Write the ASW to EEPROM
File: H_FCP_SPI_CLEM.xls
Author: R. Biggins

Procedure Summary

Objectives

The objective of this procedure is to write the currently running ASW into the EEPROM. SPIRE is then commanded to start the BSW and then starts the new EEPROM OBSW image.

Summary of Constraints

Spacecraft Configuration

Start of Procedure

SPIRE is in DPU ON mode

End of Procedure

SPIRE is in DPU ON mode

Reference File(s)

Input Command Sequences

Output Command Sequences

HFSCLEM

Referenced Displays

ANDs **GRDs** **SLDs**

ZAZ96999

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
19/05/2008	1	1	Created	R. Biggins	

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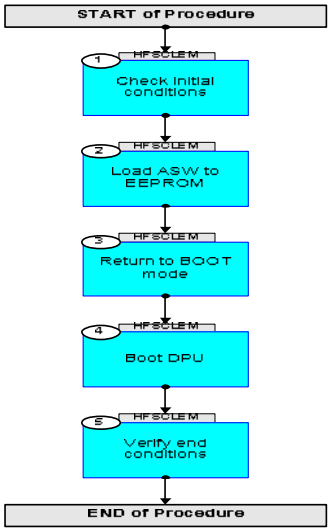
Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Beginning of Procedure		
		HFSCLEM Write to EEPROM *SSID :*		
1		*Check initial conditions*		Next Step: 2
		Verify: SPIRE has been switched off for at least 4 minutes		
		MOC should be advised by SPIRE as to whether the PRIMARY or SECONDARY partition is to be loaded. The **PRTITION** Formal Parameter should be set as follows: **0 = PRIMARY partition** **1 = SECONDARY partition**		
		Verify Telemetry **MODE** **SM00M500**	**= DPU_ON**	AND=ZAZ96999
2		*Load ASW to EEPROM*		Next Step: 3
		Execute Telecommand **WRITE2EEPROM** *Command Parameter(s) :* **STARTADDR_WRITE2EEPROM** **SPD5N505** **ENDADDR_WRITE2EEPROM** **SPD6N505** **PARTITION_FLAG** **SPDAN505** **JUMP_NPAGES** **SPDBN505** *SSID : 370*	**SCD08505** **4000 <hex>** **171EC <hex>** **PRTITION** **0 <hex>**	
		Verify: Wait approximately 30 seconds for the TM(1,7)		
3		*Return to BOOT mode*		Next Step: 4
		The following CALL_BOOT command will return SPIRE to running the BSW. This will initially execute memory checks (failures will generate **TM(5,4)** packets) and then generate **TM(5,1)** [Boot_ROM_Check] packets every 10 seconds. **WARNING:** It is vital to send the FORCE_BOOT TC within 210 seconds otherwise the DPU stops sending **TM(5,1)** packets (after 21 packets) and then the SVM will invalidate the RT		
		Return to BOOT mode **CALL_BOOT** *SSID : 370*	**SCD12505**	
4		*Boot DPU*		Next Step: 5

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Sending either of the FORCE_BOOT TCs will generate a **TM(5,1)** [TC_ACKNOWLEDGE] packet from the BSW. On ASW startup, three **TM(5,1)** [No_MCU_Response_Error, No_SCU_Response_Error, No_DCU_Response_Error] packets are expected as the units are not switched on.		
		To boot from PRIMARY partition, MANUALLY send the following command:		
		FORCE_BOOT_PRIMARY **FORCE_BOOT_PRIMARY** *SSID : 370* This Telecommand will not be included in the export	**SCD09505**	
		To boot from SECONDARY partition, MANUALLY send the following command:		
		Execute Telecommand **FORCE_BOOT_SECONDARY** *SSID : 370* This Telecommand will not be included in the export	**SCD0A505**	
5		*Verify end conditions*		Next Step: END
		The following version check should ensure that the expected software version is running.		
		Verify Telemetry **OBSVER1** **SM0EN500**	**Version**	AND=ZAZ96999
		Verify Telemetry **OBSVER2** **SM0FN500**	**Sub-version**	AND=ZAZ96999
		Verify Telemetry **OBSVER3** **SM05F500**	**Revision**	AND=ZAZ96999
		Verify Telemetry **MODE** **SM00M500**	**= DPU_ON**	AND=ZAZ96999
End of Procedure				