Almost Anything is Remotely Possible:
Network management tools bring the information highway to the PSAP
By David Wilson

With apologies to Aldous Huxley, Big Brother is alive and well, and is beginning to watch over PSAPs across the United States. Not to worry, this is not the Big Brother of 1984 fame. We're talking Big Brother-like technologies that allow technicians to look into PSAP operations from a remote location and ascertain just about everything that's going on-except what kind of sodas the call-takers are drinking (actually, with an installed Web-cam, we can do that, too).

Remote monitoring and maintenance is here. Today's Windows NT PC-based intelligent workstation systems are not only offering more functions and more flexibility, they are providing the framework for an array of services that ultimately save time, money and human resources.

Sophisticated new network management tools such as Compaq's Insight Manager, Hewlett-Packard's TopTools, or Open View, coupled with Microsoft BackOffice System Management Server (SMS), provide the platform.

The result is remote system monitoring and maintenance on a much larger scale than ever before. The advantages are multi-fold: enhanced support capabilities, significantly lower maintenance costs and higher system availability because of less downtime.

"Remote access and monitoring is a powerful alternative to conventional maintenance services, " says John K. Fuller, vice president of marketing for Plant Equipment, Inc. (PEI). "It's an all-new delivery system that opens the door to a wide range of possibilities, all of which improve efficiencies in the PSAP."

According to Fuller, PEI has developed Mission Control, a remote monitoring and maintenance service based on standard hardware network protocol and a suite of custom applications. It is designed to provide PEI customers with 24-hour remote maintenance and monitoring by specially trained technical service personnel who oversee the real-time health, configuration and status of the company's system. From PEI's Network Operations Center (NOC) technicians can generate scheduled performance reports, detect software or hardware malfunctions to the component level, implement diagnostic and troubleshooting procedures, and distribute software to installations anywhere in the United States.

Fuller says the PEI workstations configured in-factory have the manufacturer-provided Simple Network Management Protocol (SNMP) agent activated so that platform and application messages are reported to a local SNMP manager located on the site's server. Constant polling of all local nodes, achieved through a Network Management tool (either Compaq Insight Manager or HP TopTool), detects failures of PCs and other manageable devices.

At PEI,SNMP traps and NT events are parsed and alarm conditions are set according to their impact on the system. Critical, Major, and Minor alarms are sent, in the form of ASCII test messages, using a dial-up or dedicated link to one or more centralized Alarm Center. The exact format and protocol of the message can be programmed to meet the needs of various Alarm Center.

If the Alarm Center is remote and WAN connectivity is provided, an agency can use Point to Point Tunneling Protocol (PPTP) to establish a Virtual Private Network (VPN) over the Internet directly from the site or through a Communication Hub that can concentrate clusters of local PSAPs.

Remote maintenance can include such operations as "injection," in which hot fixes, service packs and even complete images of the operating system can be uploaded to a system form a remote location. This saves valuable travel time, not to mention money. On-site cameras can be used to coordinate maintenance activities and facilitate on-line Net-meetings. Remote access networking tools also allow automatic Crystal reports to be created and viewed from a secure Web site.

"The potential for this type of technology is virtually unlimited." says Fuller. "We are on the cusp of a major change in technical support protocol, and it's all good news. Better support, less downtime, more efficient upgrade-this is the future."