From: Ernest Quintin <equintin@csc.com>
Subject: ETS MPS/PM-1 (Aqua) Engineering Release 6.3 Delivery Letter
To: Willie Fuller <wfuller@pop500.gsfc.nasa.gov>
Date: Fri, 15 Jun 2001 17:21:16 -0400

Willie,

We are pleased to deliver Release 6.3 of the ETS Multimode Portable Simulator for PM-1 (MPS/Aqua). This engineering release delivery provides resolutions to Discrepancy Reports (DRs) SMOdr05706, SMOdr05924, SMOdr07803, SMOdr09840, SMOdr10213 and SMOdr10607, as detailed in the ESDIS DR Tracking Tool (DRTT). This delivery also includes enhancements to the PDB ingest process, access to telemetry values via parameter ID, access to command submnemonic values, conditional scenario script processing, and an APID packet status display.

There are six attachments to this letter.
- Attachment A describes installation instructions for this release.
- Attachment B describes special operating instructions for this release.
- Attachment C contains the resolved DR descriptions
- Attachment D contains the system limitations.
- Attachment E contains an updated release history summary matrix.
- Attachment F contains an updated Mission Systems Configuration Management (MSCM) form.

The updated software executable modules are being delivered on CD-ROM. Two copies of the CD are being given to Guy Cordier, who will forward one copy to Raytheon at Denver and will use the other for installation on the MPS/Aqua simulator PCs in the Bldg 32 EOS ISR and LSR at GSFC. The updated software is also being installed on the serial card-equipped PCs in the Bldg 25 Simulations Operations Center and on the portable PCs, in the event that any of those units are needed to support upcoming Aqua data flows.

If you have any questions about this delivery, please do not hesitate to contact me or Dave Green.

Ernest Quintin
301-805-3649

(See attached file: AttachA.doc)(See attached file: AttachB.doc)(See attached file: ttachC.doc)(See attached file: AttachD.doc)(See attached file: AttachE.doc)(See attached file: AttachF.doc)

Cc: alan.johns@gsfc.nasa.gov, Alexander.Krimchansky.1@gsfc.nasa.gov, gcordier@rattler-f.gsfc.nasa.gov, kcklem@west.raytheon.com, arhabeger@west.raytheon.com, wjohnson@eoc.ecs.nasa.gov, rmesserly@mail.gblt.averstar.com, vhruland@west.raytheon.com, pburrows@csc.com, jcarlson@csc.com, klavery@pop500.gsfc.nasa.gov, Van.Grant@honeywell-tsi.com, eshurie@pop400.gsfc.nasa.gov, lhepfer@csc.com, enoone@csc.com, klehtone@pop500.gsfc.nasa.gov, frank.scoville@omitron.com, fxu@csc.com, tnguye66@csc.com

Attachment A – MPS/Aqua Release 6.3 Installation Instructions

This attachment contains the instructions for installing the MPS/Aqua Release 6.3 Server and Client. The information presented in this attachment has been checked for accuracy by the independent test team.

Instructions for installation of the Aqua Server and Client software:

1. Insert the delivery media into the appropriate drive.

2. To install the Aqua Client:
   a) On the desktop, click on the Start button, and then select Run from the resulting menu.
   b) When the Run window appears select the Browse… button.
   c) From the Browse Window, select the Removable drive that contains the installation CD.
   d) Click on the Client folder.
   e) From within the Client folder, double click on the Setup.exe icon.
   f) The screen will be filled with an Aqua Client background and a smaller window with the title "Welcome to Aqua Client 6.3" will appear. Click on the Next button to proceed to the next step.
   g) The next window will contain the licensing agreement. Click on Yes to accept the agreement and proceed.
   h) After all of the files are copied, a window with the title "Setup Complete" will appear. Click on the Finish button to end.
   i) An Aqua Client icon will now be installed on the desktop.

3. To install the Aqua Server:
   a) On the desktop, click on the Start button, and then select Run from the resulting menu.
   b) When the Run window appears select the Browse… button.
   c) From the Browse Window, select the Removable drive that contains the installation CD.
   d) Click on the Server folder.
   e) From within the Server folder, double click on the Setup.exe icon
   f) A window with the title "Run Window" will appear. Click on the Okay button to proceed to the next step.
   g) The screen will then be filled with an Aqua Server background and a window with the title of "Welcome to Aqua Server 6.3" will appear. Click the Next button to proceed.
   h) The next window will contain the licensing agreement. Click on Yes to accept the agreement and proceed.

i) Next a window will show the completion status as the files are copied. When the copying is complete click on the Finish button to finish the installation.
j) An Aqua Server icon will be installed on the desktop.

Installation of Database Script Updates

NOTE: Skip this step if re-installing MPS/Aqua Release 6.3 at a later date.

Copy all of the files in the Database folder to d:\pm1_db\scripts, overwriting any existing files.

Attachment B - Special Operating Instructions

This attachment contains new special operating instructions for MPS/Aqua Release 6.3. The information presented in this attachment has been checked for accuracy by the independent test team.

A User's Guide is being updated to include the information presented in this section. The User's Guide will be available from the ETS home page at http://esdis-it.gsfc.nasa.gov/ ETS/ets.html.

PDB Ingest Enhancements

In response to DR ETS0437, two changes have been made to the PM-1 SQL*Plus scripts that ingest the Project Data Base (PDB) into Oracle.

1. It is no longer necessary to copy and rename the PDB flat files into the *pdb_data* folder. A Java program has been provided which performs this function automatically. Simply download the PDB flat files from the Toronto server into a convenient folder and invoke the LOAD_NEXT_PDB batch file. The batch file will execute the Java program, which in turn will prompt for the path to the source folder, then copy and rename the PDB files. There are two restrictions in the use of this program:

   - The source folder chosen should contain only the PDB flat files. Extraneous files would be copied to the *pdb_data* folder along with the PDB flat files.
   - The Java program expects the PDB flat file names to be of the form *tlm_packet_120000.pdb*. All characters from and including the last underscore up to the filename extension (.pdb) are removed.

2. A Java program has been provided that will repair the problem with ingesting the cmd_verify PDB flat file. The program locates records that have only a NULL in the last field. It adds a space to each record found. This program is also executed automatically when the LOAD_NEXT_PDB batch file is invoked.

The *BUILDPM1* batch file has also been updated to execute these Java programs.

EOSGS module – new functionality

With Release 6.3, the GSPM1 module is being replaced by the EOSGS module. EOSGS performs the same function as GSPM1 with some additional capabilities. These new capabilities are described below and in the MPS/PM-1 User's Guide.

When added to a project, the EOSGS module **defaults the Spacecraft ID to zero** so it must be set during simulator initialization. To set the Spacecraft ID, click on the interior

of the EOSGS module and select *Configure/Setup* from the pop-up menu. Enter the Spacecraft ID in hex and click Apply. Once entered, the Spacecraft ID will be saved and restored with the other project information so it need never be set again.

The other new functionality added to the EOSGS module is the ability to modify the EDOS Service Header of CLCW packets. This capability is identical to that of the Modify Telemetry Header capability. See Paragraph EOSGS-5.1.4 of the MPS/Aqua Release 6.3 User's Guide for details.

CLCW Transmission

The status of CLCW packet transmission in IP mode is now linked to H/K telemetry packet transmission by default. CLCW transmission is disabled at startup, as is telemetry transmission. Starting telemetry transmission will start CLCW transmission, and stopping telemetry transmission will stop CLCW transmission. However, the converse is not true. That is, starting or stopping CLCW transmission will not affect the state of telemetry transmission. Also, they can be uncoupled by setting container item CLCWTransmitLinked to zero.

Telemetry Value Entry via Parameter ID

The capability to view telemetry parameter values by Parameter ID (aka LRV) has been added. The syntax is "TLM#n" and "TLM#n__EU", where n is the one to five decimal digit Parameter ID of the telemetry parameter. Do not enter leading zeros. As before, two underscores precede the EU designator.

Example:

Given that PRO_TP_FDMT and PRO_TP_FDMT__EU are the container names for a raw telemetry parameter and its associated engineering value. TLM#118 and TLM#118__EU are the additional names using the Parameter ID in decimal. All four items are updated when any of one of them is changed.

Command Event Message Syntax

The display of the event message describing commands received has been changed to add the command mnemonic Parameter ID. The Parameter ID is given immediately after the command mnemonic and has the format #n, where n is the one to five digit Parameter ID. In the example which follows the Parameter ID is #12068.

```
059:20:12:40 Proj 0 SCPM1#2: Rec'd VCID:0 FrmSeq:236 APID:457
PktSeq:1644 GNC_ENABLE_OD2C1MDR #12068 RATE_CONTROL=0 RATE_SIGN=1
W_SELECT=0
```

Display of Command Submnemonic Values

During initialization, container items are now created for every command submnemonic. The syntax of these container items is *submnem_name*#n, where n is the one to five decimal digit Parameter ID of the parent command. These container items are viewable at any time via the *get* directive, or via the *Display/Set Container Items* window. They will always reflect the latest value received, and are preset to zero during initialization.

In the command receipt example given above, the "RATE_SIGN" submnemonic container point for the GNC_ENABLE_OD2C1MDR command may be accessed via the *get* directive:

```
get   rate_sign#12068
```

There is quite a bit of duplication of submnemonic names in the PDB, so be sure to get the correct command Parameter ID.

Conditional Scenario Script Processing

The capability to include WHILE loops and IF-THEN-ELSE conditional execution within scenario script files is included in this release. Complete usage directions, with examples, may be found in section SN-2.3.1 of the User's Guide. Additional examples are given at the end of this section.

Points to note:

- While a conditional expression may be up to 260 characters long, the scenario module currently inserts spaces into the line as it is parsed. It is suggested that users limit conditional expressions to 150 characters.

- A WHILE loop must always contain a sleep directive. Failure to do so will cause the loop to execute at full CPU speed, robbing all other functions of processing time.

- The accumulated total of all while loop iterations in scenario scripts running at any given time cannot exceed 1000. Every WHILE loop should include a maximum loop count as part of its condition. Failure to limit the number of consecutive loop iterations can cause the MPS to crash. A WHILE "FOREVER" loop can be implemented by controlling the loop count and having the scenario called again.

- Comments and blank lines may not contain module specification syntax characters. See the examples below.

- The module specification syntax must contain a space after the #n. Example:

  #2set <mmemonic> 1 WRONG

  #2 set <mnemonic> 1 RIGHT

- Once specified, a module specification affects every line of the script that is executed until an new module specification is issued. Read the comment in the following example.

```
#1 set M1 255
while (M1 > 0)
    sleep 500
    set M1 -= 2
    ; After the next statement is executed, every directive will be sent to module #2

    #2 set XYZ 5
endwhile
```

- For debugging purposes, all lines of a scenario script may be echoed to the event log. To do so, send the directive

  set Scenario<number>DirMsg 1

  to the Scenario module. Leave "<number>" NULL if the script is executing in the first GUI controlled scenario slot. To set debugging on for the 2nd, 3rd, 4th, and 5th GUI controlled scenario slots, put "1", "2", "3", or "4" into the <number> field.

Examples of Conditional Scenario Scripts

```
; Example 1:
; Conditional Scenario
;
; Multiple IFs test
;
if (CDH_SS_ISASUUSYNC == 0)
   SET CDH_SS_ISASUUSYNC 1

else IF (CDH_SS_PCASULSYNC == 1)
   set CDH_SS_PCASULSYNC 0

ELSE IF (CDH_VA_ISCREF2CALRP == 0)
   set CDH_VA_ISCREF2CALRP 2
endif
```

;**Example 2:**

```
; Conditional Scenario
;
; Loop test
;
set CDH_SS_ISASUUSYNC 0
sleep 1000
while (CDH_SS_ISASUUSYNC < 5)

   set CDH_SS_ISASUUSYNC += 1
   sleep 1000

   if (MOD_CR_SR_GRAT_CH_B == 0)
         SET MOD_CR_SR_GRAT_CH_B 1
   else
         set MOD_CR_SR_GRAT_CH_B 0
   endif

endwhile
; end
```

;**Example 3:**

```
; Multimodule (EOSGS & SCAura) Conditional Scenario
;
; Loop test
;
#1 set CDH_SS_ISASUUSYNC 0
set CDH_SS_ISASUUSYNC += 1
;
#2 get GSCMDExpectedSCID
;
#1 sleep 1000
while (CDH_SS_ISASUUSYNC < 5)
         set CDH_SS_ISASUUSYNC += 1
         sleep 1000
endwhile
; end
```

; Example 4

```
; While forever workaround
; Construct while loops so that the total never exceeds 1000 iterations.
; If the script must loop for more than that, exit the loop after 1000 iterations
; and use the start scenario directive to call the scenario file again.
;
while (I < 1000)
   set <mnemonic> += 1
   set I += 1
   sleep 500
endwhile
start scenario <my_own_name>
```

CLCW Transmit Rate

The transmit rate of CLCW packets in IP mode may now be changed to match the rate of the telemetry being generated. The container item name is CLCWInterval. It contains the interval between successive transmissions in milliseconds. The following table gives the nominal settings. These settings have no effect when in Serial mode.

H/K Packet Rate	CLCWInterval Setting
16 K (16384)	125
4 K (4096)	500
1 K (1024)	2000

Telemetry Data Value Validation

In response to DR ETS0363, telemetry parameter data values entered by the operator are now checked to ensure that the value will fit into the packet space. Telemetry parameters are treated as unsigned ints for purposes of this validation. If the value entered will not fit, a warning message is sent to the event log and the value is set to zero. Values entered as Engineering Units are converted to the corresponding raw count before the test is performed.

The following is an example of the event message. The user attempted to set parameter CDH_SS_ISASUUSYNC to 266. The value that the user entered is repeated in decimal and in hex, along with the parameter packet size in bits.

SCPM1#3: CDH_SS_ISASUUSYNC, TLM#18416: Value 266 (0x10a) too large for 8 bits, set to 0

APID Status Display

A display has been added which shows the current enabled status and transmit rate for all APIDs defined in the Project Data Base. To access this display, click on the *Telemetry* button of the SCPM1 Control menu. Click on the *APID Status* option from the resulting pull-down menu. The Pause button must be clicked on to maintain the display at the bottom of its list, since it updates every three seconds. More information may be found in Section SCPM1-5.2.1.1.9 of the MPS/PM-1 Release 6.3 User's Guide.

Miscellaneous

- In response to user requests to make the initial setup easier, boilerplate serial-mode Projects are being delivered with the software.

- New warning and informational messages have been added to the database load logic, and ToolTips have been added to certain GUI screens.

- The directive entry line space has been increased so that 60 characters are displayed. The directive entry line length remains at 99 characters.

- The browse window used to locate scenario files has been fixed so (1) more than 1400 characters of filenames will be displayed, and (2) white space in folder and file names is allowed.

Special Settings for AIRS Commands

The following is copied from the Special Operating Instructions for MPS/Aqua Release 6.2. The information provided has not yet been incorporated into the User's Guide.

AIRS commands were not being recognized because the commands are padded to 28 words with trailing zeros. Thus the command length as received in the packet does not match the value ingested from the PDB. The solution has been to have MPS/Aqua perform a test for Apid==385 and overwrite the command packet length to agree with the database value for AIRS commands.

A container item, "AIRSCommandWordsFlag", has been added. The value stored in this container item is used to overwrite the packet length. All of the command lengths (16-bit WORD_COUNT) are stored in the database as one less than the actual length. All of the AIRS commands (with one exception, see below) have a word count of 8. This is the value to which "AIRSCommandWordsFlag" is set.

AIRSCommandWordsFlag is interpreted as follows:

0 ==> no truncation
non-zero ==> truncate to that many command words
default = 8

There is one exception that requires a workaround. AIR_CHANGE_C_MODE (parm_id=32321) has a word count of 7. The simulator cannot easily recognize this command because the container flag defaults to 8 for the majority of AIRS commands. Should an AIR_CHANGE_C_MODE command be received, the simulator will change its length to 8 and it will be incorrectly identified as an AIR_SET_C_CONTROL (parm_id=32329) command.

The workaround is to set the "**AIRSCommandWordsFlag**" container item to 7 before that command is received. The container flag must be reset to 8 before any other AIRS commands can be properly identified.

Playback File Creation

Improvements in the ability to generate files of Channel Access Data Units (CADUs) for serial replay are described in this section. The user may employ the vcProcessor module to create clean playback files by throwing away fill CADUs.

IMPORTANT

When creating a file of telemetry CADUs for later replay, ensure that the MPS connection to the Matrix Switch is disabled to prevent inadvertent transmission of data.

The procedure for building a file of CADUs is as follows:

1. Build a project with the SCPM1 module connected to a Serial Output module, and to vcProcessor and Log modules, as shown in the figure on the second page following. A project with the name of *Playback Creation* is being delivered which automates most of this. The following steps that are asterisked (*) must be completed whether or not a saved project is used.

2. (*) After loading the database, perform the extra SCPM1 configuration step of setting the simulation mode to serial. To do this, click on the **Select Simulation Mode** option of the **SCPM1 Configuration Menu**, and select **Serial Mode** in the resulting

window. See Paragraph SCPM1-5.1 in the User's Guide for more information.

3. Configure the Serial Output module frequency to 16383. See the Serial Output section of the User's Guide. No other setup is necessary.

4. (*) Configure the vcProcessor module as follows. Check the RS box for VC 1. Click the Set Outputs button. In the Channel Selection screen that pops up, check VC 1 for Channel 1. Apply and Close the Channel Selection screen, then Apply and Close the Configuration screen.

5. (*) Configure the Log Module by entering a file name. You may also deselect the **Log With Header** option and the **Variable Length Output** option. If you deselect the **Variable Length Output** option you must ensure that the Packet size is set to 256 bytes.

   When replaying the file created, the TxFile module must be set to a complementary configuration. It is suggested that Notepad be used to create a text file containing setup and descriptive information for the log file being created. Give it the same name as the log file, with an extension of .txt, and save it in the same folder as the log file.

6. The Virtual Channel Identification (VCID) and Replay fields of the VCDU header must be set to indicate that playback VCDUs are being generated. After running the project, and before starting telemetry transmission, enter the following two set directives to the SCPM1 module:

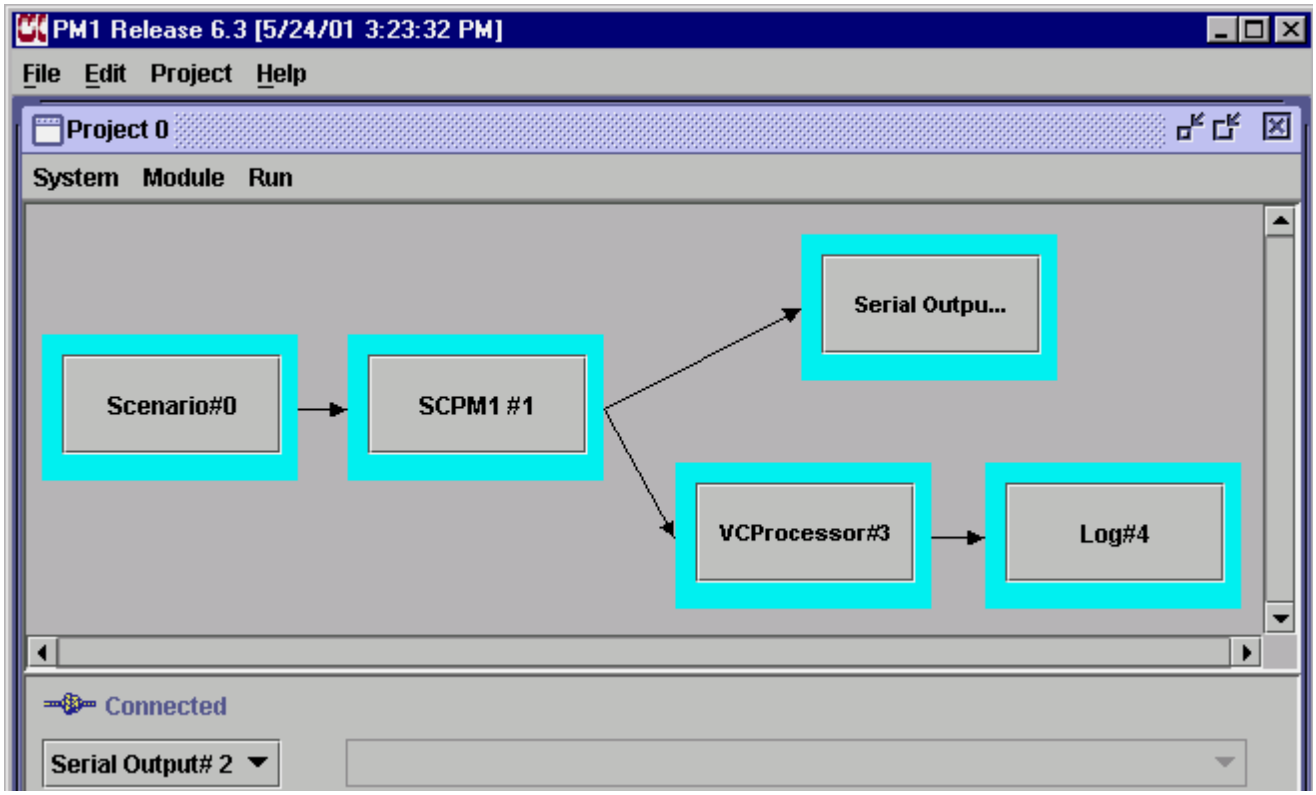
   set vcdu2vcid 1
   set vcdu2replay 1

7. (*) Run the usual telemetry startup scenario file, any special telemetry value setup scenario files desired, then start telemetry transmission by clicking on the **SRL** button of the SCPM1 Control panel.

8. At 16 Kbit the file will take 32 times longer to create than to play back at 524 Kbit. For example a four minute playback file will take 128 minutes to create.

9. After the file creation is complete, reset the two VCDU header parameters (see Step 6) to the following values:

   set vcdu2vcid 2
   set vcdu2replay 0



MPS/Aqua Configuration for Playback File

Attachment C – Resolved Discrepancy Reports

The following Discrepancy Reports (DRs) and Change Requests (CRs) have been closed by and are being delivered with MPS/Aqua Release 6.3. Although two of the DRs were written against the MPS/Aura simulator they apply to the MPS/Aqua simulator as well. The DRs/CRs are listed in the table below, which provides the DR/CR Number, Status, Severity, and a short description. A full description of each DR/CR follows the summary table. Complete information on all DRs/CRs may be accessed via the Internet at address http://iree.gsfc.nasa.gov/ddts/.

Summary of Closed Discrepancy Reports

Critical (Severity 1)	Urgent (Severity 2)	Routine (Severity 3)	Change Requests	Total
0	1	4	1	6

Status Definitions

N – New
A – Assigned Analysis
R – Analysis Entered
V – Assigned Verification
T – Tested
C – Closed
W – Withdrawn
P – Postponed
X – Duplicate

ETS No.	SMO No.	Type	Severity	Version Fixed In	Description
ETS0343	SMOdr05706	DR	3	6.3	Removing Links
ETS0363	SMOdr05924	DR	3	6.3	Telemetry data values entered by operator are not validated.
ETS0406	SMOdr07803	CR	3	6.3	MPS Scenario Execution from Command Subfields
ETS0436	SMOdr09840	DR	3	6.3	Nand and Nor functions don't work
ETS0437	SMOdr10213	DR	3	6.3	Ingest of cmd_verify PDB flat file fails
ETS0441	SMOdr10607	DR	2	6.3	Mis-spelled telemetry mnemonic with arithmetic function causes server crash.

DR: SMOdr05706 (ETS0343) Related NCR: Submitted: 991103
Status: ASSIGNED-ANALYSIS Class: ETS Asgnd-Analysis: 991109

Title: removing links

SUBMITTAL INFORMATION		ANALYSIS INFORMATION	
Project:	ETS	Assignee1/Org:	Ernest Quintin
Rel/Ver:	2.1	Phone:	301-805-3649
Subsystem:	MPS-PM/Aqua	Email:	equintin@csc.com
Test Phase:	unit test	Assignee2/Org:	
Severity:	3	Phone:	
Date found:	991029	Email:	
Location:	Denver	Date due (Sev=1,2):	
Submitter:	Vince Ruland		
Organization:	ETS		
Phone number:	720-895-4068		
Email:	vhruland@west.raytheon.com		

********** Problem (Added 991103 by vruland) **********
There should be an easier way to remove an incorrect link or a link made in error rather than going into the design mode to delete it. After the link is deleted, the create links mode has to be re-entered in order to continue creating links.

********** Admin Comments (Added 991109 by eshurie) **********
Per DRB meeting (11/8/99), the developers stated that the changes needed for this enhancement will be very involved.

DR: SMOdr05924 (ETS0363) Related NCR: Submitted: 991217
Status: ASSIGNED-ANALYSIS Class: ETS Asgnd-Analysis: 000117

Title: Telemetry data values entered by operator are not validated

SUBMITTAL INFORMATION		ANALYSIS INFORMATION	
Project:	ETS	Assignee1/Org:	Ernest Quintin
Rel/Ver:	3.0	Phone:	301-805-3649
Subsystem:	MPS-PM/Aqua	Email:	equintin@csc.com
Test Phase:	acceptance test	Assignee2/Org:	
Severity:	3	Phone:	
Date found:	991217	Email:	
Location:	GSFC	Date due (Sev=1,2):	
Submitter:	Ernest Quintin		
Organization:	ETS Dev Group		
Phone number:	301-805-3649		
Email:	equintin@csc.com		

********** Problem (Added 991217 by equintin) **********
No validation is being performed on the values entered in the Set Directive Window. If the value entered exceeds the number of bits specified for the telemetry point, high order bits are truncated when the packet is built. If you enter a hex value, the telemetry point gets set to zero. Binary values are interpreted as decimal. In addition, the system does not notify the user concerning the invalid entry

********** Admin Comment (Modified 010402 by ckolb) **********
3/30/2001 - Per DRB, this problem will be fixed in Aura Release 2.

01/05/01 DRB: Per developer, the fix for this will be included in Release 6.2, scheduled for January 26 delivery.

DR: SMOdr07803 (ETS0406) Related NCR: Submitted: 000821
Status: ASSIGNED-ANALYSIS Class: ETS Asgnd-Analysis: 000929

Title: MPS Scenario Execution from Command Subfields

SUBMITTAL INFORMATION		ANALYSIS INFORMATION	
Project:	ETS	Assignee1/Org:	Ernest Quintin
Rel/Ver:	6.0	Phone:	301-805-3649
Subsystem:	MPS-PM/Aqua	Email:	equintin@csc.com
Test Phase:	unit test	Assignee2/Org:	
Severity:	3	Phone:	
Date found:	000804	Email:	
Location:	GSFC	Date due (Sev=1,2):	
Submitter:	Ed Weidner		
Organization:	Other		
Phone number:	(301)867-0023		
Email:	eweidner@qssmeds.com		

********** Configuration (Added 000821 by eweidner) **********
MPS version 6.0 Beta

********** Problem (Modified 000821 by eshurie) **********
The MPS does not currently spawn scenarios from command subfields (via command scenario file), only from the prime command mnemonic. Since many commands require subfields to designate the prime action (such as CERES mode commands for example), this greatly limits the fidelity of the tool.

Note: This would also require the constraint of only allowing a command to be listed once in the command scenario file to be adjusted to either allow multiple times or recognize subfields as well.

********** Admin Comment (Modified 010402 by ckolb) **********
3/30/2001 - Per DRB, this problem has been partially fixed in Aura Release 1, and the final fix will be in Aura Release 2.

9/29/00: The DRB decided that this is a Change Request and would be a new requirement. As such, it is being moved to Analysis - an estimate of the effort it would require will be made when time allows.

8/21/00: Per Carolyn Dent, this DR - Spcrft_A0104 - is really an ETS problem and will now be moved from Spacecraft in the drtt to the ETS class in the drtt. (The spcrft number will no longer exist) Email dated 8/21/00 follows:

> This appears to be an MPS not a IVVF problem. The problem should be moved to the ETS with the Element MPS-Aqua or MPS.
>
> Thanks, Carolyn

DR: SMOdr09840 (ETS0436) Related NCR: Submitted: 010315
Status: ASSIGNED-ANALYSIS Class: ETS Asgnd-Analysis: 010402

Title: Nand and Nor functions don't work

SUBMITTAL INFORMATION		ANALYSIS INFORMATION	
Project:	ETS	Assignee1/Org:	Ernest Quintin
Rel/Ver:	1.0	Phone:	301-805-3649
Subsystem:	Aura	Email:	equintin@csc.com
Test Phase:	system I&T	Assignee2/Org:	
Severity:	3	Phone:	
Date found:	010315	Email:	
Location:	GSFC	Date due (Sev=1,2):	
Submitter:	Ernest Quintin		
Organization:	ETS Dev Group		
Phone number:	301-805-3649		
Email:	equintin@csc.com		

********** Problem (Added 010315 by equintin) **********
Please describe the problem you are experiencing below, including
what you did, what you expected to happen, and what actually happened:

The Nor function always returns zero, no matter what input it
is given.

The Nand function always returns an error message indicating that it
cannot find the mnemonic, but it appends the letter n to the mnemonic.
Ex: mod_cr_sr_grat_ch_bn not found

********** Admin Comments (Added 010402 by ckolb) **********
3/30/2001 - Per DRB, this problem will be fixed in Aura Release 2.

DR: SMOdr10213 (ETS0437) Related NCR: Submitted: 010413
Status: ASSIGNED-ANALYSIS Class: ETS Asgnd-Analysis: 010427

Title: Ingest of cmd_verify PDB flat file fails

SUBMITTAL INFORMATION		ANALYSIS INFORMATION	
Project:	ETS	Assignee1/Org:	Ernest Quintin
Rel/Ver:	1.0	Phone:	301-805-3649
Subsystem:	Aura	Email:	equintin@csc.com
Test Phase:	in-field use	Assignee2/Org:	
Severity:	3	Phone:	
Date found:	010330	Email:	
Location:	GSFC	Date due (Sev=1,2):	
Submitter:	Ernest Quintin		
Organization:	ETS Dev Group		
Phone number:	301-805-3649		
Email:	equintin@csc.com		

********** Problem (Modified 010427 by eshurie) **********
The ingest of the cmd_verify PDB flat file into Oracle fails part way through. The SQL*Loader script errors out after encountering 51 records with a NULL in the final column. Additionally, these records are discarded when they should not be.

NOTE: During 4/27/01 DRB, Ernest pointed out that this DR affects Aqua as well as Aura.

DR: SMOdr10607 (ETS0441) Related NCR: Submitted: 010508
Status: NEW Class: ETS

  Title: Mis-spelled tlm mnemonic with arithmetic fcn causes server crash
SUBMITTAL INFORMATION
 Project: ETS
 Rel/Ver: 6.3
 Subsystem: MPS-PM/Aqua
 Test Phase: dev informal integ
 Severity: 2
 Date found: 010504
 Location: GSFC
 Submitter: Ernest Quintin
 Organization: ETS Dev Group
 Phone number: 301-805-3649
 Email: equintin@csc.com

********** Problem (Added 010508 by equintin) **********
Please describe the problem you are experiencing below, including
what you did, what you expected to happen, and what actually happened:

Entering a set directive to change a telemetry point via one of
the arithmetic functions causes a server crash if the mnemonic
is mis-spelled.

Example: set CDH_SS_CCASULSYNC += 2

The mnemonic should be CDH_SS_PCASULSYNC.

Attachment D – System Limitations

D.1 MPS/Aqua Release 6.3 Limitations

The following limitations apply to MPS/Aqua Release 6.3. Some of these are Discrepancy Reports (DRs) against SIMSS baseline products and have been recorded in their DR repository.

Problem Description	**Workaround**
The event message window can accept no more than 50 messages per second. The Scenario module can easily overrun this limit and flood the GUI with messages.	Use Sleep directives to slow scenario files to 50 directives per second or less.
The Generic Container Buffer display is limited to 1400 bytes of data (= 700 words, or 350 double words). A request for more data than that will result in a display of 1400 bytes of information. *This is SIMSS Defect # 102.*	To view data that is beyond byte 1400 of the buffer, set the offset to 1400, or as required to view the data.
If a container item name such as a telemetry mnemonic is entered into multiple displays of the *Display/Set Container Items…* window and updated in a higher numbered display, the update will not be reflected in lower numbered display(s).	Do not duplicate container item names.
When using SQL*Plus to select entries from the Oracle calcurve table via the conversion type field, *conv_type*, it is necessary to put a space after the type entry. e.g. "U_5D ", not "U_5D".	Given at left.

The total of all while loops in scenario scripts running at any given time cannot exceed 1000.	Construct while loops so that the total never exceeds 1000 iterations. If the script must loop for more than that, exit the loop after 1000 iterations and use the start scenario directive to call the scenario file again. Ex.:
	while (I < 1000)
	  set <mnemonic> += 1
	  set I += 1
	  sleep 500
	endwhile
	start scenario <my_own_name>

Attachment E - Release History Summary Matrix

Attached is the release history summary matrix, which reflects the MPS/Aqua Release 6.3 delivery. Modules inherited from the SIMSS baseline have the SIMSS Release Number, while the MPS/Aqua modules EOSGS and SCPM1 have the current MPS/Aqua Release Number.

Release History Summary Matrix

System: **MPS/Aqua**

Release Number		1.0	1.1	2.0	2.1	2.2	3.0	3.1	4.0	5.0	5.1	6.0 Beta	6.0 Beta Update 1
Delivery Date		7/30/99	9/2/99	9/24/99	10/25/99	11/18/99	12/17/99	1/21/00	3/17/00	5/12/00	6/22/00	7/28/00	9/14/00
Configuration Item	CI No.												
Core (Client)	1.1	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
Core (Server)	1.2	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
SC-PM1 (Client)	1.3	1.0	1.1	2.0	2.1	2.2	3.0	3.1	4.0	5.0	5.0	6.0	6.0
SC-PM1 (Server)	1.4	1.0	1.1	2.0	2.1	2.2	3.0	3.1	4.0	5.0	5.1	6.0	6.0
GS (Client)	1.5	1.0	1.1	2.0	2.1	2.2	3.0	3.1	4.0	5.0	5.0	6.0	6.0
GS (Server)	1.6	1.0	1.1	2.0	2.1	2.2	3.0	3.1	4.0	5.0	5.0	6.0	6.0
IP Input (Client)	1.7	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
IP Input (Server)	1.8	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
IP Output (Client)	1.9	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
IP Output (Server)	2.0	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
DQM (Client)[1]	2.1												
DQM (Server)[1]	2.2												
Logging (Client)	2.3	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0

[1] To be delivered in a future release

Release Number		1.0	1.1	2.0	2.1	2.2	3.0	3.1	4.0	5.0	5.1	6.0 Beta	6.0 Beta Update 1
Delivery Date		7/30/99	9/2/99	9/24/99	10/25/99	11/18/99	12/17/99	1/21/00	3/17/00	5/12/00	6/22/00	7/28/00	9/14/00
Configuration Item	CI No.												
Logging (Server)	2.4	1.0	1.0	2.0	2.0	2.0	3.0	1.0	1.0	1.1	1.1	2.0	2.0
Scenario (Client)[2]	2.5								1.0	1.1	1.1	2.0	2.0
Scenario (Server)[2]	2.6								1.0	1.1	1.1	2.0	2.0
Serial Input (Client)[2]	2.7								1.0	1.1	1.1	2.0	2.0
Serial Input (Server)[2]	2.8								1.0	1.1	1.1	2.0	2.0
Serial Output (Client)[2]	2.9								1.0	1.1	1.1	2.0	2.0
Serial Output (Server)[2]	3.0								1.0	1.1	1.1	2.0	2.0
TxFile (Client)[3]	3.1												
TxFile (Server)[3]	3.2												

[2] New in Release 4.0
[3] New in Release 6.0

Release History Summary Matrix, Continued

System: **MPS/Aqua**

Release Number		6.0	6.1	6.2	6.3								
Delivery Date		9/28/00	11/17/00	2/9/01	06/15/01								
Configuration Item	CI No.												
Core (Client)	1.1	2.0	2.0	4.0	4.1								
Core (Server)	1.2	2.0	2.0	4.0	4.1								
SC-PM1 (Client)	1.3	6.0	6.0	6.2	6.3								
SC-PM1 (Server)	1.4	6.0	6.0	6.2	6.3								
GS (Client)[7]	1.5	6.0	6.0	6.0	6.3								
GS (Server)[7]	1.6	6.0	6.0	6.0	6.3								
IP Input (Client)	1.7	2.0	2.0	4.0	4.1								
IP Input (Server)	1.8	2.0	2.0	4.0	4.1								
IP Output (Client)	1.9	2.0	2.0	4.0	4.1								
IP Output (Server)	2.0	2.0	2.0	4.0	4.1								
DQM (Client)[4]	2.1												
DQM (Server)[4]	2.2												
Logging (Client)	2.3	2.0	2.0	4.0	4.1								

[4] To be delivered in a future release
[7] In Release 6.3 the Aura/EOSGS module replaced the Aqua/GSPM1 module

Release Number		6.0	6.1	6.2	6.3								
Delivery Date		9/28/00	11/17/00	2/9/01	06/15/01								
Configuration Item	CI No.												
Logging (Server)	2.4	2.0	2.0	4.0	4.1								
Scenario (Client)[5]	2.5	2.0	2.0	4.0	4.1								
Scenario (Server)[5]	2.6	2.0	2.0	4.0	4.1								
Serial Input (Client)[5]	2.7	2.0	2.0	4.0	4.1								
Serial Input (Server)[5]	2.8	2.0	2.0	4.0	4.1								
Serial Output (Client)[5]	2.9	2.0	2.0	4.0	4.1								
Serial Output (Server)[5]	3.0	2.0	2.0	4.0	4.1								
TxFile (Client)[6]	3.1	2.0	2.0	4.0	4.1								
TxFile (Server)[6]	3.2	2.0	2.0	4.0	4.1								
vcProcessor (Client)[8]	3.3				4.1								
vcProcessor (Server) [8]	3.4				4.1								

[5] New in Release 4.0
[6] New in Release 6.0
[8] New in Release 6.3

Attachment F — Mission Systems Configuration Management Form

This attachment contains the completed Mission Systems Configuration Management (MSCM) form for the delivery of MPS/Aqua Release 6.3.

Mission Systems Configuration Management Form

1. ORIGINATOR	2. ORGANIZATION	3. PHONE	4. E-MAIL ADDRESS
Dave Green	CSC	301-805-3420	dsgreen@csc.com

5. ELEMENT	6. INSTALLATION PRIORITY	7. TRACKING NUMBER (Assigned by CM Office)
ETS (MPS/PM1)	Routine	

8. SOURCE CHANGE REQUEST(S):

ETS delivery of MPS for EOS PM-1 (MPS/PM1)

9. APPROVALS

Element Manager _____ / /

Flight Ops Director _____ / /

Operations Manager _____ / /

10. DELIVERED SYSTEM (Check all that apply)

	Name	Version	Media Identification	Identification Date
☐ Hardware				
☒ Software	MPS/PM1	R6.3	CD-ROM	06/15/01
☐ Database				
☒ Documentation:				
MPS/PM1 delivery package		N/A	via email	06/15/01
☐ Other				

11. CHANGE DESCRIPTION

Release 6.3 of MPS/PM-1 (MPS/PM-1)

12. ATTACHMENT(S): Check if YES ☒

Description: MPS/PM1 Release 6.3 delivery package (cover letter with attachments) dated 06/15/01

13. CM OFFICE USE

	Location (Bldg/Room)	Slot location(s)
Hardware	/	
Media	/	
Documentation	/	

Installation date / /

CM Office Signature _____

Form MSCM (970327)