

Enable or disable the generation of an housekeeping or diagnostic packet
 File: H_FCP_DHS_3033.xls
 Author: S. Manganelli



Procedure Summary

Objectives

This procedure describes the steps needed to enable or disable the generation of an housekeeping or a diagnostic packet.

Summary of Constraints

In TCs (14,1) and (14,2) valid Packet Type and Subtype combinations are (3,25) and (3,26).

Note that TC(14,1) will be delayed if a TC(14,1) is already ongoing.

Maximum 16 HK/Diagnostic Packets may be active at the same time.
 Maximum 8 definitions may be listed in the same TC(14,1).
 When the wildcard Packet-ID FFFFhex is used, up to 16 definitions may be activated by the same TC(14,1).

Spacecraft Configuration

Start of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON

End of Procedure

- CDMU in default configuration, that is:
- PM A or B ON (nominally A)
 - TM Encoder/OBT A or B active (nominally A)
 - RM A and B enabled
 - MM A and B ON

Reference File(s)

Input Command Sequences

Output Command Sequences

HFD3033A
 HFD3033B
 HFD3033C
 HFD3033D

Referenced Displays

ANDs GRDs SLDs
 (None)

Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
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Status : Version 7 - Unchanged
 Last Checkin: 11/12/08

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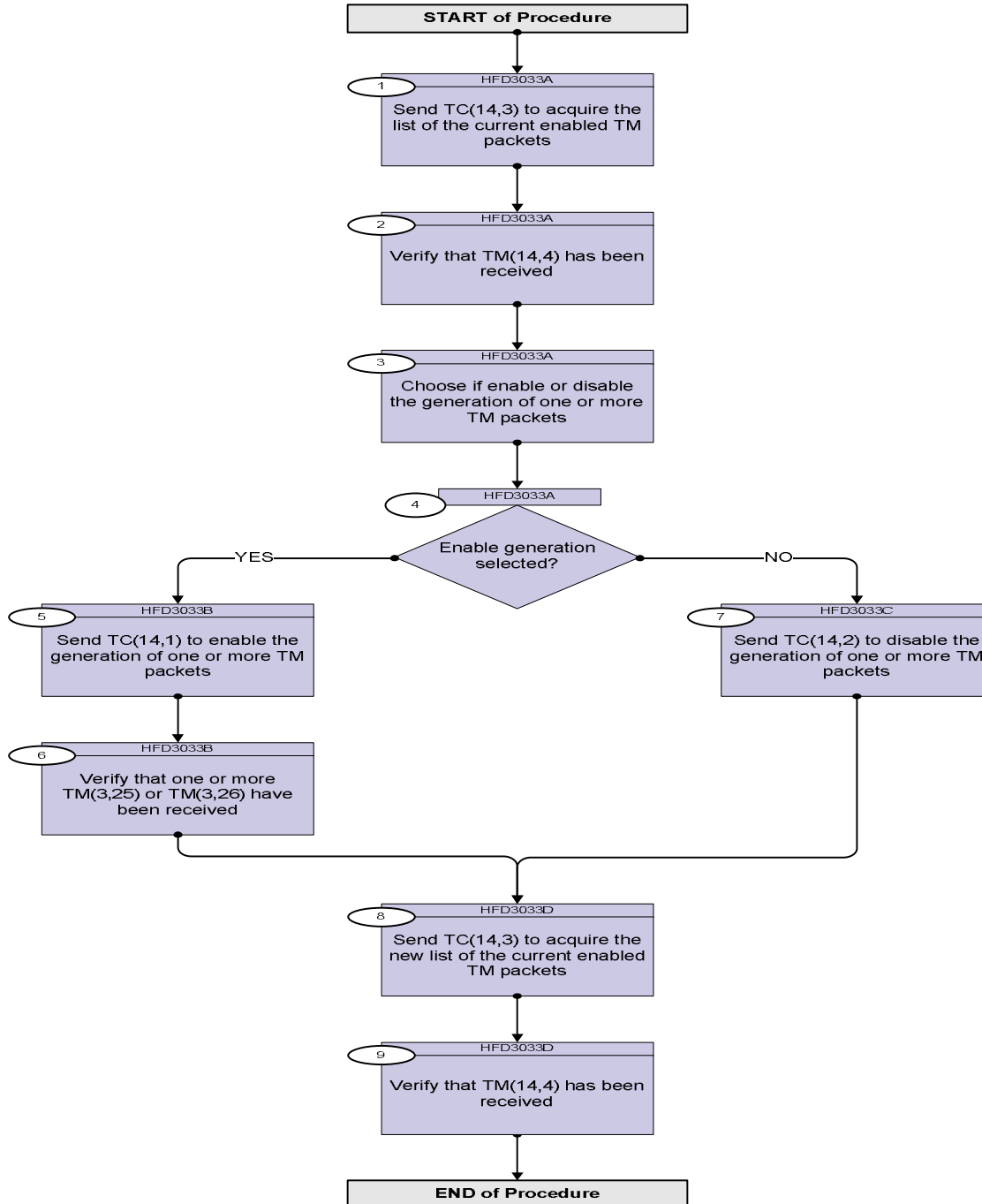


16/11/07		1	Created	cmevi-hp	
10/12/07		2	Formal parameters introduced.	cmevi-hp	
24/01/08		3	Batch update of TC flags	S. Manganelli	
29/01/08		4	Comment on constraint on max number of definitions in TC(14,1) added.	cmevi-hp	
04/08/08	1	5	Editorial	S. Manganelli	
24/10/08		6	DB check, included TCs in export	S. Manganelli	
11/12/08	2	7	Renamed sequences	S. Manganelli	

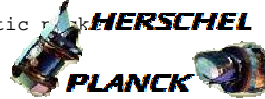
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Procedure Flowchart Overview

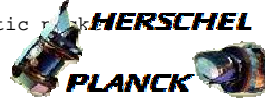


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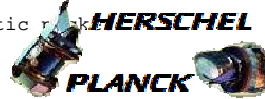
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
Beginning of Procedure				
TC Seq. Name :HFD3033A (List active hk pkt)				
TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
1		Send TC(14,3) to acquire the list of the current enabled TM packets		Next Step: 2
		When this request is received, the enabled telemetry source packet of the CDMU are determined and a report (14,4) is generated.		
		Execute Telecommand TC Control Flags : Subsch. ID : 10 Det. descr. : Report Enabled Telemetry Packets	ReportEnabledTm GBM IL DSE --Y -- ---	DC904180
2		Verify that TM(14,4) has been received		Next Step: 3
		Verify Packet Reception TM Packet Generation Status Report Packet Details:	TMpktGenRep	
		APID: Type: Subtype: PI1: PI2:	16 14 4	
		Verify Telemetry N	DE140180	(None)
		The following 3 parameters are repeated N times		
		Verify Telemetry Type	DE141180	(None)
		Verify Telemetry Sub-Type	DE142180	(None)
		Verify Telemetry Packet-ID	DE143180	(None)
3		Choose if enable or disable the generation of one or more TM packets		Next Step: 4
4		Enable generation selected?		Next Step: YES 5 NO 7

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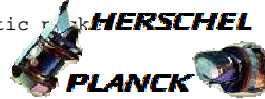
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
TC Seq. Name :HFD3033B (Ena HK pkt gener) TimeTag Type: N Sub Schedule ID: Formal Parameter List : Sub-Type SUBTYPE= Packet-ID HKID= <dec>				
5		Send TC(14,1) to enable the generation of one or more TM packets		Next Step: 6
		In the TC(14,1) it is necessary to set the following parameters: <u>N</u> : number of TM Packet definitions that follow. <u>Sub-Type</u> (repeated N times) <u>Packet-ID</u> : repeated N times, identifies specific groups of TM-packets within a certain Subtype.		
		Maximum 16 HK/Diagnostic Packets may be active at the same time. Maximum 8 definitions may be listed in the same TC(14,1). (But when the wildcard Packet-ID FFFF₁₆ is used, up to 16 definitions may be activated by the same TC(14,1).)		
		Note that: If all TM Packets belonging to a certain Subtype shall be enabled, the Packet-ID is set to 65535 (FFFFhex). Otherwise Packet-ID shall be equal to the HK Packet ID defined for that Service.		
		<u>WARNING: the following TC is intended to be just an example.</u>		
		Execute Telecommand <div style="text-align: right; margin-right: 100px;"> EnableTmGen </div> DC900180 Command Parameter(s) : <div style="display: flex; justify-content: space-between; margin-left: 100px;"> <div style="text-align: right;"> N Sub-Type Packet-ID </div> <div style="text-align: left;"> DH017180 DH019180 DH020180 </div> </div> 1 <dec> (Def) SUBTYPE HKID TC Control Flags : <div style="display: flex; justify-content: space-between; margin-left: 100px;"> <div style="text-align: right;"> GBM IL DSE --Y -- --- </div> </div> Subsch. ID : 10 Det. descr. : Enable Generation of Telemetry Packets		

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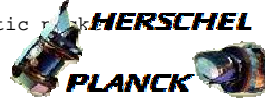
Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
6		Verify that one or more TM(3,25) or TM(3,26) have been received		Next Step: 8
		<p>Verify that the following information contained in the packet are the expected:</p> <p>SID: structure of the parameter field.</p> <p>Parameters: sequence of values of housekeeping or diagnostic parameters.</p>		
<p>TC Seq. Name :HFD3033C (Dis HK pkt gen)</p> <p>TimeTag Type: N Sub Schedule ID: Formal Parameter List : Sub-Type SUBTYPE= Packet-ID HKID=</p> <p style="text-align: right;"><dec></p>				
7		Send TC(14,2) to disable the generation of one or more TM packets		Next Step: 8
		<u>WARNING: the following TC is a variable length TC that MOIS cannot handle</u>		
		<p>In the TC(14,2) it is necessary to set the following parameters:</p> <p>N: number of TM Packet definitions that follow.</p> <p>Sub-Type (repeated N times)</p> <p>Packet-ID: repeated N times, identifies specific groups of TM-packets within a certain Subtype.</p>		
		<p>Maximum 16 HK/Diagnostic Packets may be active at the same time.</p> <p>Maximum 8 definitions may be listed in the same TC(14,1). (But when the wildcard Packet-ID FFFF₁₆ is used, up to 16 definitions may be activated by the same TC(14,1).)</p>		
		<p>Note that:</p> <p>If all TM Packets belonging to a certain Subtype shall be disabled, the Packet-ID is set to 65535 (FFFFhex).</p> <p>Otherwise Packet-ID shall be equal to the HK Packet ID defined for that Service.</p>		
		<u>WARNING: the following TC is intended to be just an example.</u>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Execute Telecommand DisableTmGen Command Parameter(s) : N DH017180 Sub-Type DH019180 Packet-ID DH020180 TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Disable Generation of Telemetry Packets	DC902180 1 <dec> (Def) SUBTYPE HKID	
TC Seq. Name :HFD3033D (List active hk pkt)				
TimeTag Type: Sub Schedule ID: □				
8		Send TC(14,3) to acquire the new list of the current enabled TM packets		Next Step: 9
		When this request is received, the enabled telemetry source packet of the CDMU are determined and a report (14,4) is generated.		
		Execute Telecommand ReportEnabledTm TC Control Flags : GBM IL DSE --Y -- --- Subsch. ID : 10 Det. descr. : Report Enabled Telemetry Packets	DC904180	
9		Verify that TM(14,4) has been received		Next Step: END
		Verify Packet Reception TM Packet Generation Status Report Packet Details: APID: 16 Type: 14 Subtype: 4 PI1: PI2:	TMpktGenRep	
		Verify Telemetry N DE140180		(None)
		The following 3 parameters are repeated N times		
		Verify Telemetry Type DE141180		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Sub-Type DE142180		(None)
		Verify Telemetry Packet-ID DE143180		(None)
End of Procedure				