

Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp



Procedure Summary

Objectives

This Herschel OBSM nominal procedure is used to perform a PACS DPU RAM Data SMCS memory ground image update from memory dump of one or several PACS DPU RAM Data SMCS memory areas. The memory dump is commanded using TC(6,5) and the memory locations content is received on ground in TM(6,6) packets.

The procedure assumes that the command stack has already been generated using the OBSM system and is ready for loading on the Manual Stack. The command stack generation activity is not covered by this procedure.

Summary of Constraints

CDMU in Operational Mode
 - PACS DPU ASW running

Memory areas are dumped through TC(6,5); this TC will be delayed when there is an ongoing:

- TC(6,2) Load Memory Using Absolute Addresses
- TC(6,5) Dump Memory Using Absolute Addresses
- TC(6,9) Check Memory Using Absolute Addresses
- TC(8,4,1,1) Copy Memory

Spacecraft Configuration

Start of Procedure

CDMU in Operational Mode
 - PACS DPU ASW running

End of Procedure

Same as start

Reference File(s)

Input Command Sequences

Output Command Sequences

OFCP4153

Referenced Displays

ANDs GRDs SLDs

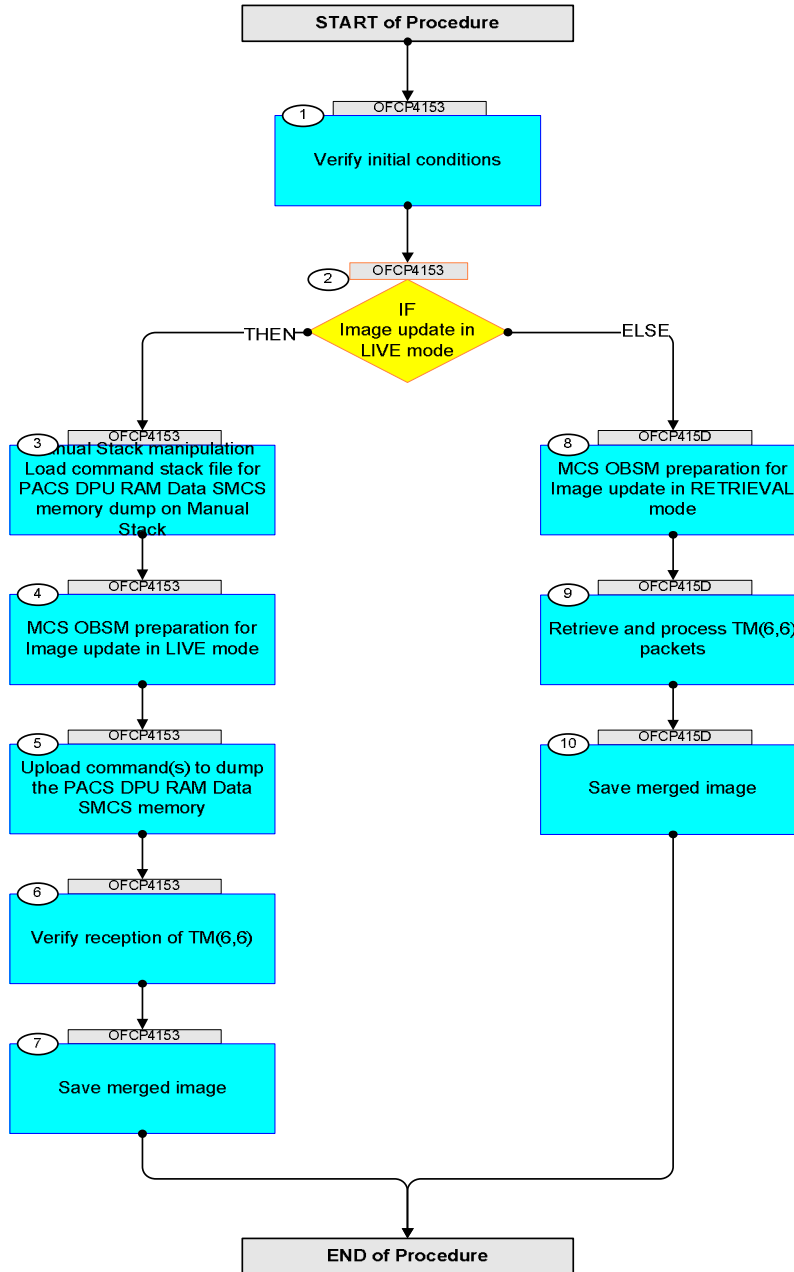
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
02/09/08		1	Created	lstefanov-hp	
05/09/08	2	2	1. steps 4.2.1, 4.2.2, 8.2.1 and 8.2.2 changed: "monitored" replaced by "updated" in comment statement	lstefanov-hp	

Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp



Procedure Flowchart Overview



Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp





Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
Beginning of Procedure					
OFCP4153 TC Seq. Name : OFCP4153 () PACS DPU RAM Data SMCS image update in Live mode TimeTag Type: B Sub Schedule ID: <input type="checkbox"/>					
1		Verify initial conditions		Next Step: 2	
		Check PACS DPU ASW running			
		Instrument SOE to confirm PACS instrument mode			
2		IF Image update in LIVE mode type: [If]		Next Step: THEN 3 ELSE 8	
3		Manual Stack manipulation Load command stack file for PACS DPU RAM Data SMCS memory dump on Manual Stack		Next Step: 4	
		NOTE: The current procedure assumes that the memory dump in Live mode is performed using commands with immediate execution.			
		Select the File -> LoadStack option from the main menu of the Manual Stack window			
3.1		IF PACS Nominal			
		Select file PADPRDSM_DI_XXXXYYY_N_NoModel_NoModel_YYYY_DDDThhmss.machine from directory /home/pmcops/HPMCS/SESSION/current/data/CMD/STACKS/OBSM/PADPRDSM as indicated by the OBSM engineer			
		IMPORTANT: XXXXYYY = Image ID(X) and Version(Y) - depend on image used for stack generation YYYY_DDD hhmss - depend on stack generation time machine - depends on the name of the machine used for stack generation			

Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp



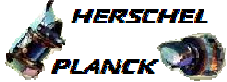


Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		<p>File name examples</p> <p>- No model associated to the memory image:</p> <p>PADPRDSM_DI_0002001_N_NoModel_NoModel_2007_254T123300.sun043</p> <p>- CT PADPRDSM1, ID 0003, Version 001 associated to the memory image:</p> <p>PADPRDSM_DI_0002001_C_PADPRDSM1_0003001_2007_337T093320.sun043</p>			
3.2		<p>ELSE</p> <p>PACS Redundant</p>			
		<p>Select file</p> <p>PADRDSMR_DI_XXXXYYY_N_NoModel_NoModel_YYYY_DDDThhmmss.machine</p> <p>from directory</p> <p>/home/pmcSops/HPMCS/SESSION/current/data/CMD/STACKS/OBSM/PADRDSMR</p> <p>as indicated by the OBSM engineer</p>			
		<p>IMPORTANT:</p> <p>XXXXYYY = Image ID(X) and Version(Y) - depend on image used for stack generation</p> <p>YYYY_DDD hhmmss - depend on stack generation time</p> <p>machine - depends on the name of the machine used for stack generation</p>			
		<p>File name examples</p> <p>- No model associated to the memory image:</p> <p>PADRDSMR_DI_0002001_N_NoModel_NoModel_2007_254T123300.sun043</p> <p>- CT PADRDSMR1, ID 0003, Version 001 associated to the memory image:</p> <p>PADRDSMR_DI_0002001_C_PADRDSMR1_0003001_2007_337T093320.sun043</p>			
3.3		<p>Check command stack loaded</p>			
		<p>Check that loaded stack contains one or several TCs</p> <p>PC028380</p>			
		<p>Display the Manual Stack in 'Full mode' and check that the Memory ID parameter in the PC028380 command(s) is set to 14 hex:</p> <p>Memory ID = 14 hex</p> <p>Note: The Memory ID of the target memory device is stored in the MSB of the 16-bit long Mem ID TC parameter. The LSB of the same parameter carries the most significant 8 bits of the Start Address.</p>			

Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp



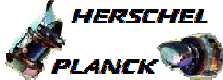

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Execute Telecommand <p style="text-align: right;">DPU_MEMORY_DUMP</p> <p style="text-align: right;">PC028380</p> <p>Command Parameter(s) :</p> <p style="margin-left: 40px;">DPU_MEMORY_BLOCK_ID PP009380 14xx hex</p> <p style="margin-left: 40px;">DPU_MEMORY_ADDR PP003380 <hex> (Def)</p> <p style="margin-left: 40px;">DPU_DATA_LENGTH PP008380 <dec> (Def)</p> <p>TC Control Flags :</p> <p style="margin-left: 40px;">GBM IL DSE</p> <p style="margin-left: 40px;">--Y -- ---</p> <p>Subsch. ID : 90</p> <p>Det. descr. : DUMP OF A DPU MEMORY AREA</p> <p>This Telecommand will not be included in the export</p>		TC	
4		MCS OBSM preparation for Image update in LIVE mode		Next Step: 5	
		Note: It is assumed that the OBSM application is already running and the OBSM Desktop is displayed on the MCS client. Starting the OBSM application is not covered by the current procedure.			
4.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the OBSM Desktop . From the Image menu, select Update . The 'Image Catalog' window opens.			
4.2		Select image to be updated			
4.2.1		IF PACS Nominal			
		Select the image to be updated for the memory device PADPRDSM . The 'Image UPDATE' window opens.			
4.2.2		ELSE PACS Redundant			
		Select the image to be updated for the memory device PADRDSMR . The 'Image UPDATE' window opens.			

Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp





Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
4.3		Start dump TM processing			
		In LIVE mode, processing of incoming real-time telemetry starts automatically after the image selection.			
5		Upload command(s) to dump the PACS DPU RAM Data SMCS memory		Next Step: 6	
		Uplink the PC028380 memory dump command(s) with ARM-GO			
		For each command, one or more TM(6,6) packets must be received on ground.			
6		Verify reception of TM(6,6)		Next Step: 7	
		Note: One or more TM(6,6) packets will be received for each memory dump command uplinked.			
6.1		IF PACS Nominal			
		Verify Packet Reception MEMORY_DUMP Packet Mnemonic : MEMORY_DUMP APID : 1152 Type : 6 Subtype : 6 PI1 : PI2 :			
6.2		ELSE PACS Redundant			
		Verify Packet Reception MEMORY_DUMP Packet Mnemonic : MEMORY_DUMP APID : 1153 Type : 6 Subtype : 6 PI1 : PI2 :			
6.3		Check OBSM dump packet processing			
		Check that the OBSM is processing the incoming memory dump packets.			

Update PACS DPU RAM Data SMCS ground image via memory dump
 File: H_FCP_OBS_4153.xls
 Author: lstefanov-hp

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
7		Save merged image		Next Step: END	
		Save merged image with new ID .			
End of Sequence					
OFCP415D TC Seq. Name : OFCP415D () PACS DPU RAM Data SMCS image update in Retrieval mode TimeTag Type: Sub Schedule ID: <input type="checkbox"/>					
8		MCS OBSM preparation for Image update in RETRIEVAL mode		Next Step: 9	
		Note: It is assumed that the OBSM application is already running and the OBSM Desktop is displayed on the MCS client. Starting the OBSM application is not covered by the current procedure.			
8.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the OBSM Desktop . From the Image menu, select Update . The 'Image Catalog' window opens.			
8.2		Select image to be updated			
8.2.1		IF PACS Nominal			
		Select the image to be updated for the memory device PADPRDSM . The 'Image UPDATE' window opens.			
8.2.2		ELSE PACS Redundant			
		Select the image to be updated for the memory device PADDRDSMR . The 'Image UPDATE' window opens.			

Update PACS DPU RAM Data SMCS ground image via memory dump File: H_FCP_OBS_4153.xls Author: lstefanov-hp	
--	--

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
8.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
9		Retrieve and process TM(6,6) packets		Next Step: 10	
		Use the STEP button to retrieve and process the TM(6,6) packets, packet by packet and starting from the time shown in the packet time field.			
		OR			
		Use the PLAY button to retrieve and process the TM(6,6) packets in automated mode. Pressing the PLAY button, the display will start to retrieve and process packets, starting from the time shown in the packet time field. This processing will stop automatically when a packet is received which creation time is greater than the one contained in the end time field.			
10		Save merged image		Next Step: END	
		Save merged image with new ID .			
End of Sequence					
End of Procedure					