RELEASE NOTES

PageMate Version 3.3 provides new functionality in PageMate Server while maintaining compatibility with earlier Version 3 Clients. While a PageMate V3.3 Server will support operation with any V3.x Client, functionality that requires cooperation with clients will be limited to the functionality of the Client. Although a PageMate V3.3 Server will accept and dispatch messages up to 1,000 characters in length, for example, operation in conjunction with a V3.2 Client will be limited to 500 characters.

New Maximum Message Length

PageMate V3.3-0 doubles maximum message length in comparison to all earlier versions. PageMate V3.3 Servers and Clients will support messages up to 1,000 characters in length in all contexts except profile messages and responses. Profile messages and responses continue to be limited to 500 characters.

Status Parameter in Subscriber Records

PageMate Automated Messenger (PAM) Server V3.3-0 provides new support for status in subscriber catalog records. Although subscriber catalog records have included a status parameter since PageMate V3.1-0, the parameter supports new values and functionality in PAM configurations beginning with V3.3-0. Status can now have any one of five values, including Active, Forward, Copy, Inactive or Disabled. Messages submitted for delivery pursuant to a subscriber record will be dispatched by a V3.3 PAM Server as follows:

- **Active** means deliver pursuant to the specifications for network, PIN and e-mail provided in the original subscriber record, ignoring forward-to.
- **Forward** means deliver pursuant to specifications provided in the subscriber record of the forward-to parameter in the original subscriber record in lieu of delivery under the original subscriber record.
- **Copy** means deliver pursuant to specifications provided in the subscriber record of the forward-to parameter in the original subscriber record in addition to delivery under the original subscriber record.

- Both **Inactive** and **Disabled** mean do not deliver pursuant to specifications provided in either the original subscriber record or the record of the forward-to subscriber, if any. The only difference between Inactive and Disabled is that an authorized subscriber operating via the PageMate Web Connector can change the status of his own subscriber record between Active and Inactive, but only an Administrator can set or remove Disabled status.

Some of the ways in which subscriber status may be used include:

- Messages submitted to a subscriber name may now be delivered in an unlimited number of ways, to different pagers, cell phones and e-mail addresses.
- The forward-to chain that specifies how messages submitted for a subscriber are ultimately delivered can be edited and maintained interactively, programmatically via standard API functions, and via catalog export/import operations.
- Authorized subscribers can edit and maintain their own catalog records, including forward-to parameters of any records they own. Without authority, they may not be able to edit the forward-to parameters of records they do not own. JohnDoe may, for example be able to forward his messages to MarySmith, but may not be able to control what happens to the message after it is forwarded to MarySmith. On the other hand, JohnDoe might own and maintain control over other subscriber records, including JohnDoePager, JohnDoeCell, JohnDoeBlackberry and JohnDoeEmail.
- Subscriber records in a forward-to chain can be functionally included or excluded individually (for purposes of message delivery) without deleting the records from the catalog.
- The presence of another subscriber name in the forward-to field of a subscriber record is no longer a sufficient condition to cause forwarding to occur. The specification provided in the forward-to field of a subscriber record will now have no effect unless the status field specifies either Forward or Copy.
- Subscriber records can forward to other subscriber records only. A subscriber record cannot forward to a group or a profile.
- Forwarding is enabled by default but can be disabled by setting FORWARD_ENABLE to FALSE in the PageMate\Server Registry hive.

Groups of Groups

In PAM Server configurations, groups can now include both subscribers and other groups as members. Groups of groups functionality is enabled by default on PAM Servers, but can be disabled by setting GROUPS_OF_GROUPS to FALSE in the PageMate\Server Registry hive.

PAM Server V3.3 builds a composite subscriber recipient list for any message submitted to a group, and removes duplicates prior to delivery. If JohnDoe, for example, is a member of more than one group in a group of groups, the message will be delivered once only to JohnDoe and all forward-to recipients.

New E-Mail Functionality

PageMate V3.3 on Windows provides significant new options for sending electronic mail in comparison to earlier versions. In a nutshell,

Corporate Publications Group
Systemetrics, Inc.
153 Lexington Avenue
Cambridge, Massachusetts 02138 USA

PageMate V3.3 on Windows can provide the functionality of a Message Transfer Agent (MTA), allowing PageMate to route e-mail on the public Internet directly to the SMTP server that will accomplish ultimate delivery to the message recipient. An option to support SMTP Authentication (*a la* RFC 4954) is also provided. More information about this and about the history of e-mail services in PageMate is provided in Application Notes for V3.3 in the Documentation section of the PageMate website (www.pagemate.com) and in the Doc directory of any PageMate V3.3 Server.

CLIENT_CATALOGS

The default value of CLIENT_CATALOGS in the PageMate\Server Registry hive has changed from TRUE to FALSE. Support for user private catalogs, created and maintained by and on behalf of an individual user on a PageMate Client system, will now be disabled unless explicitly enabled via both CLIENT_CATALOGS on the PageMate Server and LOCAL_CATALOGS on the PageMate Client.

Queue Monitoring

Minimum values and scale factors used with queue monitoring thresholds have changed in PageMate V3.3 in comparison to earlier versions. The changes affect the definition and use of SERVICE_AGE parameters, and are intended to allow queue monitoring to be more responsive in an environment where messages are now typically being dispatched more rapidly. Changes include:

- The minimum value of SERVICE_AGE_WARNING has changed from 10 to 5. The default value (10) remains the same.
- The minimum value of SERVICE_AGE_LIMIT has changed from 10 to 5. The default value (20) remains the same.
- The scale factor used to determine the effective value of SERVICE_AGE parameters for direct-connect service threads has changed from 2 to 5.
- The scale factor used to determine the effective value of SERVICE_AGE parameters for IP socket service threads has changed from 4 to 10.

Sites that have implemented queue monitoring using SERVICE_AGE parameters and are upgrading to PageMate Server V3.3-0 from an earlier version are urged to review these changes with respect to current SERVICE_AGE thresholds and make any necessary adjustments before completing an upgrade. Additional information and detail is provided in the PageMate Version 3.3-0 User's Guide.

New Restart Option

A new SERVICE_AGE_RESTART Registry key in PageMate Server V3.3 can be used to trigger a restart of PageMate Server in conjunction with queue monitoring pursuant to SERVICE_AGE criteria.

In earlier versions, SERVICE_AGE_SHUTDOWN provided an option to automatically shut down PageMate Server when a SERVICE_AGE_LIMIT threshold was exceeded. PageMate Server V3.3-0 provides both shutdown and restart options, with restart taking precedence if both are specified.

badpin.log

Whenever a WCTP paging service provider rejects a message because the subscriber ID provided with the message was invalid, a single-line entry will be appended to a file named 'badpin.log' in the PageMate Logs directory. The logfile entry will list the date and time, PageMate subscriber name, subscriber ID and name of the network that rejected the message.

If badpin.log exists, it means that at least one attempt has been made to submit a WCTP message to a subscriber ID that is unlisted, unknown or otherwise invalid at the paging service. After resolving problems with listed subscribers, this file should be deleted. As with all log files, PageMate Server will automatically create the file again when needed in the future.

This logfile is currently provided for WCTP messages only because WCTP is the only protocol that clearly identifies to PageMate (in a consistent manner) that the reason for rejecting a message was invalid subscriber ID.

New Support for SMPP

PageMate Automated Messenger V3.3 provides new support for SMPP (Short Message Peer-to-Peer) Protocol. SMPP was developed in Ireland more than 20 years ago to provide a means of exchanging SMS messages between servers in SMSCs (Short Message Service Centres). SMPP was designed and intended for use in transferring messages in bulk between servers, server-to-server (peer-to-peer) in and among service providers. It was not designed or intended for use in client-to-server (customer-to-provider) applications, but some service providers now accept SMS messages submitted from customers via SMPP on the public Internet.

PageMate V3.3 provides new support for a PAM Server acting as an ESME (External Short Message Entity) to submit mobile-terminated SMS messages to SMSCs (Short Message Service Centres). In short, you can now use a PAM Server, Version 3.3-0 or later, with a network connection to the public Internet to submit text messages to cell phones via any service provider that supports access via SMPP.

That said, it should be noted that the discretion of service providers to support access to their servers via SMPP varies widely and is typically not open and available to the general public.

Username/Password for WCTP, SMPP and SNPP

PageMate V3.3 supports new options for network-specific usernames and passwords with selected protocols. PageMate V3.2 supported network-specific passwords and a single site-specific (rather than network-specific) username defined via a Registry key for WCTP only.

PageMate V3.3 provides support for both usernames and passwords defined via network records for WCTP, SMPP and SNPP (including SN2P, its two-way variant). PageMate Administrator GUI now provides text fields for interactive specification of network-specific usernames and passwords for WCTP, SMPP and SNPP networks. The username text field, labeled "Network Username", is new and replaces the "Setup String" field, which was not used and appeared disabled for networks with these protocols. For compatibility with earlier versions, WCTP in V3.3 will continue to derive username from the WCTP_PATH Registry key when a value for WCTP_PATH is provided and Network Username is blank.

The matter of usernames and passwords, particularly with WCTP, can be confusing, so a little "more than you thought you wanted to know" about this may be helpful. A message that has been encoded for submission via WCTP includes a parameter known as senderID that is defined in the protocol for the purpose of specifying the return address of the system submitting the message. The protocol also provides for an optional parameter known as securityCode that is defined in the protocol for the purpose of providing a way to authenticate the submitting system. senderID was (and is) intended to be used to specify the network address of the sender, but some paging service providers are now using it to specify a username to authenticate the sender.

PageMate V3.3 supports three parameters for WCTP networks, one that is system-wide and two that are network-specific, that can affect the values that are encoded and provided to the paging service under senderID and securityCode. The system-wide Registry parameter WCTP_PATH, which should always be defined, will be provided to the paging service as senderID when no Network Username is defined in the network record (in networks.dat). When a Network Username is provided in networks.dat, it will be encoded as senderID in lieu of the value in WCTP_PATH. When a password is defined in the network's catalog record, it will be provided to the paging service as the WCTP securityCode. In the absence of password, no securityCode will be provided with the message.

SMPP and SNPP are similar and a little easier because there is no Registry parameter to worry about. If either or both Network Username and Password are defined in a catalog record for an SMPP or SNPP network, they will be provided to the network service provider. Otherwise not.

PageMate limits Network Username to 20 characters and Password to 15 characters. Protocol limits may be different. SMPP, for example, limits Username (also known as system ID) to 15 characters and password to 8 characters. Both parameters are case-sensitive.

Tracking Catalog Changes

PageMate Automated Messenger V3.3 provides new support for tracking changes to subscriber, group and profile catalog records. The CHANGELOG Registry key enables this support.

When CHANGELOG is TRUE, changes made or attempted to subscriber, group and profile catalog records will be reflected in single-line delimited text entries in monthly log files named `changelog_`*`yyyymm`*`.log`, where *`yyyy`* is the 4-digit year and *`mm`* is the 2-digit month when the change was made or attempted.

Each single-line plain text entry reports seven parameters, delimited by pipe (|) character (0x7C). The parameters are:

timestamp	14-chracter UTC timestamp as `yyyymmddhhmmss`
action	action performed (*e.g.*, add, delete, update)
object_type	record type (*e.g.*, subscriber)
object_name	record name
where	hostname where change performed
who	username performing change
result	result (*e.g.*, success or failed)

PageMate does no reporting from Changelog history files, but rather writes the data in a form suitable for sorting and reporting by spreadsheet or other site-specific applications.

New Support for MTMP

PageMate Automated Messenger V3.3 provides new support for MTMP, MOTOTRBO Text Messaging Protocol. MTMP supports text messaging to Motorola MOTOTRBO radios. MOTOTRBO is a professional two-way radio system that supports both mobile (in-vehicle) and portable (hand-held) radios transmitting both voice and data using TDMA (Time-Division Multiple Access) digital technology. Additional information is provided in the PageMate V3.3 User's Guide and Application Notes.

Administrator CLI

PageMate Administrator Command Line Interface (CLI) supports both entirely new and previously undocumented functionality in V3.3, as described in Chapter 3 (Administrator CLI) of the new PageMate Developer's Guide.

COM+ Interface

Parameter lists to a few catalog functions in the COM+ Interface have changed effective with PageMate V3.3. Users who have written applications using the PageMate COM+ Interface will want to review the Developer's Guide for changes in parameter lists for Catalog.Find and Catalog.Add with recordtype=subscriber and recordtype=group.