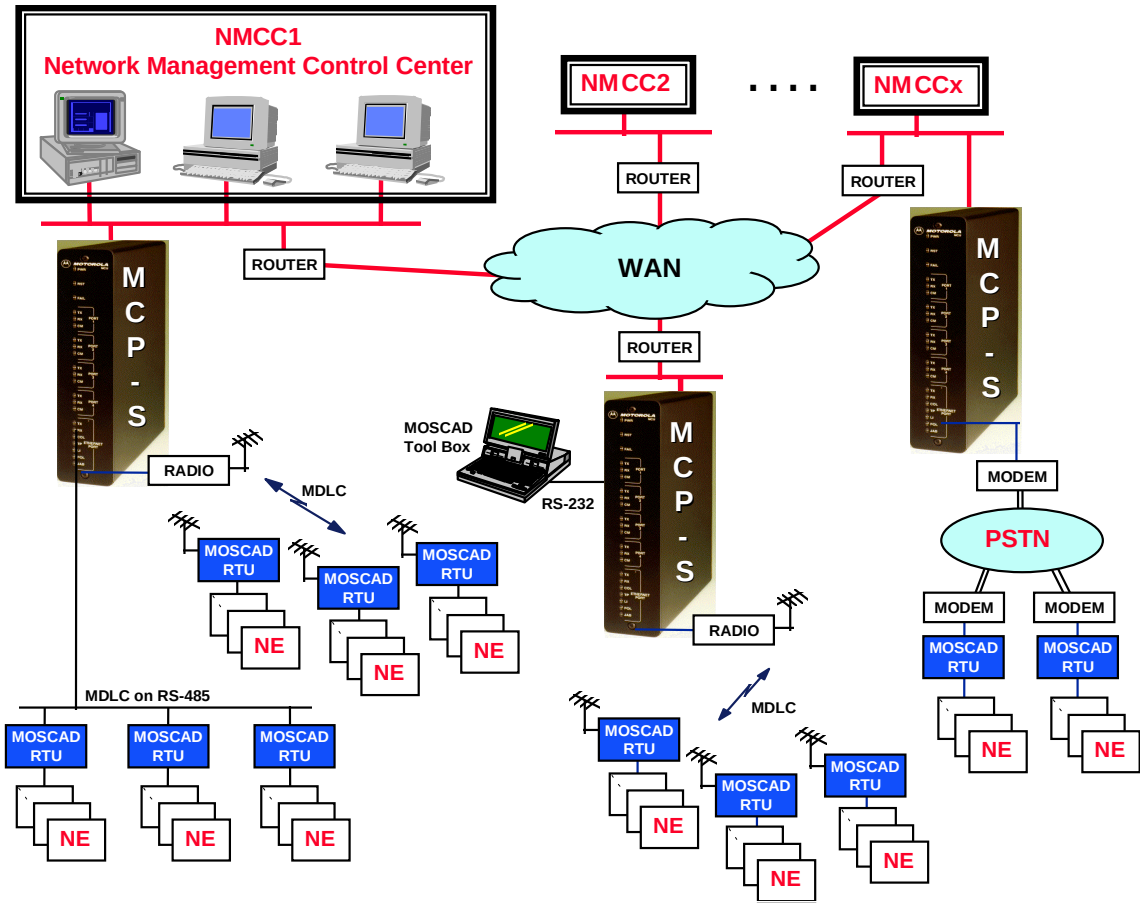
The Challenge

Communication services providers are continually adding greater capabilities and sophistication to their systems in order to meet the demands of a growing user population. Motorola's MOSCAD Network Fault Management was specifically designed to give these communication providers a cost-effective means to minimize network downtime, monitor and control remote communication and environmental devices and reduce maintenance costs.

The MOSCAD NFM Solution

The MOSCAD NFM system provides a generic solution for the supervision and control of conventional and trunked radio, analog and digital cellular, microwave radio and wired-line telecommunication systems.

It allows the operator at the Network Management Control (NMC) center to access all the network's communication and environmental devices. MOSCAD NFM also gives the operator and system manager the tools to locate, identify and repair communication system faults. The NMC features Simple Network Management Protocol (SNMP) Gateway connectivity for an industry-standard interface to a wide range of manager platforms, such as: HP/OpenView, SUN/Solstice, IBM/NetView, etc.



The SNMP Gateway, through the NFM RTU, provides the NMC manager with connectivity to the network's remote communication and environmental devices, for monitoring their status and controlling their operation. Using its various I/O (input/output) modules, the NFM RTU collects their inputs, outputs and analog signals. The RTU serially interfaces with the network's communication devices (radio, telecom and cellular) for transmission of data and events to the SNMP Gateway. It emulates the protocols of these devices, whether ASCII-based native or proprietary, to monitor operating and environmental status and alarms.

The enclosed diagram shows the architecture of a typical MOSCAD NFM system. It includes three control center computers and workstations that exchange data with the SNMP Gateways so that the NMC can monitor and control remote non-SNMP devices. The RTUs may be connected to the SNMP Gateway through various communication media, such as: TCP/IP, Ethernet/IP, PSTN wire-line, etc.

MOSCAD NFM is part of the RNSG FullVision Integrated Network Management system. This system uses the industry-leading Hewlett-Packard OpenView Manager as the fault management control center for SmartZone and OmniLink communication networks. The integration of the MOSCAD NFM with the CIG UNO Enterprise Network Manager is in process. The UNO is using SUN Solstice Enterprise Manager as the fault management control center for analog and digital cellular networks.

MOSCAD NFM adds greater dimensions of cost-effective monitoring and control for most communication networks.