| Procedure. Ref.: | **SVT_OPM_5020 (1,1)** | TIME SYNCHRONISATION |

Procedure Title:	Time Synchronisation
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Purpose of Procedure:

This procedure executes the Time Synchronisation between the ICU and CDMU clocks and the ICU and DPU clocks.

When executing the Time Synchronisation procedure during the Initial Switch on phases different verification in TM will be observed:

1) First Time Synchronisation after Switch ON - no errors are received. ICU is not able to generate the TC Load error reports.

2) Second Time Synchronisation after loading ICU code OM in Full Safe mode, no DPU code loaded - an exception packet (4,2) DA_BAD_CMD(A584) is expected.   The IC_SYNCH_CLK (A40E) command sent by the IC to the DPU fails since the DPU is yet not initialised.

3) Third Time Synchronisation after DPU Code Load and Clean Slate procedure - no errors received. SID 90 should be enabled to telemeter the DA_HBEAT to allow verification of the DPU and RBI Times.

This procedure is foreseen to be used during the OM SVT.

Initial State: OM ON in INITIAL or an operational Mode

Final State: OM ON and in the same mode as at the start of the procedure.

Step	Time	Activity/Remarks	Command	TM Verification
1		Confirm Time Synchronisation status in HK TM.		**_AND: H100_** H5330 "TIME SYNC ACTIVE" = INACTIVE H5335 "TIME INVALID" = INVALID
2		EXECUTE TIME SYNCHRONISATION		
2.1		Enable Time Synchronisation. Check Time Synch TM goes to Active. Check RBI Config Register is set to 1.	**D3702** SYNC OM	**_AND: H100_** H5330 "TIME SYNC ACTIVE" = ACTIVE H5345 "RBI CONFIG REG" = 1
2.2		Monitor CDMU set of BCP3 to instruct OM ICU to reset the clock register in the RBI		**_AND:_** **_H100_** H5330 "TIME SYNC ACTIVE" = ACTIVE H5345 "RBI CONFIG REG" = 0
2.3	00:00:40	Monitor CDMU send of Add Time Code. Time Synch is then disabled and Time Invalid Flag should be set to Valid. Wait required up to 40 sec until Time Invalid flag set VALID.		**_AND: H100_** H5330 "TIME SYNC ACTIVE" = INACTIVE H5335 "TIME INVALID" = VALID
2.4		Verify the User Time.	**D3712** VERI TIME OM	
2.5	00:00:20	Wait required up to 20 sec until Time Verification packet generated. Confirm Receipt of OM Time Verification Packet 96001. (PKDump - OM6 A5ZZ)		
3		VERIFY DPU AND ICU TIMESTAMPS		
3.1		Enable SID 90 DA_HBEAT. (144 dec)	**H2003** ENBLE PACKET **H1200 "SID VALUE" = 144	

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Step	Time	Activity/Remarks	Command	TM Verification
3.2	00:00:20	Wait 20 seconds and then check coarse time of ICU and DPU heartbeat timestamp. Take value of TM para H7680, divide by 1024 and compare to the coarse time of ICU. Values should be within 0.2 sec. (Type 4,1 - PKDump packet 92200 - 1144 OM4)		***AND: H910*** H7680 "TIMESTAMP" =
3.3		Disable SID 90 DA_HBEAT. (144 dec)	**H2004** DSBL PACKET **H1200 "SID VALUE" = 144	
4		END OF PROCEDURE		