

SpireEngPMDump Dump and Check Memory  
 File: H\_FCP\_SPI\_DUMP.xls  
 Author: L.Lucas-hp



## Procedure Summary

### Objectives

This procedure dumps the DPU Program Memory  
 SPIRE must be the PRIME instrument when this procedure is run,  
 due to the volume of SPIRE TM generated.  
 It may be necessary to co-ordinate with SOM/HSC/Instrument teams  
 to ensure that SPIRE is PRIME.

Based on procedure:SpireEngPMDump  
 Generated by SPIRE ICC:23/04/2010

### Summary of Constraints

The instrument should normally be in REDY mode before execution  
 of this observation.

### Spacecraft Configuration

**Start of Procedure**

SPIRE mode = REDY

**End of Procedure**

### Reference File(s)

**Input Command Sequences**

**Output Command Sequences**

HFSDDUMP

### Referenced Displays

ANDs	GRDs	SLDs
ZAZ90999		
SA_7_559		
SA_1_559		

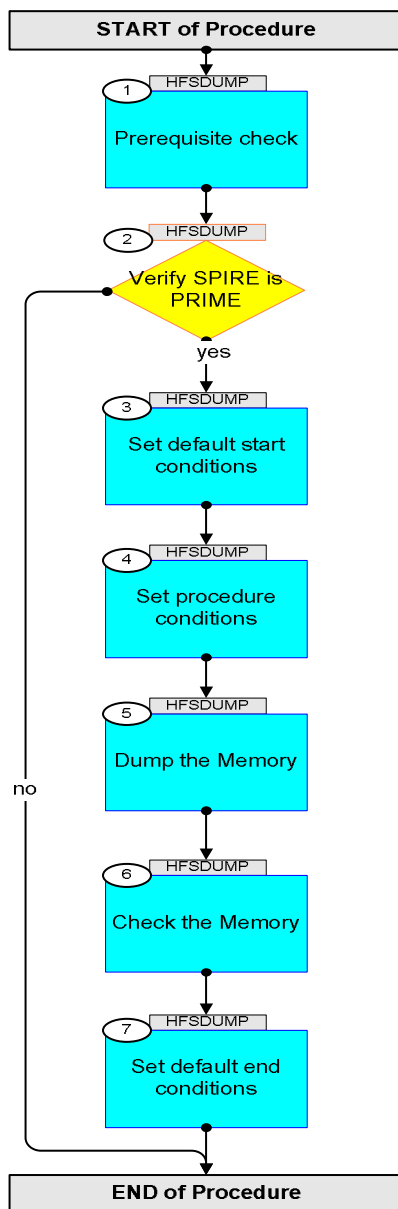
### Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
23/04/2010		1	Created	L.Lucas-hp	
13/08/2010	3.1	2	Added some TM checks and comments	L.Lucas-hp	

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### Procedure Flowchart Overview



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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
<b>Beginning of Procedure</b>				
TC Seq. Name : HFS DUMP (SpireEngPMDump v1)				
TimeTag Type: N Sub Schedule ID:  <input type="checkbox"/>				
1		Prerequisite check		Next Step: 2
1.1		HSC/ICC input		<input type="checkbox"/>
		Verify that the HSC has supplied a valid OBSID value:  OBS_ID = 0xnnnn nnnn		
2		Verify SPIRE is PRIME		Next Step: yes 3 no END
		For successful operation of this sequence, SPIRE <b>must</b> be PRIME.		
		Verify TM If TM check fails do NOT proceed. <b>BSW_SDB_ActProf</b> <b>DEF5F160</b>	<b>= SPIRE Prime</b>	AND=ZAZ90999
2.1		TM Checks		<input type="checkbox"/>
		Check telemetry, for comparison later <b>MODE</b> <b>SM00M500</b>	<b>= REDY</b>	AND=SA_7_559
		Check Telemetry, for comparison later <b>TM2N</b> <b>SMT1N500</b>		AND=SA_7_559
		Check Telemetry, for comparison later <b>THSK</b> <b>SM00T500</b>		AND=SA_7_559
3		Set default start conditions		Next Step: 4
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : <b>OBSERVATION_STEP</b> <b>SP03N500</b>  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	<b>SET_OBS_STEP</b>  <b>SC003500</b>  <b>0 &lt;hex&gt;</b>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID  SP01N500  80010001 <hex>	SC001500	
		Verify Telemetry  BBFULLTYPE	SM2LN500	= ClearObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500  1 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_OBSID  Command Parameter(s) : OBSERVATION_ID  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SET_OBSID  SP00N500  00000000 <hex>	SC000500	
		Verify Telemetry  OBSID	SM10N500	= 00000000 <hex>	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SET_OBS_STEP  SP03N500  0 <hex>	SC003500	
	ET=+ UT=+00.00.01	SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SET_BBID  SP01N500  80000000 <hex>	SC001500	
		Verify Telemetry  BBFULLTYPE	SM2LN500	= Null	AND=ZAZ90999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80020001 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= SpireBbStartOb	AND=ZAZ90999
4		Set procedure conditions		Next Step: 5
	ET=+ UT=+00.00.00	RESET_DRCU_COUNTERS  RESET_DRCU_COUNTERS  Subsch. ID : 370 Det. descr. : RESET DRCU COUNTERS	SCD00505	
		Verify that the TRESET parameter has the same value as the THSK parameter  TRESET SM01T500	same as THSK	AND=SA_1_559
		THSK SM00T500	any	AND=SA_1_559
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID  SET_OBSID  Command Parameter(s) : OBSERVATION_ID SP00N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SC000500  OBS_ID	
		Verify Telemetry  OBSID SM10N500	OBS_ID	AND=ZAZ90999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80000000 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= Null	AND=ZAZ90999
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID SP01N500  TC Control Flags :  GBM IL DSE --- --  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  8d4b0001 <hex>	
		Verify Telemetry  BBFULLTYPE SM2LN500	= PMDump	AND=ZAZ90999
5		Dump the Memory		Next Step: 6
	ET=+ UT=+00.00.00	DUMP_MEMORY_RAW  DUMP_MEMORY  Command Parameter(s) : MEMORYID_DUMPMEM SPM6N500 STARTADDR_DUMPMEM SPM7N500 NSAU_DUMPMEM SPM8N500  TC Control Flags :  GBM IL DSE --Y --  Subsch. ID : 370 Det. descr. : DUMP MEMORY USING ABSOLUTE ADDRESSES	SCM01500  0 <hex> 4000 <hex> 174B <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.10	DUMP_MEMORY_RAW  DUMP_MEMORY  Command Parameter(s) : MEMORYID_DUMPMEM           SPM6N500 STARTADDR_DUMPMEM         SPM7N500 NSAU_DUMPMEM         SPM8N500  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : DUMP MEMORY USING ABSOLUTE ADDRESSES	SCM01500  0 <hex> 6000 <hex> ffff <hex>	
	ET=+ UT=+00.01.00	DUMP_MEMORY_RAW  DUMP_MEMORY  Command Parameter(s) : MEMORYID_DUMPMEM           SPM6N500 STARTADDR_DUMPMEM         SPM7N500 NSAU_DUMPMEM         SPM8N500  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : DUMP MEMORY USING ABSOLUTE ADDRESSES	SCM01500  0 <hex> 15fff <hex> 59 <hex>	
6		Check the Memory		Next Step: 7
	ET=+ UT=+00.00.05	CHECK_MEMORY_RAW  CHECK_MEMORY  Command Parameter(s) : MEMORYID_CHECKMEM         SPM9N500 STARTADDR_CHECKMEM        SPMAN500 NSAU_CHECKMEM        SPMBN500  TC Control Flags :  GBM IL DSE --Y -- ---  Subsch. ID : 370 Det. descr. : CHECK MEMORY USING ABSOLUTE ADDRESSES	SCM02500  0 <hex> 4000 <hex> 174B <hex>	
	ET=+ UT=+00.00.05	CHECK_MEMORY_RAW  CHECK_MEMORY  Command Parameter(s) : MEMORYID_CHECKMEM         SPM9N500 STARTADDR_CHECKMEM        SPMAN500 NSAU_CHECKMEM        SPMBN500  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : CHECK MEMORY USING ABSOLUTE ADDRESSES	SCM02500  0 <hex> 6000 <hex> ffff <hex>	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
	ET=+ UT=+00.00.05	CHECK_MEMORY_RAW  CHECK_MEMORY  Command Parameter(s) : MEMORYID_CHECKMEM           SPM9N500 STARTADDR_CHECKMEM         SPMAN500 NSAU_CHECKMEM                SPMBN500  TC Control Flags :  GBM IL DSE --- -- ---  Subsch. ID : 370 Det. descr. : CHECK MEMORY USING ABSOLUTE ADDRESSES	SCM02500  0 <hex> 15fff <hex> 59 <hex>	
7		Set default end conditions		Next Step: END
		Note that a <b>TM(5,1)</b> packet [New_Step_Report] is generated after each of the following SET_OBS_STEP telecommands		
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP            SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  0 <hex>	
	ET=+ UT=+00.00.01	SET_BBID  SET_BBID  Command Parameter(s) : BUILDING_BLOCK_ID            SP01N500  Subsch. ID : 370 Det. descr. : SET BUILDING BLOCK IDENTIFIER	SC001500  80030001 <hex>	
		Verify Telemetry  BBFULLTYPE                    SM2LN500	= EndObs	AND=ZAZ90999
	ET=+ UT=+00.00.00	SET_OBS_STEP  SET_OBS_STEP  Command Parameter(s) : OBSERVATION_STEP            SP03N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION STEP	SC003500  1 <hex>	
	ET=+ UT=+00.00.01	SET_OBSID  SET_OBSID  Command Parameter(s) : OBSERVATION_ID                SP00N500  Subsch. ID : 370 Det. descr. : SET OBSERVATION IDENTIFIER	SC000500  00000000 <hex>	



