

MAINTENANCE TECHNICAL SUPPORT CENTER
HEADQUARTERS MAINTENANCE OPERATIONS
UNITED STATES POSTAL SERVICE



Software Modification Order

SUBJECT: Mailing Evaluation, Readability, and Lookup
INstrument (MERLIN) Software Version
07.10.00

DATE: June 21, 2012

TO: All MERLIN Sites

NO: SMO-024-12
FILE CODE: A9

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This Software Modification Order (SMO) **supersedes SMO-013-12** (Version 07.08.00-02) and provides information about MERLIN Version 07.10.00 application software for all MERLIN machines. This release contains software changes that impact MERLIN error messages, name lines in Address Quality Messages (AQM), Intelligent Mail Barcode (IMB) test pieces required in System test run, overwrite details and description, Catalog (CT) mailing type, GUI interface, user operation, reports and package installation. This bulletin applies to Acronym MERLIN Class Codes AA and AB.

The purpose of this SMO is to provide a summary of the Mailing Evaluation, Readability, and Lookup Instrument (MERLIN) and its impact on operation and maintenance. This document contains information concerning existing known problems, release notes, software installation procedure, post installation verification / validation and recovery procedures.

The MERLIN software in this release will be automatically downloaded and installed into MERLIN units from MERLIN Maintenance and Operations Database (MMOD) server. The MMOD Administrator will set up the download and installation effective dates, and select the appropriate MERLIN units to receive the new software. On June 21, 2012, the selected MERLIN units will automatically install the new MERLIN software. During the software download and installation process, no user interaction from operators or maintenance will be required. The entire software download and installation process takes approximately two hours and occurs overnight when the machine is not in use.

There is no need to perform any post installation verification procedures. The installation and verification of software releases are managed and monitored at the server level by the MMOD Administrator. When an operator or maintenance user logs onto a MERLIN Processing Computer (MPC), the splash screen will display the software version information at the bottom of the screen. Maintenance should perform MERLIN specific maintenance activities at the next regularly scheduled time.

Catastrophic recovery procedures for MERLIN software releases are handled by the MMOD Administrator. In the event a remote recovery of the software fails, maintenance will be instructed to initiate a drive replacement.

Direct any questions or comments concerning this bulletin to the MTSC HelpDesk, online at <http://mtsc.usps.gov/apps/remedyticket/index.cfm> or call (800) 366-4123 or (405) 573-2123.



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- Attachments:
1. Mailing Evaluation, Readability, and Lookup INstrument (MERLIN)
Version 07.10.00
 2. Release Evaluation Form

ATTACHMENT 1

**MAILING EVALUATION, READABILITY, AND LOOKUP INSTRUMENT (MERLIN)
VERSION 07.10.00**

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1. SCOPE

This Software Modification Order (SMO) provides information for the Mailing Evaluation, Readability, and Lookup Instrument (MERLIN) Version 07.10.00, including a summary of software changes and their impact on operation and maintenance.

1.1. IDENTIFICATION

Project Name: Mailing Evaluation, Readability, and Lookup Instrument
Acronym: MERLIN
Version: 07.10.00
Release Date: June 30, 2012
Recipients: United States Postal Service (USPS) Engineering, Maintenance
Technical Support Center (MTSC), and all installed MERLIN sites.
Installation Date: July 1, 2012

1.2. SYSTEM OVERVIEW

Verification and acceptance are the first steps in processing presorted mailings. The MERLIN system was developed to perform a majority of mail verification functions, including but not limited to mail count, presort verification, barcode readability, address correctness, and documentation verification. The MERLIN transport has three major sections:

- The feeder section is responsible for mail input and separation. That is the input end of the MERLIN system. After the mail input, mail enters into the processing section where mail attributes are collected for presort analysis.
- The middle section is the processing section consisting of a scale, Image Lift Transport and the Identifier (ID) printer. The line-scan camera with its illumination unit captures image data. The thickness detector is located at the exit of the Image Lift Transport. An identification number is printed on every mail piece processed by MERLIN to correctly identify any problem piece found during the run.
- The stacker section is the last section containing one bin for accumulating the mail pieces.

The MERLIN Processing Computer (PC) (MPC) has two main software applications required for MERLIN functionality. These software applications in the MPC are referred to as the Imaging Processing software as the Imaging Process Application (IPA) and the Control Graphical User Interface (GUI) software as the Control Process Application (CPA).

The IPA consists of the camera interface for image capture and analysis. The CPA is responsible for coordinating the input and output process in MERLIN. All peripheral devices including the IPA send their output results to the CPA for final presort analysis.

Project Sponsor: USPS Headquarters, Business Mail Acceptance
 User: USPS Business Mail Entry Unit (BMEU) and Detached Mail Unit (DMU)
 Developer: Bell and Howell (BH)
 Maintenance Organization: MTSC

1.3. DISTRIBUTION

Current Sites: None
 Planned Sites: All installed BMEU and DMU
 Pre-Beta Site(s): Baltimore BMEU, Baltimore MD
 Baltimore Corporate Mailing Services DMU, Baltimore MD
 Dulles BMEU, Dulles VA
 DMU, VA
 Immediate Mailing Services DMU, Dulles VA
 Merrifield BMEU, Merrifield VA
 Suburban MD BMEU, Gaithersburg MD
 Suburban MD ProList DMU, Gaithersburg MD
 Beta Sites: Augusta Quebecor World DMU, Evans GA
 John Roberts DMU, Minneapolis MN
 Martinsburg, WV Quad DMU, Martinsburg WV
 Pewaukee Quad Graphics – Sussex DMU, Sussex WI
 Quad Graphics – Hartford DMU, Hartford WI
 Saratoga Springs Quad Graphics DMU Saratoga Springs, NY
 South Florida BMEU, Pembroke Pines FL
 Distribution Process: The MERLIN software in this release will be automatically downloaded and installed into MERLIN units from MERLIN Maintenance and Operational Database (MMOD) Server.

1.4. SYSTEM IMPACT

This release contains software changes that impact MERLIN error messages, name lines in Address Quality Messages (AQM), Intelligent Mail Barcode (IMB) test pieces required in System test run, overwrite details and description, Catalog (CT) mailing type, GUI interface, user operation, reports and package installation.

1.4.1. Operations Impact

There are no operational benefits / changes in this release.

1.4.2. Maintenance Issues

The MERLIN system must be running MERLIN 07.08.00-02 or higher software version with .NET Framework 3.5 SP1, Windows XP Service Pack 3 and have CASS N tables installed in order for the automatic installation of new software to be successful.

1.5. SYSTEM DEPENDENCIES/INTERFACES

1.5.1. System Dependencies

MERLIN version 07.10.00 software is a full baseline release and it can only be installed onto the MPC. For the automatic download of this software from MMOD, the MPC is required to have MERLIN software version 07.08.00-02 or a higher version already installed on it. MERLIN version 07.10.00 software is compatible with MMOD Server version 5.04.00 software. This software requires current Postal Tables for proper functionality. Any outstanding Continuous mailing jobs must be closed before the installation of new software.

For MERLIN systems to receive MERLIN Software Packages (MSP) and request for Walk Sequence / Enhanced Line of Travel (eLOT) analysis from the MMOD Server, the MERLIN system and the MMOD Server must be connected on the same network.

1.5.2. Interfaces

MERLIN interfaces to the following external systems over the USPS network:

- USA Domain
- Remote Test and Diagnostic System (RTDS)
- MMOD Server
- USPS File Transfer Protocol (FTP) Job Archive Server

2. VERSION DESCRIPTION

2.1. MATERIALS RELEASED

A physical release kit will not be provided for this software modification. The MERLIN software in this release will be automatically downloaded and installed into MERLIN units from the MMOD Server.

2.2. SUMMARY OF CHANGES

MERLIN 07.10.00 is a full baseline release. The software changes incorporated in this release since the previous release are listed below.

- Double Use of Line Information for Names – MERLIN software has been modified to not reuse an identified name line. A name line identified for use as one AQM field will not be reused as another field.
- Name Line Above Optional Endorsement Line (OEL) – MERLIN software has been modified to not use any line above OEL as name line candidate in the AQM.
- Generic Name Matching – MERLIN software has been modified to ignore spaces when performing generic name matching for the name line field in the AQM.
- Invalid Mail Piece Identification (MPID) Entry – MERLIN software has been modified to prevent user from entering an invalid MPID during an evaluation run after a

transport stoppage. Starting the transport to continue processing may result in the Piece Count to start with a negative number and appear as counting backward.

- IMB Required in System Test Run – MERLIN software has been modified to require IMB test pieces to be included in a System Test run. If the run contains adequate number of IMB test pieces, MERLIN will analyze these pieces and produce a pass/fail score for the IMB category in the System Test. If the run does not contain enough IBM test pieces, MERLIN will fail the IMB category of the System Test.
- IPA Errors – MERLIN software has been modified to correct several issues that caused IPA errors during software and Postal Tables / Address Directory installations.
- Report MERLIN Problem To MMOD – MERLIN software has been modified to display a new dialog box allowing user to enter contact information and description of MERLIN problem. The Report MERLIN Problem dialog box will be displayed after the standard MERLIN error message dialog box is acknowledged by the user. This new dialog box will only be displayed if the problem description information is required to be sent to MMOD. User will have the option to cancel. In the message sent to MMOD, MERLIN will include system information and job information if applicable. MERLIN will also provide a menu option for user to initiate the problem reporting process.
- MERLIN Update Time Setting Screen Clarification – The selections “Automatic MERLIN Update “ has been changed to “Automatic Update Time “ and “Manual MERLIN Update “ has been changed to “Manual Update Time “ in the MERLIN Update Time Setting option under the Maintenance Menu.
- Overwrite Description and Explanation – MERLIN software has been modified to prompt the user to enter reasons / descriptions for overwriting MERLIN verification errors for Digit String, Barcode, Barcode Worksheet, Presort, Mailer Profile and Tray Label. This information will be included in the Post Processing Message (PPM) and transmitted to MMOD.
- Barcode Clearance Issue – MERLIN software has been modified to recognize and decode valid barcode printed in a windowed envelope. MERLIN will be modified to prevent the interference from mailer applied barcode such as a Code 128 barcode printed to the left of the IMB.
- CT Mailing Type – MERLIN software has been modified to process line items with CT Mailing Type in the Postage Statement Message (PSM) and handle it exactly the same as Flats.
- Change 11043 Error Message – MERLIN software has been modified to display the 11043 error message only when the last 30 address blocks had not been captured. A different error message will be displayed when the 30 consecutive pieces do not have address data due to an IPA crash.
- Stop MERLIN Job – MERLIN software has been modified to display a new 11118 error message instructing user to abort or analysis job when it detects IPA has crashed leading to 30 consecutive pieces with no address data captured.

- Send Overwrite Details to MMOD – MERLIN software has been modified to include additional overwrite detail information such as overwrite presort weight and overwrite piece count in the PPM and transmit this data to MMOD.
- MERLIN Hard Disk Information – MERLIN software has been modified to retrieve hard disk information for C and D drives including:
 - Hard disk serial number
 - Number of disk replacements
 - Device ID
 - Disk capacity
 - Logical drive size
 - Available disk space
 - Timestamp of last disk replacement and history
 - MERLIN serial number

MERLIN will include this information in the System Configuration Message to send to MMOD.

Refer to Section 13 for details of software changes in this release.

3. INSTALLATION OVERVIEW

The MERLIN software in this release will be automatically downloaded and installed into MERLIN units from MMOD. MMOD Administrator will set up the download and installation effective dates, and select the appropriate MERLIN units to receive the new software. On the effective dates, the selected MERLIN units will automatically receive and install the new MERLIN software. During the software download and installation process, no user interaction from operators or maintenance will be required. The entire software download and installation process takes approximately two hours and occurs overnight when the machine is not in use.

4. OPERATIONAL PROCEDURES

The following is a list of Maintenance / Operational changes in this release. Detailed description of these changes can be found in Section 14.

- IMB Required in System Test Run – MERLIN software has been modified to require IMB test pieces to be included in a System Test run. If the run contains adequate number of IMB test pieces, MERLIN will analyze these pieces and produce a pass/fail score for the IMB category in the System Test. If the run does not contain enough IBM test pieces, MERLIN will fail the IMB category of the System Test.

- Overwrite Description and Explanation – MERLIN software has been modified to prompt the user to enter reasons / descriptions for overwriting MERLIN verification errors for Digit String, Barcode, Barcode Worksheet, Presort, Mailer Profile and Tray Label. This information will be included in the PPM and transmitted to MMOD.

5. POSSIBLE PROBLEMS AND KNOWN ERRORS

There are no known problems in this release.

6. DOCUMENTATION AND REFERENCES

- MS-197, MERLIN Maintenance Series (MS) Handbook,
http://www.mtsc.usps.gov/msbooks/dynamicindex.cfm?hbk_msno=197

7. CHANGE REQUEST PROCEDURES

Your Area Maintenance Software Specialist (AMSS) processes all release changes. Contact MTSC at 1-800-366-4123 for the name and telephone number of your Area Software Specialist.

All change requests should be submitted via the “Software Change Request / Software Problem Report (SCR/SPR)” option on the Engineering web site. The form is available via the USPS Engineering web server at <http://web.eng.usps.gov/index.html> by highlighting “Forms” in the left column.

The project leader is responsible for reviewing the request and notifying the developer of required changes and setting a deployment date to allow time for implementation of the changes and then providing resolution to the requestor.

8. PROBLEM REPORTING PROCEDURES

Any problems or questions should be addressed to MTSC at 1-800-366-4123. MTSC will take the appropriate information regarding the problem or question and attempt to resolve it. If unable to provide resolution, MTSC will contact the appropriate parties. Resolution information will be provided back to the requester by MTSC.

9. NOTES

Table 1-1. Acronyms and Abbreviations

Acronym	Definition
AMSS	Area Maintenance Software Specialist
AQM	Address Quality Message
BH	Bell and Howell
BMEU	Business Mail Entry Unit
CASS	Coding Accuracy Support System
CPA	Control Process Application
CT	Catalog
DMU	Detached Mail Unit
DTCS	Data Transfer Communication Service

Acronym	Definition
eLOT	Enhanced Line of Travel
FTP	File Transfer Protocol
GUI	Graphical User Interface
IBM	International Business Machines
ID	Identifier
IMB	Intelligent Mail Barcode
IPA	Imaging Process Application
LCD	Liquid Crystal Display
MERLIN	Mailing Evaluation, Readability, and Lookup Instrument
MMOD	MERLIN Maintenance and Operational Database
MPC	MERLIN PC
MPID	Mail Piece Identification
MS	Maintenance Series
MSP	MERLIN Software Package
MTSC	Maintenance Technical Support Center
NCSC	National Customer Support Center
OCR	Optical Character Reader
OEL	Optional Endorsement Line
PC	Processing Computer
PPM	Post Processing Message
PSM	Postage Statement Message
RTDS	Remote Test and Diagnostics System
SCR	Software Change Request
SPR	Software Problem Report
SVD	Software Version Description
SVI	Software Versions Information
USA	United States of America
USPS	United States Postal Service

10. INSTALLATION INSTRUCTIONS

The MERLIN software in this release will be automatically downloaded and installed into MERLIN units from MMOD. MMOD Administrators will set up the download and installation effective dates, and select the appropriate MERLIN units to receive the new software. On the effective dates, the selected MERLIN units will automatically receive and install the new MERLIN software. During the software download and installation process, no user interaction from operators or maintenance will be required. The entire software download and installation process takes approximately two hours and occurs overnight when the machine is not in use.

11. POST INSTALLATION AND VERIFICATION PROCEDURES

There is no need to perform any post installation verification procedures. The installation and verification of software releases are managed and monitored at the server level by the MMOD Administrator. When an operator or maintenance user logs onto a MERLIN MPC, the splash screen will display the software version information at the bottom of the screen. Maintenance should perform MERLIN specific maintenance activities at the next regularly scheduled time.

12. CATASTROPHIC RECOVERY PROCEDURES

Catastrophic recovery procedures for MERLIN software releases are handled by the MMOD Administrator. In the event a remote recovery of the software fails, maintenance will be instructed to initiate a drive replacement.

13. RELEASE NOTES

1. Double Use of Line Information for Names

Reason for Change: Change requested by USPS not to reuse an identified name line in the address block. A name line identified for use as one AQM field cannot be reused as another field.

Origin: SCR000010139

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts the AQM sent to NCSC. The AQM will not contain duplicate name line information.

2. Name Line above OEL

Reason for Change: Change requested by USPS not to use any line above OEL as name line candidate in the AQM.

Origin: SCR000010140

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts the AQM sent to NCSC. The AQM will not contain any line above OEL as name line candidate.

3. Generic Name Matching

Reason for Change: Change requested by USPS to ignore spaces when performing generic name matching for the name line field in the AQM.

Origin: SCR000010141

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts the AQM sent to NCSC. MERLIN will be able to perform better matching on generic names.

4. Invalid MPID Entry

Reason for Change: Change requested by USPS to prevent user from entering an invalid MPID during an evaluation run after a transport stoppage which may result in the Piece Count to start with a negative number and appear to be counting backward.

Origin: SCR000010406

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users. The MERLIN GUI has been changed when prompting user for the next MPID after transport stoppage. User will only be permitted to enter a valid MPID within a range determined by MERLIN.

5. IMB Required in System Test Run

Reason for Change: Change requested by USPS to require IMB test pieces to be included in a System Test run.

Origin: SCR000011018

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts MERLIN administrators and maintenance users who are responsible for performing System Test runs. The 50 IMB test pieces must be included in the System Test run.

6. IPA Errors

Reason for Change: Change requested by USPS to conduct an analysis and determine the root cause of IPA errors during software and Postal Tables / Address Directory installations.

Origin: SCR000010571

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users. Several software issues that caused IPA errors were identified and resolved.

7. Report MERLIN Problem to MMOD

Reason for Change: Change requested by USPS to provide GUI allowing user to enter MERLIN problem description and contact information after MERLIN error occurred. The information will be sent to MMOD where MMOD administrator can review the error information and take appropriate actions.

Origin: SCR000010654

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts all MERLIN users. MERLIN will display an optional dialog box prompting for MERLIN problem description and contact information after MERLIN error has occurred. Since this information will be sent from MERLIN to MMOD. The MERLIN-MMOD interface will be changed.

8. MERLIN Update Time Setting Screen Clarification

Reason for Change: Change requested by USPS to update time selection text in the Time Setting Screen for better clarification.

Origin: SCR000010678

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts MERLIN administrators and maintenance users. The time selection text in the Time Setting Screen has been updated for better clarification.

9. Remove SVI Screen and References

Reason for Change: Change requested by USPS to remove the sample SVI screen and references from the installation section of the SVD.

Origin: SCR000010685

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts maintenance users who are responsible for MERLIN software installation. The sample SVI screen and references have been removed from the installation section of the SVD.

10. Overwrite Description and Explanation

Reason for Change: Change requested by USPS to update GUI prompting user for reasons / descriptions for overwriting MERLIN verification errors.

Origin: SCR000010711

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users who perform MERLIN verification runs. Users will be required to enter explanations for overwriting MERLIN verification results.

11. Barcode Clearance Issue

Reason for Change: Change requested by USPS to correct an IMB recognition issue when a mailer applied barcode such as a Code 128 barcode is printed to the left of the IMB.

Origin: SCR000010739

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users. An IMB recognition issue has been corrected. MERLIN should be able to recognize and decode an IMB even if there is a mailer applied barcode such as a Code 128 barcode printed to the left of the IMB.

12. CT Mailing Type

Reason for Change: Change requested by USPS to process line items with CT Mailing Type in the PSM as Flats.

Origin: SCR000010841

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users. Catalog mailing type will be processed and handled as Flats in MERLIN.

13. Change 11043 Error Message

Reason for Change: Change requested by USPS to check and change the logic for displaying the 11043 error message.

Origin: SCR000010894

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users. The 11043 error messages will only display when MERLIN detects that it was unable to capture the last 30 mail piece's address blocks and the IPA is still running. The error message will instruct user to check the orientation selection, feed orientation, address block location / quality and then retry.

14. Stop MERLIN Job

Reason for Change: Change requested by USPS to display an error message instructing user to abort or analysis job when it detects IPA has crashed.

Origin: SCR000010895

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts operational users. A new MERLIN warning message, 11118, will be displayed when MERLIN detects IPA has crashed. This message will instruct user to finish analysis on the pieces already run or reboot MERLIN PC and then retry.

15. Send Overwrite Details to MMOD

Reason for Change: Change requested by USPS to include additional overwrite detail information such as overwrite presort weight and overwrite piece count in the PPM and transmitted to MMOD.

Origin: SCR000010710

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts the MERLIN-MMOD interface. The PPM has been modified to include the overwrite detail information.

16. MERLIN Hard Disk Information

Reason for Change: Change requested by USPS to send MERLIN hard disk information to MMOD.

Origin: SCR000009065

Requestor: USPS

Effects: (Interfaces, Operations, and Maintenance): This change impacts the MERLIN-MMOD interface. The System Configuration message has been modified to include the MERLIN hard disk information.

14. ANNEXES

There are many changes that affect maintenance / operational procedures in this software release. The effects of these changes are detailed below.

14.1. DOUBLE USE OF LINE INFORMATION FOR NAMES

An issue was identified during MERLIN 7.02.00 Alpha Test that MERLIN reuses an identified name line in the AQM as shown in Figure 1-1. In this example, name line1 was reused as name line 2.

```
- <mailPieceAddress>
- <MailPieceAddressBlockName>
  <line2>MER-070Z-14- EL0T SCF SACKS</line2>
  <line1>MER-0702-14- EL0T SCF SACKS</line1>
```

Figure 1-1. Name Line 1 Reused As Name Line 2

The MERLIN software has been modified to not reuse an identified name line. It will remove all non-address lines from the address text before adding name lines to prevent the possibility of the same line getting added twice. If the name line has already been assigned to an AQM field, then it will not be reused / reassigned as another field in the AQM.

14.2. NAME LINE ABOVE OEL

An issue was identified during MERLIN 7.02.00 Alpha Test that MERLIN uses an identified line above the OEL as a name line in the AQM as shown in Figure 1-2. In this example, an IMB above the OEL was identified as name line 2.

[illegible]

Figure 1-2. IMB Above OEL Identified As Name Line 2

The MERLIN software has been modified to ignore lines above the OEL. It will check the OEL coordinates and ignore any name line candidates that are above the OEL.

14.3. GENERIC NAME MATCHING

An issue was identified during MERLIN 7.02.00 Alpha Test that MERLIN was unable to match generic items such as "OR CURRENT RESIDENT" in the address lines because of spaces within the string. The generic item is not correctly identified in the name line field of the AQM as shown in Figure 1-3. In this example, line2 should contain "J I J OR CURRENT RESIDENT".

```
- <mailPieceAddress>  
- <MailPieceAddressBlockName>  
  <line2>J I J ORCURRENTRESIDENT</line2>  
  <line1>B</line1>
```

Figure 1-3. Generic Item Not Identified Due to Spaces

The MERLIN software has been modified to ignore spaces when it is comparing generic items. The lexicons have been expanded to include the following:

- "RESIDENTOR"
- "ORCURRENT"
- "OROCCUPANT"
- "OCCUPANTOR"
- "CURRENTRESIDENT"
- "CURRENTRESIDENTOR"
- "ORCURRENTRESIDENT"
- "CURRENTOCCUPANT"
- "CURRENTOCCUPANTOR"
- "ORCURRENTOCCUPANT"
- "RUALROUTE"
- "ROUTEBOXHOLDER"
- "RUALROUTEBOXHOLDER"
- "RESIDENTIALCUSTOMER"
- "POSTALCUSTOMER"
- "BUSINESSCUSTOMER"
- "FRIENDSOF"
- "PARENTSOF"

14.4. INVALID MPID ENTRY

An issue was reported that the MPID displayed in the Run System screen's "Pieces in Tray" field is a negative value as shown in Figure 1-4.

The screenshot shows the 'Run System' interface. On the left is a sidebar with a tree view containing: PSM ID: 0, Permit #: PI12345, Job Data, Mailing Types, Sack/Tray Tags: 2 tag, Mailing Type Info, Mail Characteristics, and Mail ID Position: Lowe. The main area has a title 'Run System' and instructions: 'Run current tray now. Touch "NEXT TRAY" to proceed to next tray in sequence. Touch "Run Complete/Analyze" for analysis after all trays are run.' Below this is the 'Current Tray' section with fields for 'Tray Destination' (CHICAGO IL 60690) and 'Tray Content' (FCM LTR 5D BC). A table displays tray information:

Tray ID	Pieces In Tray	Total Sample
2	-5	34

Below the table is a 'Feeder Mode' dropdown menu set to 'Letters'. At the bottom are three buttons: 'Modify Trays', 'Previous Tray', and 'Next Tray'. At the very bottom are two large buttons: 'Abort Run' and 'Run Complete Analyze'.

Figure 1-4. Sample Run System Screen with Negative Value in Pieces in Tray Field

This issue is caused by an invalid MPID entered by the user after a transport stoppage such as a jam. After user clears the jam, MERLIN will prompt the user for the next MPID to continue. If user enters an invalid MPID such as an MPID from a previous tray, then MERLIN will start with a negative value or count backward in the Run System screen's "Pieces in Tray" field.

The MERLIN software has been modified to prevent user from entering an invalid MPID during an evaluation run after a transport stoppage. The valid MPID range that MERLIN will accept will be displayed in dialog box as shown in Figure 1-5. Note MERLIN will also provide / suggest the MPID it expects.

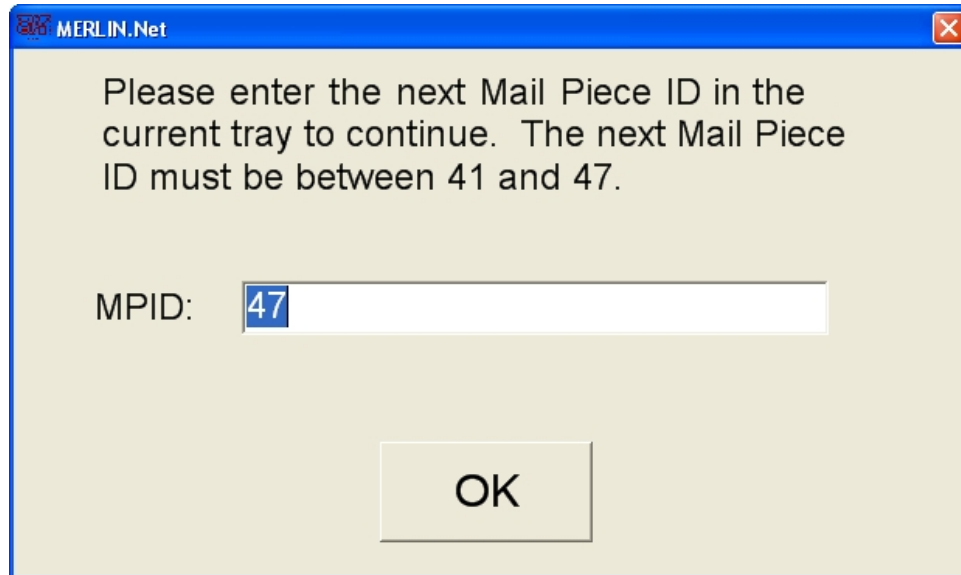


Figure 1-5. Sample MERLIN Dialog Box 1 for Next MPID

User must enter a MPID within the acceptable range (within the current tray). If user enters a MPID that is not within the acceptable range, MERLIN will not accept the invalid MPID and display another dialog box as shown in Figure 1-6 prompting the use to reenter the MPID.

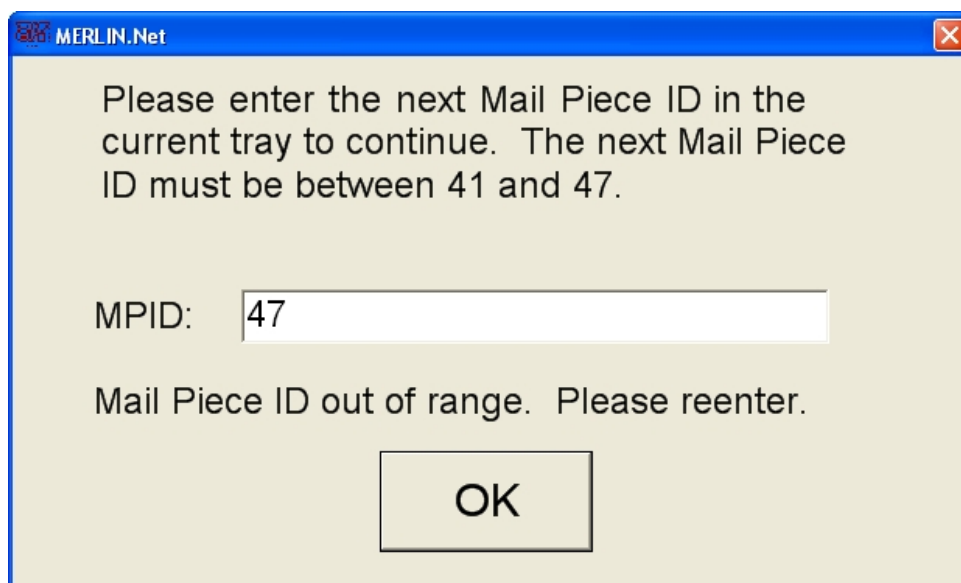


Figure 1-6. Sample MERLIN Dialog Box 2 for Next MPID

14.5. IMB REQUIRED IN SYSTEM TEST RUN

MERLIN will now require the IMB test pieces to be included in a System Test run for it to pass. If the run contains no IMB pieces, the System Test would fail and the IMB results would also display this category as a “FAIL”, as shown in Figure 1-7.

System Test Report

Date: 3/21/2012

Time: 10:20:46 AM

POSTNET Barcode:	PASS	Indicia :	PASS	Weight :	PASS
PLANET Barcode :	PASS	Endorsement :	FAIL	Height :	PASS
IM Barcode :	FAIL	Pkg Label :	PASS	Length :	PASS
Address :	PASS	Thickness :	PASS	Analysis :	PASS
Number of Pieces Fed : 420		Number of Pieces Matched : 420			

Figure 1-7. System Test Report with missing IMB test pieces

When all 50 of the IMB test pieces are included during the System Test, MERLIN will analyze these and produce a pass/fail score for the System Test based on results as shown in Figure 1-8. If the run does not contain enough IMB test pieces, MERLIN may fail the IMB category of the System Test depending on which pieces were run.

System Test Report

Date: 3/21/2012

Time: 4:22:20 PM

POSTNET Barcode: PASS

PLANET Barcode: PASS

IM Barcode: PASS

Address: PASS

Indicia: PASS

Endorsement: PASS

Pkg Label: PASS

Thickness: PASS

Weight: PASS

Height: PASS

Length: PASS

Analysis: PASS

Number of Pieces Fed: 470

Number of Pieces Matched: 470

Figure 1-8. System Test Report with all IMB test pieces

14.6. IPA ERRORS

The MERLIN software has been modified to correct software exception in several software modules including USPS alternate address lexicon, barcode analysis, OCR processing and image traversing. These changes will reduce the number of IPA errors reported by MERLIN users.

14.7. REPORT MERLIN PROBLEM TO MMOD

A new option, “Report MERLIN Problem”, has been added to the MERLIN main menu as shown in Figure 1-9. The Report MERLIN Problem menu option will be available to all MERLIN users (Administrator, Maintenance and Operator).

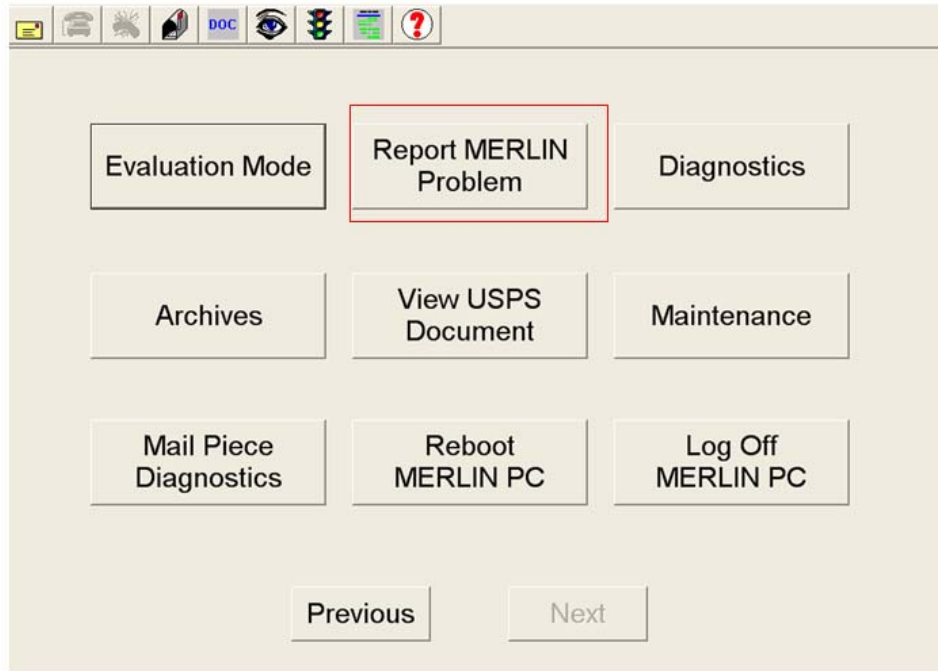
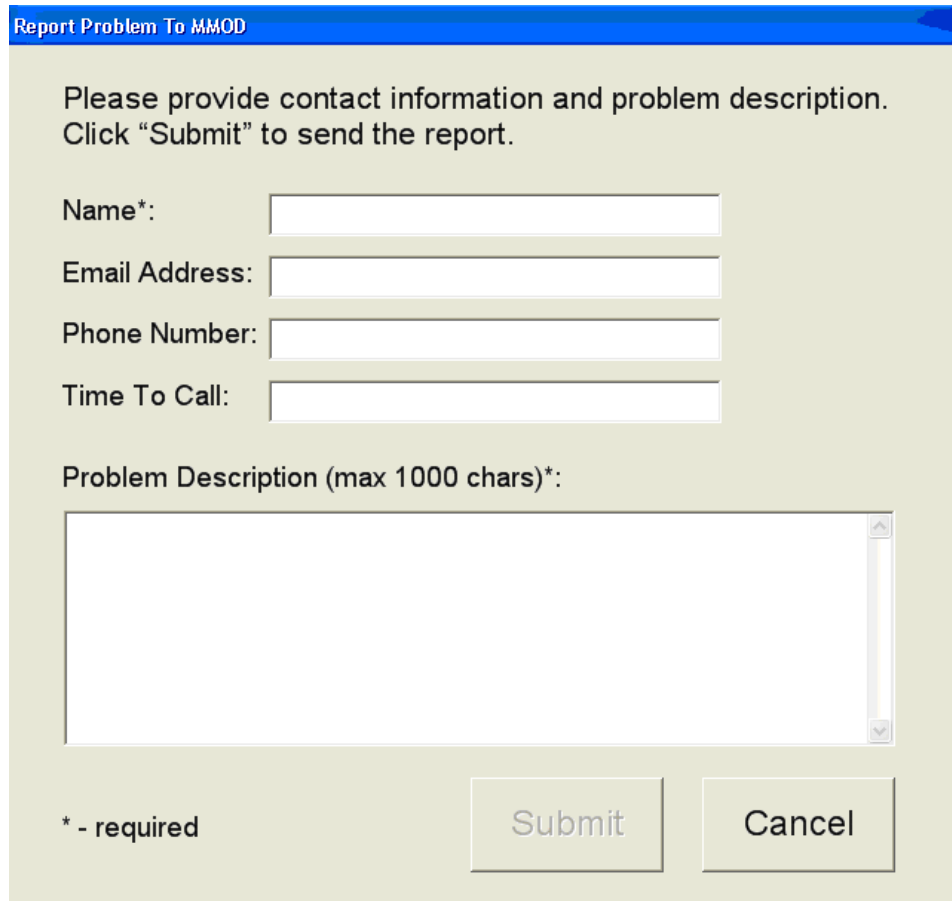


Figure 1-9. Report MERLIN Problem Menu Option

Clicking the “Report MERLIN Problem” button will bring up the “Report Problem To MMOD” dialog box as shown in Figure 1-10.



Report Problem To MMOD

Please provide contact information and problem description.
Click “Submit” to send the report.

Name*:

Email Address:

Phone Number:

Time To Call:

Problem Description (max 1000 chars)*:

* - required

Submit Cancel

Figure 1-10. Report Problem To MMOD Dialog Box

To report a MERLIN problem to the MMOD Administrator, user will have to enter the following information in the dialog box:

- Name
- Email Address
- Phone Number
- Best time to call
- Description of problem

Note that only the name and problem description information fields will be required. The other information in the dialog box is optional. The maximum number of characters allowed in the Problem Description field is 1000 characters.

If user decides not to submit a problem report, click on the “Cancel” button will close the dialog box and the problem report will not be sent to MMOD.

After entering the contact information, problem description, and any other optional information, user can submit the report to MMOD by clicking on the “Submit” button as shown in Figure 1-11.

Report Problem To MMOD

Please provide contact information and problem description.
Click “Submit” to send the report.

Name*: John Smith

Email Address: John.Smith@myemail.com

Phone Number: 312-224-5678

Time To Call: Any Time after 9AM Mon-Fri

Problem Description (max 1000 chars)*:
Unable to open an archived job.

* - required

Submit Cancel

Figure 1-11. Sample Report Problem To MMOD Dialog Box with User Entry

The “Report Problem To MMOD” dialog box may also appear after MERLIN encounters an application or system level error condition such as Analysis Error or Report Generation Error. The dialog box will appear after MERLIN displays the standard warning / error dialog message box. Again, user has the option to submit the problem report or cancel.

14.8. MERLIN UPDATE TIME SETTING SCREEN CLARIFICATION

The text selections in the MERLIN Update Time Setting option under the Maintenance Menu have been changed from “Automatic MERLIN Update” to “Automatic Update Time” and from “Manual MERLIN Update” to “Manual Update Time”.

The labels next to the selection buttons have also been modified to be more explanatory as shown in Figure 1-12. The label for “Automatic Update Time” explains that the times for optimal update time will be calculated by MERLIN software itself based on the lowest usage time and if selected that time will be used by the services to initiate download. If the “Manual Update Time” is selected, then the user configured “Start” and “End” times would be used by the MERLIN services to perform download activities.

MERLIN Update Time Setting

MERLIN Update Time is the time period for the MERLIN application to receive and process data/packages from the MMOD server which includes MERLIN Application Software, monthly Address Directory and Postal Tables and may take a few hours. Daily, Weekly and Monthly maintenance routines should not be performed during this time period.

☒ Automatic Update Time (Select to use MERLIN Calculated Update Time)

Calculated based on when MERLIN is idle (No mail processing)

Start: End:

☐ Manual Update Time (Select to use Manually Configured Update Time)

Start: End:

Figure 1-12. MERLIN Update Time Setting Screen

14.9. REMOVE SVI SCREEN AND REFERENCES

This MERLIN SVD document has been updated by removing the sample SVI screen and references to the SVI screen from the installation section. The current instructions will only note what has changed on the screen for the current release. This change will prevent problems and confusions regarding tables and directory updates that may or may not be part of a software release.

14.10. OVERWRITE DESCRIPTION AND EXPLANATION

The MERLIN software has been modified to gather additional details from the user when any verification results are being overwritten. MERLIN will prompt the user to enter reasons / descriptions for overwriting MERLIN verification errors for Digit String, Barcode, Barcode Worksheet, Presort, Mailer Profile and Tray Label. This information will be included in the PPM and transmitted to MMOD.

Once the user makes the “Overwrite” selection on the reports screen; a new dialog box will appear and user has to enter the overwrite description / comments before he / she can actually perform the overwrite. For example, when the user clicks on Presort Overwrite from the report screen, the following dialog box in Figure 1-13 will appear. The operator will have to select or enter the reason(s) / description for overwrite before the actual overwrite selections in Figure 1-14 appear. Note user must select at least one of the predefined overwrite descriptions or enter an explanation for the overwrite before MERLIN will enable the OK button.

Figure 1-13. MERLIN Presort Overwrite Descriptions Dialog Box

MPID	Section	Category	ErrText	Overwr...	Expected	Actual
Pkg:	Tray: 0...	Tray CHICAGO I...		X		
Pkg:	Tray: 0...	5 Digit Destinatio...		X		
Pkg:	Tray: 0...	5 Digit Destinatio...		X		

Figure 1-14. Sample MERLIN Presort Overwrite Dialog Box

This same process / GUI flow is implemented for all MERLIN overwrites including Presort, Barcode, Digit String, Barcode Adjustment Worksheet, Tray Label and Mailer Profile.

The following predefined overwrite comments / descriptions given in Table 1-2 are currently available for selection based on the MERLIN overwrite being performed. The user can also enter the description in the text box provided.

Table 1-2. Predefined Overwrite Comments/Descriptions

Category	Overwrite Description
Barcode Digit String	Valid General Delivery barcode
Barcode Readability	Valid barcode manually verified
Barcode Readability	Mail piece has dark border
Barcode Worksheet	Updated with correct mailer provided information
Mailer Profile	Updated with correct mailer provided information
Presort Verification	Endorsement Line not recognized
Presort Verification	Separator Card not recognized
Presort Verification	Package label not recognized
Presort Verification	Sortation verified based on current Labeling List
Tray Tag Labels	Incorrect Carrier Router number entered
Tray Tag Labels	Incorrect Tray Label scanned or entered

14.11. BARCODE CLEARANCE ISSUE

The MERLIN software has been modified to improve block formation to better recognize gaps between regions of interest. This change will allow MERLIN to be able to recognize and decode valid barcode printed in a windowed envelope even if there is a mailer applied barcode such as a Code 128 barcode printed to the left of the IMB as shown in Figure 1-15. Sample Address Block with Mailer Applied Barcode.

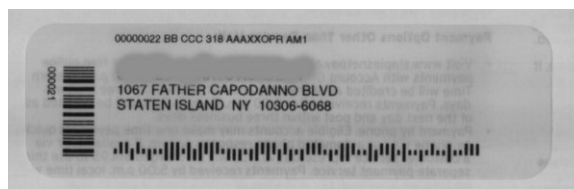


Figure 1-15. Sample Address Block with Mailer Applied Barcode

14.12. CT MAILING TYPE

MERLIN software has been modified to process line items with CT Mailing Type in the PSM. A mailing that is for catalogs category would be verified using the tray tag selection and sort rules for Flats. MERLIN reports will display “Flats” for the “Mailing Category” field for these catalog mailings.

14.13. CHANGE 11043 ERROR MESSAGE

The MERLIN software has been modified to display the 11043 error message only when the last 30 consecutive mail piece's address block had not been captured / identified while IPA is still communicating with the control software. The 11043 message was also modified as shown in Figure 1-16. Updated MERLIN Warning Message 11043 to display the reason for getting no address data. This message ID will no longer display in case IPA has crashed and is not sending any data.

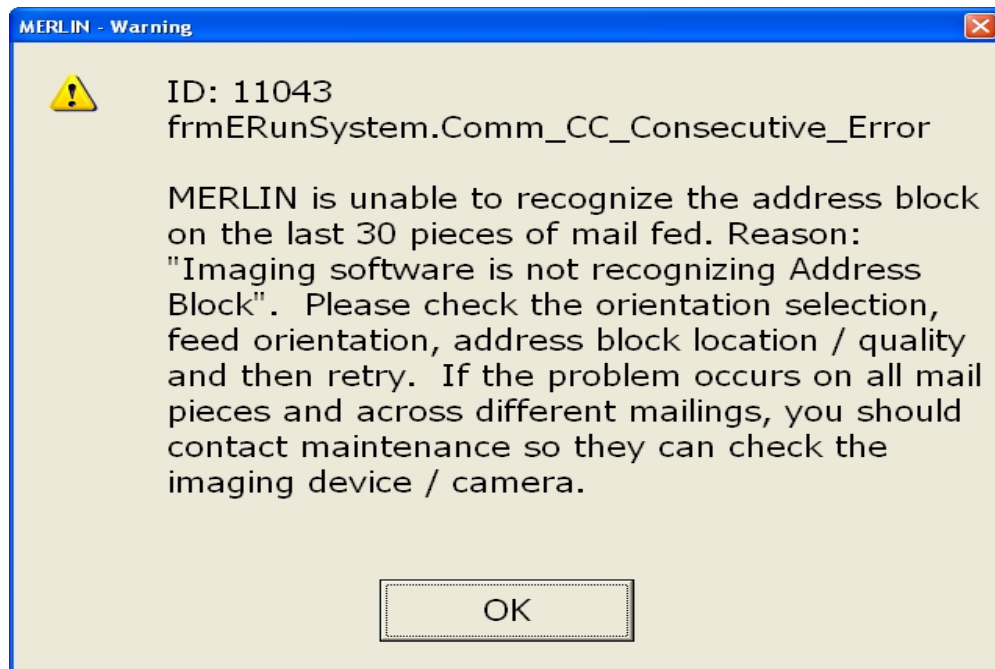


Figure 1-16. Updated MERLIN Warning Message 11043

14.14. STOP MERLIN JOB

In the event that during a MERLIN run no data is received from the IPA for 30 consecutive pieces due to an IPA crash, a new message with ID 11118 will be displayed as shown in Figure 1-17. The message would inform the user that IPA is not sending any data and instruct the user to either analyze the job with the pieces already run or reboot and retry. MERLIN software has been modified to not allow operator to continue adding more mail pieces to this job. After the message is displayed the user can either abort the job or finish analyzing the job with the pieces that have already been run. It is recommended that MERLIN be rebooted after this message appears to allow IPA software to restart. This message would also trigger the new MERLIN functionality that allows the reporting of MERLIN problem to MMOD.

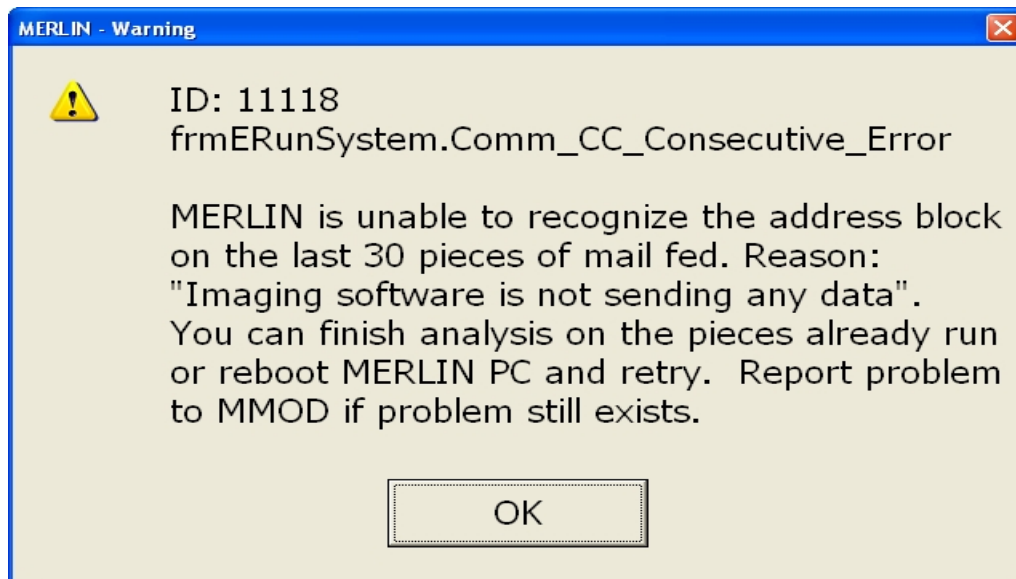


Figure 1-17. MERLIN Warning Message 11118

14.15. SEND OVERWRITE DETAILS TO MMOD

The MERLIN software has been modified to include additional overwrite detail information such as overwrite presort weight and overwrite piece count in the PPM. This additional data in PPM will be transmitted to MMOD.

14.16. MERLIN HARD DISK INFORMATION

The MERLIN software has been modified to retrieve hard disk information for the MPC's C and D drives. This information will include the following:

- Hard disk serial number
- Number of disk replacements
- Device ID
- Disk capacity
- Logical drive size
- Available disk space
- Timestamp of last disk replacement and history
- MERLIN serial number

This information will be included in the MERLIN System Configuration Message and transmitted to MMOD. A new report, "MERLIN Disk Info", will be available in MMOD listing the disk drive information sent by MERLIN units.

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ATTACHMENT 2**RELEASE EVALUATION FORM****INSTRUCTIONS FOR USING ON-LINE
EVALUATION FORM****USPS Engineering Customers:**

After completing the installation of a new USPS Engineering software release, fill out the online Engineering Release Evaluation form. Evaluation of the software, documentation, and release activities determines whether the release process satisfies the needs of our customers. Access the Engineering Release Evaluation form at:

<http://web.eng.usps.gov/fed/forms/interim/REF/ref.cfm>

or go to the Engineering web page at

<http://web.eng.usps.gov>

and choose Forms. Select Release Evaluation Form (REF).

Efforts by Field Personnel to help Engineering improve its software development processes and products, and better serve our customers are appreciated.