

July 30, 1997
Ref. No.: EOS/ETS-0797-013

National Aeronautics and
Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771

Attention: Mr. Willie Fuller
Code 513.0
Building 32, Room S212D

Subject: Contract No.: NAS5-31000
Subcontract No.: HQ001057
EOS SLA 9 (Work Element 3.2.3 in SLA)
EOSDIS Test System (ETS) Multimode Portable Simulator (MPS)
Delivery of MPS Engineering Patch Release 1.2.1 Software
Delivery of MPS User's Guide for MPS Release 1.2.0

Dear Mr. Fuller:

The CNMOS contractor is pleased to deliver Multimode Portable Simulator (MPS) Engineering Patch Release 1.2.1 of the ETS. MPS Engineering Patch Release 1.2.1 resolves four Discrepancy Reports (DRs), stemming from minor discrepancies identified during pre-ECT2 testing. Rapid turnaround fixes to all of these DRs were installed in the MPS development environment in Building 32 for use during ECT2 dry runs.

This MPS Engineering Patch Release 1.2.1 delivery package contains three attachments:

- Attachment A contains the list of the DRs resolved in this patch
- Attachment B contains the build instructions for the five source code files being delivered on the patch delivery diskette
- Attachment C is the completed Missions System Configuration Management form

At this time, we are also delivering a hard-copy of the MPS User's Guide, which has been updated to reflect Release 1.2.0. No operational changes were introduced with the engineering patch. In addition, an electronic version of the MPS User's Guide is now accessible via the Internet at <http://esdis.gsfc.nasa.gov/ets/ets.html/>.

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This is also to inform you that we are in the process of updating the MPS operating system in Building 32 to support multicasting and the MPS EDOS simulation mode, which are features that will be supported in our next MPS Release 1.3.0.



If you have any questions concerning this delivery, please call me at 301-794-2300.

Sincerely yours,

A handwritten signature in black ink, appearing to read 'Robert Shanklin', is written over the typed name.

Robert Shanklin
CNMOS EOS Project Manager

Delivery Package Reviewed by:

A handwritten signature in black ink, appearing to read 'Walter Hall', is written over the typed name.

Walter Hall
CNMOS EOS Product Assurance Officer

Distribution: (* - Letter Only)

NASA

Herring, E. *
Johns, A. *
Kelly, A.
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ATSC

Bradbury, T.

Lockheed Martin

Cordier, G

CSC

Abshire, G.*
Crowley, A.*
Hall, W.
Helton, K. (CM)
Labus, J.
McGarry, J.
Noone, E.
Shah, Raj
Sharma, K.*
Zavaleta, H.
Task File

Attchment A -- DR Resolved in MPS Engineering Patch 1.2.1

Status Definitions

N - New A - Assigned Analysis V - Assigned Verification
 C Closed W - Withdrawn P - Postponed X -Duplicate

DR Number	IDR Number	Sys	Stat	Sev	Description
SMOdr00355	00012434	MPS	C	3	Incorrect count on command load
SMOdr00360	ETS0462	MPS	C	3	Invalid data indicator
SMOdr00413		MPS	C	2	MPS Rejecting Valid BC Type Commands
SMOdr00433		MPS	C	2	Memory Dumps are Formatted Incorrectly

Total records found = 4

DR SMOdr00355 Related NCR #: 00012434 Submitted: 970605

Status: CLOSE System: ETS Closed: 970730

TITLE: "Incorrect count on command load"

***** Problem (for SMOdr00355) *****

Sent a load initiate command (pseudo-ops) with word count -> 56. Sent two loads with word count 32 and 26, respectively. The second load data command (which has an incorrect count - should be 24 words) was sent but memory load data does not complete processing. The memory loading process should stop once the word count = 56.

***** Analysis (for SMOdr00355) *****

Fixed code to correct the memory load word count error

DR SMOdr00360 Related NCR #: ETS0462 Submitted: 970606

Status: CLOSE System: ETS Closed: 970730

TITLE: "Invalid data indicator"

***** Problem (for SMOdr00360) *****

The valid data indicator bit is not set to 1 (valid data) in the diagnostic data packet per ICD 106, section 6.1.1.5, e. Data format does not conform with ICD.

***** Analysis (for SMOdr00360) *****

Fixed code to set valid data bit correctly

DR SMODr00413 **Related NCR #:** **Submitted: 970623**

Status: CLOSE System: ETS Closed: 970730

TITLE: "MPS Rejecting Valid BC Type Commands"

***** Problem (for SMODr00413) *****

Valid BC type commands are being rejected by MPS for an incorrect frame length (error). All the cmd validation was set to "on".

***** Analysis (for SMODr00413) *****

A previous change made to accommodate an idle sequence modification assumed that all commands would have four or more code blocks. However, BC-type commands only have two code blocks, so when received they were flagged as having a length error. Logic was added to correctly handle the two code blocks for BC commands.

DR SMODr00433 **Related NCR #:** **Submitted: 970711**

Status: CLOSE System: ETS Closed: 970730

TITLE: "Memory Dumps are Formatted Incorrectly"

***** Problem (for SMODr00433) *****

Memory dumps are incorrectly formatted as VCDUs. Modify MPS to format memory dumps at the packet level.

***** Analysis (for SMODr00433) *****

Fixed code to correctly indicate memory dumps at the packet level rather than VCDU level.

Attachment B -- MPS Release 1.2.1 Engineering Patch Build Instructions

The delivered 3.5" "patch" disk contains five source files:

ci_addcb.c, gt_dppkt.c, pub_sm.h, to_main.c and xt_main.c.

**Note: Steps 1 and 2 must be performed first.

1. Move pub_sm.h in the "inc" directory of the MPS Release 1.2.0 software to pub_sm.org.
2. Copy the pub_sm.h file from the "patch" disk to the "inc" directory of the MPS Release 1.2.0 software.
3. Move ci_addcb.c in the "ci_dir" directory of the MPS Release 1.2.0 software to ci_addcb.org.
4. Copy the ci_addcb.c file from the "patch" disk to the "ci_dir" directory of the MPS Release 1.2.0 software.
5. Delete the *.obj and *.sy files from the "ci_dir" directory of the MPS Release 1.2.0 software.
6. Compile the "ci_dir" directory: comp_ci.
7. Link the "ci_dir" directory: link link_ci.
8. Copy link_ci.sy to xci.
9. Repeat steps 3-8 for gt_dppkt.c, to_main.c and xt_main.c. gt_dppkt.c resides in the "gt_dir" directory. to_main.c resides in the "to_dir" directory. xt_main.c resides in the "xt_dir" directory.
10. Additionally, compile and link the "sm_dir" and "mc_dir" directories.
11. FTP the newly created executables- xsm, xgt, xto, xxt, xmc and xci to the M177 card.

Attachment C - Mission Systems Configuration Management Form

This attachment contains the completed Mission Systems Configuration Management (MSCM) form for the delivery of the MPS Engineering Patch Release 1.2.1.

Mission Systems Configuration Management Form

<u>1. ORIGINATOR</u> Estelle Noone	<u>2. ORGANIZATION</u> CSC	<u>3. PHONE</u> (301)794-1305	<u>4. E-MAIL ADDRESS</u> enoone@csc.com		
<u>5. ELEMENT</u> ETS MPS		<u>6. INSTALLATION PRIORITY</u> Routine	<u>7. TRACKING NUMBER</u> (Assigned by CM Office)		
<u>8. SOURCE CHANGE REQUEST(S):</u> ETS MPS engineering patch release to reflect latest version used to support ECT2		<u>9. APPROVALS</u> Element Manager _____ / / Flight Ops Director _____ / / Operations Manager _____ / /			
<u>10. DELIVERED SYSTEM</u> (Check all that apply)					
	Name	Version	Media Identification	Identification Date	
<input type="checkbox"/>	Hardware	_____	_____	_____	
<input checked="" type="checkbox"/>	Software	<u>MPS</u>	<u>R 1.2.1</u>	<u>One 3.5" diskette</u>	<u>7/30/97</u>
<input type="checkbox"/>	Database	_____	_____	_____	
<input checked="" type="checkbox"/>	Documentation:				
	<u>MPS Delivery Package</u>	<u>n/a</u>	<u>One 3.5" diskette</u>	<u>7/30/97</u>	
	<u>MPS User's Guide for R 1.2.0</u>	_____	<u>Hard-copy</u>	<u>July 1997</u>	
<input type="checkbox"/>	Other	_____	_____	_____	
<u>11. CHANGE DESCRIPTION</u> <u>MPS Engineering Patch Release 1.2.1 closes the list of SMO DRs identified in the attached delivery package.</u>					
<u>12. ATTACHMENT(S):</u> Check if YES <input checked="" type="checkbox"/> Description: MPS Engineering Patch Release 1.2.1 delivery package (cover letter with attachments) dated 7/30/97 _____					
<u>13. CM OFFICE USE</u>					
	Location (Bldg/Room)	Slot location(s)			
Hardware	_____ / _____	_____			
Media	_____ / _____	_____			
Documentation	_____ / _____	_____			
Installation date	_____ / _____ / _____	CM Office Signature _____			