

NASA/GSFC		MISSION OPERATIONS & DATA SYSTEMS DIRECTORATE (MO&DSD) CONFIGURATION CHANGE REQUEST (CCR)			
1. CCR NO.	CCR-530-ICD-04	2. DATE	October 1, 1996	3. PRIORITY	4. CHANGE LEVEL
				<input type="checkbox"/> EMERGENCY <input type="checkbox"/> URGENT <input checked="" type="checkbox"/> ROUTINE	<input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input checked="" type="checkbox"/> D <input type="checkbox"/> E <input type="checkbox"/> F
5. TITLE OF CHANGE					
Work Off #2106 Changes					
6. DOCUMENT TITLE					
ICD Between the NCC/FDF and the WSC					
DOCUMENT NO. 530-ICD-NCC-FDF/WSC, Rev. 4, 15 April 1996					
LIST ALL AFFECTED DOCUMENTS INCLUDING PROCEDURES					
ICD Between the NCC/FDF and the WSC for the TDRS H, I, J Era,					
405-TDRS-RP-ICD-001, 8 December 1995					
(CONT ON ATTACHMENT)					
7. REASON FOR CHANGE					
To incorporate Work Off #2106 changes.					
(CONT ON ATTACHMENT)					
8. DESCRIPTION OF CHANGE					
Pages 2-12, 9-35 and 9-36.					
(CONT ON ATTACHMENT)					
9. IMPACT					
		SYSTEM		ORGANIZATIONAL	
YES NO	YES NO	YES NO	YES NO	YES NO	YES NO
<input type="checkbox"/> SCHEDULE	<input type="checkbox"/> RELIABILITY/MAINTAIN- ABILITY/SAFETY	<input checked="" type="checkbox"/> GROUND SEGMENT	<input type="checkbox"/> 501	<input type="checkbox"/> MSFC	<input type="checkbox"/> CODE E
<input type="checkbox"/> BUDGET	<input type="checkbox"/> USER SERVICES/MANUALS	<input type="checkbox"/> SPACE SEGMENT	<input type="checkbox"/> 502	<input type="checkbox"/> JSC	<input type="checkbox"/> CODE S
<input type="checkbox"/> FACILITIES	<input type="checkbox"/> RISK MANAGEMENT	<input type="checkbox"/> LOGISTICS	<input type="checkbox"/> 503	<input type="checkbox"/> LERC	<input type="checkbox"/> CODE T
<input type="checkbox"/> TESTING	<input type="checkbox"/> SECURITY	<input type="checkbox"/> DOCUMENTATION	<input type="checkbox"/> 510	<input type="checkbox"/> KSC	<input type="checkbox"/> OTHER
<input type="checkbox"/> TRAINING	<input type="checkbox"/> USAF FUNDING REQ'D	<input type="checkbox"/> HARDWARE	<input type="checkbox"/> 520	<input type="checkbox"/> JPL	
<input type="checkbox"/> SPECIFICATIONS	<input type="checkbox"/> POWER	<input type="checkbox"/> SOFTWARE	Code 405		
<input type="checkbox"/> CONTRACTOR SUPPORT	<input type="checkbox"/> WEIGHT	<input type="checkbox"/> OTHER			
<input checked="" type="checkbox"/> INTERFACES					
10. COMMENTS					
		SIGNATURE	DATE	CONCURRENCE:	
STel ANALYST		_____	_____	_____	
HARDWARE ENGINEER		_____	_____	_____	
OPERATIONS REPRESENTATIVE		_____	_____	_____	
SYSTEMS ENGINEER		_____	_____	_____	
I AND T MANAGER		_____	_____	_____	
		_____	_____	CODE 285	
		_____	_____	DATE	
11. BOARD ACTION		12. DIRECTION/ACTION REQUIRED			
<input type="checkbox"/> APPROVED	<input type="checkbox"/> WITHDRAWN	<input type="checkbox"/> ECP	<input type="checkbox"/> TECH DIRECTION	<input type="checkbox"/> CONTRACT MOD	
<input type="checkbox"/> DISAPPROVED	<input type="checkbox"/> DEFERRED UNTIL _____	<input type="checkbox"/> WAIVER	<input type="checkbox"/> PUBLISH DOCUMENT	<input type="checkbox"/> PUBLISH DCN	
		<input type="checkbox"/> DEVIATION	<input type="checkbox"/> C.O. LETTER	<input type="checkbox"/> OTHER _____	
13. ORIGINATOR	D. Littmann x7643	CODE 530.4	14. SEGMENT MANAGER'S APPROVAL		CODE _____
SIGNATURE _____	DATE _____	DATE _____	SIGNATURE _____		DATE _____
15. CCB APPROVAL			16. CCR IMPLEMENTED		
SIGNATURE _____ DATE _____			ATR SIGNATURE _____ DATE _____		
			CCB SIGNATURE _____ DATE _____		

42. For users transmitting from a single source by QPSK modulation, only the I Channel data of Subheader 6 is applicable. For users transmitting BPSK, the applicable channel of Subheader 6 is as specified in Ground Rule 33.
43. MA services are applicable for TDRS A-G only. SSA and KSA services are applicable for TDRS A-J. SMA and KaSA services are applicable for TDRS H-J only. Incorrectly scheduled services for a TDRS shall be rejected.
44. Simultaneous scheduling of Ku and Ka Band services on the same SA antenna is not permitted.
45. Ka-Band services are DG-2, noncoherent only. There are no tracking services at Ka-Band.

2.2.3 End-To-End Test (EET) Data Ground Rules

The following ground rules apply to End-to-End Test SHO's:

1. Deleted.
2. End-to-End Test services cannot be scheduled alone, i.e., the related traffic services must be included in the SHO.
3. In an End-to-End Test SHO, the start time specified in an End-to-End Test data set must be the same as that of the related traffic service and the stop time in the End-to-End Test data set must be the same as that of the related traffic service.
4. End-to-End Test services cannot be included in a normal SHO. An End-to-End Test SHO must be used for End-to-End Test services.
5. All End-to-End Test SHO reject messages shall be sent to the NCC without operator intervention.
6. Shuttle End-to-End Test and pre-service test shall not overlap on the same SA antenna on any TDRS, e.g., if Shuttle End-to-End Test services are on-going on SGLT1 SA-1, then in order to avoid conflict, schedule overlapping Shuttle pre-service tests on SA-2 of SGLT1, 2 or 3, i.e., not on SA-1 of SGLT2 or 3. Shuttle SHO's shall not be rejected if End-to-End Tests and pre-service tests overlap, i.e., the Shuttle SHO shall be serviced without pre-service test.
7. End-to-End Test services for which End-to-End Test data is sent to a POCC shall be reconfigurable by OPM classes 02 (return only), 03, and 11. Shuttle forward End-to-End Tests cannot be reconfigured.
8. POCC Shuttle End-to-End Tests shall be limited to digital data only.~~supported only in the local mode.~~
9. EET EIRP calibration shall be performed during preservice testing.
10. There will only be one S-band (forward and return) and one K-band (forward and return) service per EET SHO. The EIRP of the return EET service shall not be reconfigured.

9.2.3.15 End-to-End Test Data Set (See 9.2.3.17 for End-to-End Test SHO Structure)

9.2.3.15.1 Forward Data

<u># of Bytes</u>	<u>Data Item</u>
3	SHO Subheader No. 1
22	SHO Subheader No. 2
70	SHO Subheader No. 6*
4	Spare
4	G/T of Simulated User (LSD = ± 0.1 dB/ $^{\circ}$ K)
1	Local or DIS (POCC) Data** 0 = Local Signal Source 1 = DIS (POCC) Signal Source
<u>10</u>	Spare
114	

* SHO Subheader 6 shall specify the return path for the user forward data ~~if in the POCC mode (1 = POCC Signal Source) and in the Local Signal Source mode (0 = Local Signal Source) if the local forward signal is to be sent to a POCC.~~ If the local forward signal is not sent to the POCC, the SHO Subheader 6 Designation shall be set to ASCII "N".

** For data provided by a DIS (POCC) Signal Source, SHO Subheader 5 of the corresponding Forward Parameters (see Section 9.2.3.17) shall specify the forward path. For data provided by a Local Signal Source, the SHO Subheader 5 Designation of the corresponding Forward Parameters shall be set to ASCII "N".

9.2.3.15.2 Return Data

<u># of Bytes</u>	<u>Data Item</u>
3	SHO Subheader No. 1
22	SHO Subheader No. 2
146	SHO Subheader No. 5*
4	EIRP of Simulated User (LSD = \pm 0.1 dBw)
4	Spare
1	Local or DIS (POCC) Data** 0 = Local Signal Source 1 = DIS (POCC) Signal Source 2 = Local Playback-I Channel 3 = Local Playback-Q Channel 4 = Local Playback-Shuttle Channel 3 5 = Local Playback-Shuttle Channel 2 6 = Local Playback-I and Q Channels 7 = Local Playback-Shuttle Channels 2 and 3
<u>10</u>	Spare
190	

* Two copies of SHO Subheader 5 are provided. This corresponds to two channels of return service data (i.e., either “I” and “Q” for normal users, Channels 2 and 3 for Shuttle KSAR, or a single channel and an unused channel for Shuttle SSAR). For channel data provided by a Local Signal Source, the SHO Subheader 5 Designation shall be set to ASCII “N”. For channel data provided by a DIS (POCC) Signal Source, the SHO Subheader 5 shall specify the forward path of the return service data. In DIS (POCC) mode if either channel is unused or is used for tape playback, the corresponding SHO Subheader 5 Designation shall be set to ASCII “N”. SHO Subheader 5 shall specify the forward path for the user return data in the POCC mode (1 = POCC Signal Source). For the modes in which the return data is locally generated (0 = Local Signal Source and 2 thru 7 = Local Playback) the SHO Subheader 5 Designation shall be set to ASCII “N”.

If data for a the locally generated return data channel is to be sent to the POCC, the return path shall be specified in SHO Subheader 6 of the Return Parameters corresponding to the EET Data Set (see Section 9.2.3.17). If data for a the locally generated return data channel is not sent to the POCC, that SHO Subheader 6 Designation shall be set to ASCII “N”. If other channels are required with the Local Playback Channel, those channels shall be locally generated.

** For tape playbacks, DIS (POCC) mode shall be used. The configuration of the data channels will be operationally specified by a tape playback support request.