

Dump of ACC memories (code and constants)
File: H_COP_OBS_9101.xls
Author: lstefanov-hp



Procedure Summary

Objectives

This Herschel OBSM commissioning procedure is used to perform ACC memory ground images update from memory dump. The procedure is meant to be used for updating the OBSM ground images in the Commissioning phase, but it can also be used for commanding and monitoring ACC memory dumps in any other mission phase. The procedure assumes that the ground image updates are conducted in Retrieval.

The procedure assumes that full dumps of code and constant memory areas (no variable areas) are dumped for the following CDMU memory devices:

- ACC PM PROM
- ACC PM EEPROM1&2
- ACC CPU RAM (OBS image)
- ACC TTR SGM A&B

The memory dump is commanded using TC(6,5) and the memory locations content is received on ground in TM(6,6) packets.

The memory dumps are commanded using the TC sequence generated from this procedure, and not OBSM generated command stacks.

Summary of Constraints

ACC in Operational Mode

The ACC CPU RAM dump requests may not cross the border between Write Protected (WP) and Not Protected (NP) areas. If the border is violated, the command is rejected.

The ACC SGM dump requests may not cross the border between: BSW Write Protected (BSW WP), ASW Write Protected (ASW WP), BSW Not Protected (BSW NP) and ASW Not Protected (ASW NP) areas. If a border is violated, the corresponding command is rejected.

The ACC SGM dump requests shall observe the 32-bit alignment of the SGM devices. The maximum number of SAUs in a dump command shall be FFFC hex, instead of FFFF hex.

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

ACC in Operational Mode

End of Procedure

Same as start except:
- ACC memory dump sequence executed

Reference File(s)

Status : Version 1 - Unchanged
Last Checkin: 31/03/09

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Input Command Sequences

Output Command Sequences

OCOP9101

Referenced Displays

ANDs GRDs SLDs

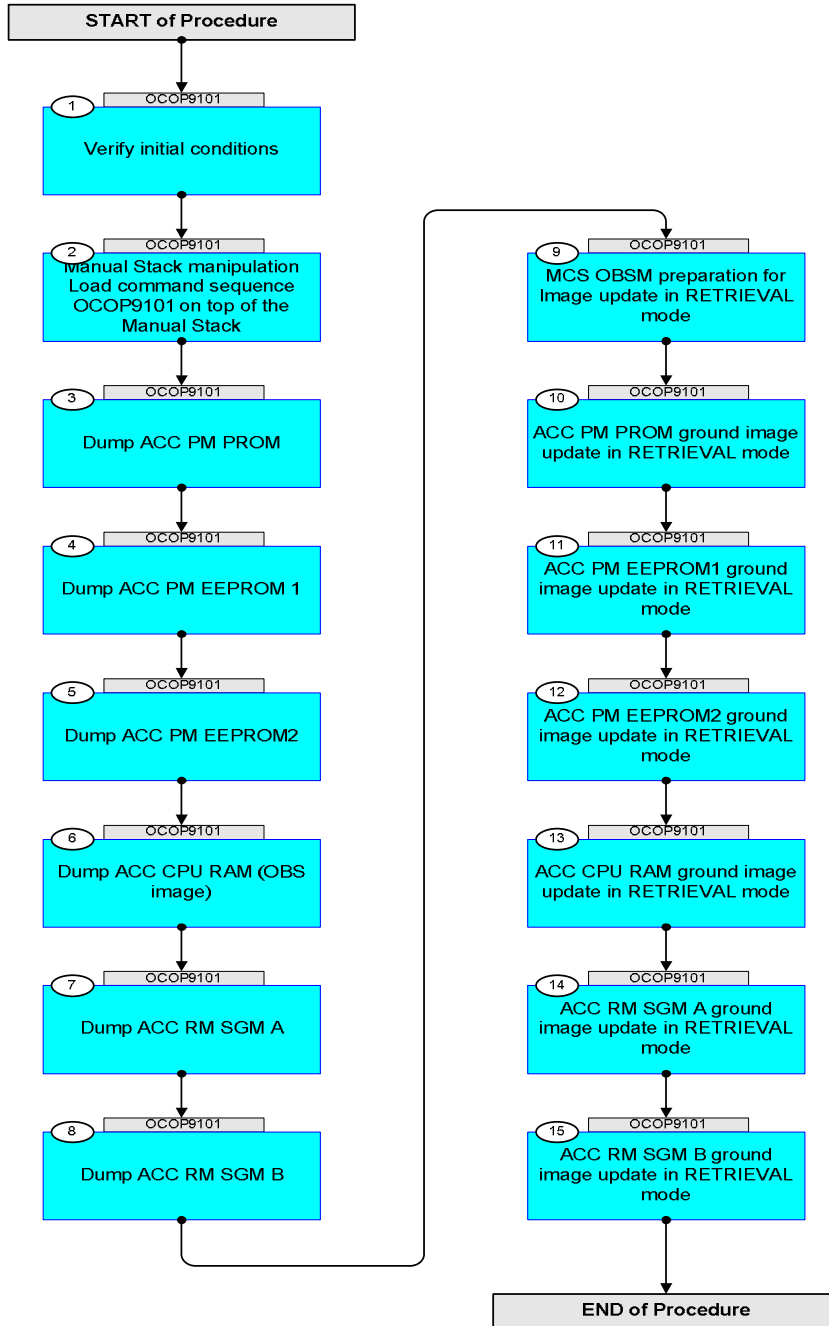
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
31/03/09	2.3	1	Created	lstefanov-hp	

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Procedure Flowchart Overview



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-----------------------------------------------------------------------------------------------	------------------------------------------------------------------------------------

Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment											
Beginning of Procedure																
OCOP9101		TC Seq. Name : OCOP9101 (ACC Mem Dump) ACC memories dump (code and constants) TimeTag Type: N Sub Schedule ID: □														
1		Verify initial conditions		Next Step: 2												
		Check: - ACC in Operational mode ACMS SOE to confirm ACC mode														
2		Manual Stack manipulation Load command sequence OCOP9101 on top of the Manual Stack		Next Step: 3												
2.1		Sequence data FP: N/A TT: N/A														
3		Dump ACC PM PROM		Next Step: 4												
		For a full ACC PM PROM dump (Memory ID = 0000 included in the address): Start Address = 0000.0000 hex End Address = 0000.FFFF hex Length = 10000 hex														
		2 TCs for ACC PM PROM dump														
		Execute Telecommand <div style="text-align: right; margin-right: 20px;">Dump Memory</div> Command Parameter(s) : <table style="margin-left: 20px; border: none;"> <tr> <td style="padding-right: 20px;">Memory ID</td> <td style="padding-right: 20px;">AH6M0109</td> <td>0000 <hex> (Def)</td> </tr> <tr> <td>Start Address</td> <td>AH6M1109</td> <td>0000 <hex> (Def)</td> </tr> <tr> <td>Length SAU</td> <td>AH6M3109</td> <td>FFFF <hex></td> </tr> </table> TC Control Flags : <table style="margin-left: 20px; border: none;"> <tr> <td style="padding-right: 20px;">GBM IL DSE</td> <td>--Y -- ---</td> </tr> </table> Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	Memory ID	AH6M0109	0000 <hex> (Def)	Start Address	AH6M1109	0000 <hex> (Def)	Length SAU	AH6M3109	FFFF <hex>	GBM IL DSE	--Y -- ---	AC063109	TC	
Memory ID	AH6M0109	0000 <hex> (Def)														
Start Address	AH6M1109	0000 <hex> (Def)														
Length SAU	AH6M3109	FFFF <hex>														
GBM IL DSE	--Y -- ---															

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
4		Dump ACC PM EEPROM 1		Next Step: 5	
		For a full ACC PM EEPROM1 dump (Memory ID = 008 included in the address): Start Address = 0080.0000 hex End Address = 008F.FFFF hex Length = 100000 hex			
		17 TCs for ACC PM EEPROM1 dump			
	ET=+ UT=+00.00.20	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
5		Dump ACC PM EEPROM2		Next Step: 6	
		For a full ACC PM EEPROM2 dump (Memory ID = 009 included in the address): Start Address = 0090.0000 hex End Address = 009F.FFFF hex Length = 100000 hex			
		17 TCs for ACC PM EEPROM2 dump			
	ET=+ UT=+00.00.20	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
6		Dump ACC CPU RAM (OBS image)		Next Step: 7	
		Note: For a dump of the ACC CPU RAM OBS image (Memory ID = 02 included in the address): Start Address = 0200.0000 hex End Address = 020F.FFBF hex Length = FFFC0 hex			
		IMPORTANT: The ACC CPU RAM dump request may not cross the border between Write Protected (WP) and Not Protected (NP) areas. If the border is violated, the command is rejected. The allocation of ACC RAM between WP and NP memory is defined at link time. The BSW constant, WriteProtectedRamEndAddr_C, points to the first byte of the unprotected RAM. For Herschel ACC OBS v.4.0.4 AAE WriteProtectedRamEndAddr_C = 020A.CB98 hex			
		17 TCs for ACC PM RAM dump			
	ET=+ UT=+00.00.20	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
7		Dump ACC RM SGM A		Next Step: 8	
		IMPORTANT: - On each SGM A and B, the memory area is split in two parts where the first part is write protected and second part is unprotected. - Each protected and unprotected area is divided into one part allocated to the ASW and one part allocated to the BSW			
		For ACMS ASW v.4.0 and BSW v.2.0, the definitions of the 4 SGM memory areas are (Memory ID = 00B hex included): SGM BSW WP Start Address = 00B0.0000 hex Length = 80 hex SGM ASW WP Start Address = 00B0.0080 hex Length = 3FF80 hex			
		SGM BSW NP Start Address = 00B4.0000 hex Length = 46100 hex SGM ASW NP Start Address = 00B8.6100 hex Length = 39F00 hex			
		IMPORTANT: All accesses to SGM memory must be 32-bit transfers, aligned to 32-bit boundaries.			
		14 TCs for ACC RM SGM A dump			

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7.1		Dump ACC SGM A BSW Write Protected area			
		For a full ACC SGM A BSW WP area dump (Memory ID = 00B hex included): Start Address = 00B0.0000 hex End Address = 00B0.007F hex Length = 80 hex			
		1 TC for ACC SGM A BSW WP area dump			
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
7.2		Dump ACC SGM A ASW Write Protected area			
		For a full ACC SGM A ASW WP area dump(Memory ID = 00B hex included): Start Address = 00B0.0080 hex End Address = 00B3.FFFF hex Length = 3FF80 hex			
		4 TCs for ACC SGM A ASW WP area dump			
	ET+= UT+=00.00.20	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
7.3		Dump ACC SGM A BSW Not Protected area			
		For a full ACC SGM A BSW NP area dump (Memory ID = 00B hex included): Start Address = 00B4.0000 hex End Address = 00B8.60FF hex Length = 46100 hex			
		5 TCs for ACC SGM A BSW NP area dump			
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
7.4		Dump ACC SGM A ASW Not Protected area			
		For a full ACC SGM A ASW NP area dump (Memory ID = 00B hex included): Start Address = 00B8.6100 hex End Address = 00BB.FFFF hex Length = 39F00 hex			
		4 TCs for ACC SGM A ASW NP area dump			
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
8		Dump ACC RM SGM B		Next Step: 9	
		IMPORTANT: - On each SGM A and B, the memory area is split in two parts where the first part is write protected and second part is unprotected. - Each protected and unprotected area is divided into one part allocated to the ASW and one part allocated to the BSW			
		For ACMS ASW v.4.0 and BSW v.2.0, the definitions of the 4 SGM memory areas are (Memory ID = 00E hex included): SGM BSW WP Start Address = 00E0.0000 hex Length = 80 hex SGM ASW WP Start Address = 00E0.0080 hex Length = 3FF80 hex			
		SGM BSW NP Start Address = 00E4.0000 hex Length = 46100 hex SGM ASW NP Start Address = 00E8.6100 hex Length = 39F00 hex			
		IMPORTANT: All accesses to SGM memory must be 32-bit transfers, aligned to 32-bit boundaries.			
		14 TCs for ACC RM SGM B dump			
8.1		Dump ACC SGM B BSW Write Protected area			
		For a full ACC SGM B BSW WP area dump (Memory ID = 00E hex included): Start Address = 00E0.0000 hex End Address = 00E0.007F hex Length = 80 hex			
		1 TC for ACC SGM B BSW WP area dump			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
8.2		Dump ACC SGM B ASW Write Protected area			
		For a full ACC SGM B ASW WP area dump(Memory ID = 00E hex included): Start Address = 00E0.0080 hex End Address = 00E3.FFFF hex Length = 3FF80 hex			
		4 TCs for ACC SGM B ASW WP area dump			
	ET=+ UT=+00.00.20	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
8.3		Dump ACC SGM B BSW Not Protected area			
		For a full ACC SGM B BSW NP area dump (Memory ID = 00E hex included): Start Address = 00E4.0000 hex End Address = 00E8.60FF hex Length = 46100 hex			
		5 TCs for ACC SGM B BSW NP area dump			
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET+= UT+=00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
8.4		Dump ACC SGM B ASW Not Protected area			
		For a full ACC SGM B ASW NP area dump (Memory ID = 00E hex included): Start Address = 00E8.6100 hex End Address = 00EB.FFFF hex Length = 39F00 hex			
		4 TCs for ACC SGM B ASW NP area dump			
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
	ET=+ UT=+00.00.40	Execute Telecommand Dump Memory Command Parameter(s) : Memory ID AH6M0109 Start Address AH6M1109 Length SAU AH6M3109 Subsch. ID : 20 Det. descr. : TC(6,5) Dump Memory Using Absolute Addresses	AC063109	TC	
9		MCS OBSM preparation for Image update in RETRIEVAL mode		Next Step: 10	
		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.			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		<p>Note: Following steps assume Image UPDATE from dump data is executed. IF dump data is to be monitored against already existing OBSM ground images, 'Image UPDATE' preparation activities in the following steps shall be replaced by 'Image MONITOR'.</p>			
10		ACC PM PROM ground image update in RETRIEVAL mode		Next Step: 11	
10.1		Select 'Image UPDATE' from the menu			
		<p>Select the Image menu of the <i>OBSM Desktop</i>. From the Image menu, select Update. The 'Image Catalog' window opens.</p>			
10.2		Select image to be updated			
10.2.1		<p>IF ACC PM A</p>			
		<p>Select the image to be updated for the memory device ACCUPRPG. The 'Image UPDATE' window opens.</p>			
10.2.2		<p>ELSE ACC PM B</p>			
		<p>Select the image to be updated for the memory device ACCUPRPG. The 'Image UPDATE' window opens.</p>			
10.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
10.4		Retrieve and process TM(6,6) packets			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		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.			
10.5		Save merged image			
		Save merged image with new ID .			
11		ACC PM EEPROM1 ground image update in RETRIEVAL mode		Next Step: 12	
11.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the <i>OBSM Desktop</i> . From the Image menu, select Update . The 'Image Catalog' window opens.			
11.2		Select image to be updated			
11.2.1		IF ACC PM A			
		Select the image to be updated for the memory device ACCCE1PG . The 'Image UPDATE' window opens.			
11.2.2		ELSE ACC PM B			
		Select the image to be updated for the memory device ACCCE1PB . The 'Image UPDATE' window opens.			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
11.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
11.4		Retrieve and process TM(6,6) packets			
		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.			
11.5		Save merged image			
		Save merged image with new ID .			
12		ACC PM EEPROM2 ground image update in RETRIEVAL mode		Next Step: 13	
12.1		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.			
12.2		Select image to be updated			
12.2.1		IF ACC PM A			

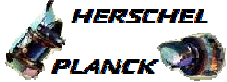
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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
		Select the image to be updated for the memory device ACCEE2PG . The 'Image UPDATE' window opens.			
12.2.2		ELSE ACC PM B			
		Select the image to be updated for the memory device ACCEE2PB . The 'Image UPDATE' window opens.			
12.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
12.4		Retrieve and process TM(6,6) packets			
		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.			
12.5		Save merged image			
		Save merged image with new ID .			
13		ACC CPU RAM ground image update in RETRIEVAL mode		Next Step: 14	
13.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the <i>OBSM Desktop</i> . From the Image menu, select Update . The 'Image Catalog' window opens.			

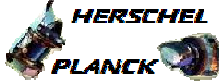

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
13.2		Select image to be updated			
13.2.1		IF ACC PM A			
		Select the image to be updated for the memory device ACCRMCPU . The 'Image UPDATE' window opens.			
13.2.2		ELSE ACC PM B			
		Select the image to be updated for the memory device ACCRMCPB . The 'Image UPDATE' window opens.			
13.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons .			
13.4		Retrieve and process TM(6,6) packets			
		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.			
13.5		Save merged image			
		Save merged image with new ID .			

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
14		ACC RM SGM A ground image update in RETRIEVAL mode		Next Step: 15	
14.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the <i>OBSM Desktop</i> . From the Image menu, select Update . The 'Image Catalog' window opens.			
14.2		Select image to be updated			
		Select the image to be updated for the memory device ASGMAMEM . The 'Image UPDATE' window opens.			
14.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
14.4		Retrieve and process TM(6,6) packets			
		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.			
14.5		Save merged image			
		Save merged image with new ID .			
15		ACC RM SGM B ground image update in RETRIEVAL mode		Next Step: END	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	AIT Comment
15.1		Select 'Image UPDATE' from the menu			
		Select the Image menu of the <i>OBSM Desktop</i> . From the Image menu, select Update . The 'Image Catalog' window opens.			
15.2		Select image to be updated			
		Select the image to be updated for the memory device ASGMBMEM . The 'Image UPDATE' window opens.			
15.3		Start dump TM packets processing			
		Set retrieval start and stop time and start retrieval of TM packets using the PLAY buttons.			
15.4		Retrieve and process TM(6,6) packets			
		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.			
15.5		Save merged image			
		Save merged image with new ID .			
End of Sequence					
End of Procedure					