

Suspend or resume an OBCP
File: H_FCP_DHS_3043.xls
Author: S. Manganelli



Procedure Summary

Objectives

The ASW function "OBCP Management" is responsible of executing the loaded Procedures.

This procedure describes the steps needed to suspend the execution of a running OBCP (either immediately or after a given step) or to resume a previously suspended OBCP.

Summary of Constraints

Default status of the function: "Stopped".

When the function is stopped, it does not accept any other telecommands than the:

- Start Function TC(8,1,107);
- Report Function Status TC(8,5,107).

Thus, if the function is stopped this procedure cannot be executed.

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

HFD3043C
HFD3043B
HFD3043D

Referenced Displays

ANDs GRDs SLDs

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ZAZAI999 (None)
 ZAZAQ999
 ZAZ3X999
 ZAZ4U999
 ZAD08999

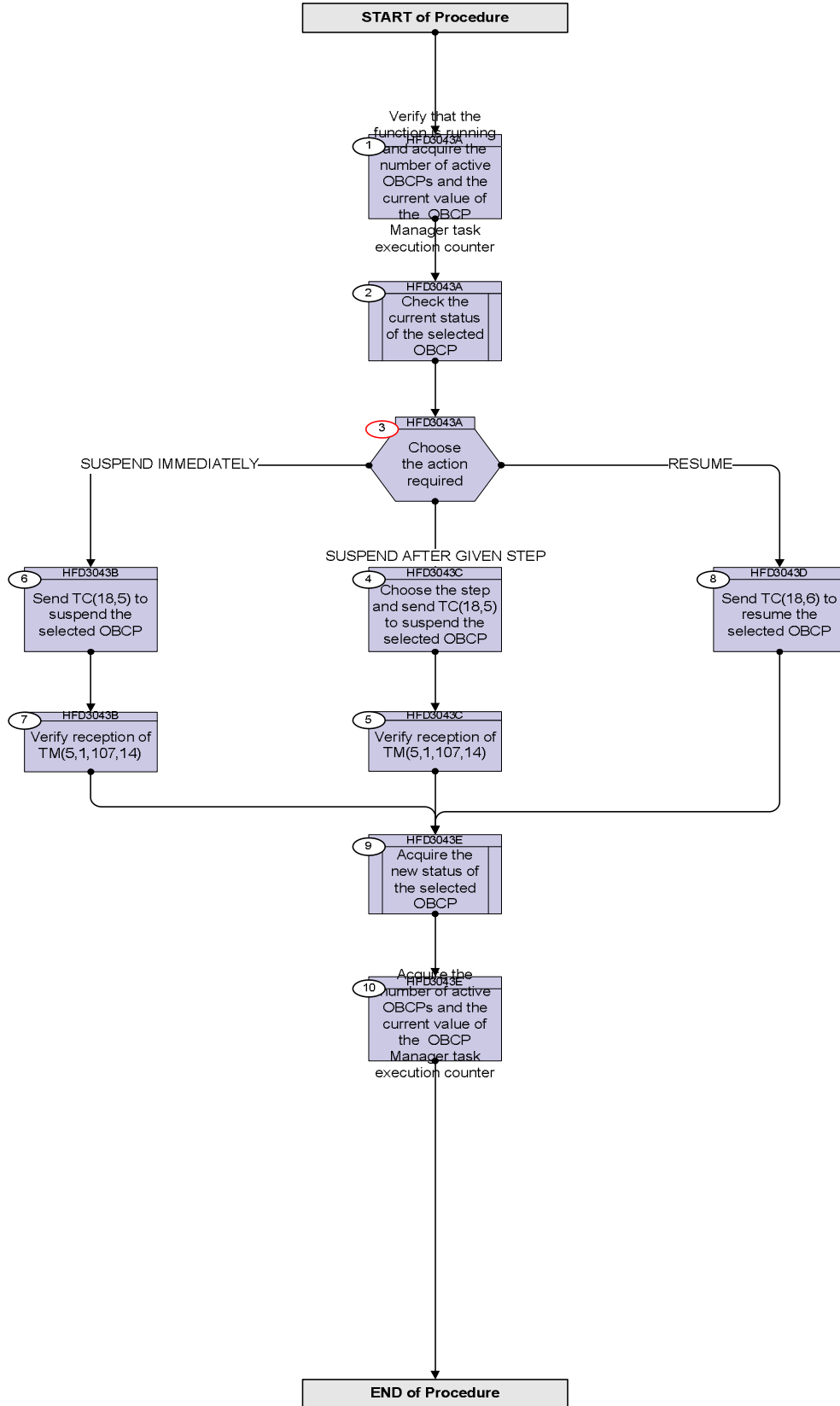
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
05/11/07		1	Created	cmevi-hp	
10/06/08		2	TC Flag and Seq Properly changed	S. Manganelli	
03/07/08	1	3	1. step 12: added TM checks for Event 5-1 OBCP Suspended, in line with TAS-F comment in HSVT1p2 Acceptance Matrix 080701	Istefanov-hp	
01/12/08	2	4	Procedure updated according to latest version received from industry on 24/10/2008	cmevi-hp	
15/03/09	2.2	5	Fixed MOIS FP bug	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 :HFD3043A (Acquire active OBCPs) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
1		Verify that the function is running and acquire the number of active OBCPs and the current value of the OBCP Manager task execution counter		Next Step: 2
		Verify Telemetry ObcpSts DEH36170	= Running	AND=ZAZAI999
		Verify Telemetry ObcpActiveCnt DE83B170		AND=ZAZAQ999
		Verify Telemetry FdirobcpExecCnt DE81B170		AND=ZAZ3X999
2		Check the current status of the selected OBCP		Next Step: 3
		Execute procedure H_FCP_DHS_3045.		
3		Choose the action required		Next Step: SUSPEND IMMEDIATELY 6 RESUME 8 SUSPEND AFTER GIVEN STEP 4
TC Seq. Name :HFD3043C (Suspend OBCP at step) TimeTag Type: N Sub Schedule ID: <input type="checkbox"/>				
4		Choose the step and send TC(18,5) to suspend the selected OBCP		Next Step: 5

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch												
		<p>Please note that only top-level OBCPs can be suspended, not sub-routines, i.e. only OBCPs which have started by TC(18,3).</p> <p>When this request is received, the specified on-board procedure is suspended at the completion of the indicated step. The procedure status is then "suspended".</p> <p>WARNING: If after 10 seconds the OBCP was not suspended, the TC(18,5) execution is aborted and event TM(5,4,107,5) is issued.</p> <p>The request is ignored if the procedure status was "stopped" or "suspended".</p>														
		<p>Execute Telecommand</p> <p style="text-align: right;">SuspObcpAtStep</p> <p>Command Parameter(s) :</p> <table style="margin-left: 100px;"> <tr> <td>ObcpId</td> <td>DH135170</td> <td>OBCPID</td> </tr> <tr> <td>ObcpStepNr</td> <td>DH145170</td> <td>STEPNR</td> </tr> </table> <p>TC Control Flags :</p> <table style="margin-left: 100px;"> <tr> <td>GBM</td> <td>IL</td> <td>DSE</td> </tr> <tr> <td>--Y</td> <td>--</td> <td>---</td> </tr> </table> <p>Subsch. ID : 10 Det. descr. : TEMPLATE Suspend OBCP At Step, TC(18,5)</p>	ObcpId	DH135170	OBCPID	ObcpStepNr	DH145170	STEPNR	GBM	IL	DSE	--Y	--	---	DCT80170	
ObcpId	DH135170	OBCPID														
ObcpStepNr	DH145170	STEPNR														
GBM	IL	DSE														
--Y	--	---														
5		Verify reception of TM(5,1,107,14)		Next Step: 9												
		<p>Verify Packet Reception</p> <p style="text-align: right;">CdmuAsw Event 5-1 OBCP Suspended</p> <p style="text-align: right;">D_EvRp_360</p> <p>Packet Details:</p> <table style="margin-left: 100px;"> <tr> <td>APID:</td> <td>16</td> </tr> <tr> <td>Type:</td> <td>5</td> </tr> <tr> <td>Subtype:</td> <td>1</td> </tr> <tr> <td>PI1:</td> <td>27406</td> </tr> <tr> <td>PI2:</td> <td>0</td> </tr> </table>	APID:	16	Type:	5	Subtype:	1	PI1:	27406	PI2:	0				
APID:	16															
Type:	5															
Subtype:	1															
PI1:	27406															
PI2:	0															
		<p>Verify Packet Telemetry</p> <p style="text-align: right;">TM5xEventID</p> <p style="text-align: right;">DEZSJ170</p> <p style="text-align: right;">= ObcpSuspended</p>		(None)												
		<p>Verify Packet Telemetry</p> <p style="text-align: right;">ProcedureID</p> <p style="text-align: right;">DE293170</p> <p style="text-align: right;">OBCPID</p>		AND=ZAZ4U999												
<p>TC Seq. Name :HFD3043B (Suspend active OBCP)</p> <p>TimeTag Type: N Sub Schedule ID:</p> <p style="text-align: center;">□</p>																
6		Send TC(18,5) to suspend the selected OBCP		Next Step: 7												

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>Please note that only top-level OBCPs can be suspended, not sub-routines, i.e. only OBCPs which have started by TC(18,3).</p> <p>When this request is received, the specified on-board procedure is suspended, i.e. at completion of the step currently executing. The procedure status is then set to "suspended" .</p> <p>WARNING: If after 10 seconds the OBCP was not suspended, the TC(18,5) execution is aborted and event TM(5,4,107,5) is issued.</p> <p>The request is ignored if the procedure status was "stopped" or "suspended".</p>		
		<p>Execute Telecommand</p> <p style="text-align: right;">SuspendObcp</p> <p>Command Parameter(s) :</p> <p style="padding-left: 100px;">ObcpId DH135170</p> <p>TC Control Flags :</p> <p style="padding-left: 100px;">GBM IL DSE --Y -- ---</p> <p>Subsch. ID : 10 Det. descr. : Suspend OBCP TC(18,5)</p>	DCT73170 OBCPID	
7		Verify reception of TM(5,1,107,14)		Next Step: 9
		<p>Verify Packet Reception</p> <p style="text-align: center;">CdmuAsw Event 5-1 OBCP Suspended</p> <p style="text-align: right;">D_EvRp_360</p> <p>Packet Details:</p> <p style="padding-left: 100px;">APID: 16 Type: 5 Subtype: 1 PI1: 27406 PI2: 0</p>		
		<p>Verify Packet Telemetry</p> <p style="text-align: center;">TM5xEventID DEZSJ170</p> <p style="text-align: right;">= ObcpSuspended</p>		(None)
		<p>Verify Packet Telemetry</p> <p style="text-align: center;">ProcedureID DE293170</p> <p style="text-align: right;">OBCPID</p>		(None)
<p>TC Seq. Name :HFD3043D (Resume OBCP)</p> <p>TimeTag Type: N Sub Schedule ID:</p> <p style="text-align: center;">□</p>				
8		Send TC(18,6) to resume the selected OBCP		Next Step: 9

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>When this request is received, the specified on-board procedure is resumed after the step where it was previously suspended. The procedure status is then "active".</p> <p>The request is ignored if the procedure status was "stopped" or "active".</p>		
		<p>Execute Telecommand</p> <p style="text-align: right;">ResumeObcp</p> <p>Command Parameter(s) :</p> <p style="padding-left: 100px;">ObcpId DH135170</p> <p>TC Control Flags :</p> <p style="padding-left: 100px;">GBM IL DSE --Y -- ---</p> <p>Subsch. ID : 10 Det. descr. : TEMPLATE Resume OBCP TC(18,6)</p>	<p>DCT74170</p> <p>OBCPID</p>	
<p>TC Seq. Name :HFD3043E (Acquire OBCP new sta)</p> <p>TimeTag Type:</p> <p>Sub Schedule ID:</p> <p style="text-align: center;">□</p>				
9		Acquire the new status of the selected OBCP		Next Step: 10
		<p>The status of the procedure shall reflect the command sent, i.e. either "suspended" in case of TC(18,5) or "active" in case of TC(18,6).</p> <p>Execute procedure H_FCP_DHS_3045.</p>		
10		Acquire the number of active OBCPs and the current value of the OBCP Manager task execution counter		Next Step: END
		<p>Verify Telemetry</p> <p style="padding-left: 100px;">ObcpActiveCnt DE83B170</p>	<p><></p> <p>OrigObcpActiveCnt</p>	AND=ZAD08999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		<p>Note that:</p> <ul style="list-style-type: none"> - if the OBCP was suspended immediately, the OBCP Active counter is decremented by 1 after the completion of the current step; - if the OBCP was suspended at a specific step, the OBCP Active counter is decremented by 1 after the completion of the indicated step; - if the OBCP was resumed, the OBCP Active counter is incremented by 1. <p>Warning: in the first cases the OBCP Active counter is not reliable as other actions on the OBCPs might have happen in the meantime, thus impacting also that counter value.</p>		
		<p>Verify Telemetry</p> <p style="text-align: center;">FdirobcpxExecCnt DE81B170</p>	<p>> OrigFDIRObcpxExecCnt</p>	(None)
		<p>Note that:</p> <p>in all cases suspended immediately/after a given step completion or resumed the OBCP Manager task execution counter should have increased by 2.</p> <p>Warning: in all cases the OBCP Manager task execution counter is not reliable as other actions on the OBCPs might have happen in the meantime, thus impacting also that counter value.</p>		
End of Procedure				