CCR Number: 0039	CRITICALITY: ROUTINE	DUE:9/24/99

DISTRIBUTION SHEET
EO-1 LEVEL II CCB

Matt Jurotich/EO-1 Payload Manager

Pete Spidaliere/EO-1 Mission Mgr

Nick Speciale/EO-1 Mission Technologist

B.Zink/EO-1 Electrical Sys.

George Andrew/EO-1 Sys Avionics

M. Perry/SYS Engineer/Swales

Mike Cully/S/C Mgr./GSFC

Brian Smith/S/C Engineer/GSFC

Terry Smith/EO-1 WARP Lead Engineer

NEW MILLENNIUM PROJECT CONFIGURATION CHANGE REQUEST

PROGRAM EO-1	**TITLE** CHANGES TO EO-1 SC TO WARP ICD-026
CCR NO. 0039	**ORIGINATOR** Terry Smith/735.4
DATE INITIATED 09/03/99	**ORIGINATOR'S CHG. NO.**
	SPONSOR/CODE Terry Smith **PHONE** x0651

EFFECTIVITY

ITEM: EO-1
S / N
ITEM:
S / N
ITEM:
S / N

CHANGE CLASS

	I	II
PRELIMINARY	☐	☐
FORMAL	☐	☐

TYPE OF CHANGE

MILESTONE	☐	INTERFACE	☐	SOFTWARE	☐
DOCUMENT	☒	POWER	☐	OTHER	☐
COST	☐	WEIGHT	☐		☐

DOCUMENTS OR SOFTWARE AFFECTED

EO-1 SC TO WARP ICD-026

PROBLEM

The EO-1Spacecraft (SC) to Wideband Advanced Recorder Processor (WARP) ICD-026 require changes that must be incorporated into the baselined ICD. The changes are detailed in the enclosed Preliminary Interface Revision Notice (PIRN).

PROPOSED SOLUTION

Approve the attached PIRN 002 to ICD-26, EO-1 SC to WARP Interface Control Document (ICD) by the EO-1 Level II Configuration Control Board (CCB). The signed CCR/PIRN will officially approve the changes by EO-1 Project Management. Future changes will be initiated by submittal of Configuration Change Requests (CCRs) and PIRNs. This document is maintained by EO-1 Configuration Management Office.

BOARD ACTION		APPROVAL LEVEL REQUIRED		CRITICALITY LEVEL		PROCUREMENT CHANGE ORDER CLASSIFICATION					
APPROVE	☒	LEVEL I HQS	☐	EMERGENCY	☐	ROUTINE		URGENT		EMERGENCY	☐
APPROVE WITH CHANGE	☐	LEVEL II GSFC	☒	URGENT	☐	OPTION 1	☐	OPTION 1	☐		
DISAPPROVE	☐	LEVEL III	☐	ROUTINE	☒	OPTION 2	☐	OPTION 2	☐		
WITHDRAW	☐										

COMMENTS

APPROVE TO INCORPORATE PIRN 002 TO ICD-26

CHAIRPERSON [signature] **DATE** 22NOV99

3/28/96

GODDARD SPACE FLIGHT CENTER		GODDARD SPACE
		PAGE 1 OF 3
PRELIMINARY SPECIFICATION CHANGE NOTICE (PSCN) No. _		2. INIT. DATE: 9/2/99
or **PRELIMINARY INTERFACE REVISION NOTICE (PIRN)** No. 002		3. CONTRACT NUMBER
4. ASSOCIATED CONTROL NUMBERS: **EO-1CCR 0039**	5. CI'S AFFECTED: EO-1 TO WARP ICD-026	6. DOCUMENT NUMBER: REVISION:
7. DESCRIPTION OF CHANGE:		

1. Delete: The following from Section 2.1 Applicable Documents:

SAI-ICD-027	EO-1 Spacecraft to Instrument FODB Terminal ICD
A0758	WARP to Spacecraft Interface Control Document
WARP-735-0013	WARP S-Band ICD
WARP-735-0026	EO-1 Instrument RS-422 ICD
	ICD for Ground Station Interface
	WARP to ALI ICD

2. Add: The following to Section 2.1 Applicable Documents:

ICD-026 S/C to WARP ICD

ICD-056 ALI to WARP RS-422 ICD

ICD-023 S/C to Ground ICD

ICD-057 A/C to WARP RS-422 ICD

ICD-065 Hyperion ICD

ICD-067 WARP to ACDS S-Band ICD

3. Change the following in Figure 3-1 WARP Block Diagram:

From: S-Band Data 4 Mbps

To: S-Band Data **2** Mbps

PREPARED BY: S.Schneider/442	**ORIGINATING ORGANIZATION APPROVAL:** **DATE:**	**ORGANIZATION:**
HST CCB ACTION	**SIGNATURE:**	**DATE:** 22 Nov 99
APPROVED: X **DISAPPROVED:**		**MINUTES No:**

4. Delete: Section 3.3.2.1 Power Distribution:

5. Change Table 3-4 Connector Pinout:

From: Table 3-4 Connector Pinout

To: Table 3-**5** Connector Pinout

6.Change Table 3-5 Main Power Bus Specification:

From: Table 3-5 Main Power Bus Specification:

To: Table 3-**6** Main Power Bus Specification

7. Change Section 3.3.4 WARP to S Band Transponder Interface:

From: The WARP transmits S-band telemetry downlink to the spacecraft Command and Data Handling (C&DH) system via a serial RS-422 interface. The S-Band interface will support the 24-Mbps rate requirement. For further details, refer to the WARP S-Band ICD (WARP-735-0013).

To: The WARP transmits S-band telemetry downlink to the spacecraft Command and Data Handling (C&DH) system via a serial RS-422 interface. The S-Band interface will support the **2** - Mbps rate requirement. For further details, refer to the WARP S-Band ICD (WARP-735-0013).

8. Add: The following to Section 4 Deliverables:

Item	Delivered By	Delivered To	Need Date	Comment
WARP Normal Mode Filter Box	**GSFC**	**SWALES**		
WARP Common Mode Filter Assy	**GSFC**	**SWALES**		

9. Change Section 3.3.2.1 Power Distribution:

From: The WARP will require a single connector for +28 V power input from the WARP LVPC. The WARP will draw 4.6 A at peak and 1.5 A for Orbital average. The +28 V power input shall use a DB-15p connector on the WARP. The wires into the WARP LVPC power input connector shall be 20 AWG. The connector pinout is shown in Table 3-4.

Table 3-4 Connector Pinout

Pin Number	Connection
1	+28 V
2	+28 V
3	+28 V
4	+28 V
5	+28 V
6	+28 V
7	+28 V
8	NC
9	+28 V Return
10	+28 V Return
11	+28 V Return
12	+28 V Return
13	+28 V Return
14	+28 V Return
15	+28 V Return

The WARP LVPC shall be designed in accordance with the specification for the spacecraft main power bus as shown in Table 3-5 and described in the System Level Electrical Requirements NMP EO-1, Litton Amecom document AM-149-0020 (155).

To: 3.3.2.1 Power Distribution:

Power from the spacecraft shall be provided to the WARP via a Normal-Mode EMI Filter and Common Mode EMI Filter, connected in series. The WARP (and filters) will draw ____ A at peak and ___A for orbital average. The +28 V power input to the Normal Mode EMI fileter shall use a DB37P connector . This connector shall also include the filtered output power to the Common-Mode EMI filter. The connector pinout is shown in Table 3-4.

Table 3-4 Normal-Mode EMI Filter Connector Pinout

Pin Number	Connection
14	Filtered + 28 V (To Common-Mode EMI Filter)
15	Filtered + 28 V (To Common-Mode EMI Filter)
18	Unfiltered +28 V (From Spacecraft)
19	Unfiltered +28 V (From Spacecraft)
32	Filtered + 28 V Return (To Common-Mode EMI Filter)
33	Filtered + 28 V Return (To Common-Mode EMI Filter)
36	Unfiltered +28 V Return (From Spacecraft)
37	Unfiltered +28 V Return (From Spacecraft)

The Common-Mode EMI Filter then provides the filtered power to the WARP DB15P power input connector. This connector pinout is shown in Table 3-5.