

Configuration check after TTR board failure
File: H_CRP_DHS_3049.xls
Author: S. Manganelli



Procedure Summary

Objectives

This procedure describes the steps needed to check the recovery performed on-board by the ASW (through the Event-Action Table, EAT) and by the BSW (through the Health Table) following BSW events 56/57/64/65/86/87.

Summary of Constraints

If the failed TTR is the "currently in use" TTR, the ASW at the reception of one of the previous events:

- changes the FDIR status to "Failed" in the Unit In Use (UIU) table for the "currently in use" TTR;
- restores the TC and TM bit rate;
- changes the "currently in use" TTR in UIU table;
- disables EAT entries for all the previous BSW events.

It is highlighted that in case of ICB failure (event 86/87) also a PM switchover will be performed on-board (through the Watchdog).

Vice-versa, if the failed TTR is not the "currently in use" TTR, the ASW changes the FDIR status to "Failed" in UIU table for the "not currently in use" TTR.

In both cases, according to the received event, a component in the Health Table is marked as Unhealthy or Disabled.

When changing the TM encoder a glitch on the internal PPS lines of the OBT cannot be excluded, possibly causing the BSW to enter in free running mode; for this reason it is necessary to set the CTR (Central Time Reference) and synchronise the ACC

Spacecraft Configuration

Start of Procedure

TTR A/B marked as "Failed" in UIU table and related component marked as Unhealthy or Disabled in Health table.

End of Procedure

Unchanged

Reference File(s)

Input Command Sequences

Output Command Sequences

Referenced Displays

ANDs GRDs SLDs

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ZAZAA999
 ZAZAI999 (None)
 ZAZAB999
 ZAZAO999
 ZAZ7I999
 ZAZAN999
 ZAZAC999

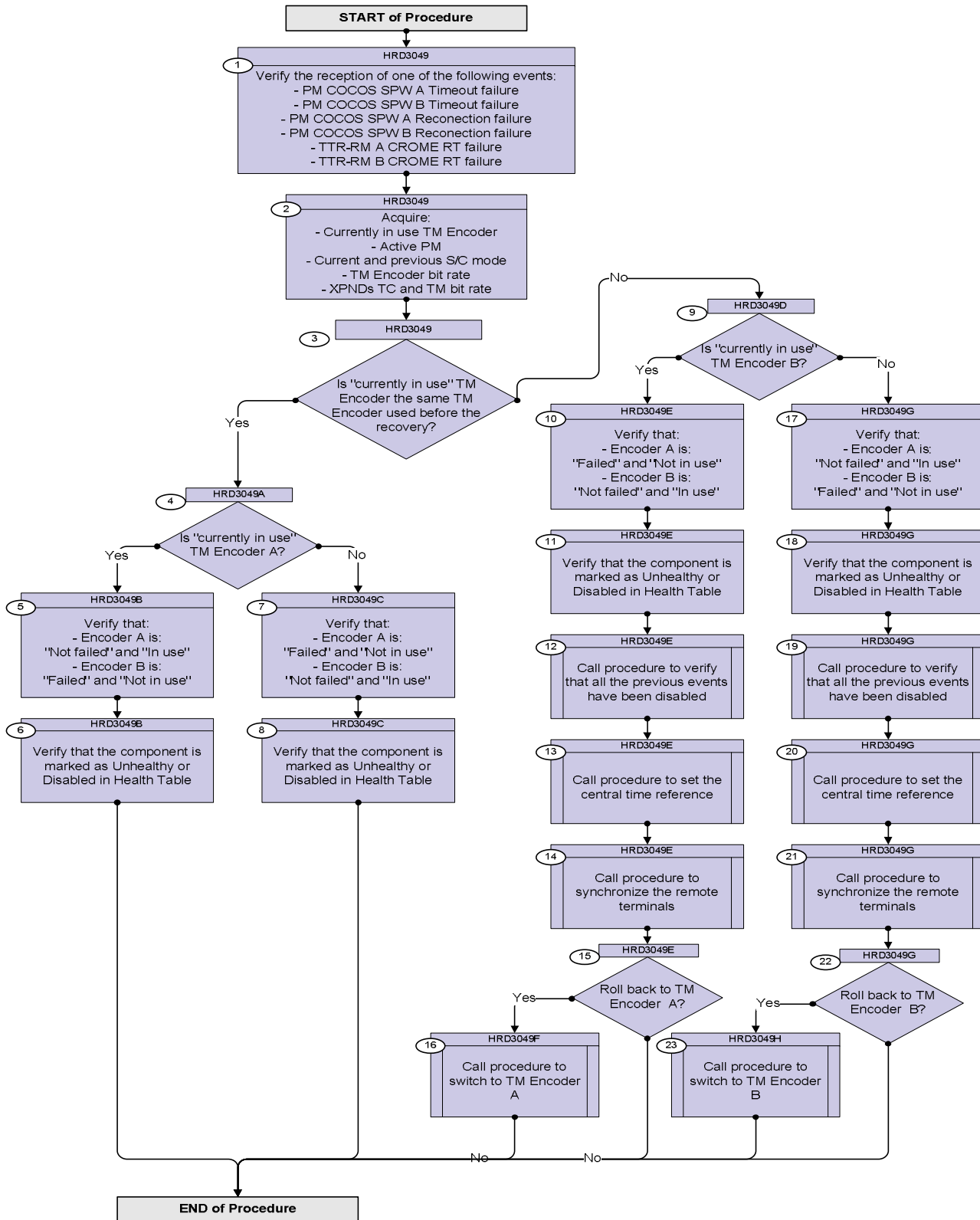
Configuration Control Information

DATE	FOP ISSUE	VERSION	MODIFICATION DESCRIPTION	AUTHOR	SPR REF
14/11/08		1	Created	cmevi-hp	
02/01/09	2	2	Added comments about instrument resynchronization	S. Manganelli	
21/03/09	2.2	3	Updated as per TAS-I inputs 3 march 09	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				
<p>TC Seq. Name :HRD3049 (Acquire status)</p> <p>TimeTag Type: Sub Schedule ID:</p> <p style="text-align: center;">□</p>				
1		<p>Verify the reception of one of the following events:</p> <ul style="list-style-type: none"> - PM COCOS SPW A Timeout failure - PM COCOS SPW B Timeout failure - PM COCOS SPW A Reconnection failure - PM COCOS SPW B Reconnection failure - TTR-RM A CROME RT failure - TTR-RM B CROME RT failure 		Next Step: 2
		<p>Note that after the reception of the event the related component in the Health Table is marked as "Unhealthy":</p> <ul style="list-style-type: none"> - PM COCOS SPW A Timeout/Reconnection failure -> PmSpwTtrRm[A/B][A] - PM COCOS SPW B Timeout/Reconnection failure -> PmSpwTtrRm[A/B][B] - TTR-RM A CROME RT failure -> TtrRmlcbRtA - TTR-RM B CROME RT failure -> TtrRmlcbRtB 		
		<p>Notice that when the TtrRmlcbRtA/B is declared "Unhealthy" in the BSW Health Table, the Watchdog (WD) on RM A/B will be triggered since it will not be refreshed anymore through the 1553 internal bus. A sequence of 3a-3b alarms will occur leading to run on PM B/A.</p> <p>Once on PM B/A a level 3a alarm will also be triggered, always due to the WD on RM A/B and Image 2 will be selected.</p> <p>Note that PM bit 0 relay on PM B/A is assumed to be equal to "NOT in Survival Mode" (default value); no other automatic reconfiguration will be triggered and the CDMU BSW event 86/87 "TTR/RM A/B CROME RT Failure" will be served by the CDMU ASW, performing a TTR S/O (from TTR A to TTR B or from TTR B to TTR A).</p>		

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		<p>Moreover, Ground has to verify the status of the following entries in Unit In Use (UIU) table, related to TTR components managed by the BSW via the Health Table:</p> <ul style="list-style-type: none"> - failure on ICB: --> SGM, CPDU and Survival Register - failure on SPW: --> SGM <p>It is noticed that the status of SGM, CPDU and Survival Register are updated in UIU by the ASW after calling relevant BSW SVC (e.g. BswSvc_Sgm_Read/WriteA/B, BswSvc_Cpdu_Cmd, etc).</p> <p>TTR (TM Encoder) entry in UIU is affected both by SPW and ICB failures (via relevant events) and is directly updated in UIU by the ASW as part of the TTR recovery sequence.</p>		
1.1		<p>PM COCOS SPW A Timeout Failure (event ID 0x38)</p>		<input type="checkbox"/>
		<p>Verify Packet Reception CdmuBsw Event 5-2 PM COCOS SPW A Timeout Failure Packet Details:</p> <p style="text-align: right;"> APID: 16 Type: 5 Subtype: 2 PI1: 56 PI2: 56 </p>	D_EvRp_456	
		<p>Verify Packet Telemetry EVENT_ID DEZA0180</p>		
		<p>Verify Packet Telemetry SID DEZA1180</p>		
		<p>Verify Packet Telemetry BSW_EvIDCnt56 DEGLF180</p>		
		<p>Verify Packet Telemetry PM_SPW_PISR DEA30180</p>		
		<p>Verify Packet Telemetry HEALTH_UPDATED DEZ51180</p>		
		<p>Verify Packet Telemetry EVENT_SEQ_CNT DEZA2180</p>		
		<p>Verify Packet Telemetry PW_SPW_IMR DEA40180</p>		
		<p>Verify Packet Telemetry PM_SPW_SR DEA60180</p>		
1.2		<p>PM COCOS SPW B Timeout Failure (event ID 0x39)</p>		<input type="checkbox"/>

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
1.4		<i>PM COCOS SPW B Reconnection Failure (event ID 0x41)</i>		<input type="checkbox"/>
		Verify Packet Reception CdmuBsw Event 5-2 PM COCOS SPW B Reconnection Failure Packet Details: <div style="text-align: right; margin-left: 400px;"> APID: 16 Type: 5 Subtype: 2 PI1: 65 PI2: 65 </div>	D_EvRp_465	
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">EVENT_ID DEZA0180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">SID DEZA1180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">BSW_EvIDCnt65 DEGS0180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">HEALTH_UPDATED DEZ51180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">EVENT_SEQ_CNT DEZA2180</div>		
1.5		<i>TTR-RM A CROME RT Failure (event ID 0x56)</i>		<input type="checkbox"/>
		Verify Packet Reception CdmuBsw Event 5-2 TTR-RM A CROME RT Failure Packet Details: <div style="text-align: right; margin-left: 400px;"> APID: 16 Type: 5 Subtype: 2 PI1: 86 PI2: 86 </div>	D_EvRp_486	
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">EVENT_ID DEZA0180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">SID DEZA1180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">BSW_EvIDCnt86 DEH3F180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">LMSW_FAILED DEAA0180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">LoopCmdSyncOrg DEAAA180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">LoopDatSyncOrg DEAAB180</div>		
		Verify Packet Telemetry <div style="text-align: right; margin-left: 300px;">LoopManchOrg DEAAC180</div>		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry LoopParOrg DEAAD180		
		Verify Packet Telemetry LoopWdCntOrg DEAAE180		
		Verify Packet Telemetry Rsp1ExpdOrg DEAAF180		
		Verify Packet Telemetry Rsp1StsSyncOrg DEAAG180		
		Verify Packet Telemetry Rsp1DatSyncOrg DEAAH180		
		Verify Packet Telemetry Rsp1ManchOrg DEAAJ180		
		Verify Packet Telemetry Rsp1ParOrg DEAAK180		
		Verify Packet Telemetry Rsp1WdCntOrg DEAAL180		
		Verify Packet Telemetry Rsp1WordsOrg DEAAM180		
		Verify Packet Telemetry Rsp2ExpdOrg DEEAN180		
		Verify Packet Telemetry Rsp2StsSyncOrg DEAAP180		
		Verify Packet Telemetry Rsp2ManchOrg DEEAR180		
		Verify Packet Telemetry Rsp2ParOrg DEEAS180		
		Verify Packet Telemetry Rsp2WdCntOrg DEEAT180		
		Verify Packet Telemetry HEALTH_UPDATED DEZ51180		
		Verify Packet Telemetry EVENT_SEQ_CNT DEZA2180		
		Verify Packet Telemetry LoopCmdSyncTest DEABA180		
		Verify Packet Telemetry LMSW_BUS_TEST DEAB0180		
		Verify Packet Telemetry LoopDatSyncTest DEABB180		
		Verify Packet Telemetry LoopManchTest DEABC180		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry LoopParTest DEABD180		
		Verify Packet Telemetry LoopWdCntTest DEABE180		
		Verify Packet Telemetry Rsp1ExpdTest DEABF180		
		Verify Packet Telemetry Rsp1StsSyncTest DEABG180		
		Verify Packet Telemetry Rsp1DatSyncTest DEABH180		
		Verify Packet Telemetry Rsp1ManchTest DEABJ180		
		Verify Packet Telemetry Rsp1ParTest DEABK180		
		Verify Packet Telemetry Rsp1WdCntTest DEABL180		
		Verify Packet Telemetry Rsp1WordsTest DEABM180		
		Verify Packet Telemetry Rsp2ExpdTest DEABN180		
		Verify Packet Telemetry Rsp2StsSyncTest DEABP180		
		Verify Packet Telemetry Rsp2ManchTest DEABR180		
		Verify Packet Telemetry Rsp2ParTest DEABS180		
		Verify Packet Telemetry Rsp2WdCntTest DEABT180		
1.6		TTR-RM B CROME RT Failure (event ID 0x57)		☐
		Verify Packet Reception CdMuBsw Event 5-2 TTR-RM B CROME RT Failure Packet Details: APID: 16 Type: 5 Subtype: 2 PI1: 87 PI2: 87	D_EvRp_487	
		Verify Packet Telemetry EVENT_ID DEZA0180		
		Verify Packet Telemetry SID DEZA1180		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry BSW_EvIDCnt87	DEH40180	
		Verify Packet Telemetry LMSW_FAILED	DEAA0180	
		Verify Packet Telemetry LoopCmdSyncOrg	DEAAA180	
		Verify Packet Telemetry LoopDatSyncOrg	DEAAB180	
		Verify Packet Telemetry LoopManchOrg	DEAAC180	
		Verify Packet Telemetry LoopParOrg	DEAAD180	
		Verify Packet Telemetry LoopWdCntOrg	DEAAE180	
		Verify Packet Telemetry Rsp1ExpdOrg	DEAAF180	
		Verify Packet Telemetry Rsp1StsSyncOrg	DEAAG180	
		Verify Packet Telemetry Rsp1DatSyncOrg	DEAAH180	
		Verify Packet Telemetry Rsp1ManchOrg	DEAAJ180	
		Verify Packet Telemetry Rsp1ParOrg	DEAAK180	
		Verify Packet Telemetry Rsp1WdCntOrg	DEAAL180	
		Verify Packet Telemetry Rsp1WordsOrg	DEAAM180	
		Verify Packet Telemetry Rsp2ExpdOrg	DEAAN180	
		Verify Packet Telemetry Rsp2StsSyncOrg	DEAAP180	
		Verify Packet Telemetry Rsp2ManchOrg	DEAAR180	
		Verify Packet Telemetry Rsp2ParOrg	DEAAS180	
		Verify Packet Telemetry Rsp2WdCntOrg	DEAAT180	
		Verify Packet Telemetry HEALTH_UPDATED	DEZ51180	

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Packet Telemetry EVENT_SEQ_CNT DEZA2180		
		Verify Packet Telemetry LoopCmdSyncTest DEABA180		
		Verify Packet Telemetry LMSW_BUS_TEST DEAB0180		
		Verify Packet Telemetry LoopDatSyncTest DEABB180		
		Verify Packet Telemetry LoopManchTest DEABC180		
		Verify Packet Telemetry LoopParTest DEABD180		
		Verify Packet Telemetry LoopWdCntTest DEABE180		
		Verify Packet Telemetry Rsp1ExpdTest DEABF180		
		Verify Packet Telemetry Rsp1StsSyncTest DEABG180		
		Verify Packet Telemetry Rsp1DatSyncTest DEABH180		
		Verify Packet Telemetry Rsp1ManchTest DEABJ180		
		Verify Packet Telemetry Rsp1ParTest DEABK180		
		Verify Packet Telemetry Rsp1WdCntTest DEABL180		
		Verify Packet Telemetry Rsp1WordsTest DEABM180		
		Verify Packet Telemetry Rsp2ExpdTest DEABN180		
		Verify Packet Telemetry Rsp2StsSyncTest DEABP180		
		Verify Packet Telemetry Rsp2ManchTest DEABR180		
		Verify Packet Telemetry Rsp2ParTest DEABS180		
		Verify Packet Telemetry Rsp2WdCntTest DEABT180		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
2		Acquire: - Currently in use TM Encoder - Active PM - Current and previous S/C mode - TM Encoder bit rate - XPNDs TC and TM bit rate		Next Step: 3
		Notice that "previous" and "current" S/C mode are usefull in case of ICB failure on TM Encoder in use (PM switchover and S/C transition from Nominal to Earth Acquisition).		
		Verify Telemetry Active_TTRBoard DEDMG160		AND=ZAZAA999
		Verify Telemetry Active_PM_Board DEDM1160		AND=ZAZAA999
		Verify Telemetry CurrentMode DEL34170		AND=ZAZAI999
		Verify Telemetry PrevMode DEL35170		AND=ZAZAI999
		Verify Telemetry TME_BITRATE DEMRF160		AND=ZAZAB999
		Verify Telemetry RX1 125-4K Stat RMB17442		AND=ZAZAO999
		Verify Telemetry X1 TcBitRateTCB RMB61442		(None)
		Verify Telemetry RX2 125-4K Stat RMB18442		AND=ZAZAO999
		Verify Telemetry X2 TcBitRateTCB RMB62442		(None)
		Verify Telemetry X1 LowRate-1 MD RMB30442		(None)
		Verify Telemetry X1 LowRate-2 MD RMB31442		AND=ZAZ7I999
		Verify Telemetry X1 MedRate-MRM RMB29442		AND=ZAZ7I999
		Verify Telemetry X1 HIRateMD-HRM RMB28442		AND=ZAZ7I999
		Verify Telemetry X2 LowRate-1 MD RMB51442		(None)
		Verify Telemetry X2 LowRate-2 MD RMB52442		(None)
		Verify Telemetry X2 MedRate-MRM RMB50442		(None)

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry X2 HIRateMD-HRM RMB49442		AND=ZAZ7I999
3		Is "currently in use" TM Encoder the same TM Encoder used before the recovery?		Next Step: Yes 4 No 9
TC Seq. Name :HRD3049A (Dummy sequence) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
4		Is "currently in use" TM Encoder A?		Next Step: Yes 5 No 7
TC Seq. Name :HRD3049B (Verify Encoder A in) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
5		Verify that: - Encoder A is: "Not failed" and "In use" - Encoder B is: "Failed" and "Not in use"		Next Step: 6
		Verify Telemetry Ttr1FailSts DEL09170	= Not_Failed	AND=ZAZAN999
		Verify Telemetry Ttr1Use DEL12170	= In_Use	AND=ZAZAN999
		Verify Telemetry Ttr2FailSts DEL13170	= Failed	AND=ZAZAN999
		Verify Telemetry Ttr2Use DEL16170	= Not_In_Use	AND=ZAZAN999
6		Verify that the component is marked as Unhealthy or Disabled in Health Table		Next Step: END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The components changed in Health Table are the following: - PM COCOS SPW B Timeout/Reconnection failure -> PmSpwTtrRmAB marked "Unhealthy" if active PM is A -> PmSpwTtrRmBB marked "Unhealthy" if active PM is B -> TtrRmSgmB marked "Disabled" - TTR-RM B CROME RT failure -> TtrRmIcbRtB marked "Unhealthy" -> TtrRmIntrpB marked "Unhealthy"		
		Verify Telemetry PmSpwTtrAB_Hlth DEJR6160	"Unhealthy" if active PM is A	AND=ZAZAC999
		Verify Telemetry PmSpwTtrBB_Hlth DEJRL160	"Unhealthy" if active PM is B	AND=ZAZAC999
		Verify Telemetry TtrRmSgmB_Enabl DEJL5160	= DISABLED	AND=ZAZAC999
		Verify Telemetry TtrRmIcbB_Healt DEJLL160	= Unhealthy	AND=ZAZAC999
		Verify Telemetry TtrRmIntB_Healt DEJKL160	= Unhealthy	AND=ZAZAB999
TC Seq. Name :HRD3049C (Verify Encoder B in) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
7		Verify that: - Encoder A is: "Failed" and "Not in use" - Encoder B is: "Not failed" and "In use"		Next Step: 8
		Verify Telemetry Ttr1FailSts DEL09170	= Failed	AND=ZAZAN999
		Verify Telemetry Ttr1Use DEL12170	= Not_In_Use	AND=ZAZAN999
		Verify Telemetry Ttr2FailSts DEL13170	= Not_Failed	AND=ZAZAN999
		Verify Telemetry Ttr2Use DEL16170	= In_Use	AND=ZAZAN999
8		Verify that the component is marked as Unhealthy or Disabled in Health Table		Next Step: END

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		The components changed in Health Table are the following: - PM COCOS SPW A Timeout/Reconnection failure -> PmSpwTtrRmAA marked "Unhealthy" if active PM is A -> PmSpwTtrRmBA marked "Unhealthy" if active PM is B -> TtrRmSgmA marked "Disabled" - TTR-RM A CROME RT failure -> TtrRmIcbRtA marked "Unhealthy" -> TtrRmIntrpA marked "Unhealthy"		
		Verify Telemetry PmSpwTtrAA_Hlth DEJR3160	"Unhealthy" if active PM is A	AND=ZAZAC999
		Verify Telemetry PmSpwTtrBA_Hlth DEJRZ160	"Unhealthy" if active PM is B	AND=ZAZAC999
		Verify Telemetry TtrRmSgmA_Enabl DEJL2160	= DISABLED	AND=ZAZAC999
		Verify Telemetry TtrRmIcbA_Healt DEJLZ160	= Unhealthy	AND=ZAZAC999
		Verify Telemetry TtrRmIntA_Healt DEJKZ160	= Unhealthy	AND=ZAZAB999
TC Seq. Name :HRD3049D (Dummy sequence) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
9		Is "currently in use" TM Encoder B?		Next Step: Yes 10 No 17
TC Seq. Name :HRD3049E (Switch to Encoder B) TimeTag Type: Sub Schedule ID: <input type="checkbox"/>				
10		Verify that: - Encoder A is: "Failed" and "Not in use" - Encoder B is: "Not failed" and "In use"		Next Step: 11
		Verify Telemetry Ttr1FailSts DEL09170	= Failed	AND=ZAZAN999

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
		Verify Telemetry Ttr1Use DEL12170	= Not_In_Use	AND=ZAZAN999
		Verify Telemetry Ttr2FailSts DEL13170	= Not_Failed	AND=ZAZAN999
		Verify Telemetry Ttr2Use DEL16170	= In_Use	AND=ZAZAN999
11		Verify that the component is marked as Unhealthy or Disabled in Health Table		Next Step: 12
		The components changed in Health Table are the following: - PM COCOS SPW A Timeout/Reconnection failure -> PmSpwTtrRmAA marked "Unhealthy" if active PM is A -> PmSpwTtrRmBA marked "Unhealthy" if active PM is B -> TtrRmSgmA marked "Disabled" - TTR-RM A CROME RT failure -> TtrRmIcbRtA marked "Unhealthy" -> TtrRmIntrpA marked "Unhealthy"		
		Verify Telemetry PmSpwTtrAA_Hlth DEJR3160	"Unhealthy" if active PM A	AND=ZAZAC999
		Verify Telemetry PmSpwTtrBA_Hlth DEJRZ160	"Unhealthy" if active PM B	AND=ZAZAC999
		Verify Telemetry TtrRmSgmA_Enabl DEJL2160	= DISABLED	AND=ZAZAC999
		Verify Telemetry TtrRmIcbA_Healt DEJLZ160	= Unhealthy	AND=ZAZAC999
		Verify Telemetry TtrRmIntA_Healt DEJKZ160	= Unhealthy	AND=ZAZAB999
12		Call procedure to verify that all the previous events have been disabled		Next Step: 13
		The following Event IDs should have been disabled: 0x38 0x39 0x40 0x41 0x56 0x57		
		Execute procedure H_FCP_DHS_3051.		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
13		Call procedure to set the central time reference		Next Step: 14
		Execute procedure H_FCP_DHS_3021.		
14		Call procedure to synchronize the remote terminals		Next Step: 15
		Execute procedure H_FCP_DHS_3019.		
		Confirm with Instrument/Sys SOEs that the resynchronization of instruments will be done in the context of system recovery. If this is the case, execute procedure ONLY for ACC RT		
15		Roll back to TM Encoder A?		Next Step: Yes 16 No END
<p>TC Seq. Name :HRD3049F (Switch to Encoder A)</p> <p>TimeTag Type: Sub Schedule ID:</p> <p><input type="checkbox"/></p>				
16		Call procedure to switch to TM Encoder A		Next Step: END
		Execute procedure H_CRP_DHS_3056.		
<p>TC Seq. Name :HRD3049G (Switch to Encoder A)</p> <p>TimeTag Type: Sub Schedule ID:</p> <p><input type="checkbox"/></p>				
17		Verify that: - Encoder A is: "Not failed" and "In use" - Encoder B is: "Failed" and "Not in use"		Next Step: 18
		Verify Telemetry Ttr1FailSts DEL09170 = Not_Failed		AND=ZAZAN999
		Verify Telemetry Ttr1Use DEL12170 = In_Use		AND=ZAZAN999
		Verify Telemetry Ttr2FailSts DEL13170 = Failed		AND=ZAZAN999

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		Verify Telemetry Ttr2Use DEL16170	= Not_In_Use	AND=ZAZAN999
18		<i>Verify that the component is marked as Unhealthy or Disabled in Health Table</i>		Next Step: 19
		The components changed in Health Table are the following: - PM COCOS SPW B Timeout/Reconnection failure -> PmSpwTtrRmAB marked "Unhealthy" if active PM is A -> PmSpwTtrRmBB marked "Unhealthy" if active PM is B -> TtrRmSgmB marked "Disabled" - TTR-RM B CROME RT failure -> TtrRmIcbRtB marked "Unhealthy" -> TtrRmIntrpB marked "Unhealthy"		
		Verify Telemetry PmSpwTtrAB_Hlth DEJR6160	"Unhealthy" if active PM A	AND=ZAZAC999
		Verify Telemetry PmSpwTtrBB_Hlth DEJRL160	"Unhealthy" if active PM B	AND=ZAZAC999
		Verify Telemetry TtrRmSgmB_Enabl DEJL5160	= DISABLED	(None)
		Verify Telemetry TtrRmIcbB_Healt DEJLL160	= Unhealthy	AND=ZAZAC999
		Verify Telemetry TtrRmIntB_Healt DEJKL160	= Unhealthy	AND=ZAZAB999
19		<i>Call procedure to verify that all the previous events have been disabled</i>		Next Step: 20
		Execute procedure H_FCP_DHS_3051.		
20		<i>Call procedure to set the central time reference</i>		Next Step: 21
		Execute procedure H_FCP_DHS_3021.		
21		<i>Call procedure to synchronize the remote terminals</i>		Next Step: 22
		Execute procedure H_FCP_DHS_3019.		
		Confirm with Instrument/Sys SOEs that the resynchronization of instruments will be done in the context of system recovery. If this is the case, execute procedure ONLY for ACC RT		

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Step No.	Time	Activity/Remarks	TC/TLM	Display/ Branch
22		Roll back to TM Encoder B?		Next Step: Yes 23 No END
<p>TC Seq. Name :HRD3049H (Switch to Encoder B)</p> <p>TimeTag Type: Sub Schedule ID: <input type="checkbox"/></p>				
23		Call procedure to switch to TM Encoder B		Next Step: END
		Execute procedure H_CRP_DHS_3055.		
End of Procedure				

Configuration check after TTR board
File: H_CRP_DHS_3049.xls
Author: S. Manganelli

BEGIN

Look at the unit-in-use table to check which TTR is currently in use.

IF (Currently in use TTR == FailedTTRBoard)

Change Currently in use TTR FDIR Status to FAILED in Unit In Use Table

/ Changing the FDIR Status from NOT FAILED to FAILED is the way to define the NEW
Currently In Use TTR that is now the Redundant and NOT FAILED one.
This is the new information used by the ASW to reconfigure the TTR as part of the recovery
sequence.*/*

/ In order to preserve the TTC configuration as it was before the failure occurrence (in
particular the TM encoder configuration and the TM packets enabling/disabling status),
the ASW will make use of the information stored in the TTC Management Function.*/*

Restore the TTC (RX / TX and Antennae) configuration as it was before the failure
occurrence, except from the RFDN SW position that shall not be reinforced.
Restore the TC rate and the encoder TM rate as they were before the failure occurrence.

*/*Note that the 1553 TX configuration is not affected by the TTR switchover.*/*

Look at the unit-in-use table to check which TTR is currently in use.

/ Select the Encoder of the Currently in Use TTR using both CPDUs */*

Call BswSvc_Cpdu_Cmd to select the Encoder of the Currently In Use TTR through CPDU

A

Call BswSvc_Cpdu_Cmd to select the Encoder of the Currently In Use TTR through CPDU

B

/ Note that disabling EAT entries prevent to raise again the same failure events with
continuous switching of the selected encoder */*

Disable EAT entries:

event IDs 0x38 (COCOS SpaceWire A Time Out Failure TM(5,x,56));
event IDs 0x39 (COCOS SpaceWire B Time Out Failure TM(5,x,57));
event IDs 0x40 (COCOS SpaceWire A Reconnection Failure TM(5,x,64));
event IDs 0x41 (COCOS SpaceWire B Reconnection Failure TM(5,x,65));
event IDs 0x56 (TTR/RM A CROME RT Failure TM(5,x,86));
event IDs 0x57 (TTR/RM B CROME RT Failure TM(5,x,87)).

ELSE

Change not in use TTR FDIR Status to FAILED in Unit In Use Table

ENDIF

Doc No. :PT-HMOC-OPS-FOP-6001-OPS-OAH
Fop Issue : 3.0
Issue Date: 13/04/10

d failure

Status : Version 3 - Unchanged
Last Checkin: 21/03/09