



Using PageMate® V3.3 with HMI/SCADA Plant Automation Systems

PageMate has long been the paging engine of choice for use with plant automation systems. PageMate Version 3 provides new capabilities for message delivery, tracking, response and escalation.

PageMate has been providing robust and reliable electronic messaging service for network monitoring and plant automation systems for many years. From its inception, PageMate has provided unique capabilities to support messaging from SCADA and processes automation systems that can impose variable and unpredictable demands in message volume. PageMate's client-server architecture and unique multi-threaded message queuing services meet the test of providing robust and reliable messaging to pagers, digital telephones, in-plant radio and paging systems and other portable messaging devices from heterogeneous networks of Windows, UNIX and OpenVMS systems.

During the last decade, the development of new technologies for electronic messaging and digital communications, together with the explosive growth and popularity of the Internet, demanded that we take a fresh look at the services and messaging support provided by PageMate and the services that PageMate provides for HMI/SCADA systems users. PageMate Version 3 takes advantage of automation techniques and new communications and messaging technologies to provide

- ✓ options for message delivery using a wider variety of media and technologies, including telephony and speech synthesis, e-mail and web browsers;
- ✓ support for two-way or round-trip messaging with options for message tracking and automatic escalation;
- ✓ capabilities to associate messages on the basis of process, alias name or alarm number, providing both subscribers and management with options to display and review related messages and activity; and
- ✓ improved tracking and audit trail to help manage messaging resources and quickly identify any problems that might arise with message delivery services.

The techniques and technologies used to provide these services in PageMate Version 3 are described in detail in documents available from Systemetrics' web site at <http://www.system.com>. In this brief white paper, we would like to describe from the viewpoint of an HMI/SCADA installation some of the services and configuration options for PageMate Version 3.3.

PageMate Automated Messenger (PAM) Server supports a variety of capabilities that can be customized to serve the unique needs of SCADA applications, including

- ✓ capabilities to deliver messages spoken in English using text-to-speech synthesis to telephones, in-plant radios and public address systems;
- ✓ capabilities to filter, route and deliver messages in different ways based on things like the time of day, day of the week, content of the message, or other site or application-specific criteria;
- ✓ network access to PageMate via web browsers; and
- ✓ capabilities for message tracking, response and automatic escalation.

The text-to-speech functionality in PageMate Automated Messenger is based on and incorporates speech synthesis technology originally developed for DECtalk, a product of Digital Equipment Corporation. The telephony functionality in PageMate Automated Messenger is based on technologies that are more broadly supported today on Windows as compared to UNIX and OpenVMS, and it is for this reason that PageMate Automated Messenger Server is supported on Windows only. But PageMate is a client-server application, and messages are sourced on clients rather than servers. PageMate's client functionality, including the Application Program Interface (API), Command Line Interface (CLI) and Graphic User Interface (GUI) are client functions that are supported on Windows, UNIX, Linux and OpenVMS. In HMI/SCADA environments, therefore, PageMate can be configured to work with plant automation software running on Windows, Sun Solaris, HP-UX, Linux or OpenVMS. PageMate Automated Messenger Server must be installed on a Windows platform, but it does not have to be co-resident with the HMI/SCADA, monitoring or dispatch application that it serves.

Configuration options for PageMate Automated Messenger Server include Voice Connector, Electronic Mail Connector, and Web Connector. Each connector provides support for electronic messaging in conjunction with a particular technology or message delivery medium.

PageMate Automated Messenger provides support for messaging to electronic pagers, PDAs and digital telephones using TAP, PET, DTMF, SMS, WCTP, SNPP, TNPP, SMGP, SMFC and BCOM protocols as a part of its core functionality in

every configuration. Multi-threaded message queuing services with message tracking and audit trail are also provided in all PageMate configurations. For mission-critical applications, the software can be configured to provide support for e-mail error notification, fail-over e-mail, and redundant servers with automatic server fail-over. Programmed message delivery, delivery confirmation and response, telephony and radio interfaces, interactive voice response, and automatic escalation are features unique to PageMate Automated Messenger.

The latest PageMate software builds and distributions, updates, documentation, application notes and product news, together with technical support resources, can be found on the PageMate website at <http://www.pagemate.com>. Systemetrics welcomes and encourages your feedback and suggestions about our software, documentation, services and support. You are invited to call us with personal suggestions or send e-mail to support@pagemate.com.

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