



When things go bump in the night...



Next Generation Master (NGM) Alarm Monitoring System

The Next Generation Master (NGM) is an advanced, graphically oriented fault management and control system designed for the telecommunications industry. The NGM supports multiple users, multiple networks and multiple protocols all through a common intuitive user interface. The NGM automatically collects and stores alarm, status and performance data from the monitored transmission system equipment. The NGM also continuously polls remote microwave radios, lightwave equipment, switches, multiplexers, RTU's and other types of transmission equipment, ensuring that your operators always have the most current system information available.



Features:

FULL-FEATURED NETWORK MANAGEMENT

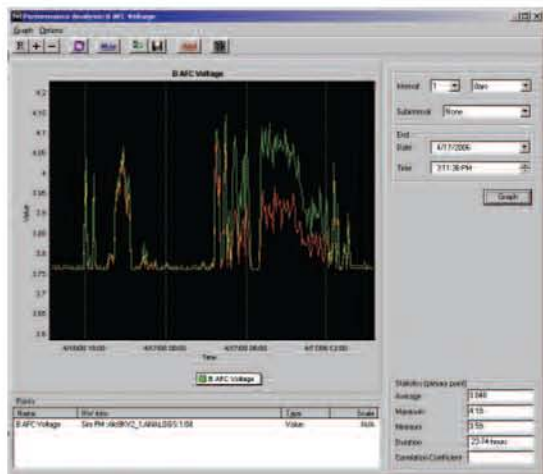
- Every event and measurement logged and displayed in real-time
- Multiple simultaneous users
- Multiple networks and equipment types
- Multiple protocols: SNMP (v1, v2, v3), TL1, MCS-11, and other protocols upon request
- Fully graphical user-interface
- Distributed client/server architecture
- Customizable network views
- Virtual composite alarms
- User-defined high/low threshold alarms
- User acknowledgement of alarms
- Controls and control scripts
- Easily add new network elements from predefined or custom templates
- Configurable assertion delays for any alarm point
- User-defined alarm severities

ASSURED SECURITY

- Required usernames and passwords
- Encrypted client/server communications
- Secure monitoring and control with SNMPv3
- Administrator-assigned network views
- Group-based user permissions
- Administrator auditing of all user actions
- Additional operating system level security

MONITORING WITH POWER AND SIMPLICITY

- Uniform, protocol-independent presentation
- Real-time, up-to-date display of all alarms, controls, and measurements
- Scalable, interactive geographic network topology map
- Entire system status at a glance
- One click to highest-severity alarm
- User-configurable graphic backgrounds and overlays
- Easy integration of equipment-specific extension software (craft, provisioning, element management)



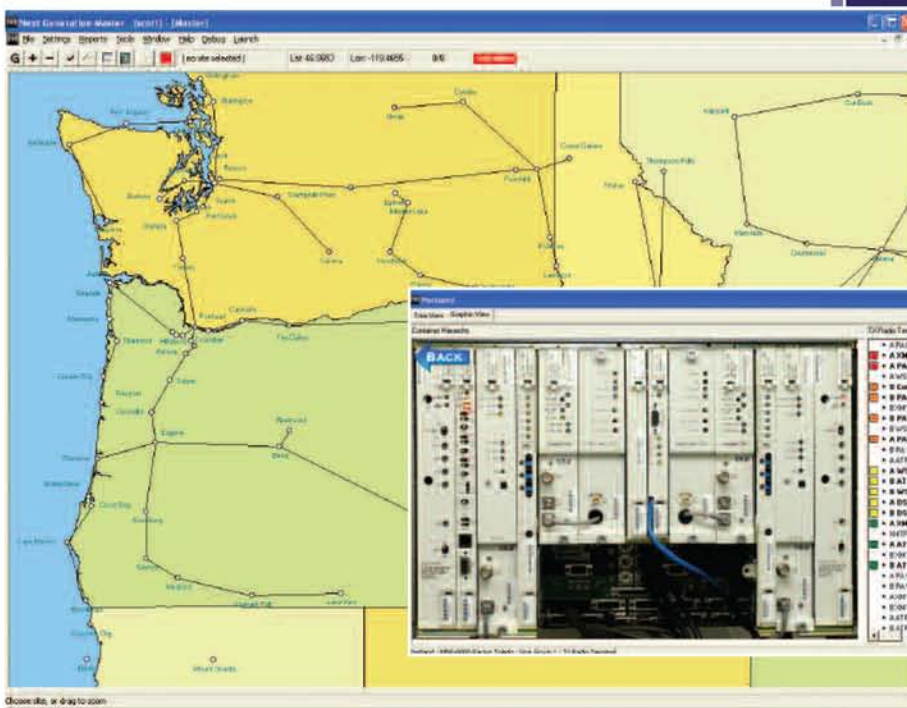
Features (continued):

STAY INFORMED, ANYWHERE

- Paging & email alarm notifications
- Real-time, synchronized alarm reporting to other managers
- Graphical web client (Q4 2006)
- Graphics- and text-based dial-up
- Phone-in voice response access
- Audible alarm alerts

TRUSTED RELIABILITY

- Linear and redundant network topologies
- Multiple active masters



- Mirrored hard drives (RAID 1)
- Hot-swappable power supplies
- Internal status and diagnostics
- Active verification of NE connectivity
- Automatic database backup whenever changes are saved
- Monitored telemetry channel health
- Active monitoring of server and client hardware and software functions

EXPERT ANALYSIS TOOLS

- Feature-rich log querying with advanced filtering
- On-demand and scheduled log reports
- Path & equipment performance reports
- One-click access to historical performance data for any point

- Intelligent performance graphing and analysis tools

- Save, print, and export results to Excel
- Alarm activity summary reports
- Real-time current alarms report, sorted by priority

SUPERIOR PERFORMANCE

- Monitor thousands of sites and NEs
- Up to 1000 alarms/sec, sustained
- Storms of over 300,000 alarm events
- Under 1 sec. latency from alarm receipt to display
- Years of on-line historical alarm and performance data
- Over 25 simultaneous users

The NGM integrates alarms and performance information from various protocols into a uniform, intuitive graphical or text display individually tailored for each user. Most popular telecom protocols are supported and others, both industry and proprietary, are available upon request. Multiple simultaneous local and remote users are standard. The customer has full control of all the most important aspects of the NGM including user privileges, graphical maps and view and SNMP alarm characterization. Critical management functions are monitored for proper operation. All network events and user activities are recorded for later retrieval.

The NGM server is available as a redundant or non-redundant configuration. The redundant configuration is a rugged 7-inch (4 RU) high, 19 inch wide, rack mount, AC powered computer chassis. It is equipped with hot-swappable RAID (mirrored) dual hard disk drives with controller and dual hot-swappable power supplies. It also includes a rack mount 17 inch LCD flat panel display, keyboard with integrated touch pad, Microsoft Windows 2003 Server O/S and Server Alarm monitoring software.

Next Generation Master (NGM) Characteristics

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| Server Operating System | Microsoft Windows 2003 Server |
| Client Operating System | Microsoft Windows XP Professional |
| Power | |
| Input Power | 120 VAC, 60 Hz (nominal) |
| Power Consumption | 275 W (server), 160 W (client) |
| Power Connection | USA NEMA 5-15P (3 prong, grounded) (Other power and connections optional) |
| Environmental | |
| Operating Temperature | 68°F (18°C) to 85°F (29°C) |
| Humidity Range | 20% to 80% relative humidity (no condensation) |
| Mechanical Conditions | No dust or vibration |
| Electrical Conditions | No electromagnetic radiation or static electricity |
| Physical Characteristics (Server) | |
| Shelf Size | 26.25" H (15 RU), 19" W (nominal), 23" D |
| Rack Mounting | Flush (keyboard shelf can be extended) |
| Monitor | Rack Mount 17" LCD |
| Remote Access and Notification | |
| | E-mail notification |
| | Paging notification |
| | Remote IP graphical or text alarm access |
| | Web-based interface, Q4 2006 |

Fial Incorporated is a responsive business partner with a solid commitment to quality and customer satisfaction. Since 1978, we have operated with one basic objective: to provide functional, cost effective solutions while maintaining strong communication with our customers.

The NGM is a continuously evolving product. At Fial Incorporated, custom solutions are readily encouraged. We excel at responding to your unique requirements. We are ready to assist you with modifications or enhancements to solve the challenges of your specific network or proprietary protocol.

The Next Generation Master Your Solution to Multi Protocol Management

The NGM is a high-reliability, modern Communications Network Manager. The NGM natively supports SNMP, TL1, Alcatel MCS-II, Harris FarScan[™], and the Badger 481 protocol. This cost-effective solution to monitoring your network offers you communication access to the most prevalent microwave radios in the industry.

Multiple protocol support affords your company the ability to replace your existing RTUs with modern Fial SNMP remotes as your budget allows.

The NGM integrates alarms and performance information from various protocols into a uniform, intuitive graphical or text display which can be individually tailored for each user. While the most popular telecom protocols are supported, we are eager to add support for any protocols you have in your network.

KEEPING YOU INFORMED

Not only does the NGM implement an advanced paging and email alarm notification system, it also provides optional features like the Interactive Voice Response and Web Interface so that technicians will have full alarm notification when they are away from the NOC.

EASY DEPLOYMENT TOOLS

Fial Incorporated can provide custom wiring pigtails based on your current RTU wiring scheme to assist you in the deployment of its SNMP remotes. This relieves you of the burdensome task of changing the wiring scheme for the new remotes.



WHY CHOOSE FIAL

Fial Incorporated provides an effective solution to upgrade a legacy network management system without wholesale replacement of the existing network. Modern new SNMP encoders can replace legacy equipment as desired. The NGM will monitor both the Legacy and SNMP remotes, providing a common interface to both.

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NGM WEB INTERFACE

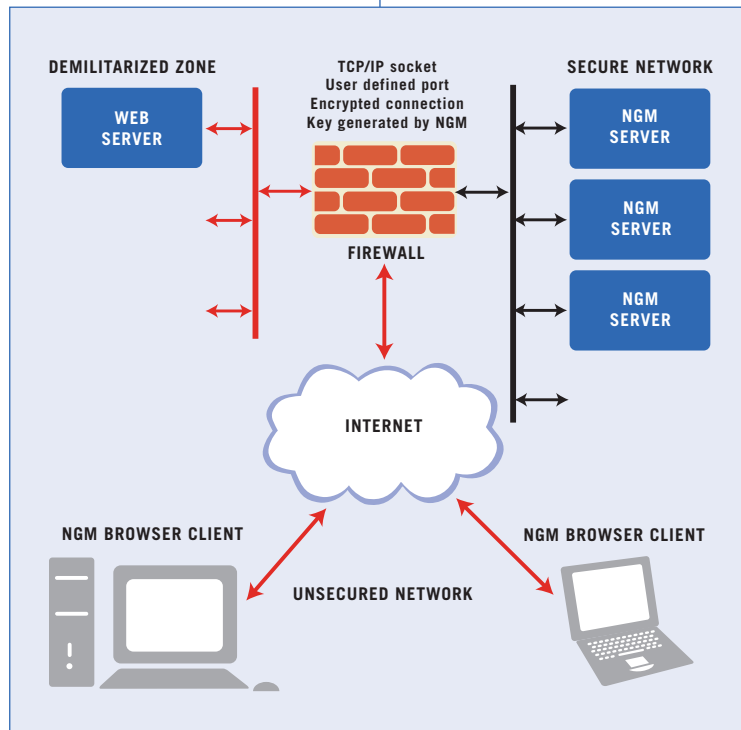
If you need remote visibility, you can use this optional feature to access your network where ever you have internet access. The Next Generation Master (NGM) Web Server is a separate program that runs independently of the NGM Server. It communicates with the server over a TCP/IP socket using a single port. The NGM Web Server program can reside on either the same computer as the NGM Server program or on a completely different computer (depending on your security requirements). A single Web Server program handles all Web browser-based Client connections.

Browser-based NGM Clients communicate only with the Web Server program. They obtain all network status data, issue controls and acknowledge alarm events only through the Web Server program. Output from the NGM Web Server consists of HTML, JavaScript, and CSS (Cascading Style Sheets). Access security is provided at two levels: the standard NGM Client user log-in and password security, and optionally an SSL (Secure Socket Layer – 128 bit) connection. The SSL connection provides secure communications between the NGM Web Server and the Web browser Client. For SSL connections, the Web Server program can generate a custom SSL certificate itself (preferred method), or a certificate may be obtained from a trusted source. A certificate is required by the Web Server program if SSL communications are enabled.

PHONE-IN VOICE RESPONSE ACCESS

Using this unique, optional add-on feature, technicians out in the field can access the current state of the network using telephone dial-up to the NGM server's Interactive Voice Response system. Entering a six digit pin number is required to gain access to the system. Each user has his own configurable pin number which can be changed to promote security. After successfully

logging in, the user will hear a quick summary of current alarm conditions. From there, menu driven access to various functions is provided. The user may listen to prioritized lists of either asserted or unacknowledged alarms. If permitted a user may acknowledge unacknowledged alarms. At any point in which a current record or menu is being read, the user



may skip to the next record or navigate through the menu system. Combined with the advanced paging system, the IVR provides a powerful tool for remote supervision of the network.