

814-RD-007-003

## **EOSDIS Core System Project**

# **Flight Operations Segment (FOS) Release A Version Description Document (VDD) for the ECS Project**

Version 1.00

December 2, 1996

Hughes Information Technology Systems  
Upper Marlboro, Maryland

# **Flight Operations Segment (FOS) Release A Version Description Document (VDD) for the ECS Project**

**Version 1.00**

**December 2, 1996**

Prepared Under Contract NAS5-60000

**SUBMITTED BY**

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**Hughes Information Technology Systems**  
Upper Marlboro, Maryland

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# Preface

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This preliminary document accompanies the delivery of the Earth Observing System (EOS) Flight Operations Segment (FOS) Version 1.00 software and hardware for the ECS project. It is not a formal deliverable and does not require Government approval. However, it has been placed under configuration control by the EOSDIS Core System (ECS) Change Control Board (CCB). Changes to this document shall be made by document change notice (DCN) or by complete revision.

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# Abstract

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This document describes the delivery contents of the FOS components including commercial off-the-shelf (COTS) software, Version 1.00 of custom FOS software, and accompanying documentation.

The purpose of this document is to describe the contents of the FOS delivery. It briefly describes the capabilities of the product, provides an inventory of the delivery, lists unresolved problems, and addresses issues such as special operating instructions, and disclaimer notices for public domain software used in the product.

**Keywords:** CCB, deliver, EOC, ECL, description, instructions, inventory, FOT, FOS, manual, operations, problems, release, software, tools, user's, version, 1ST

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# 1. Introduction

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## 1.1 Identification of Document

This is a Version Description Document (VDD) prepared using NASA-STD-2100-91 (NASA-DID-P500, NASA form DD250) as a guide. It is submitted as part of Flight Operations Segment (FOS) delivery for the Earth Observing System Data and Information System (EOSDIS) Core System (ECS), contract number NAS5-60000.

## 1.2 Scope of Document

This document describes the delivery contents of the FOS components including commercial off-the-shelf (COTS) software, Version 1.00 of custom FOS ECS software, and accompanying documentation.

## 1.3 Purpose and Objectives of Document

The purpose of this document is to describe the contents of the FOS delivery. It briefly describes the capabilities of the product, provides an inventory of the delivery, lists unresolved problems, and addresses issues such as special operating instructions, system limitations, and disclaimer notices for public domain software used in the product.

## 1.4 Document Status and Schedule

This VDD is submitted as a preliminary document. The preliminary version of this VDD will be used for Acceptance Testing of Release A of the FOS.

The final document is scheduled for delivery thirty days after the Release Readiness Review (RRR). Any changes to the product that require a subsequent version of this document to be released will be described in a new VDD.

## 1.5 Document Organization

The format and contents of this document comply with NASA-DID-P500 and NASA-DID-999 as defined in NASA-STD-2100-91.

- Introduction — Introduces the VDD scope, purpose, objectives, status, schedule and document organization.
- Related Documentation — Provides a bibliography of reference documents for the VDD organized by parent and binding subsections.
- Product Description — Describes the general capabilities and product contents.
- Inventory — Lists product inventory including COTS and custom FOS software (contents of tar file).

- Non-conformance Status — Discusses known problems with the FOS software and lists Non-conformance Reports with an open status.
- Appendices — Contain supplemental information such as: build/installation instructions, problem reporting, and public software disclaimer notices.
- Abbreviations and Acronyms — Contains an alphabetized list of the definitions for abbreviations and acronyms used in this volume.

## 2. Related Documentation

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### 2.1 Parent Document

The parent documents are the documents from which the scope and content of this document is derived.

423-42-01	EOSDIS Core System Statement of Work - CN10
423-41-02	Goddard Space Flight Center, Functional and Performance Requirements Specification for the Earth Observing System Data and Information System (EOSDIS) Core System (ECS)
NASA-STD-2100-91	NASA Software Documentation Standard, Software Engineering Program

### 2.2 Applicable Documents

The following documents are referenced within this document, or are directly applicable, or contain policies or other directive matters that are binding upon the content of this volume.

194-207-SE1-001	System Design Specification for the ECS Project
304-CD-001-003	Flight Operations Segment (FOS) Requirement Specified for the ECS Project, Volume 1: General Requirements
305-CD-040-001	Flight Operations Segment (FOS) Design Specification for the ECS Project (Segment Level Design)
307-CD-001-003 329-CD-001-003	Flight Operations Segment (FOS) Release Plan and Development Plan for the ECS Project

### 2.3 Information Documents

The following documents are referenced herein and, amplify or clarify the information presented in this document. These documents are not binding on the content of the Version Description Document.

222-TP-003-008	Release Plan Content Description for the ECS Project
320-WP-001-002	Flight Operation Segment (FOS) Commercial-off-the-Shelf (COTS) Hardware for Release A
604-CD-001-004	Operations Concept for the ECS Project: Part 1: - ECS Overview
604-CD-004-001	ECS Operations Concept for the ECS Project: Part 2, FOS

609-CD-005-001

Flight Operations Segment (FOS) Operations Tool Manual

SD-1-014

Software Nonconformance Reporting Project Instruction

## 3. Product Description

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This section describes the product capabilities of the FOS ECS software.

### 3.1 Product Description and General Capabilities

FOS will be deployed November 1996 at one of the Distributed Active Archive Centers (DAACs) - Goddard Space Flight Center (GSFC). It will be an incremental release of the ECS software leading to Release A.

FOS is responsible for mission operations, including the planning, scheduling, commanding, and monitoring of US EOS spacecraft and US EOS instruments onboard the US and International Partner (IP) series of spacecraft. FOS is composed of the EOS Operations Center (EOC) located at GSFC and Instrument Support Toolkit (IST) associated with the Principal Investigations (PIs) and Team Leaders (TLs).

Nine subsystems have been defined to support flight operations. Individually these subsystems perform specific, unique functions; collectively, they provide a set of interrelated services for the Flight Operations Team (FOT) and the IST user community. These subsystems are:

1. Analysis Subsystem (ANA)
2. Command Subsystem (CMD)
3. Command Management Subsystem (CMS)
4. Data Management Subsystem (DMS)
5. FOS User Interface Subsystem (FUI)
6. Planning and Scheduling Subsystem (PAS)
7. Real-Time Contact Management Subsystem (RCM)
8. Resource Management Subsystem (RMS)
9. Telemetry Subsystem (TLM)

The following sections describe the product capabilities in further detail.

#### 3.1.1 Analysis Subsystem (ANA)

The ANA subsystem provides statistics generation, User Supplied Algorithm processing, a Decision Support System (DSS), Routine Request Processing, Carryout Data, and Clock Correlation Process. The ANA subsystem is responsible for managing the on-board systems and for the overall mission monitoring. Its functions include performance analysis and trend analysis. It also cooperates with Telemetry to support fault detection and isolation.

### **3.1.2 Command Subsystem (CMD)**

The CMD subsystem consists of three processes: Format Command, Frame Operation Procedure (FOP) Command, and Transmit Command. Format Command receives and validates command directives. FOP Command builds command link transmission units (CLTUs) according to the Consultative Committee for Space Data Systems (CCSDS) standard. Transmit command forwards the CLTUs at a specified uplink rate. CMS is responsible for transmitting command data (i.e., Real-Time commands or command loads) to EDOS for uplink to the spacecraft during each real-time contact. Command data can be received in real-time by the operational staff or as preplanned command groups generated by Command Management. The CMD subsystem is also responsible for verifying command execution on-board the spacecraft.

### **3.1.3 Command Management Subsystem (CMS)**

The CMS subsystem contributes a Schedule Controller process, a Command Model process, a Spacecraft Model process, a Ground Schedule process, and a Load Catalog process. CMS manages the preplanned command data for the spacecraft and instruments. Based on inputs received from Planning and Scheduling, Command Management collects and validates the commands, software memory loads, tables loads, and instrument memory loads necessary to implement the instrument and spacecraft scheduled activities.

### **3.1.4 Data Management Subsystem (DMS)**

This subsystem provides the Project Data Base Management processes, Event Processing, Telemetry Archive Process, Ground Telemetry Archive Process, and External Interface Processes. DMS is responsible for maintaining and updating the Project Data Base (PDB) and the FOS history log.

### **3.1.5 FOS User Interface Subsystem (FUI)**

This provides graphical user interface services for all of the FOS subsystems. FUI provides character-based and graphical display interfaces for FOS operators interacting with all of the aforementioned FOS subsystems.

### **3.1.6 Planning and Scheduling (PAS)**

This produces a conflict-free schedule of activities for spacecraft resources. PAS integrates plans and schedules for spacecraft, instruments, and ground operations. Planning and Scheduling provides the operational staff with a common set of capabilities to perform "what-if" analyses and to visualize plans and schedules.

### **3.1.7 Real-Time Contact Management Subsystem (RCM)**

This receives and processes messages from NCC during contact. It also sends request messages to NCC during contact. Status messages are also received and processed from EDOS during

contact. RCM is responsible for managing the real-time interface with the NCC and EDOS, as well as with the DSN station, as applicable.

### **3.1.8 Resource Management Subsystem (RMS)**

This provides multiple operators access to the same data stream. It also ensures a single point of command for a specific spacecraft. RMS provides the capability to manage and monitor the configuration of the EOC. This includes configuring the EOC resources for multi-mission support; facilitating operational failure recovery during real-time contacts.

### **3.1.9 Telemetry Subsystem (TLM)**

This provides telemetry decommutation. It also provides for memory dump and spacecraft state checks. TLM receives and processes housekeeping telemetry (in CCSDS packets) from EDOS. After the packet decommutation, the telemetry data is converted to engineering units and checked against boundary limits.

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## 4. Product Inventory

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Delivery of FOS consists of commercial-off-the shelf (COTS) software, shareware software and custom ECS software. This section provides details of these components.

### 4.1 Inventory of Materials

#### 4.1.1 Documentation

The document provided with this release is:

Document Number: 320-WP-001-002

Title: Flight Operation Segment (FOS) Commercial-off-the-Shelf (COTS)  
Hardware for Release A

Delivery Source: Hardcopy, WEB

Summary: This document includes descriptions of the hardware, network diagrams, and COTS

#### 4.1.2 Archive Tapes

The following magnetic tape is used to archive the delivered baseline configuration of the developed software.

##### 904-PR-027-001

Label: FOS\_v1.0\_120296

Distribution Date: December 2, 1996

>>> 5.0gbyte format (high density) <<<<

FOS\_v1.0\_120296.tar

All documents (VDD and User's Guide )

Command to untar tar tape: tar xvf ##

Command to untar tar file: tar xvf file.tar

where ## = your tape device and file.tar = Name you give tar file

#### 4.1.3 Utility and Support Software

The Utility and Support Software are included as part of the FOS Custom Software (refer to section 4.2.1).

#### 4.1.4 COTS Software Inventory

FOS uses the existing Version 0 Wide Area Network (WAN) to transport data between sites. It uses the existing Version 0 LAN infrastructure to support local networking at the GSFC DAAC.

Table 4-1 summarizes the deployed COTS software at GSFC. Refer to *Flight Operation Segment (FOS) Commercial-off-the-Shelf (COTS) Hardware for Release A* (320-WP-001-002) for the physical mapping of FOS Release A COTS hardware to COTS software.

**Table 4-1. COTS Software Inventory List (GSFC)**

Identification:	Component Description	Version	Patches	Vendor	Part Number
CSS-EOC-1 (CSS Server)	HP-UX Operating System	9.05			
	Motif	1.2			
ISS-EOC-1 (Interworking Equipment)	None Identified				
FOS-EOC-1 (Printer)	None Identified				
FOS-EOC-2 (RAID File Server)	Digital UNIX Operating System	3.2	-	DEC	
	Network Applications Support	N/A	-	DEC	
	OSF/Motif Base Software	1.2	-	DEC	
	OSF/Motif USR Digital Unix, 8 user	N/A	N/A	DEC	
	Jukebox Tier 1	N/A	N/A	DEC	
	Advanced File System Utilities	N/A	N/A	DEC	
FOS-EOC-3 (Printer)	None Identified				
FOS-EOC-4 (Printer)	None Identified				
FOS-EOC-5 (FOT User Station)	RogueWave libraries	6.1			
	Sybase Client	10.0.2			
	Netscape Browser	2.02			
	Solaris Operating System	2.4		SUN	
	Motif	1.2.3			
FOS-EOC-6 (Real Time Server)	Digital UNIX Operating System	3.2	-	DEC	
	Polycenter Netview Base System	4.1A	-	DEC	
	DEC Fuse For OSF-1	2.1A	-	DEC	
	DEC Fuse For OSF-1 c/user	2.1A	-	DEC	
	Network Application Support	N/A	-	DEC	
	OSF/Motif Base Software	1.2	-	DEC	
	DEC OSF-1 AXP Developers Ext.	N/A	-	DEC	
	OSF/Motif USR Digital Unix, 8 user	N/A	N/A	DEC	
	DEC C++ For U/A	5.1	-	DEC	
	Sybase SQL Server	10.0.2	-	-	-
	Sybase Open Client/C	10.0.2	-	-	-
	Sybase Embedded SQL/C	10.0.2	-	-	-

FOS-EOC-7 (Data Server)	Digital UNIX Operating System	3.2		DEC	
	Polycenter Netview Base System	4.1A	-	DEC	
	DEC Fuse For OSF-1	2.1	-	DEC	
	Network Application Support	N/A	-	DEC	
	OSF/Motif Base Software	1.2	-	DEC	
	DEC OSF-1 AXP Developers Ext.	N/A	N/A	DEC	
	OSF/Motif USR Digital Unix, 8 user	N/A	N/A	DEC	
	DEC C++ For U/A	5.1		DEC	

**Table 4-1. COTS Software Inventory List (GSFC) cont.**

Identification:	Component Description	Version	Patches	Vendor	Part Number
	Sybase SQL Server	10.0.2	-	-	-
	Sybase Open Client/C	10.0.2	-	-	-
	Sybase Embedded SQL/C	10.0.2	-	-	-
FOS-EOC-8 (FOT User Station)	Solaris Operating System	2.4	-	SUN	
	Motif	1.2.3			
	RogueWave libraries	6.1			
	Sybase Client	10.0.2			
	Netscape Browser	2.02			
FOS-EOC-9 (FOT User Station)	Solaris Operating System	2.4	-	SUN	
	Motif	1.2.3			
	RogueWave libraries	6.1			
	Sybase Client	10.0.2			
	Netscape Browser	2.02			
FOS-EOC-10 (FOT User Station)	Solaris Operating System	2.4	-	SUN	
	Motif	1.2.3			
	RogueWave libraries	6.1			
	Sybase Client	10.0.2			
	Netscape Browser	2.02			
FOS-EOC-11 (Console Manager)	Digital UNIX Operating System	3.2	-	DEC	
	Open 3D	N/A	-	DEC	
	Multimedia Services RT-DEC OSF-1	N/A	-	DEC	
	OSF-BASE	N/A	-	DEC	
FOS-EOC-12 (Console Manager)	Open 3D	N/A	-	DEC	
	Multimedia Services RT-DEC OSF-1	N/A	-	DEC	
	Digital UNIX Operating System	3.2	-	DEC	
FOS-EOC-13 (Time Gateways)	None Identified				
MSS-EOC-1 (Printer)	None Identified				
MSS-EOC-2 Management Subsystem Workstation	RogueWave 6.1 Libraries	6.1			
	Netscape Browser	2.02			
	Motif	1.2.3	-	SUN	

**Table 4-1. COTS Software Inventory List (GSFC) cont.**

Identification:	Component Description	Version	Patches	Vendor	Part Number
MSS-EOC-3 (Management Subsystem Server)	HP-UX Operating System	9.05	-	HP	
	Motif	1.2	-	HP	
MSS-EOC-4 Multicast Server					
	Solaris Operating System	2.4	-	SUN	
	Motif	1.2.3			
	RogueWave 6.1 Libraries	6.1			
	Netscape Browser	2.02			
	Sybase Client	10.0.2	-		

#### 4.1.5 Shareware Inventory

Table 4-2 summarizes the deployed Shareware at GSFC EOC. Refer to *Flight Operation Segment (FOS) Commercial-off-the-Shelf (COTS) Hardware for Release A* (320-WP-001-002) for the physical mapping of FOS Release A COTS hardware to shareware.

**4-2. Shareware Inventory List (GSFC)**

Identification:	Component Description	Version	Patches	Vendor	Part Number
CSS-EOC-1 (CSS Server)	None Identified				
ISS-EOC-1	None Identified				
FOS-EOC-1	None Identified				
FOS-EOC-2 (RAID File Server)	None Identified				
FOS-EOC-3	None Identified				
FOS-EOC-4	None Identified				
FOS-EOC-5	Mosaic	2.4			
	emacs	19.28.1		GNU	
	ghostview	1.5		GNU	
	gzip	1.2.4		GNU	
	gunzip	1.2.4		GNU	
	sudo	1.3.1pl4			
	zmail	None identified			

	gcc	2.6.0			
	XV	None identified			
FOS-EOC-6	tcpdump	3.2.1			
FOS-EOC-7 (Data Server)	tcpdump	3.2.1			

**4-2. Shareware Inventory List (GSFC) cont.**

<b>Identification:</b>	<b>Component Description</b>	<b>Version</b>	<b>Patches</b>	<b>Vendor</b>	<b>Part Number</b>
FOS-EOC-8 (FOT User Station)	Mosaic	2.4			
	emacs	19.28.1		GNU	
	ghostview	1.5		GNU	
	gzip	1.2.4		GNU	
	gunzip	1.2.4		GNU	
	sudo	1.3.1pl4			
	zmail	None identified			
	XV	None identified			
FOS-EOC-9 (FOT User Station)	emacs	19.28.1		GNU	
	ghostview	1.5		GNU	
	gzip	1.2.4		GNU	
	gunzip	1.2.4		GNU	
	sudo	1.3.1pl4			
	zmail	None identified			
	XV	None identified			
FOS-EOC-10 (FOT User Station)	Mosaic	2.4			
	emacs	19.28.1		GNU	
	ghostview	1.5		GNU	
	gzip	1.2.4		GNU	
	gunzip	1.2.4		GNU	
	sudo	1.3.1pl4			
	zmail	None identified			
	XV	None identified			
FOS-EOC-11(Console Manager)	None Identified				
FOS-EOC-12 (Console Manager)	None Identified				
FOS-EOC-13	None Identified				
MSS-EOC-1	None Identified				

**4-2. Shareware Inventory List (GSFC) cont.**

<b>Identification:</b>	<b>Component Description</b>	<b>Version</b>	<b>Patches</b>	<b>Vendor</b>	<b>Part Number</b>
MSS-EOC-2 Management Subsystem Workstation	Mosaic	2.4			
	emacs	19.28.1		GNU	
	ghostview	1.5		GNU	
	gzip	1.2.4		GNU	
	gunzip	1.2.4		GNU	

#### 4-2. Shareware Inventory List (GSFC) cont.

Identification:	Component Description	Version	Patches	Vendor	Part Number
	sudo	1.3.1pl4			
	zmail	None identified			
	XV	None identified			
MSS-EOC-3 Management Subsystem Server	Traceroute	None Identified			
	gzip	1.2.4		GNU	
	Kerberos	5		Cygnus	
MSS-EOC-4	Sudo	1.3.1pl4			

## 4.2 FOS Custom Software

FOS custom software consists of a number of components. Ten subsystems are required to make a complete FOS build. The software is available for the following architectures:

- DEC  
OSF 3.2
- SUN  
Sun Solaris 2.4

A file listing maybe generated from the delivered tar file using the tar -tvf command.

### 4.2.1 FOS Custom Software Version 1.00 Tar File Listing

The following listing provides the files generated by the build process and the installation process. All of the run time executables are located in the /fos/test/am1/bin area. For the SUN platform the executables are located in the sun\_sparc\_5-4 subdirectory to /bin (e.g., the DynamicPage executable is located at /fos/test/am1/bin/sun\_sparc\_5-4).

```
drwxrwxr-x 752/20      0 Nov 22 09:56 1996 am1/
drwxrwxr-x 752/20      0 Nov  8 15:34 1996 am1/bin/
drwxrwxr-x 752/20      0 Nov 21 15:50 1996 am1/bin/dec_osf_3-2/
-rwxr-x--- 424/20    1966080 Nov 13 14:05 1996 am1/bin/dec_osf_3-2/DumpUplinkImage
-rwxr-x--- 424/20    5895912 Nov 13 14:59 1996 am1/bin/dec_osf_3-2/FaDrReaderDriver
-rwxr-x--- 424/20    8593408 Nov 13 14:55 1996 am1/bin/dec_osf_3-2/FaRmRequestManager
-rwxrwxr-x 424/20     9871360 Nov 24 12:15 1996 am1/bin/dec_osf_3-2/FcCdFormat
-rwxr-x--- 424/20    7725056 Nov 13 13:52 1996 am1/bin/dec_osf_3-2/FcCmFop
-rwxr-x--- 424/20    8265728 Nov 12 22:22 1996 am1/bin/dec_osf_3-2/FcCmXmit
-rwxr-x--- 424/20    7692288 Nov 13 13:46 1996 am1/bin/dec_osf_3-2/FdArTlmArchiver
```

```

-rwxr-x--- 424/20 8642560 Nov 13 13:38 1996 am1/bin/dec_osf_3-2/FdDbBuildAnlOdf
-rwxr-x--- 424/20 9609216 Nov 13 13:38 1996 am1/bin/dec_osf_3-2/FdDbBuildCmsOdf
-rwxr-x--- 424/20 8970240 Nov 13 13:44 1996 am1/bin/dec_osf_3-2/FdDbBuildEventOdf
-rwxr-x--- 424/20 9641984 Nov 13 13:45 1996 am1/bin/dec_osf_3-2/FdDbBuildFuiCmdOdf
-rwxr-x--- 424/20 9306112 Nov 13 13:46 1996 am1/bin/dec_osf_3-2/FdDbBuildNccOdf
-rwxr-x--- 424/20 9461760 Nov 13 13:51 1996 am1/bin/dec_osf_3-2/FdDbBuildPidsOdf
-rwxr-x--- 424/20 11870208 Nov 13 13:39 1996 am1/bin/dec_osf_3-2/FdDbBuildSysOdf
-rwxr-x--- 424/20 24557808 Nov 13 13:49 1996 am1/bin/dec_osf_3-2/FdDbBuildTlmOdf
-rwxr-x--- 424/20 13197312 Nov 13 13:37 1996 am1/bin/dec_osf_3-2/FdDbEventDbSrv
-rwxr-x--- 424/20 9519104 Oct 19 01:40 1996 am1/bin/dec_osf_3-2/FdDbEvtDefWebDbClient
-rwxr-x--- 424/20 12935168 Nov 13 13:47 1996 am1/bin/dec_osf_3-2/FdDbFileMetaServer
-rwxr-x--- 424/20 10125312 Nov 13 13:42 1996 am1/bin/dec_osf_3-2/FdDbFormEvtWebDbClient
-rwxr-x--- 424/20 9519104 Nov 13 13:36 1996 am1/bin/dec_osf_3-2/FdDbGroundParamWebClient
-rwxr-x--- 424/20 13434880 Nov 13 13:41 1996 am1/bin/dec_osf_3-2/FdDbLoadCatSrv
-rwxr-x--- 424/20 9609216 Nov 13 13:35 1996 am1/bin/dec_osf_3-2/FdDbNameServerWebClient
-rwxr-x--- 424/20 12820480 Nov 13 13:34 1996 am1/bin/dec_osf_3-2/FdDbOdfTable
-rwxr-x--- 424/20 12140544 Nov 13 13:34 1996 am1/bin/dec_osf_3-2/FdDbOrbEvtWebClient
-rwxr-x--- 424/20 12886016 Nov 13 13:35 1996 am1/bin/dec_osf_3-2/FdDbOrbitEventServer
-rwxr-x--- 424/20 13246464 Nov 13 17:51 1996 am1/bin/dec_osf_3-2/FdDbTableDefSrv
-rwxr-x--- 424/20 12558336 Nov 13 13:44 1996 am1/bin/dec_osf_3-2/FdDbTlmCataServer
-rwxr-x--- 424/20 7741440 Nov 13 13:37 1996 am1/bin/dec_osf_3-2/FdEvEventArchiver
-rwxr-x--- 424/20 6193152 Nov 13 13:36 1996 am1/bin/dec_osf_3-2/FdEvEventHandler
-rwxr-x--- 424/20 6062080 Nov 13 13:36 1996 am1/bin/dec_osf_3-2/FdEvEventRouter
-rwxr-x--- 424/20 14123008 Nov 13 13:42 1996 am1/bin/dec_osf_3-2/FdQmQueueMgr
-rwxr-x--- 424/20 7331840 Nov 12 22:34 1996 am1/bin/dec_osf_3-2/FgEiEdosIn
-rwxr-x--- 424/20 7536640 Oct 18 18:13 1996 am1/bin/dec_osf_3-2/FgEoEdosOut
-rwxr-x--- 424/20 11493376 Nov 12 22:33 1996 am1/bin/dec_osf_3-2/FgGmNccGroundMgr
-rwxr-x--- 424/20 9011200 Oct 18 18:11 1996 am1/bin/dec_osf_3-2/FgSmNccStatusMgr
-rwxr-x--- 424/20 11190272 Nov 13 17:41 1996 am1/bin/dec_osf_3-2/FmGsGroundSchedule
-rwxr-x--- 424/20 15163392 Nov 13 17:43 1996 am1/bin/dec_osf_3-2/FmLdAM1LoadCatalog
-rwxr-x--- 424/20 15065088 Nov 13 14:04 1996 am1/bin/dec_osf_3-2/FmScAM1ScheduleController
-rwxr-x--- 424/20 12533760 Nov 12 19:06 1996 am1/bin/dec_osf_3-2/FoNsNameServer
-rwxr-x--- 424/20 6586368 Nov 12 19:06 1996 am1/bin/dec_osf_3-2/FoPsParameterServer
-rwxrwxr-x 424/20 21151744 Oct 18 14:40 1996 am1/bin/dec_osf_3-2/FpAdActivityDefiner
-rwxr-x--- 424/20 11075584 Nov 22 08:19 1996 am1/bin/dec_osf_3-2/FtDcDecom
-rwxrwxr-x 424/20 19218432 Oct 18 14:42 1996 am1/bin/dec_osf_3-2/FpBdBapDefiner
-rwxrwxr-x 424/20 7315456 Oct 18 14:45 1996 am1/bin/dec_osf_3-2/FpEhEventHandler
-rwxrwxr-x 424/20 10469376 Oct 18 14:46 1996 am1/bin/dec_osf_3-2/FpFsAsterFilter
-rwxrwxr-x 424/20 19218432 Oct 18 14:47 1996 am1/bin/dec_osf_3-2/FpGsGeneralScheduler
-rwxrwxr-x 424/20 11059200 Oct 18 14:48 1996 am1/bin/dec_osf_3-2/FpLgLoadGenerator
-rwxrwxr-x 424/20 20111360 Nov 13 14:27 1996 am1/bin/dec_osf_3-2/FpLqLoadQueueer
-rwxrwxr-x 424/20 10559488 Oct 18 14:53 1996 am1/bin/dec_osf_3-2/FpNsNameServer
-rwxrwxr-x 424/20 12992512 Oct 18 14:54 1996 am1/bin/dec_osf_3-2/FpRmResourceModel
-rwxrwxr-x 424/20 23060480 Oct 18 14:57 1996 am1/bin/dec_osf_3-2/FpTlTimeline
-rwxr-x--- 424/20 16334848 Nov 16 14:08 1996 am1/bin/dec_osf_3-2/FrGrStringMgr
-rwxr-x--- 424/20 5775360 Oct 18 13:03 1996 am1/bin/dec_osf_3-2/FrRpRepeater
-rwxr-x--- 424/20 17694720 Nov 20 09:38 1996 am1/bin/dec_osf_3-2/FuGsGroundScriptControl
-rwxr-x--- 424/20 7217152 Nov 13 13:43 1996 am1/bin/dec_osf_3-2/TlmRetriever
-rwxrwxr-x 424/20 7569408 Oct 14 16:55 1996 am1/bin/dec_osf_3-2/ncc
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/bin/dec_osf_4-0/
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/bin/hp_ux_10-01/
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/bin/hp_ux_10-10/

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drwxrwxr-x 752/20      0 Nov  8 15:34 1996 am1/bin/hp_ux_9-05/
drwxrwxr-x 752/20      0 Nov  8 15:34 1996 am1/bin/sgi_irix32_5-3/
drwxrwxr-x 752/20      0 Nov  8 15:34 1996 am1/bin/sgi_irix64_6-2/
drwxrwxr-x 752/20      0 Nov 21 15:55 1996 am1/bin/sun_sparc_5-4/
-rwxr-x--- 424/20    2142784 Nov 14 09:34 1996 am1/bin/sun_sparc_5-4/A2tlm
-rwxr-x--- 424/20    8055840 Nov 16 18:03 1996 am1/bin/sun_sparc_5-4/CmdControl
-rwxr-x--- 424/20    2484492 Nov 13 15:04 1996 am1/bin/sun_sparc_5-4/CreateRTS
-rwxr-x--- 424/20    578556 Oct 19 19:35 1996 am1/bin/sun_sparc_5-4/CreateTlmCmdFilterKeys
-rwxr-x--- 424/20    1731032 Nov 13 15:05 1996 am1/bin/sun_sparc_5-4/DeleteRTS
-rwxr-x--- 424/20    8444560 Nov 16 18:04 1996 am1/bin/sun_sparc_5-4/DisplayBuilder
-rwxr-xr-x 424/20      276 Nov 15 19:45 1996 am1/bin/sun_sparc_5-4/DisplayBuilder.ini
-rwxr-x--- 424/20    563816 Nov 13 15:07 1996 am1/bin/sun_sparc_5-4/DumpUplinkImage
-rwxr-x--- 424/20    6081992 Nov 16 18:04 1996 am1/bin/sun_sparc_5-4/DynamicPage
-rwxr-x--- 424/20    3016620 Nov 16 17:40 1996 am1/bin/sun_sparc_5-4/EC
-rwxr-x--- 424/20    3482088 Nov 14 15:02 1996 am1/bin/sun_sparc_5-4/FaAcCruncher
-rwxr-x--- 424/20    1446388 Nov 14 15:45 1996 am1/bin/sun_sparc_5-4/FaDrReaderDriver
-rwxr-x--- 424/20    2635428 Nov 13 15:40 1996 am1/bin/sun_sparc_5-4/FaRmRequestManager
-rwxr-x--- 424/20    2894704 Nov 14 15:11 1996 am1/bin/sun_sparc_5-4/FaRtDServer
-rwxr-x--- 424/20    3147796 Nov 13 14:23 1996 am1/bin/sun_sparc_5-4/FcCdFormat
-rwxr-x--- 424/20    2373804 Nov 13 14:19 1996 am1/bin/sun_sparc_5-4/FcCmFop
-rwxr-x--- 424/20    2527108 Nov 13 14:15 1996 am1/bin/sun_sparc_5-4/FcCmXmit
-rwxr-x--- 424/20    2364088 Nov 13 14:06 1996 am1/bin/sun_sparc_5-4/FdArTlmArchiver
-rwxr-x--- 424/20    1628192 Nov 13 13:46 1996 am1/bin/sun_sparc_5-4/FdDbBuildAnlOdf
-rwxr-x--- 424/20    1963240 Nov 13 13:48 1996 am1/bin/sun_sparc_5-4/FdDbBuildCmsOdf
-rwxr-x--- 424/20    1734344 Nov 13 14:03 1996 am1/bin/sun_sparc_5-4/FdDbBuildEventOdf
-rwxr-x--- 424/20    1968096 Nov 13 14:04 1996 am1/bin/sun_sparc_5-4/FdDbBuildFuiCmdOdf
-rwxr-x--- 424/20    2144384 Nov 13 14:12 1996 am1/bin/sun_sparc_5-4/FdDbBuildFuiOdf
-rwxr-x--- 424/20    1904212 Nov 12 22:44 1996 am1/bin/sun_sparc_5-4/FdDbBuildNccOdf
-rwxr-x--- 424/20    1936076 Nov 12 22:53 1996 am1/bin/sun_sparc_5-4/FdDbBuildPidsOdf
-rwxr-x--- 424/20    2719012 Nov 13 13:51 1996 am1/bin/sun_sparc_5-4/FdDbBuildSysOdf
-rwxr-x--- 424/20    4561820 Nov 13 14:10 1996 am1/bin/sun_sparc_5-4/FdDbBuildTlmOdf
-rwxr-x--- 424/20    3156264 Nov 13 13:43 1996 am1/bin/sun_sparc_5-4/FdDbEventDbSrv
-rwxr-x--- 424/20    1921468 Nov 13 13:56 1996 am1/bin/sun_sparc_5-4/FdDbEvtDefWebDbClient
-rwxr-x--- 424/20    3017760 Nov 13 14:07 1996 am1/bin/sun_sparc_5-4/FdDbFileMetaServer
-rwxr-xr-x 424/20    2237568 Oct 14 09:18 1996 am1/bin/sun_sparc_5-4/ncc
-rwxr-x--- 424/20    2124212 Nov 13 13:56 1996 am1/bin/sun_sparc_5-4/FdDbFormEvtWebDbClient
-rwxr-x--- 424/20    1907232 Nov 13 13:40 1996 am1/bin/sun_sparc_5-4/FdDbGroundParamWebClient
-rwxr-x--- 424/20    3203528 Nov 13 13:54 1996 am1/bin/sun_sparc_5-4/FdDbLoadCatSrv
-rwxr-x--- 424/20    1934092 Nov 13 13:39 1996 am1/bin/sun_sparc_5-4/FdDbNameServerWebClient
-rwxr-x--- 424/20    2992536 Nov 13 13:33 1996 am1/bin/sun_sparc_5-4/FdDbOdfTable
-rwxr-x--- 424/20    2827700 Nov 13 13:36 1996 am1/bin/sun_sparc_5-4/FdDbOrbEvtWebClient
-rwxr-x--- 424/20    3060892 Nov 13 13:37 1996 am1/bin/sun_sparc_5-4/FdDbOrbitEventServer
-rwxr-x--- 424/20    3172716 Nov 13 13:53 1996 am1/bin/sun_sparc_5-4/FdDbTableDefSrv
-rwxr-x--- 424/20    2908356 Nov 13 14:03 1996 am1/bin/sun_sparc_5-4/FdDbTlmCataServer
-rwxr-x--- 424/20    2344996 Nov 13 13:45 1996 am1/bin/sun_sparc_5-4/FdEvEventArchiver
-rwxr-xr-x 424/20    1186024 Oct 19 15:30 1996 am1/bin/sun_sparc_5-4/FdEvEventDriver
-rwxr-x--- 424/20    1801552 Nov 13 13:41 1996 am1/bin/sun_sparc_5-4/FdEvEventHandler
-rwxr-x--- 424/20    1745780 Nov 13 13:41 1996 am1/bin/sun_sparc_5-4/FdEvEventRouter
-rwxr-x--- 424/20    3422328 Nov 13 13:58 1996 am1/bin/sun_sparc_5-4/FdQmQueueMgr
-rwxr-x--- 424/20    2217300 Nov 13 14:39 1996 am1/bin/sun_sparc_5-4/FgEiEdosIn
-rwxr-x--- 424/20    2288736 Nov 13 14:39 1996 am1/bin/sun_sparc_5-4/FgEoEdosOut
-rwxr-x--- 424/20    3686280 Nov 13 14:38 1996 am1/bin/sun_sparc_5-4/FgGmNccGroundMgr

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-rwxr-x--- 424/20 2788080 Nov 13 14:33 1996 am1/bin/sun_sparc_5-4/FgSmNccStatusMgr
-rwxr-x--- 424/20 3636092 Nov 13 14:47 1996 am1/bin/sun_sparc_5-4/FmGsGroundSchedule
-rwxr-x--- 424/20 4912056 Nov 13 14:53 1996 am1/bin/sun_sparc_5-4/FmLdAM1LoadCatalog
-rwxr-x--- 424/20 2773712 Nov 13 15:06 1996 am1/bin/sun_sparc_5-4/FmPcTest
-rwxr-x--- 424/20 4823672 Nov 13 15:01 1996 am1/bin/sun_sparc_5-4/FmScAM1ScheduleController
-rwxr-x--- 424/20 2877396 Nov 13 11:59 1996 am1/bin/sun_sparc_5-4/FoNsNameServer
-rwxr-x--- 424/20 1919628 Nov 13 12:00 1996 am1/bin/sun_sparc_5-4/FoPsParameterServer
-rwxrwxr-x 424/20 7460124 Oct 15 19:52 1996 am1/bin/sun_sparc_5-4/FpAdActivityDefiner
-rwxrwxr-x 424/20 6400388 Oct 15 19:55 1996 am1/bin/sun_sparc_5-4/FpBdBapDefiner
-rwxrwxr-x 424/20 2917032 Nov 13 15:18 1996 am1/bin/sun_sparc_5-4/FpEhEventHandler
-rwxrwxr-x 424/20 5268868 Oct 15 20:01 1996 am1/bin/sun_sparc_5-4/FpFsAsterFilter
-rwxrwxr-x 424/20 4187008 Oct 15 20:04 1996 am1/bin/sun_sparc_5-4/FpLgLoadGenerator
-rwxrwxr-x 424/20 6900400 Oct 15 20:03 1996 am1/bin/sun_sparc_5-4/FpGsGeneralScheduler
-rwxrwxr-x 424/20 7737160 Nov 13 15:26 1996 am1/bin/sun_sparc_5-4/FpLqLoadQueuer
-rwxrwxr-x 424/20 2909220 Oct 15 20:10 1996 am1/bin/sun_sparc_5-4/FpNsNameServer
-rwxrwxr-x 424/20 6190476 Oct 15 20:13 1996 am1/bin/sun_sparc_5-4/FpRmResourceModel
-rwxrwxr-x 424/20 7517836 Oct 15 20:15 1996 am1/bin/sun_sparc_5-4/FpTITimeline
-rwxr-x--- 424/20 5698724 Nov 13 14:30 1996 am1/bin/sun_sparc_5-4/FrGrStringMgr
-rwxr-x--- 424/20 1671980 Nov 13 14:25 1996 am1/bin/sun_sparc_5-4/FrRpRepeater
-rwxr-x--- 424/20 3375980 Nov 13 12:11 1996 am1/bin/sun_sparc_5-4/FtDcDecom
-rwxr-x--- 424/20 5026112 Nov 16 18:02 1996 am1/bin/sun_sparc_5-4/FuAnBuild
-rwxr-x--- 424/20 2435512 Nov 16 17:30 1996 am1/bin/sun_sparc_5-4/FuAnHandler
-rwxr-x--- 424/20 2852144 Nov 16 17:41 1996 am1/bin/sun_sparc_5-4/FuEvEvtdis
-rwxr-x--- 424/20 6204736 Nov 20 09:25 1996 am1/bin/sun_sparc_5-4/FuGsGroundScriptControl
-rwxr-x--- 424/20 4155928 Nov 16 17:45 1996 am1/bin/sun_sparc_5-4/FuLbTableLoadBuilder
-rwxr-x--- 424/20 3447604 Nov 15 08:12 1996 am1/bin/sun_sparc_5-4/FuTsdriver
-rwxr-x--- 424/20 3763132 Nov 16 17:46 1996 am1/bin/sun_sparc_5-4/FuLmLoadManager
-rwxr-x--- 424/20 5443680 Nov 16 17:47 1996 am1/bin/sun_sparc_5-4/FuPbProcBuilderWin
-rwxr-x--- 424/20 4871392 Nov 16 17:49 1996 am1/bin/sun_sparc_5-4/FuPcProcController
-rwxr-x--- 424/20 2067932 Nov 16 17:50 1996 am1/bin/sun_sparc_5-4/FuRbRoomBuilder
-rwxr-x--- 424/20 6835484 Nov 16 18:03 1996 am1/bin/sun_sparc_5-4/RegCtrlWin
-rwxr-x--- 424/20 2209660 Nov 13 14:01 1996 am1/bin/sun_sparc_5-4/TlmRetriever
-rwxr-x--- 424/20 32768 Nov 16 17:41 1996 am1/bin/sun_sparc_5-4/evtdis.uid
-rwxr-x--- 424/20 2863940 Nov 16 17:38 1996 am1/bin/sun_sparc_5-4/writeDefs
-rwxr-x--- 424/20 1859808 Nov 16 17:39 1996 am1/bin/sun_sparc_5-4/writePms
-rwxr-x--- 424/20 1827236 Oct 28 13:12 1996 am1/bin/sun_sparc_5-4/writeRoom
drwxrwxr-x 752/20 0 Nov 21 10:57 1996 am1/config/
-rwxrwxrwx 424/20 48 Nov 12 15:34 1996 am1/config/NccConfig.data
-rwxrwxrwx 424/20 195 Nov 13 11:51 1996 am1/config/config.dat
-rwxrwxrwx 424/20 3548492 Nov 12 10:04 1996 am1/config/createCmdActs
-rwxrwxrwx 424/20 3545948 Nov 12 10:05 1996 am1/config/createCmds
-rwxrwxr-x 424/20 152752 Nov 20 09:07 1996 am1/config/act.db
-r-xr-xr-x 424/20 1051820 Oct 16 13:06 1996 am1/config/act.db_reinit
-rwxrwxr-x 424/20 6129 Nov 20 09:07 1996 am1/config/alloc.db
-r-xr-xr-x 424/20 193 Oct 16 13:06 1996 am1/config/alloc.db_reinit
-rwxrwxr-x 424/20 118 Aug 20 11:46 1996 am1/config/asteract.db
-rwxrwxr-x 424/20 3196 Nov 20 09:07 1996 am1/config/bap.db
-rwxrwxr-x 424/20 141 Aug 20 11:47 1996 am1/config/cmdproc.db
-rw-rw-r-- 424/20 287871 Oct 30 13:41 1996 am1/config/command.db
-r-xr-xr-x 424/20 277132 Oct 16 13:06 1996 am1/config/command.db_reinit
-rwxr-x--- 424/20 195 Oct 23 17:27 1996 am1/config/data.db
-rwxrwxr-x 424/20 90 Oct 19 11:14 1996 am1/config/data.db%

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-rwxrwxr-x 424/20	61 Aug 8 11:46 1996 am1/config/eoc_data.db
-rwxrwxr-x 424/20	68 Aug 8 11:50 1996 am1/config/eoc_gchw.db
-rwxrwxr-x 424/20	52 Aug 8 11:53 1996 am1/config/eoc_gcuser.db
-rwxrwxr-x 424/20	68 Aug 8 11:54 1996 am1/config/eoc_hw.db
-rwxrwxr-x 424/20	52 Aug 8 11:54 1996 am1/config/eoc_user.db
-rwxrwxrwx 424/20	1387 Oct 16 15:03 1996 am1/config/etlConfig.db
-rwxrwxr-x 424/20	161 Aug 20 11:47 1996 am1/config/event.db
-rwxr-x--- 424/20	111 Oct 23 11:36 1996 am1/config/gcuser.db
-rwxrwxr-x 424/20	5429 Aug 20 11:47 1996 am1/config/mode.db
-rwxrwxr-x 424/20	305 Aug 20 11:47 1996 am1/config/orb.aos.db
-rwxrwxr-x 424/20	305 Aug 20 11:47 1996 am1/config/orb.los.db
-rwxrwxr-x 424/20	312 Aug 20 11:47 1996 am1/config/orb.sunrise.db
-rwxrwxr-x 424/20	312 Aug 20 11:47 1996 am1/config/orb.sunset.db
-rwxrwxr-x 424/20	1869 Nov 21 10:40 1996 am1/config/plan.db
-r-xr-xr-x 424/20	7413 Sep 20 14:41 1996 am1/config/rconn.db
-rwxrwxr-x 424/20	11984 Aug 20 11:48 1996 am1/config/rs.db
-rwxrwxr-x 424/20	6212 Aug 20 11:48 1996 am1/config/srs.db
-rwxrwxr-x 424/20	1193 Aug 20 11:48 1996 am1/config/srsconn.db
-rwxrwxr-x 424/20	102268 Nov 21 10:40 1996 am1/config/state.db
-r-xr-xr-x 424/20	100167 Oct 16 13:06 1996 am1/config/state.db_reinit
-rwxr-x--- 424/20	111 Oct 23 11:29 1996 am1/config/user.db
-rwxrwxr-x 424/20	76 Oct 19 11:15 1996 am1/config/user.db%
-r--r--r-- 424/20	101 Nov 12 10:19 1996 am1/config/gchw.db
-r--r--r-- 424/20	101 Nov 12 10:20 1996 am1/config/hw.db
-rwxrwxrwx 424/20	237 Nov 12 10:07 1996 am1/config/st_cmdActs
-rwxrwxrwx 424/20	200 Oct 29 10:36 1996 am1/config/st_cmds
drwxrwxr-x 752/20	0 Nov 21 11:17 1996 am1/data/
drwxrwxr-x 752/20	0 Nov 8 15:34 1996 am1/data/ANA/
drwxrwxr-x 752/20	0 Nov 8 15:34 1996 am1/data/DMS/
drwxrwxr-x 752/20	0 Nov 8 15:34 1996 am1/data/FUI/
drwxrwxr-x 752/20	0 Nov 8 15:34 1996 am1/data/FUI/requests/
drwxrwxr-x 752/20	0 Nov 8 16:05 1996 am1/data/PAS/
-rwxrwx--- 752/20	337 Jul 24 19:27 1996 am1/data/PAS/ASTER_ODA_1999165007.txt
-rwxrwx--- 752/20	337 Jul 24 19:27 1996 am1/data/PAS/ASTER_ODS_1999165005.txt
-rwxrwx--- 752/20	304 Jul 24 19:27 1996 am1/data/PAS/ASTER_ODS_1999165006.txt
-rwxrwx--- 752/20	337 Jul 24 19:27 1996 am1/data/PAS/ASTER_STA_1999165004.txt
-rwxrwx--- 752/20	337 Jul 24 19:27 1996 am1/data/PAS/ASTER_STS_1999165002.txt
-rwxrwx--- 752/20	304 Jul 24 19:27 1996 am1/data/PAS/ASTER_STS_1999165003.txt
-rwxrwx--- 752/20	112 Jul 24 19:03 1996 am1/data/PAS/ASTER_STS_1999165009.txt
-rwxr-x--- 424/20	40 Aug 29 15:13 1996 am1/data/event.dat
-rw-rw-r-- 424/20	6824 Oct 3 13:43 1996 am1/data/event2.dat
-rwxrwx--- 752/20	394 May 7 10:08 1996 am1/data/orbitEventB.dat
-rw-rw-r-- 424/20	6687 Oct 3 13:43 1996 am1/data/event2.dat%
-rwxr-x--- 424/20	291 May 31 11:16 1996 am1/data/sc.dat
-rwxrwx--- 752/20	732 Nov 12 06:49 1996 am1/data/fose5oe.fos-services
-rwxrwx--- 752/20	732 Nov 12 06:50 1996 am1/data/fose8oe.fos-services
-rwxrwx--- 752/20	732 Nov 12 06:50 1996 am1/data/fose9oe.fos-services
-rwxrwx--- 752/20	735 Nov 12 06:49 1996 am1/data/fose10oe.fos-services
-rwxrwx--- 752/20	732 Oct 25 11:01 1996 am1/data/foseoc6.fos-services
-rwxrwx--- 752/20	732 Oct 25 11:01 1996 am1/data/foseoc7.fos-services
-rwxrwx--- 752/20	732 Nov 12 06:51 1996 am1/data/msseoc2.fos-services
-rwxrwx--- 752/20	732 Nov 12 06:51 1996 am1/data/msse4of.fos-services

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-rw-rw-r-- 424/20      1241 Oct 10 12:56 1996 am1/data/evtfilter.fdl
-r--r--r-- 424/20      1439 Oct 16 13:13 1996 am1/data/forward.html
-r--r--r-- 424/20      1473 Oct 16 13:13 1996 am1/data/opscene.html
-rw-rw-r-- 424/20      642935 Oct  3 18:27 1996 am1/data/snapshot.rs
-rwxr-x--- 424/20        72 Nov  1 11:04 1996 am1/data/subsys.dat
-r--r--r-- 424/20      1435 Oct 16 13:13 1996 am1/data/back.html
drwxrwxr-x 752/20        0 Nov  8 15:34 1996 am1/datasets/
drwxrwxr-x 752/20        0 Nov 21 16:00 1996 am1/db/
drwxrwxr-x 752/20        0 Nov  8 15:34 1996 am1/db/tools/
-rwxr-x--- 424/20      5791 Aug  1 16:38 1996 am1/db/bcp_cmd_pdb.script
-rwxr-x--- 424/20       731 Oct 11 11:47 1996 am1/db/bcp_events_in.script
-rwxr-x--- 424/20       686 Oct 11 11:47 1996 am1/db/bcp_events_out.script
-rwxr-x--- 424/20       871 Oct 11 11:46 1996 am1/db/bcp_pids_in.script
-rwxrwxrwx 424/20       816 Oct 11 11:47 1996 am1/db/bcp_pids_out.script
-rwxr-x--- 424/20      8000 Jul 25 10:53 1996 am1/db/bcp_tlm_pdb.script
-rwxr-x--- 424/20      5163 Jul 25 10:53 1996 am1/db/cmd_desc_ins.trig
-rwxr-x--- 424/20       943 Jul 25 10:53 1996 am1/db/cmd_desc_pdb.sql
-rwxr-x--- 424/20      1915 Jul 25 10:53 1996 am1/db/cmd_errmsg.sql
-rwxr-x--- 424/20      6285 Jul 23 11:08 1996 am1/db/cmd_fixdata_ins.trig
-rwxr-x--- 424/20      1006 Jul 25 10:53 1996 am1/db/cmd_fixdata_pdb.sql
-rwxr-x--- 424/20      6595 Jul 25 10:54 1996 am1/db/cmd flddef_ins.trig
-rwxr-x--- 424/20      1154 Jul 25 10:54 1996 am1/db/cmd flddef_pdb.sql
-rwxr-x--- 424/20       898 Jul 25 10:54 1996 am1/db/cmd_mmask_pdb.sql
-rwxr-x--- 424/20      8378 Jul 25 10:54 1996 am1/db/cmd_parm_ins.trig
-rwxr-x--- 424/20      1038 Jul 25 10:54 1996 am1/db/cmd_parm_pdb.sql
-rwxr-x--- 424/20      6263 Jul 25 10:54 1996 am1/db/cmd_pstate_ins.trig
-rwxr-x--- 424/20      1057 Jul 25 10:54 1996 am1/db/cmd_pstate_pdb.sql
-rwxr-x--- 424/20      4412 Jul 25 10:54 1996 am1/db/cmd_tbldef_ins.trig
-rwxr-x--- 424/20       998 Jul 23 14:32 1996 am1/db/cmd_tbldef_pdb.sql
-rwxr-x--- 424/20       698 Jul 25 10:54 1996 am1/db/cmd_type_cfx.sql
-rwxr-x--- 424/20      1386 Jul 25 10:54 1996 am1/db/cmd_type_data.sql
-rwxr-x--- 424/20       713 Jul 25 10:54 1996 am1/db/cmd_user_auth.sql
-rwxr-x--- 424/20       838 Jul 25 10:54 1996 am1/db/cmd_user_auth_data.sql
-rwxr-x--- 424/20       731 Jul 25 10:54 1996 am1/db/cmd_ustat_auth.sql
-rwxr-x--- 424/20       960 Jul 25 10:54 1996 am1/db/cmd_ustat_auth_data.sql
-rwxr-x--- 424/20       808 Jul 25 10:54 1996 am1/db/cmd_val_log.sql
-rwxr-x--- 424/20      6668 Jul 25 10:55 1996 am1/db/cmd_vardata_ins.trig
-rwxr-x--- 424/20      1785 Jul 25 10:55 1996 am1/db/cmd_vardata_pdb.sql
-rwxr-x--- 424/20      6480 Jul 25 10:55 1996 am1/db/cmd_verify_ins.trig
-rwxr-x--- 424/20      1100 Jul 25 10:55 1996 am1/db/cmd_verify_pdb.sql
-rwxr-x--- 424/20      1665 Jul 25 10:55 1996 am1/db/const_type_data.sql
-rwxr-x--- 424/20       656 Jul 25 10:55 1996 am1/db/const_type_tfx.sql
-rwxr-x--- 424/20      1358 Jul 25 10:55 1996 am1/db/conv_type_data.sql
-rwxr-x--- 424/20       681 Jul 25 10:55 1996 am1/db/conv_type_tfx.sql
-rwxr-x--- 424/20       692 Jul 25 10:55 1996 am1/db/cre_cmd_cfx.script
-rwxr-x--- 424/20       796 Jul 25 10:55 1996 am1/db/cre_cmd_cfx.sql
-rwxr-x--- 424/20       719 Jul 25 10:55 1996 am1/db/cre_cmd_procs.script
-rwxr-x--- 424/20      887 Jul 30 16:55 1996 am1/db/cre_cmd_procs.sql
-rwxr-x--- 424/20      688 Jul 25 10:55 1996 am1/db/cre_cmd_trigs.script
-rwxr-x--- 424/20      810 Jul 25 10:55 1996 am1/db/cre_cmd_trigs.sql
-rwxr-x--- 424/20      711 Jul 25 10:55 1996 am1/db/cre_tlm_procs.script
-rwxr-x--- 424/20     1023 Jul 30 16:56 1996 am1/db/cre_tlm_procs.sql

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-rwxr-x--- 424/20      695 Jul 25 10:55 1996 am1/db/cre_tlm_tfx.script
-rwxr-x--- 424/20      810 Jul 25 10:55 1996 am1/db/cre_tlm_tfx.sql
-rwxr-x--- 424/20      693 Jul 25 10:56 1996 am1/db/cre_tlm_trigs.script
-rwxr-x--- 424/20     1043 Jul 30 16:56 1996 am1/db/cre_tlm_trigs.sql
-rwxr-x--- 424/20     1960 Jul 25 10:56 1996 am1/db/create_am1_dbs.script
-rwxr-x--- 424/20     1051 Jul 25 12:51 1996 am1/db/create_am1_dspace.sql
-rwxr-x--- 424/20      843 Jul 23 14:33 1996 am1/db/create_am1_errmsgs.script
-rwxr-x--- 424/20      900 Jul 25 10:56 1996 am1/db/create_am1_fos_ops.sql
-rwxr-x--- 424/20      980 Jul 25 10:56 1996 am1/db/create_am1_fos_unv.sql
-rwxr-x--- 424/20      885 Jul 25 10:56 1996 am1/db/create_am1_fos_val.sql
-rwxr-x--- 424/20      769 Jul 25 10:56 1996 am1/db/create_am1_procs.script
-rwxr-x--- 424/20      699 Jul 25 10:56 1996 am1/db/create_fos_dba.sql
-rwxr-x--- 424/20      846 Jul 23 14:33 1996 am1/db/create_lcthres_proc.sql
-rwxr-x--- 424/20      914 Jul 25 10:56 1996 am1/db/create_ops_cmd.sql
-rwxr-x--- 424/20     2255 Aug 24 13:23 1996 am1/db/create_ops_tbls.sql
-rwxr-x--- 424/20     1016 Jul 25 10:56 1996 am1/db/create_ops_tlm.sql
-rwxr-x--- 424/20      967 Jul 25 10:56 1996 am1/db/create_unv_cmd.sql
-rwxr-x--- 424/20      657 Jul 23 14:33 1996 am1/db/create_unv_tbls.sql
-rwxr-x--- 424/20     1067 Jul 25 10:56 1996 am1/db/create_unv_tlm.sql
-rwxr-x--- 424/20      925 Jul 25 10:56 1996 am1/db/create_val_cmd.sql
-rwxr-x--- 424/20     1430 Jul 29 13:19 1996 am1/db/create_val_tbls.sql
-rwxr-x--- 424/20     1040 Jul 25 10:56 1996 am1/db/create_val_tlm.sql
-rwxr-x--- 424/20     1251 Jul 25 10:56 1996 am1/db/data_rep_data.sql
-rwxr-x--- 424/20      651 Jul 25 10:56 1996 am1/db/data_rep_tfx.sql
-rwxr-x--- 424/20     1993 Jul 25 10:56 1996 am1/db/derived_oper_data.sql
-rwxr-x--- 424/20      662 Jul 25 10:57 1996 am1/db/derived_oper_tfx.sql
-rwxr-x--- 424/20      764 Jul 25 10:57 1996 am1/db/event_severity_data.sql
-rwxr-x--- 424/20      820 Jul 25 10:57 1996 am1/db/event_severity_fix.sql
-rwxr-x--- 424/20      784 Jul 25 10:57 1996 am1/db/file_loc_data.sql
-rwxr-x--- 424/20      797 Jul 25 10:57 1996 am1/db/file_loc_fix.sql
-rwxr-x--- 424/20      886 Oct 11 11:38 1996 am1/db/file_meta.sql
-rwxr-x--- 424/20     2472 Oct 16 13:23 1996 am1/db/file_types_data.sql
-rwxr-x--- 424/20      876 Jul 31 15:17 1996 am1/db/file_types_fix.sql
-rwxr-x--- 424/20      529 Jul 31 17:01 1996 am1/db/fos_dba_env.script
-rwxr-x--- 424/20      529 Oct 28 11:42 1996 am1/db/fos_dba_env.script%
-rwxr-x--- 424/20     1059 Jul 31 15:17 1996 am1/db/fos_event_archive.sql
-rw-r--r-- 424/20    37292 Nov 15 16:56 1996 am1/db/fos_events.bcp
-rwxr-x--- 424/20     1063 Jul 25 10:57 1996 am1/db/fos_events.sql
-rwxr-x--- 424/20     2848 Jul 25 10:57 1996 am1/db/fos_events_ins.trig
-rwxr-x--- 424/20     1988 Jul 23 14:34 1996 am1/db/fos_load_cat.sql
-rwxr-x--- 424/20     1608 Jul 23 14:34 1996 am1/db/fos_pids.sql
-rwxr-x--- 424/20     1506 Oct 11 11:46 1996 am1/db/fos_pids_ins.trig
-rw-rw-r-- 424/20   148698 Nov 15 16:49 1996 am1/db/fos_pids_ops.bcp
-rwxr-x--- 424/20   148698 Oct 11 11:46 1996 am1/db/fos_pids_ops.bcpP6E1Delivered
-r-xr-xr-x 424/20     2006 Nov 14 16:24 1996 am1/db/fos_pids_ops.sql
-rwxr-xr-x 424/20      1995 Aug 15 10:44 1996 am1/db/fos_pids_ops.sqlP3Delivered
-rwxr-x--- 424/20     1851 Oct 11 11:39 1996 am1/db/fos_pids_ops.sqlP6E1Delivered
-rw-rw-r-- 424/20   130825 Nov 15 16:49 1996 am1/db/fos_pids_val.bcp
-rwxr-x--- 424/20   130825 Oct 11 11:46 1996 am1/db/fos_pids_val.bcpP6E1Delivered
-rwxr-x--- 424/20      620 Jul 23 14:34 1996 am1/db/gen_ops_cmd.sql
-rwxr-x--- 424/20      986 Jul 23 14:34 1996 am1/db/fos_request_queue.sql
-rwxr-x--- 424/20      968 Jul 25 10:57 1996 am1/db/fos_rms_role.sql

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-rwxr-x--- 424/20      965 Jul 25 10:57 1996 am1/db/fos_rms_role_data.sql
-rwxr-x--- 424/20     1212 Jul 25 10:57 1996 am1/db/fos_subsys_data.sql
-rwxr-x--- 424/20     1097 Jul 25 10:57 1996 am1/db/fos_subsys_fix.sql
-rwxr-x--- 424/20     1691 Aug  7 07:57 1996 am1/db/fos_sysparms_data.sql
-rwxr-x--- 424/20     1281 Jul 23 14:34 1996 am1/db/fos_sysparms_ins.trig
-rwxr-x--- 424/20     1216 Jul 25 10:57 1996 am1/db/fos_system_parms.sql
-rwxr-x--- 424/20      997 Jul 25 10:57 1996 am1/db/fos_uplinkinfo_cat.sql
-rwxr-x--- 424/20    3027 Jul 30 15:25 1996 am1/db/gen_ops_cmd.proc
-rw-rw-r-- 424/20      785 Nov 15 18:54 1996 am1/db/gen_ops_db.lis
-rwxr-x--- 424/20    1726 Jul 23 14:34 1996 am1/db/gen_ops_db.script
-rwxr-x--- 424/20      673 Jul 23 14:34 1996 am1/db/gen_ops_pdefs.sql
-rw-rw-r-- 424/20   14422 Oct 22 14:31 1996 am1/db/int.out
-rwxr-x--- 424/20    4241 Jul 23 14:34 1996 am1/db/gen_ops_pids.proc
-rwxr-x--- 424/20      615 Jul 23 14:34 1996 am1/db/gen_ops_pids.sql
-rwxr-x--- 424/20      680 Jul 23 14:34 1996 am1/db/gen_ops_sys.sql
-rwxr-x--- 424/20   4064 Jul 23 14:35 1996 am1/db/gen_ops_tlm.proc
-rwxr-x--- 424/20      622 Jul 23 14:35 1996 am1/db/gen_ops_tlm.sql
-rwxr-x--- 424/20     667 Oct 11 11:47 1996 am1/db/grd_sys_upd.script
-rwxr-x--- 424/20    1219 Oct 11 11:47 1996 am1/db/grd_sys_upd.sql
-rwxr-x--- 424/20      754 Jul 25 10:58 1996 am1/db/interface_data.sql
-rwxr-x--- 424/20      681 Jul 25 10:58 1996 am1/db/interface_fix.sql
-rwxr-x--- 424/20   1454 Aug 24 13:23 1996 am1/db/name_srvr_met.sql
-rwxr-x--- 424/20      762 Aug  5 12:35 1996 am1/db/odf_table.sql
-rwxr-x--- 424/20      768 Aug 24 13:23 1996 am1/db/odf_table_data.sql
-rwxr-x--- 424/20      759 Jul 23 14:35 1996 am1/db/orbit_event_fdf.sql
-rwxr-x--- 424/20      881 Jul 25 10:58 1996 am1/db/packet_defs.sql
-r--r--r-- 424/20   25805 Nov 14 17:18 1996 am1/db/packet_defs_data.sql
-rwxr-x--- 424/20   25633 Oct 22 15:00 1996 am1/db/packet_defs_data.sqlP5Delivered
-r--r--r-- 424/20   25805 Oct 11 11:39 1996 am1/db/packet_defs_data.sqlP6E1Delivered
-rwxr-x--- 424/20    2601 Oct 18 12:11 1996 am1/db/packet_defs_ins.trig
-rwxr-x--- 424/20      813 Jul 25 10:58 1996 am1/db/packet_types.sql
-rwxr-x--- 424/20   1618 Jul 25 10:58 1996 am1/db/packet_types_data.sql
-rwxr-x--- 424/20      806 Aug 24 13:23 1996 am1/db/parm_type_data.sql
-rwxr-x--- 424/20      757 Jul 25 10:58 1996 am1/db/parm_type_fix.sql
-rwxr-x--- 424/20      552 Jul 23 14:35 1996 am1/db/pdb_env.script
-rw-rw-r-- 424/20   5812 Nov 15 17:37 1996 am1/db/pdb_load.lis
-rwxr-x--- 424/20    1092 Jul 25 10:58 1996 am1/db/pdb_load.script
-rwxr-x--- 424/20   2995 Jul 25 10:59 1996 am1/db/pdb_setup.script
-rwxr-x--- 424/20      673 Jul 25 10:59 1996 am1/db/rt_name_cfx.sql
-rwxr-x--- 424/20   1715 Jul 25 10:59 1996 am1/db/rt_name_data.sql
-rwxr-x--- 424/20   1223 Jul 23 14:35 1996 am1/db/sns_register_pst.sql
-rwxr-x--- 424/20      686 Jul 25 10:59 1996 am1/db/tbl_type_cfx.sql
-rwxr-x--- 424/20      701 Jul 25 10:59 1996 am1/db/tbl_type_data.sql
-rwxr-x--- 424/20   8641 Jul 25 10:59 1996 am1/db/tlm_calcurve_ins.trig
-rwxr-x--- 424/20   1344 Jul 25 10:59 1996 am1/db/tlm_calcurve_pdb.sql
-rwxr-x--- 424/20      637 Aug 24 13:23 1996 am1/db/tlm_cata.sql
-rwxr-xr-x 424/20      659 Aug 16 11:30 1996 am1/db/tlm_cata.sql81696
-rwxr-x--- 424/20   4150 Jul 25 10:59 1996 am1/db/tlm_constant_ins.trig
-rwxr-x--- 424/20      919 Jul 25 10:59 1996 am1/db/tlm_constant_pdb.sql
-rwxr-x--- 424/20   4050 Jul 25 10:59 1996 am1/db/tlm_context_del.trig
-rwxr-x--- 424/20   4208 Jul 25 10:59 1996 am1/db/tlm_context_ins.trig
-rwxr-x--- 424/20   1159 Jul 25 10:59 1996 am1/db/tlm_context_pdb.sql

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-rwxr-x--- 424/20      4956 Jul 25 10:59 1996 am1/db/tlm_delta_ins.trig
-rwxr-x--- 424/20      868 Jul 25 10:59 1996 am1/db/tlm_delta_pdb.sql
-rwxr-x--- 424/20     8138 Jul 25 10:59 1996 am1/db/tlm_derived_ins.trig
-rwxr-x--- 424/20     1435 Jul 25 11:00 1996 am1/db/tlm_derived_pdb.sql
-rwxr-x--- 424/20     6387 Oct 22 14:57 1996 am1/db/tlm_desc_ins.trig
-rwxr-x--- 424/20     1004 Jul 25 11:00 1996 am1/db/tlm_desc_pdb.sql
-rwxr-x--- 424/20     5521 Jul 25 11:00 1996 am1/db/tlm_dstate_ins.trig
-rwxr-x--- 424/20      933 Jul 25 11:00 1996 am1/db/tlm_dstate_pdb.sql
-rwxr-x--- 424/20     3670 Oct 18 12:13 1996 am1/db/tlm_errmsg.sql
-rwxr-x--- 424/20     4018 Jul 25 11:00 1996 am1/db/tlm_limsel_del.trig
-rwxr-x--- 424/20     4592 Jul 25 12:34 1996 am1/db/tlm_limsel_ins.trig
-rwxr-x--- 424/20     1063 Jul 25 12:34 1996 am1/db/tlm_limsel_pdb.sql
-rwxr-x--- 424/20     3866 Jul 25 12:34 1996 am1/db/tlm_lineconv_ins.trig
-rwxr-x--- 424/20     2397 Jul 25 12:34 1996 am1/db/tlm_lineconv_pdb.sql
-rwxr-x--- 424/20     4565 Jul 25 12:34 1996 am1/db/tlm_packet_ins.trig
-rwxr-x--- 424/20     1073 Jul 25 12:34 1996 am1/db/tlm_packet_pdb.sql
-rwxr-x--- 424/20     8448 Oct 18 12:13 1996 am1/db/tlm_parm_ins.trig
-rwxr-x--- 424/20     1798 Oct 18 12:13 1996 am1/db/tlm_parm_pdb.sql
-rwxr-x--- 424/20     2152 Aug 13 16:50 1996 am1/db/tlm_pids_upd.trig
-rwxr-x--- 424/20     4590 Jul 25 12:35 1996 am1/db/tlm_polyconv_ins.trig
-rwxr-x--- 424/20     1342 Jul 25 12:35 1996 am1/db/tlm_polyconv_pdb.sql
-rwxr-x--- 424/20     6652 Aug  6 12:17 1996 am1/db/tlm_rylim_ins.trig
-rwxr-x--- 424/20     1070 Jul 25 12:35 1996 am1/db/tlm_rylim_pdb.sql
-rwxr-x--- 424/20      812 Jul 25 12:35 1996 am1/db/tlm_val_log.sql
-rwxr-x--- 424/20      655 Jul 25 12:35 1996 am1/db/trunc_cmd_desc.sql
-rwxr-x--- 424/20      658 Jul 25 12:35 1996 am1/db/trunc_cmd_fixdata.sql
-rwxr-x--- 424/20      662 Jul 25 12:35 1996 am1/db/trunc_cmd_fldef.sql
-rw-rw-r-- 424/20      111 Nov 15 18:48 1996 am1/db/val_cmdpdb.lis
-rwxr-x--- 424/20      652 Jul 25 12:35 1996 am1/db/trunc_cmd_mmask.sql
-rwxr-x--- 424/20      653 Jul 25 12:35 1996 am1/db/trunc_cmd_parm.sql
-rwxr-x--- 424/20      667 Jul 25 12:35 1996 am1/db/trunc_cmd_pstate.sql
-rwxr-x--- 424/20      656 Jul 25 12:35 1996 am1/db/trunc_cmd_tbldef.sql
-rwxr-x--- 424/20      663 Jul 25 12:35 1996 am1/db/trunc_cmd_vardata.sql
-rwxr-x--- 424/20      670 Jul 25 12:35 1996 am1/db/trunc_cmd_verify.sql
-rwxr-x--- 424/20      822 Jul 23 14:36 1996 am1/db/trunc_cmdpdb.sql
-rwxr-x--- 424/20      613 Oct 11 11:47 1996 am1/db/trunc_events.sql
-rwxr-x--- 424/20      676 Jul 23 14:36 1996 am1/db/trunc_ops_pdb.sql
-rwxr-x--- 424/20      641 Jul 23 14:36 1996 am1/db/trunc_ops_pdefs.sql
-rwxr-x--- 424/20      643 Jul 23 14:36 1996 am1/db/trunc_ops_sys.sql
-rwxr-x--- 424/20      610 Oct 11 11:46 1996 am1/db/trunc_pids_ops.sql
-rwxr-x--- 424/20      610 Oct 11 11:46 1996 am1/db/trunc_pids_val.sql
-rwxr-x--- 424/20      648 Jul 25 12:35 1996 am1/db/trunc_tlm_calcurve.sql
-rwxr-x--- 424/20      648 Jul 25 12:35 1996 am1/db/trunc_tlm_constant.sql
-rwxr-x--- 424/20      645 Jul 25 12:35 1996 am1/db/trunc_tlm_context.sql
-rwxr-x--- 424/20      639 Jul 25 12:35 1996 am1/db/trunc_tlm_delta.sql
-rwxr-x--- 424/20      645 Jul 25 12:35 1996 am1/db/trunc_tlm_derived.sql
-rwxr-x--- 424/20      657 Jul 25 12:35 1996 am1/db/trunc_tlm_desc.sql
-rwxr-x--- 424/20      665 Jul 25 12:35 1996 am1/db/trunc_tlm_dstate.sql
-rwxr-x--- 424/20      665 Jul 25 12:35 1996 am1/db/trunc_tlm_limsel.sql
-rwxr-x--- 424/20      671 Jul 25 12:35 1996 am1/db/trunc_tlm_lineconv.sql
-rwxr-x--- 424/20      642 Jul 25 12:36 1996 am1/db/trunc_tlm_packet.sql
-rwxr-x--- 424/20      640 Jul 25 12:36 1996 am1/db/trunc_tlm_parm.sql

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-rwxr-x--- 424/20      675 Jul 25 12:36 1996 am1/db/trunc_tlm_polyconv.sql
-rwxr-x--- 424/20      665 Jul 25 12:36 1996 am1/db/trunc_tlm_rylim.sql
-rwxr-x--- 424/20      947 Jul 23 14:36 1996 am1/db/trunc_tlmpdb.sql
-rwxr-x--- 424/20     9537 Jul 25 12:36 1996 am1/db/unit_format_data.sql
-rwxr-x--- 424/20      783 Jul 25 12:36 1996 am1/db/unit_format_fix.sql
-rwxr-x--- 424/20     2183 Jul 25 12:36 1996 am1/db/unit_type_data.sql
-rwxr-x--- 424/20      879 Jul 25 12:36 1996 am1/db/unit_type_fix.sql
-rwxr-x--- 424/20     1425 Jul 23 14:36 1996 am1/db/upd_fos_pids.sql
-rwxr-x--- 424/20     2656 Jul 23 14:36 1996 am1/db/val_cmd_desc.proc
-rwxr-x--- 424/20     2743 Jul 23 14:36 1996 am1/db/val_cmd_fixdata.proc
-rwxr-x--- 424/20     3357 Jul 25 12:36 1996 am1/db/val_cmd_flgdef.proc
-rwxr-x--- 424/20     2204 Jul 25 12:36 1996 am1/db/val_cmd_mmask.proc
-rwxr-x--- 424/20     2818 Jul 25 12:36 1996 am1/db/val_cmd_parm.proc
-rwxr-x--- 424/20     5171 Jul 25 12:36 1996 am1/db/val_cmd_pstate.proc
-rwxr-x--- 424/20     2394 Jul 25 12:36 1996 am1/db/val_cmd_tbldef.proc
-rwxr-x--- 424/20     5712 Jul 25 12:36 1996 am1/db/val_cmd_vardata.proc
-rwxr-x--- 424/20     2934 Jul 25 12:36 1996 am1/db/val_cmd_verify.proc
-rwxr-x--- 424/20     3119 Jul 25 12:36 1996 am1/db/val_cmdpdb.proc
-rwxr-x--- 424/20      690 Jul 25 12:36 1996 am1/db/val_cmdpdb.script
-rwxr-x--- 424/20      622 Jul 25 12:36 1996 am1/db/val_cmdpdb.sql
-rwxr-x--- 424/20     6982 Jul 25 12:36 1996 am1/db/val_tlm_calcurve.proc
-rwxr-x--- 424/20     2611 Jul 25 12:36 1996 am1/db/val_tlm_constant.proc
-rwxr-x--- 424/20     6787 Jul 25 12:36 1996 am1/db/val_tlm_context.proc
-rwxr-x--- 424/20     2516 Jul 25 12:37 1996 am1/db/val_tlm_delta.proc
-rwxr-x--- 424/20     4068 Jul 25 12:37 1996 am1/db/val_tlm_derived.proc
-rwxr-x--- 424/20     3307 Oct 22 14:57 1996 am1/db/val_tlm_desc.proc
-rwxr-x--- 424/20     5879 Jul 25 12:37 1996 am1/db/val_tlm_dstate.proc
-rwxr-x--- 424/20     6967 Jul 25 12:37 1996 am1/db/val_tlm_limsel.proc
-rw-rw-r-- 424/20       48 Nov 15 18:42 1996 am1/db/val_tlmpdb.lis
-rwxr-x--- 424/20     5404 Jul 25 12:37 1996 am1/db/val_tlm_lineconv.proc
-rwxr-x--- 424/20     2455 Jul 25 12:37 1996 am1/db/val_tlm_packet.proc
-rwxr-x--- 424/20     8484 Oct 18 12:13 1996 am1/db/val_tlm_parm.proc
-rwxr-x--- 424/20     3013 Jul 25 12:37 1996 am1/db/val_tlm_polyconv.proc
-rwxr-x--- 424/20     2937 Jul 25 12:37 1996 am1/db/val_tlm_rylim.proc
-rwxr-x--- 424/20     5531 Oct 22 14:57 1996 am1/db/val_tlmpdb.proc
-rwxr-x--- 424/20      649 Jul 25 12:37 1996 am1/db/val_tlmpdb.script
-rwxr-x--- 424/20      624 Jul 25 12:37 1996 am1/db/val_tlmpdb.sql
-rwxr-x--- 424/20      694 Jul 25 12:37 1996 am1/db/value_type_cfx.sql
-rwxr-x--- 424/20      667 Jul 25 12:37 1996 am1/db/value_type_data.sql
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/dbinit/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/displaydefs/
drwxrwxr-x 752/20          0 Nov 21 11:31 1996 am1/displaydefs/activepages/
-rw-rw-r-- 424/20     20171 Oct 29 08:49 1996 am1/displaydefs/activepages/Aster
-rwxr-x--- 424/20     1296 Oct 23 11:27 1996 am1/displaydefs/activepages/pageSystem.dat
drwxrwxr-x 752/20          0 Nov 21 13:37 1996 am1/displaydefs/newpages/
-rw-rw-r-- 424/20     20171 Oct 24 16:27 1996 am1/displaydefs/newpages/Aster
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/dumps/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/edos/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/events/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/fdf/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/groundsched/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/groundsched/archive/

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drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/groundsched/report/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/groundsched/script/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/groundsched/working/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/helpdocs/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loadcatalog/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loadcatalog/working/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loadcontents/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loads/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loads/atc/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loads/fsw/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loads/mp/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loads/rts/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/loads/table/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/ltip/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/ltsip/  
drwxrwxr-x 752/20 0 Nov 21 15:42 1996 am1/odf/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/odf/ops/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/odf/test/  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/odf/training/  
drwxrwxr-x 752/20 0 Nov 8 15:54 1996 am1/pdb/  
drwxrwxr-x 752/20 0 Nov 21 12:01 1996 am1/pdb/data/  
-rwxr-x--- 424/20 189 Feb 8 12:33 1996 am1/pdb/data/cmd\_desc.fmt  
-rwxr-x--- 424/20 125 Feb 8 12:33 1996 am1/pdb/data/cmd\_fixdata.fmt  
-rwxr-x--- 424/20 246 Feb 8 12:33 1996 am1/pdb/data/cmd\_parm.fmt  
-rwxr-x--- 424/20 188 Feb 8 12:33 1996 am1/pdb/data/cmd\_pstate.fmt  
-rwxr-x--- 424/20 1084 Feb 8 12:33 1996 am1/pdb/data/cmd\_vardata.fmt  
-rwxr-x--- 424/20 280 Feb 8 12:33 1996 am1/pdb/data/cmd\_verify.fmt  
-rwxr-x--- 424/20 384 Feb 8 12:33 1996 am1/pdb/data/tlm\_calcurve.fmt  
-rwxr-x--- 424/20 128 Feb 8 12:33 1996 am1/pdb/data/tlm\_delta.fmt  
-rwxr-x--- 424/20 307 Feb 8 12:33 1996 am1/pdb/data/tlm\_desc.fmt  
-rwxr-x--- 424/20 160 Feb 8 12:33 1996 am1/pdb/data/tlm\_dstate.fmt  
-rwxr-x--- 424/20 189 Feb 8 12:33 1996 am1/pdb/data/tlm\_limsel.fmt  
-rwxr-xr-x 424/20 235 Jul 3 15:34 1996 am1/pdb/data/tlm\_lineconv.fmt  
-rwxr-x--- 424/20 95 Feb 8 12:33 1996 am1/pdb/data/tlm\_packet.fmt  
-rwxr-x--- 424/20 276 Oct 24 14:06 1996 am1/pdb/data/tlm\_parm.fmt  
-rwxr-x--- 424/20 235 Feb 8 12:33 1996 am1/pdb/data/tlm\_polyconv.fmt  
-rwxr-x--- 424/20 249 Feb 8 12:33 1996 am1/pdb/data/tlm\_rylim.fmt  
drwxrwxr-x 752/20 0 Nov 8 15:34 1996 am1/pdb/input/  
drwxrwxr-x 752/20 0 Nov 21 12:04 1996 am1/pdb/input/003/  
-rwxrwxr-x 424/20 437219 Oct 8 13:29 1996 am1/pdb/input/003/cmd\_desc\_003.pdb  
-rwxrwxr-x 424/20 200900 Oct 8 13:29 1996 am1/pdb/input/003/cmd\_fixdata\_003.pdb  
-rwxrwxr-x 424/20 203299 Oct 8 13:29 1996 am1/pdb/input/003/cmd\_parm\_003.pdb  
-rwxrwxr-x 424/20 2075 Oct 8 13:29 1996 am1/pdb/input/003/cmd\_pstate\_003.pdb  
-rwxrwxr-x 424/20 249065 Oct 8 13:29 1996 am1/pdb/input/003/cmd\_vardata\_003.pdb  
-rwxrwxr-x 424/20 97890 Oct 8 13:29 1996 am1/pdb/input/003/cmd\_verify\_003.pdb  
-rwxrwxr-x 424/20 238788 Oct 8 13:29 1996 am1/pdb/input/003/tlm\_calcurve\_003.pdb  
-rwxrwxr-x 424/20 3772 Oct 8 13:29 1996 am1/pdb/input/003/tlm\_delta\_003.pdb  
-rwxrwxr-x 424/20 1237745 Oct 8 13:29 1996 am1/pdb/input/003/tlm\_desc\_003.pdb  
-rwxrwxr-x 424/20 164604 Oct 8 13:29 1996 am1/pdb/input/003/tlm\_dstate\_003.pdb  
-rwxrwxr-x 424/20 2964 Oct 8 13:29 1996 am1/pdb/input/003/tlm\_limsel\_003.pdb  
-rwxrwxr-x 424/20 545 Nov 15 15:45 1996 am1/pdb/input/003/tlm\_packet\_003.pdb  
-rwxrwxr-x 424/20 2075066 Oct 8 13:29 1996 am1/pdb/input/003/tlm\_parm\_003.pdb

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-rwxrwxr-x 424/20      54229 Oct  8 13:29 1996 am1/pdb/input/003/tlm_polyconv_003.pdb
-rwxrwxr-x 424/20      66720 Oct  8 13:29 1996 am1/pdb/input/003/tlm_rylim_003.pdb
drwxrwxr-x 752/20          0 Nov 21 12:05 1996 am1/pdb/input/999/
-rw-rw-rw- 424/20      411156 Oct  7 14:39 1996 am1/pdb/input/999/cmd_desc_999.pdb
-rw-rw-rw- 424/20      157710 Oct  7 14:39 1996 am1/pdb/input/999/cmd_fixdata_999.pdb
-rw-rw-rw- 424/20      164424 Oct  7 14:39 1996 am1/pdb/input/999/cmd_parm_999.pdb
-rw-rw-rw- 424/20      164943 Oct  7 14:39 1996 am1/pdb/input/999/cmd_vardata_999.pdb
-rw-rw-rw- 424/20      38220 Oct  7 14:39 1996 am1/pdb/input/999/cmd_verify_999.pdb
-rw-rw-rw- 424/20      174537 Oct  7 14:39 1996 am1/pdb/input/999/tlm_analog_999.pdb
-rw-rw-rw- 424/20      239085 Oct  7 14:41 1996 am1/pdb/input/999/tlm_calcurve_999.pdb
-rw-rw-rw- 424/20        3312 Oct  7 14:39 1996 am1/pdb/input/999/tlm_delta_999.pdb
-rw-rw-rw- 424/20     1240095 Oct  7 14:41 1996 am1/pdb/input/999/tlm_desc_999.pdb
-rw-rw-rw- 424/20     110960 Oct  7 14:39 1996 am1/pdb/input/999/tlm_dstate_999.pdb
-rw-rw-rw- 424/20        2965 Oct  7 14:39 1996 am1/pdb/input/999/tlm_limsel_999.pdb
-rw-r--r-- 424/20        545 Oct  7 14:39 1996 am1/pdb/input/999/tlm_packet_999.pdb
-rw-rw-rw- 424/20     2077386 Oct  7 14:41 1996 am1/pdb/input/999/tlm_parm_999.pdb
-rw-rw-r-- 424/20     54651 Oct  7 14:41 1996 am1/pdb/input/999/tlm_polyconv_999.pdb
-rw-rw-rw- 424/20     66431 Oct  7 14:39 1996 am1/pdb/input/999/tlm_rylim_999.pdb
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/pdb/load/
drwxrwxr-x 752/20          0 Nov 21 12:07 1996 am1/pdb/log/
-rw-rw-r-- 424/20        372 Oct  8 10:30 1996 am1/pdb/log/bcp_tlm_rylim.log
-rwxrwx--- 752/20        552 Aug 15 10:44 1996 am1/pdb/pdb_env.script
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/procs/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/reports/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/reports/loads/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/requestfiles/
drwxrwxr-x 752/20          0 Nov 21 12:08 1996 am1/res/
-rwxr-xr-x 424/20        87 Jul 11 17:14 1996 am1/res/ATCLOADGEN
-rwxr-xr-x 424/20       117 Jul 11 17:14 1996 am1/res/ActDef
-rwxr-xr-x 424/20       112 Jul 11 17:14 1996 am1/res/BAP
-rwxr-xr-x 424/20       111 Jul 11 17:14 1996 am1/res/CMS
-rwxr-xr-x 424/20       113 Jul 11 17:14 1996 am1/res/FpTlXtl
-rwxr-xr-x 424/20       127 Jul 11 17:14 1996 am1/res/GenSched
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/results/
drwxrwxr-x 752/20          0 Nov 11 14:55 1996 am1/roomdefs/
-rw-rw-r-- 752/20       499 Oct 28 14:14 1996 am1/roomdefs/roomSystem.dat
-rw-rw-r-- 752/20     1367 Nov  4 14:56 1996 am1/roomdefs/roomUser.dat
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/schedcontr/
drwxrwxr-x 752/20          0 Nov  8 15:34 1996 am1/schedcontr/working/
drwxrwxr-x 752/20          0 Nov 21 12:09 1996 am1/scripts/
drwxrwxr-x 752/20          0 Nov 22 12:19 1996 am1/scripts/setup/
-rwxrwxrwx 424/20     2272 Nov 12 11:04 1996 am1/scripts/setup/A2StandbyValues
-rwxrwxrwx 424/20     2134 Oct 25 09:22 1996 am1/scripts/setup/A2_DataServerStartup
-rwxrwxrwx 424/20     1040 Oct 25 09:40 1996 am1/scripts/setup/A2_RealTimeServerStartup
-rwxrwxrwx 424/20     2099 Nov 15 16:58 1996 am1/scripts/setup/A2_UserStationStartup
-rwxrwxrwx 424/20     1436 Nov 12 11:04 1996 am1/scripts/setup/A2_UserStationStartup_NONPAS
-rwxrwxrwx 424/20     1391 Nov 12 11:05 1996 am1/scripts/setup/A2_UserStationStartup_PAS
-rwxrwxrwx 424/20     1046 Nov 12 11:14 1996 am1/scripts/setup/A2tlmEnvVars
-rwxrwxrwx 424/20     6715 Nov 15 21:36 1996 am1/scripts/setup/MyKill
-rwxrwxrwx 424/20     1336 Oct 25 09:41 1996 am1/scripts/setup/fos_sybsetup.script
-rwxrwxrwx 424/20         37 Oct 15 10:41 1996 am1/scripts/setup/rm_10.script
-rwxrwxrwx 424/20         50 Oct 15 10:45 1996 am1/scripts/setup/rm_all.sql

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-rwxrwxrwx 424/20      139 Oct 15 10:41 1996 am1/scripts/setup/rm_10.sql
-rwxrwxrwx 424/20      137 Oct 15 10:42 1996 am1/scripts/setup/rm_2.sql
-rwxrwxrwx 424/20      137 Oct 15 10:43 1996 am1/scripts/setup/rm_4.sql
-rwxrwxrwx 424/20      137 Oct 15 10:44 1996 am1/scripts/setup/rm_5.sql
-rwxrwxrwx 424/20      137 Oct 25 10:11 1996 am1/scripts/setup/rm_6.sql
-rwxrwxrwx 424/20      137 Oct 25 10:12 1996 am1/scripts/setup/rm_7.sql
-rwxrwxrwx 424/20      137 Oct 15 10:44 1996 am1/scripts/setup/rm_8.sql
-rwxrwxrwx 424/20      137 Oct 15 10:45 1996 am1/scripts/setup/rm_9.sql
-rwxrwxrwx 424/20      36 Oct 15 10:42 1996 am1/scripts/setup/rm_2.script
-rwxrwxrwx 424/20      36 Oct 15 10:43 1996 am1/scripts/setup/rm_4.script
-rwxrwxrwx 424/20      36 Oct 15 10:43 1996 am1/scripts/setup/rm_5.script
-rwxrwxrwx 424/20      36 Oct 25 10:11 1996 am1/scripts/setup/rm_6.script
-rwxrwxrwx 424/20      36 Oct 25 10:12 1996 am1/scripts/setup/rm_7.script
-rwxrwxrwx 424/20      36 Oct 15 10:44 1996 am1/scripts/setup/rm_8.script
-rwxrwxrwx 424/20      36 Oct 15 10:44 1996 am1/scripts/setup/rm_9.script
-rwxrwxrwx 424/20      38 Oct 15 10:45 1996 am1/scripts/setup/rm_all.script
-rwxrwxrwx 424/20      40 Oct 15 10:51 1996 am1/scripts/setup/show_all.script
-rwxrwxrwx 424/20      52 Oct 15 10:51 1996 am1/scripts/setup/show_all.sql
-rwxrwxrwx 424/20      141 Oct 15 10:47 1996 am1/scripts/setup/show_2.sql
-rwxr-xr-x 424/20      1194 Aug 5 16:37 1996 am1/scripts/setup/st_ad
-rwxrwxrwx 424/20      141 Oct 15 10:48 1996 am1/scripts/setup/show_4.sql
-rwxrwxrwx 424/20      141 Oct 15 10:49 1996 am1/scripts/setup/show_5.sql
-rwxrwxrwx 424/20      141 Oct 25 10:13 1996 am1/scripts/setup/show_6.sql
-rwxrwxrwx 424/20      141 Oct 25 10:13 1996 am1/scripts/setup/show_7.sql
-rwxrwxrwx 424/20      141 Oct 15 10:50 1996 am1/scripts/setup/show_8.sql
-rwxrwxrwx 424/20      141 Oct 15 10:51 1996 am1/scripts/setup/show_9.sql
-rwxrwxrwx 424/20      143 Oct 15 10:46 1996 am1/scripts/setup/show_10.sql
-rwxrwxrwx 424/20      38 Oct 15 10:47 1996 am1/scripts/setup/show_2.script
-rwxrwxrwx 424/20      38 Oct 15 10:47 1996 am1/scripts/setup/show_4.script
-rwxrwxrwx 424/20      38 Oct 15 10:49 1996 am1/scripts/setup/show_5.script
-rwxrwxrwx 424/20      38 Oct 25 10:12 1996 am1/scripts/setup/show_6.script
-rwxrwxrwx 424/20      38 Oct 25 10:13 1996 am1/scripts/setup/show_7.script
-rwxrwxrwx 424/20      38 Oct 15 10:50 1996 am1/scripts/setup/show_8.script
-rwxrwxrwx 424/20      38 Oct 15 10:50 1996 am1/scripts/setup/show_9.script
-rwxr-xr-x 424/20      1091 Aug 5 16:37 1996 am1/scripts/setup/st_bd
-rwxr-xr-x 424/20      208 Aug 5 16:37 1996 am1/scripts/setup/st_eh
-rwxr-xr-x 424/20      346 Aug 14 11:25 1996 am1/scripts/setup/st_fs
-rwxr-xr-x 424/20      346 Aug 14 11:33 1996 am1/scripts/setup/st_fs.2
-rwxr-xr-x 424/20      346 Aug 14 11:33 1996 am1/scripts/setup/st_fs.3
-rwxr-xr-x 424/20      346 Aug 14 11:34 1996 am1/scripts/setup/st_fs.4
-rwxr-xr-x 424/20      346 Aug 14 11:34 1996 am1/scripts/setup/st_fs.5
-rwxr-xr-x 424/20      346 Aug 14 11:34 1996 am1/scripts/setup/st_fs.6
-rwxr-xr-x 424/20      346 Aug 14 11:35 1996 am1/scripts/setup/st_fs.7
-rwxr-xr-x 424/20      346 Aug 14 11:35 1996 am1/scripts/setup/st_fs.9
-rwxr-xr-x 424/20      1045 Aug 17 14:37 1996 am1/scripts/setup/st_gs
-rwxr-xr-x 424/20      224 Aug 17 14:40 1996 am1/scripts/setup/st_lg
-rwxr-xr-x 424/20      208 Aug 17 14:35 1996 am1/scripts/setup/st_lq
-rwxr-xr-x 424/20      295 Aug 17 14:34 1996 am1/scripts/setup/st_ns
-rwxr-xr-x 424/20      738 Aug 17 14:35 1996 am1/scripts/setup/st_rm
-rwxr-xr-x 424/20      356 Oct 16 15:03 1996 am1/scripts/setup/st_tl
-rw-r--r-- 688/20      5 Nov 21 13:12 1996 am1/scripts/setup/A2tlmHSFreq
-rwxr-xr-x 424/20      169 Aug 19 11:19 1996 am1/scripts/setup/telemetry.db

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-rwxr-xr-x 424/20      169 Oct  5 12:09 1996 am1/scripts/setup/ProcessPms
-rwxr-xr-x 424/20      2483 Oct  1 16:52 1996 am1/scripts/setup/FosArch
-rwxr-xr-x 424/20     208772 Aug 19 11:15 1996 am1/scripts/setup/A2tImHSValues
-rwxr-xr-x 424/20    1258085 Aug 19 11:15 1996 am1/scripts/setup/A2tImHKValues
-rwxrwxrwx 688/20         4 Nov 12 11:07 1996 am1/scripts/setup/A2tImStandbyFreq
-rwxrwxrwx 688/20        39 Oct 15 10:46 1996 am1/scripts/setup/show_10.script
-rw-r--r-- 688/20     6015 Nov 21 13:12 1996 am1/scripts/setup/FosEnvVars
-rwxr-xr-x 424/20    1625652 Oct 29 09:06 1996 am1/scripts/psutil
drwxrwxr-x 752/20         0 Nov  8 15:34 1996 am1/statistics/
drwxrwxr-x 752/20         0 Nov  8 15:34 1996 am1/tlmarchive/

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## 5. Non-Conformance Status

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### 5.1 Known Problems with FOS

This section contains the list of problems closed (section 5.2) and known problems (section 5.3) as of 11/7/96 in the product. These problems were found and recorded during unit and integration testing and captured in the formal problem tracking system, Distributed Defect Tracking System (DDTS). The DDTS system generated the attached list of “open” NCRs. This list has been reviewed by HITC management and the FOS system is considered to be acceptable for delivery at this time. The list includes the NCR ID, Software, Title, Severity, and Problem description. DDTS problem severity definitions, on a 1-5 scale, are defined as follows:

- 1 Catastrophic bug without workaround that causes total failure or unrecoverable data loss.  
Example: system crash or lost user data.
- 2 Bug which severely impairs functionality. Workaround might exist but is unsatisfactory.  
Example: can not use major product function.
- 3 Bug that causes failure of noncritical system aspects. There is a reasonably satisfactory workaround.  
Example: user data must be modified to work.
- 4 Bug of minor significance. Workaround exists or, if not, the impairment is slight.  
Example: error messages are not very clear.
- 5 Very minor defect. Workaround exists or the problem can be ignored.  
Example: bad layout or misuse of grammar in manual.

### 5.2 FOS Non-Conformance Reports (Closed Status)

This is the first delivery of the software and this section is not applicable.

### 5.3 FOS Non-Conformance Reports (Open Status)

The following NCRs are liens against the FOS Version 1.00 delivery.

**NCR ID:** ECSed03872

**Software:** DMS

**Title:** Command ODF hex to decimal conversion not being done properly

**Severity:** 1

**Problem:** The command database tables store data in ASCII hex representation. The odf generation interprets the ASCII hex representation as ASCII decimal. This causes the binary for the commands to be incorrect.

**NCR ID:** ECSed03987  
**Software:** CMD  
**Title:** submnemonics not converted ASCII to binary  
**Severity:** 1  
**Problem:** Submnemonics from FUI to command format are in ASCII and need to be converted to binary before insertion in to the command. This is not being done and the commands are not being properly built.

**NCR ID:** ECSed04434  
**Software:** ANA  
**Title:** Could not generate a stats request: data file comes back empty  
**Severity:** 1  
**Problem:** The user tried to generate a user-specified statistics request. The request was generated but the statistics files in /fos/test/am1/datasets was empty. F-ANA-03050  
F-ANA-05250

**NCR ID:** ECSed01944  
**Software:** FUI-B  
**Title:** ECL Directive PAGE CLOSE  
**Severity:** 2  
**Problem:** ECL directive "PAGE CLOSE" caused Environment Controller, mini-Control Window and String Manager Jr. processes to crash. Had to rerun script to restart these processes.

**NCR ID:** ECSed02452  
**Software:** PAS-B  
**Title:** Executables and source code outside accepted directory structure  
**Severity:** 2  
**Problem:** Executables and source code are being delivered outside the accepted directory structure guidelines - Code has not been inspected and unit tested and is treated as deliverable code - creatCmdActs and createCmds

**NCR ID:** ECSed02456  
**Software:** PAS-B  
**Title:** FpTI Power Usage not showing usage correctly  
**Severity:** 2  
**Problem:** Power usage representation on the timeline is not correct. Having scheduled an activity to represent power usage the power usage stayed as a flat line over the time frame of that activity. Power usage should have been shown as increasing.

**NCR ID:** ECSed02471  
**Software:** RCM-B  
**Title:** FOS/NCC Communication via XDR

**Severity:** 2  
**Problem:** For the purposes of integration and test, this INCR should be classified as an enhancement. Currently, the RCM NCC Ground Manager process uses the FOS IPC mechanism to successfully communicate with the NCC Unit Test Driver and support integration and test efforts as needed. The RCM NCC Ground Manager will, however, need to communicate with the NCC as early as September 1, 1996 using the XDR format. XDR is not currently supported by the FOS IPC solution. When the RCM NCC Ground Manager software is modified to use XDR, the NCC Unit Test Driver will also require the upgrade so that integration and test efforts are possible between now and September 1.

**NCR ID:** ECSed02487  
**Software:** FOS  
**Title:** Use of 'hardcoded' variables will not support multi-mission/mode req  
**Severity:** 2  
**Problem:** The use of environment variables and start-up script command line arguments specifying a spacecraft id (AM-1) or a mode id (operational, test, training) will not support multi-mission and multi-mode system requirements.

Level 4 Requirements:

F-FOS-00030  
F-FOS-00035  
F-FOS-00040

**NCR ID:** ECSed02488  
**Software:** FOS Common S/W  
**Title:** Use of 'hardcoded' communication port assignments  
**Severity:** 2  
**Problem:** The use of hardcoded communication port assignments should be replaced with references to the FOS Services file(s) (for port assignments reserved for well known services or for multi-cast port assignments) or queries to the FOS Name Server (for point-to-point assignments registered for dynamic services).

This NCR is related to ECSed02752.

**NCR ID:** ECSed02645  
**Software:** DMS  
**Title:** FileMetaData doesn't return status  
**Severity:** 2  
**Problem:** The FileMetaData server doesn't return a status to indicate if files have been stored successfully or not. If they are not stored successfully then these files will not get archived. The user should be made aware of this situation.

**NCR ID:** ECSed02702  
**Software:** DMS  
**Title:** RCM NccGroundMgr Connection to Archiver  
**Severity:** 2  
**Problem:** The NccGroundMgr Archiver Proxy lost its connection to the Ground Telemetry Archiver when attempting to send a message to be archived.

**NCR ID:** ECSed02752  
**Software:** FOS Common  
**Title:** Registering and retrieving from the Name Server correctly  
**Severity:** 2  
**Problem:** Processes need to register with the Name Server with at least the process name, the spacecraft ID and the process type (DEV, INT, OPS, TEST). Lookups from the Name Server by processes need to be requested based on the above three criteria at a minimum.

**NCR ID:** ECSed02757  
**Software:** FOS Common S/W  
**Title:** The CDE Window Manager should NEVER be used to test FUI Applications  
**Severity:** 2  
**Problem:** The CDE Window Manager (Common Desktop Environment) is a different Window Manager than Motif. FUI has no requirements to work under CDE. FUI code is required to work under Motif. All FUI developers code and test under Motif. FUI developers have noticed several differences in how applications behave under CDE vs. Motif. Since FUI has neither the time nor the requirements to make their applications run under CDE, all testing should be performed under Motif. If an INCR is generated under CDE, against FUI, FUI will request that the problem be proven to exist under Motif before excepting the INCR. If, at some time in the future, FUI is given requirements (a big CCR) to work under CDE, then FUI code will be upgraded to work correctly under CDE.

**NCR ID:** ECSed02805  
**Software:** PAS-B  
**Title:** FpTl Timeline - user resources not applied to timeline  
**Severity:** 2  
**Problem:** Selected User Setup/Resources - and chose the resources I wanted to have on the timeline. Selected Apply & Ok. The resources selected were not applied to the timeline.

**NCR ID:** ECSed02810  
**Software:** SYS  
**Title:** The use of process type & mode are different between subsystems-EndPt  
**Severity:** 2

**Problem:** CMS uses OP\_ENV to set the process type when registering with the name server. OP\_ENV is set in the FosEnvVars file to indicate, dev, int, ops, test, training, etc. The ground script controller is looking for a process type equal to 3. I don't know what process type means to the ground script controller and the parameter server. The parameter server uses process mode to indicate, ops, test, training, etc. using numeric values.

This NCR is related to ECSed02488 and ECSed02752.

**NCR ID:** ECSed02821

**Software:** DMS

**Title:** Proxy needs to be asynchronous for GUI use

**Severity:** 2

**Problem:** The FdDbTd proxy does an asynchronous send. Within a GUI process, communications are required to be asynchronous after the window is managed.

**NCR ID:** ECSed02834

**Software:** FUI - B

**Title:** Incorrect Syntax check result

**Severity:** 2

**Problem:** When I did a Syntax check by using the CheckProcedureSyntax function of the FuCLParser class, I got a valid result for "CV ONtn" which is not a valid statement.

**NCR ID:** ECSed02856

**Software:** DMS

**Title:** Needs to add telemetry limits and states to PidOdf1.O

**Severity:** 2

**Problem:** The Directive Builder is required to show the telemetry limits and states to the user. But, the Odf Directive Builder currently used does not include those data elements. The class FoUpParamData needs to be modified to include the telemetry limits and states and PidsOdf1.O needs to be rebuilt so that the Directive Builder could display the telemetry limits and states.

**NCR ID:** ECSed02908

**Software:** FOS

**Title:** Inconsistent methods for finding Odf files.

**Severity:** 2

**Problem:** In order to determine the proper Odf file within a multi mission environment it is necessary to combine an environment path name (ie. ops, test, dev ) with a space craft id (i.e., AM1, PM1 ). Currently

**NCR ID:** ECSed02935

**Software:** FUI-B

**Title:** EC must automatically update its page list when new pages are created  
**Severity:** 2  
**Problem:** Currently, a new page definition (created via the Display Builder) is not recognized by EC until the process is restarted. A manual workaround using a script generates the new pageUser.dat file, but EC has no way of re-reading this file once it has been started.

**NCR ID:** ECSed02975  
**Software:** TLM  
**Title:** Decom Is Using 20+% Of The CPU  
**Severity:** 2  
**Problem:** Decom on the Real-Time Server and the User Station has been using over 20% of the CPU once the packet generator is turned on. If two packet generators are running, then the two Decom processes eat up 40+% of the CPU. Here is output from a test:

```
sneezer{fosint2}1: ps aux
USER      PID %CPU %MEM  SZ  RSS TT    S  START TIME
COMMAND
fosint2  9272 19.8 11.224352 6996 pts/3   R 15:43:15  7:15 FtDcDecom -sid 100
-sc am1 -ttype 3 -ctype 0 -chtype 2 -rate 1
fosint2  9268 19.4 14.825864 9256 pts/3   R 15:43:14  7:59 FtDcDecom -sid 100
-sc am1 -ttype 2 -ctype 0 -chtype 1 -rate 2
fosint2  9251 13.5  4.8 5564 2996 pts/3   R 15:42:12  4:44 FoPsParameterServer
-sc AM1 -sid 100 -dbid 1.0 -state 1 -mode 1 -psi 1 -chtype 1
fosint2  9254 12.6  2.8 5148 1748 pts/3   R 15:42:32  4:50 FoPsParameterServer
-sc AM1 -sid 100 -dbid 1.0 -state 1 -mode 1 -psi 1 -chtype 2
fosint2  9344  9.0  5.6 4328 3508 pts/4   R 17:15:47  0:11 A2tlm
fosint2  9343  8.6  3.0 2640 1880 pts/5   R 17:15:14  0:19 A2tlm
```

**NCR ID:** ECSed02976  
**Software:** FOS Common  
**Title:** Need to Analyze Parameter Server Performance  
**Severity:** 2  
**Problem:** ParameterServer on the Real-Time Server and the User Station has been using over 10% of the CPU once the packet generator is turned on. If two packet generators are running, then the two ParameterServer processes eat up 20+% of the CPU. Here is output from a test:

```
sneezer{fosint2}1: ps aux
USER      PID %CPU %MEM  SZ  RSS TT    S  START TIME
COMMAND
fosint2  9272 19.8 11.224352 6996 pts/3   R 15:43:15  7:15 FtDcDecom -sid 100
-sc am1 -ttype 3 -ctype 0 -chtype 2 -rate 1
fosint2  9268 19.4 14.825864 9256 pts/3   R 15:43:14  7:59 FtDcDecom -sid 100
-sc am1 -ttype 2 -ctype 0 -chtype 1 -rate 2
```

fosint2 9251 13.5 4.8 5564 2996 pts/3 R 15:42:12 4:44 FoPsParameterServer  
-sc AM1 -sid 100 -dbid 1.0 -state 1 -mode 1 -psi 1 -chtype 1  
fosint2 9254 12.6 2.8 5148 1748 pts/3 R 15:42:32 4:50 FoPsParameterServer  
-sc AM1 -sid 100 -dbid 1.0 -state 1 -mode 1 -psi 1 -chtype 2  
fosint2 9344 9.0 5.6 4328 3508 pts/4 R 17:15:47 0:11 A2tlm  
fosint2 9343 8.6 3.0 2640 1880 pts/5 R 17:15:14 0:19 A2tlm

**NCR ID:** ECSed03039  
**Software:** FUI-B  
**Title:** Proc Bldr flags valid syntax errors on the line following the error.  
**Severity:** 2  
**Problem:** Procedure Builder fails its syntax check when there are no apparent errors.

**NCR ID:** ECSed03208  
**Software:** RCM  
**Title:** Can not archive GCMR messages.  
**Severity:** 2  
**Problem:** During GCMR processing, after entering the first GCMR directive, the Event Display displayed: NCC Telemetry Archiver detected data dropout. From this point on, whenever FgGmNccGroundMgr tried to archive a GCMR message, the Event Display displayed: FoIpCommExcept was caught, socket error, error = broken pipe.

**NCR ID:** ECSed03302  
**Software:** FOS Common  
**Title:** Ctlr-Z kills processes  
**Severity:** 2  
**Problem:** When hitting control-z all processes that are running are killed. FoUt incorrectly installs a signal handler for SigSTP which causes processes to die if the user intends to stop it

**NCR ID:** ECSed03309  
**Software:** FUI-B  
**Title:** Removing multiple items from listbox is slow  
**Severity:** 2  
**Problem:** Removing large numbers of parameters from listbox forces screen redraws for each item removed. This is time consuming

**NCR ID:** ECSed03310  
**Software:** FOS Common  
**Title:** Parameter monitor slows up dynamic page display  
**Severity:** 2  
**Problem:** Dynamic page takes more than 1 minute to appear because every parameter monitor must read in ~640K XDR file. Since a Dynamic Page may have multiple parameter

monitors, this initialization degrades th Consider using a metafile, so that PM's may determine the type of a parameter from a single file associated with a given spacecraft

**NCR ID:** ECSed03359  
**Software:** FUI-B  
**Title:** Unintended Parameter Selection  
**Severity:** 2  
**Problem:** In "Analysis Telemetry Selector" window, user must de-select all entries in "Available Parameter" List, otherwise they will be reselected.

**NCR ID:** ECSed03375  
**Software:** FUI-B  
**Title:** Cannot delete times  
**Severity:** 2  
**Problem:** Cannot delete selected times in "Analysis Request Builder" window.

**NCR ID:** ECSed03383  
**Software:** DMS-B  
**Title:** No Data Base Option  
**Severity:** 2  
**Problem:** F-RMS-00035 The EOC Operator is unable to specify a database, other than the Default.

**NCR ID:** ECSed03384  
**Software:** FUI-B  
**Title:** Limited Data Set Names  
**Severity:** 2  
**Problem:** Only one data set name allowed in "Analysis Request Builder" window. User should be prompted for a different data set name for each time specified.

**NCR ID:** ECSed03438  
**Software:** DMS  
**Title:** Parameter Picker Window Can't Pick Parameters  
**Severity:** 2  
**Problem:** The selection Filter of the Parameter Picker is black cannot pick parameters to fill onto page display.

**NCR ID:** ECSed03440  
**Software:** DMS/FUI-B  
**Title:** Alarm Msg no filtering & Display'  
**Severity:** 2

**Problem:** Currently, alarm messages are no different than non-alarm messages and no way to filter them via event filter options.

**NCR ID:** ECSed03442

**Software:** FUI/DMS

**Title:** Event Display filtering option for ops,test and training'

**Severity:** 2

**Problem:** There is currently no filtering option for ground systems (i.e. ops, test, or training)

**NCR ID:** ECSed03453

**Software:** FUI-B

**Title:** 'Save As' Feature w/Proc Builder

**Severity:** 2

**Problem:** Default Directory is /fos/test/am1/scripts/setup Should be a data proc directory not startup.

**NCR ID:** ECSed03471

**Software:** HW

**Title:** Raid data transfer rate

**Severity:** 2

**Problem:** Raid data transfer rate is less than 20 MB. The requirement is 20 MB transfer rate but the disks are rated for 10 MB.

**NCR ID:** ECSed03472

**Software:** HW

**Title:** RAID hot-swap

**Severity:** 2

**Problem:** The RAID fan and controllers for the disk-array are not hot-swappable.

**NCR ID:** ECSed03496

**Software:** FUI

**Title:** Display Builder Exit on Return

**Severity:** 2

**Problem:** Display Builder exits if the return button is hit in the selection area of the file selection if a file is not selected.

**NCR ID:** ECSed03499

**Software:** FUI

**Title:** Parameters Truncated in available parameter list

**Severity:** 2

**Problem:** In Data Source Dialog Window, the parameters included in the available parameters columns are cut off; that is, the last characters in the parameter name are truncated.

**NCR ID:** ECSed03500  
**Software:** FUI-B  
**Title:** Selection Filter/Deselection takes too long  
**Severity:** 2  
**Problem:** Deselection of a filtered subsystem in the selection filter takes too long. It has taken up to 10 minutes at times if the number of parameters listed in the available parameters text area is large.

**NCR ID:** ECSed03502  
**Software:** FUI-B  
**Title:** Process PMS Does Not Make Pages Active  
**Severity:** 2  
**Problem:** ProcessPms copies newpages to active pages but the pages still don't come up when called. They also do not appear under TlmWins.

**NCR ID:** ECSed03505  
**Software:** FUI-B  
**Title:** No Error for Bringing up an Illegal Page  
**Severity:** 2  
**Problem:** Display Builder will try to open files even if they are not display pages. No error message is received. The Display Builder window resizes to a small size.

**NCR ID:** ECSed03509  
**Software:** FUI-B  
**Title:** Event Display drop-out after resize  
**Severity:** 2  
**Problem:** The event display was widened when displaying seven events (for generating a DAS). When the resize operation was complete, the event display contained only the first four events. New events were not displayed.

**NCR ID:** ECSed03527  
**Software:** FUI-B  
**Title:** Parameter Picker doesn't reset  
**Severity:** 2  
**Problem:** When building a new page, the data source resets but the parameter picker still displays the last group of mnemonics filtered on. This group also stays even if a different data source is selected.

**NCR ID:** ECSed03900  
**Software:** FUI  
**Title:** Time Selector accepts a starttime the same as the stop time

**Severity:** 2  
**Problem:** F-ANA-03015 An analysis request should be 1 second or greater. The time selector accepts a 0 second duration.

**NCR ID:** ECSed03953  
**Software:** FUI  
**Title:** Cmd contrl windw crashes when user attempts to killground script  
**Severity:** 2  
**Problem:** When user attempts to kill a ground script using kill button on the cmd control window it crashes the window, user attempts to bring up a new window and a cmd monitor window appears. When a second user attempts to take command the ground script controller crashes and this causes an error within the FOP procsss and user cannot bring up a command control window.

**NCR ID:** ECSed03959  
**Software:** FOS Common S/W  
**Title:** FoIp Motif Notifier Is Using Too Much CPU  
**Severity:** 2  
**Problem:** The FoIp Motif Notifier is very inefficient. It is directly responsible for 20-30% CPU utilization in FUI processes that are relatively inactive (i.e. not sending or receiving lots of data/classes). This is a well known and understood problem that was pushed off until a late

**NCR ID:** ECSed03960  
**Software:** FOS Common S/W  
**Title:** FoIp Uses A Very CPU Intensive Class Flattening And Restoring Method  
**Severity:** 2  
**Problem:** Currently, FoIp is using a very ineffecient method to send classes, i.e. Portable ASCII streams. No consideration is being made as to whether the message is being sent to the same kind of H/W and O/S conversion to Portable ASCII by the sender, and eliminate the conversion from Portable ASCII by the receiver. Since most of our communication is between processes on the same H/W and O/S, much less the same machine, this should provide a significant speed increase.

**NCR ID:** ECSed03961  
**Software:** FOS Common  
**Title:** Some Functions in the FoTm lib. cause a core dump.  
**Severity:** 2  
**Problem:** The use of the floor() function in FoTm Functions results in a core dump on the DEC.

**NCR ID:** ECSed03962  
**Software:** FUI

**Title:** Selection Filter bug when items are selected before hitting O.K.  
**Severity:** 2  
**Problem:** The selection filter window will not work properly if the user selects an item in the "selected" list and then hits O.K. After that, the window behaves incorrectly.

**NCR ID:** ECSed03967  
**Software:** FUI/FOS  
**Title:** Display page telemetry update rate is slow  
**Severity:** 2  
**Problem:** Telemetry update on display pages is very slow. Ran the telemetry packet generator at 6 seconds between packets and the display page was still slow  
note: when analyzing this NCR, see NCR #3959

**NCR ID:** ECSed03982  
**Software:** PAS-B  
**Title:** Current date and time is missing from schedule time line  
**Severity:** 2  
**Problem:** Requirement is not met. (FUI-04070) No current Date and Time on the time line display

**NCR ID:** ECSed03986  
**Software:** SYSTEM  
**Title:** DEC byte addressing "little indian first"  
**Severity:** 2  
**Problem:** When doing a hex dump (Unix od -x) of a command data block log file I realized that the DEC machine was using even byte addressing-least significant byte first, causing each pair of bytes in the dump to be swapped. I am informed that the DEC is supposed to be configurable to address the way the rest of the world does it. This could have serious impact to the functioning of software on a DEC machine. If it is indeed possible to select "big indian first" addressing, it should be done as soon as possible to minimize any possible impact to FOS software when running on a DEC machine.

**NCR ID:** ECSed03999  
**Software:** TLM  
**Title:** Out-of-Limits (red) parameters go static  
**Severity:** 2  
**Problem:** Telemetry parameters whose values are Out-of-Limits (red) turn static, and the row color changed from red to white, even though the same Out-of-limits (red) values are continually being ingested. In the attached TLM decomm page, CHD\_VR\_PWRB\_AYT\_2V, a high red value of 220,000 is continually ingested. After several cycles however, the parameter changes to static ("S") and the row color changes to white.

Note: related to NCR 2690

**NCR ID:** ECSed04009  
**Software:** SYSTEM  
**Title:** Isolate the mini-EOC.  
**Severity:** 2  
**Problem:** If possible, the mini-EOC should be put on its own subnet to prevent receiving multicast messages from the second floor. This disrupted testing for two consecutive days because it was crashing the User Stations in the mini-EOC and we couldn't test.

**NCR ID:** ECSed04020  
**Software:** SYSTEM  
**Title:** Start a command proc crashes system  
**Severity:** 2  
**Problem:** Starting a command proc within the command control window crashes the system.

**NCR ID:** ECSed04022  
**Software:** DMS  
**Title:** Exponential conversion types are not getting through validation  
**Severity:** 2  
**Problem:** DMS validation software is kicking out mnemonics defined with an exponential calcurve. The conv\_type\_tfx table has a conversion type of U\_EX. The conversion type field is 4 char long and should be five to define a common conversion type of u\_exp.

**NCR ID:** ECSed04023  
**Software:** DMS  
**Title:** 6th and 7th order polynom. defined as 5th order are passing validatio  
**Severity:** 2  
**Problem:** If a user defines a parameter as 5th order polynomial in the conv\_type field of tlm\_calcurve\_pdb but gives it a conversion number that is associated with a 6th or 7th order polynomial in tlm\_polyconv\_pdb, the parameter passes validation and truncates the coefficients to make the parameter a 5th order poly.

**NCR ID:** ECSed04025  
**Software:** DMS  
**Title:** Param not marked as static after a master cycle for standby  
**Severity:** 2  
**Problem:** Paramaters did not go static after the master cycle when the user sent standby telemetry. It appears that FOS is waiting for 64 packets with no update to the parameter even though standby telemetry has only 32 packets in the master F-TLM-00625.

**NCR ID:** ECSed04071  
**Software:** CMD  
**Title:** Valid Submnemonic values flag subfield value error  
**Severity:** 2  
**Problem:** Entered a command with a valid submnemonic and the system returned a subfield value error. The value of the submnemonic entered was 135 The database has the range from 0.0 to 255.0 defined for the submnemonic and the same error occurred.

**NCR ID:** ECSed04086  
**Software:** FUI  
**Title:** Format of data entry not given in load generator window  
**Severity:** 2  
**Problem:** Within load generator window, the format of start & stop times are not indicated on display or through an error message.

This is an copy of NCR 3588

**NCR ID:** ECSed04232  
**Software:** FUI  
**Title:** Can't display Q-channel telemetry values  
**Severity:** 2  
**Problem:** Can't display Q-channel telemetry via alphanumerics-(alphas cannot key into Q-channel data)  
F-TLM-10125

**NCR ID:** ECSed04297  
**Software:** CMD  
**Title:** More than 2 cmds with submnemonics crashes format  
**Severity:** 2  
**Problem:** When two consecutive commands with submnemonics are entered in the ground script, the first one executes properly but the second one causes the command format task to exit on failure.

**NCR ID:** ECSed04298  
**Software:** DMS  
**Title:** event logger hangs in command format  
**Severity:** 2  
**Problem:** When the command format task sends event messages containing command mnemonics, certain mnemonics cause the event logger to hang. One possible conjectured cause is the size of the string. This in turn causes the command format task to hang, and no further commands can be sent.

**NCR ID:** ECSed04360  
**Software:** FUI  
**Title:** Cannot access procedures from "procedure dialog" selection box  
**Severity:** 2  
**Problem:** The control window dialog boxes are inconsistent with its capabilities. Rooms, TLM wins and tools dialog boxes can access the list provided. The proc's dialog box does not allow access to the listed procs. The procs are only accessed through the proc builder tool.

Affected rqmnt F-FUI-01315

**NCR ID:** ECSed04370  
**Software:** DMS  
**Title:** During ODF generation: illegal conversion types  
**Severity:** 2  
**Problem:** During ODF generation, received error messages illegal conversion types U-6D, U\_TD, Line. These are conversion types for 6th and 7th order polynomials and linear conversion F-TLM-00935

**NCR ID:** ECSed04371  
**Software:** TLM  
**Title:** Multi-bytes are not getting Decommed  
**Severity:** 2  
**Problem:** Multi-byte parameters were created. The user ran telemetry and no values were being passed to the parameter server.  
F-TLM-00710  
F-TLM-00715  
F-TLM-00720  
F-TLM-00725  
F-TLM-00730  
F-TLM-00735

**NCR ID:** ECSed04372  
**Software:** TLM  
**Title:** No event messages are generated when a packet is missed  
**Severity:** 2  
**Problem:** The user made a frequency file to send packet 1 of standby telemetry every third master cycle. When the packet was missed, no event message was displayed on the Even Display indicating that a packet was missed affects L4 reqs  
TLM-00445  
TLM-10445

**NCR ID:** ECSed04373  
**Software:** DMS

**Title:** Real-time standby Q-channel data not archived  
**Severity:** 2  
**Problem:** All telemetry data is archived except standby Q channel

**NCR ID:** ECSed04376  
**Software:** DMS  
**Title:** Event Filtering Error  
**Severity:** 2  
**Problem:** An error occurs when filtering the events display with the "TLM" only option. For some reason a few "RMS" events slip through the filter and show up in the display this is incorrect. There should only be "TLM" only events displayed  
RQMT F-FUI-09605

**NCR ID:** ECSed04383  
**Software:** System  
**Title:** Clocks on user stations not in sync  
**Severity:** 2  
**Problem:** Each user station displays a different time when the "clock" program is initiated. Also these times are different than the equivalent local times shown in the event display

For example, on Oct 31,1996 those times were displayed simultaneously:

fose5oe 8:55 est  
msseoc2 9:05 est  
fose8oe 8:57 est  
Event display 9:00 est

**NCR ID:** ECSed04386  
**Software:** FOTM  
**Title:** Incorrect time parameter values displayed  
**Severity:** 2  
**Problem:** The "SDU\_SCTIME" parameter in telemetry header page display shows incorrect and inconsistent time values. Within the span of one minute the values for this parameter are drastically different

**NCR ID:** ECSed04387  
**Software:** FUI  
**Title:** Mnemonic names truncated on alpha display page  
**Severity:** 2  
**Problem:** The mnemonics [sys\_grnd\_cntrl\_ws\_id and sys\_cmd\_author\_ws\_id] have the last character cut in half in the display window

**NCR ID:** ECSed04389

**Software:** FUI  
**Title:** Events filtering w/out invoking "apply" button  
**Severity:** 2  
**Problem:** During filter operation on the events display, filter selections occur without invoking the "Apply" button. Filtering the events on the control window requires the user to invoke the "Apply" button for selections to occur

**NCR ID:** ECSed04399  
**Software:** FUI  
**Title:** GroundScript controller dies when procedure does not exist.  
**Severity:** 2  
**Problem:** The ground script controller dies when it tries to execute a procedure that does not exist.

**NCR ID:** ECSed04403  
**Software:** System  
**Title:** MyKill script does not work on Dec Machines  
**Severity:** 2  
**Problem:** initiated MyKill script and none of the processes died

**NCR ID:** ECSed04404  
**Software:** FUI  
**Title:** A new page gets saved and overwrites an old page  
**Severity:** 2  
**Problem:** The user opened a old page then decided to create a new page. The user selected new under the file option menu and the Display Builder was clear. After the page was created, the user clicked on save instead of save as in the pull down menu. The new page overwrote the page originally brought up

**NCR ID:** ECSed04406  
**Software:** DMS  
**Title:** In requesting an event history bulk copy printout has unreadable data  
**Severity:** 2  
**Problem:** The bulk copy command used to get event history report outputs unreadable data in field that displays the DOY and timestamp. In addition the fields that display the event type and subsystem type are missing from the output please add to output

**NCR ID:** ECSed04410  
**Software:** FUI  
**Title:** Run-Time exception error upon alpha page display  
**Severity:** 2  
**Problem:** A/N page displays are not coming up. Symptom is that the message "run-time exception error..." appears. Maybe linked to max # of IPC connections reached

**NCR ID:** ECSed04411  
**Software:** CMD  
**Title:** Command event messages not appearing  
**Severity:** 2  
**Problem:** When a cmd is executed no format event messages are being generated i.e.,  
Binary  
command ...successfully validated  
command....not critical  
passed submnemonic check  
etc  
F-CMD-02240  
F-CMD-03135  
possibly others

**NCR ID:** ECSed04412  
**Software:** FUI  
**Title:** Real-time graphs- No format capabilities for graphs  
**Severity:** 2  
**Problem:** The user has no way of customizing the graph. The only thing the user can do is pick  
the parameters to be displayed on the graph.  
F-FUI-07350  
07355  
07380  
07385  
07390  
07391

**NCR ID:** ECSed04413  
**Software:** ANA  
**Title:** Stand-by parameters not getting submitted in analysis request  
**Severity:** 2  
**Problem:** Submitted an analysis request with standby parameters. Analysis request completed  
successfully but the data set was empty. Checked TLM archive file and the time  
frame for the request was correct

**NCR ID:** ECSed04414  
**Software:** DMS  
**Title:** EDS mnemonics have the same FOS Pids  
**Severity:** 2  
**Problem:** The user submitted an Analysis Request and FuAnHandler died. Noticed that the  
EDS parameters used had an associated SDU parameter. Looked at the parameter  
definitions and all EDS parameters that had an associated SDU parameter had a FOS  
PID = 4010.

**NCR ID:** ECSed04415  
**Software:** FUI  
**Title:** Room builder process hangs up; preventing access to any room  
**Severity:** 2  
**Problem:** Define a room and saved the room, attempted to an event display in the room, attempted to leave that room and go to another room (userevent room) rec'd an error (see attached) was not able to access any other room definitions when user attempted to do so the cmd control window crashed.  
F-FUI-01165

**NCR ID:** ECSed04416  
**Software:** FUI  
**Title:** Unable to filter on instrument  
**Severity:** 2  
**Problem:** Requirement # F-FUI-090605: F-FUI-03230 The filtering option # instrument Is not available from either the EVENT DISPLAY or the EVENT HISTORY REQUEST. This option is not available.

**NCR ID:** ECSed04417  
**Software:** FUI  
**Title:** Table load builder display crashes  
**Severity:** 2  
**Problem:** When user brings up the table template selection(in the table builder) selected spacecraft and then selected subsystem and then reselected S/C id, the window crashed. User was able to bring the window backup.User was able to repeat this 5 time

**NCR ID:** ECSed04418  
**Software:** FUI  
**Title:** Unable to filter on ground system  
**Severity:** 2  
**Problem:** Requirement F-FUI-03220 F0FUI-09605 states that the FOS shell provide the capability to filter on ground system from either the EVENT DISPLAY or through the EVENT HISTORY REQUEST, this option is not available.

**NCR ID:** ECSed04419  
**Software:** FUI  
**Title:** Received Syntax error entering cmd submnemonic w/o assigning a value  
**Severity:** 2  
**Problem:** Entered a cmd submnemonic w/o specifying a value, rec'd a syntax error from the parser. Entered the same cmd w/submnemonic assigned a value, it was accepted by parser.

**NCR ID:** ECSed04420  
**Software:** FUI  
**Title:** PROC Builder will not accept a logical operator  
**Severity:** 2  
**Problem:** Inserting the logical operator & within a statement results in an failure during syntax check. See Attachments F-FUI-01585

**NCR ID:** ECSed04421  
**Software:** RCM  
**Title:** Unable to recieve "Status and Disposition" messages  
**Severity:** 2  
**Problem:** After invoking NCC ECL directives, the status and Disposition displays should increment by 1, this is not happening. Displays were built @ EOC and have the AM1 operational defaults. I also used the mnemonics "GCM\_GS & GCM\_GD"

**NCR ID:** ECSed04422  
**Software:** PAS  
**Title:** Unable to receive ASTER activities  
**Severity:** 2  
**Problem:** Unable to receive ASTER activities: directory isn't polled correctly

**NCR ID:** ECSed04424  
**Software:** FUI  
**Title:** Table load builder doesn't check for user authorization  
**Severity:** 2  
**Problem:** Table load builder doesn't check affects rqt: F-FUI-05100 05120

**NCR ID:** ECSed04426  
**Software:** FUI  
**Title:** Table loads can not be imported from Table load builder  
**Severity:** 2  
**Problem:** Table loads can not be imported into table load builder.

F-CMS-01025  
01028  
01029

**NCR ID:** ECSed04428  
**Software:** FUI  
**Title:** Real-time graphs graph continues to scroll after data stops  
**Severity:** 2

**Problem:** The graph continues to update after data stops. The graph should stop plotting if there is no data.

**NCR ID:** ECSed04429

**Software:** FUI

**Title:** Real-time graphs y axis re-draws but display doesn't change

**Severity:** 2

**Problem:** The y-axis starts out going from 0 to 1. If the first plot is 1, a line segment is drawn up to 1. The y axis re-draws to go from 0 to 40 but the segment stays on the graph.

**NCR ID:** ECSed04430

**Software:** FUI

**Title:** Real-time tables can't remove parameter in display builder, frm a tbl

**Severity:** 2

**Problem:** The user can't remove parameters from a table. The first parameter is removed but the user is unable to select a second parameter to remove.

**NCR ID:** ECSed04432

**Software:** DMS

**Title:** Not all telemetry definitions are contained in the database

**Severity:** 2

**Problem:** odf software can't handle 6th and 7th order polynomials. derived parameters and context dependent definitions are release B capability (note: See F-DMS-00120)

**NCR ID:** ECSed04433

**Software:** FUI

**Title:** Unable to reconnect to a display page(CFGOPS1)

**Severity:** 2

**Problem:** In RCM-2000A the test requires that you can cycle through the ops, test, and back to ops logical strings. The string connection works according to the events display, but the display page will not open for a second time. Problem discussed with R.Broome, apparently a problem that isn't related to just this page, it could have been any page.

**NCR ID:** ECSed04435

**Software:** FUI

**Title:** Can't display tlm. param.values in specific format

**Severity:** 2

**Problem:** Can't display tlm params in decoded or raw format, hex, binary, octal  
F-FUI-07225 F-FUI-07230

**NCR ID:** ECSed04437

**Software:** FUI

**Title:** Standby telemetry values displayed on "stby only" page, but not on "T  
**Severity:** 2  
**Problem:** When running standby telemetry from the A2 TLM driver, values for standby parameters were displayed only in the "stby only" page, not in the "TLMDecom" or EUconv" windows  
Note: may be related to 4438 and 4440

**NCR ID:** ECSed04438  
**Software:** FUI  
**Title:** Telemetry pages updated with values on msseocz, but not on fose8oe  
**Severity:** 2  
**Problem:** When running standby telemetry from the AZTLM driver on fose8oe, the "TLMDecom" and "EUConv" pages on Fose8oe were never updated; however, the same pages on msseocz were updated frequently. Similarly for housekeeping and heath and saftey telemetry data, the pages on msseocz were updated regularly , but not those on fose8oe  
note: may be related to NCRs 4437 and 4440

**NCR ID:** ECSed04439  
**Software:** ANA  
**Title:** No notification for mnemonics not in the analysis reqstd time frame  
**Severity:** 2  
**Problem:** Standby parameters are not historically decommed. There was no notification message that the parameter did not exist in the time frame  
F-ANA-03040

**NCR ID:** ECSed04440  
**Software:** FUI  
**Title:** Realtime graphs-parameters that do not get updated appear on graph  
**Severity:** 2  
**Problem:** The user placed a standby parameter on the graph, flowed Health and Saftey data and the standby parameter appeared Note: may be related to NCRs 4437 and 4438  
F-FUI-07398

**NCR ID:** ECSed04446  
**Software:** TLM  
**Title:** Assigned limit values cut off on event display  
**Severity:** 2  
**Problem:** Limit msgs not showing all limits information this coupled w/the fact that the mnemonic name is not displayed, keeps the test team from verifying the following:  
F-TLM-01040  
F-TLM-01055  
F-TLM-01110  
F-TLM-01125

**NCR ID:** ECSed04448  
**Software:** ANA  
**Title:** Carry-out file doesn't match SAS ICD  
**Severity:** 2  
**Problem:** Carryout file does not match ICD between ECS and AM-1 S/C Analysis system 505-41-38 (pg 5-2; 5-3) Field D3 and D4 not provided.

**NCR ID:** ECSed04449  
**Software:** ANA  
**Title:** Can't specify data source for historical analysis requests  
**Severity:** 2  
**Problem:** Data source is not a valid option when building an historical request  
F-DMS-00770

**NCR ID:** ECSed04451  
**Software:** ANA  
**Title:** Interval type not in statistics report  
**Severity:** 2  
**Problem:** The interval type of the MMM statistics report is not available.  
F-ANA-04320

**NCR ID:** ECSed04452  
**Software:** FUI  
**Title:** There are no FUI capabilities to view the request queue  
**Severity:** 2  
**Problem:** The user has no way of seeing the status or percentage complete of an analysis request except through sybase. There are no FUI capabilities for this. F-ANA-08030  
F-ANA-08040 F-ANA-0850

**NCR ID:** ECSed04454  
**Software:** CMS  
**Title:** Inhibit identifier for RTS loads are all zero  
**Severity:** 2  
**Problem:** Dumped an uplink load file for a RTS load generated. Using ICD106 determined that the inhibit identifier breaks down to all zeros.

**NCR ID:** ECSed04456  
**Software:** CMS  
**Title:** Time tag converts improperly  
**Severity:** 2

**Problem:** Dumped uplink file for a RTS load generated. Using ICD106 converted time tag to binary and determined the time tag did not convert properly.

**NCR ID:** ECSed04458

**Software:** System

**Title:** fose8oe & fose90e: Terminals black out

**Severity:** 2

**Problem:** The terminals seem to black out for a few minutes occasionally. This has happened several times. Nothing could be done to bring the display back.

**NCR ID:** ECSed04473

**Software:** CMD

**Title:** packets built on dec have swapped bytes

**Severity:** 2

**Problem:** Please describe the problem you are experiencing below, including what you did, what you expected to happen, and what actually happened: Because of the DEC byte ordering command packets built on a DEC platform have swapped bytes and are therefore built incorrectly.

**NCR ID:** ECSed01948

**Software:** FUI-B

**Title:** 13th window in room

**Severity:** 3

**Problem:** A room can contain between 0 and 12 windows in a single room. While defining a room, a 13th window was added without error. The system crashed when this room was recalled and the windows came up without a number in the title (e.g. EventDisplay[3] - the 3 was missing).

**NCR ID:** ECSed01958

**Software:** FUI-B

**Title:** ECL Directive DROPOUT <tlm type>

**Severity:** 3

**Problem:** ECL Directive DROPOUT accepted anything entered as the <tlm type>. Expected the tlm type would be restricted to only valid types.

**NCR ID:** ECSed01961

**Software:** DMS-B

**Title:** ODF Generation Results

**Severity:** 3

**Problem:** Upon completion of ODF generation complete, the user receives a minimal amount of information as to the success of the generation. The process should generate ODF report or logfile that provides information to the user.

**NCR ID:** ECSed01995  
**Software:** FUI-B  
**Title:** Search string option searches prior to APPLY  
**Severity:** 3  
**Problem:** When Search option is selected on EventDisplay (versus Filter option), the search is initiated right away as opposed to allowing the user to input the string to search on and then invoking 'Apply'. The Filter option allows the user to input the string to filter on and then invoke 'Apply". Would have expected Search to begin searching only after the user invokes 'Apply'.

**NCR ID:** ECSed01998  
**Software:** FUI-B  
**Title:** Window numbers are wrong  
**Severity:** 3  
**Problem:** If multiple EventDisplay windows are brought up they have a number, in brackets, in the title to indicate the number of windows showing with the same title. This number sometimes starts with three or five, not always one. Along the same lines, when a new room is entered, this number does not reset which gives an inaccurate count of the number of windows showing.

**NCR ID:** ECSed02393  
**Software:** DMS  
**Title:** Event definition include files using a /home directory  
**Severity:** 3  
**Problem:** Event definition include files are being put in /home/dpeters, then copied by the subsystems. These need to be in a configuration controlled area.

**NCR ID:** ECSed02394  
**Software:** DMS ODF  
**Title:** Event ODF needs to be recompiled without debug  
**Severity:** 3  
**Problem:** All code in the event ODF test needs to be recompiled without debug

**NCR ID:** ECSed02395  
**Software:** PAS-B  
**Title:** FpTl Timeline appears to core dump on normal exit DEC  
**Severity:** 3  
**Problem:** When the exit option on the first menu was selected on the timeline (running on the HP), it appeared to core dump (core file was left over). Also the following message appeared on the screen: X Toolkit Error: Object "tl" does not have windowed ancestor inst fault=4, status word=8, pc=140045238

**NCR ID:** ECSed02406  
**Software:** PAS-B  
**Title:** FpTI Data Buffer color change  
**Severity:** 3  
**Problem:** On timon (HP), { will recheck on other platforms} When changing the color resources for the different activities and modes, the data buffer resource does not update immediately after clicking Apply in the color palette dialog. Does refresh after refresh of timeline.

**NCR ID:** ECSed02410  
**Software:** PAS-B  
**Title:** FpTI Time scroll implementation incorrect  
**Severity:** 3  
**Problem:** The time scroll bar jumps every 1/5 of 12 hours. (i.e.) if start at 00:00:00, then 02:24:00, then 04:48:00, then 07:12:00, then 09:36:00, then 12:00:00. Because of this, the 5/10/30 minutes time intervals do not scroll properly, and the other time intervals do not scroll smoothly.

**NCR ID:** ECSed02436  
**Software:** PAS-B  
**Title:** FpTI TimeLine's plan pool doesn't get updated for a new plan  
**Severity:** 3  
**Problem:** We modified the timeline to use the plan pool to get new plans. But the plan pool in the time line never gets updated, so new plans are never seen. This only affects the filter scheduler.

**NCR ID:** ECSed02450  
**Software:** PAS-B  
**Title:** FpTI SSR update and summation of data doesn't always work  
**Severity:** 3  
**Problem:** The timeline doesn't always update or sum up the total solid state recorder usage for all of the activities that have been scheduled.

**NCR ID:** ECSed02499  
**Software:** PAS-B  
**Title:** FpAd only sends startup/shutdown messages  
**Severity:** 3  
**Problem:** The Activity definer only sends startup & shutdown messages to the event handler. It should be sending messages whenever significant actions take place.

**NCR ID:** ECSed02501  
**Software:** PAS-B  
**Title:** FpBd only sends startup/shutdown messages

**Severity:** 3  
**Problem:** The BAP definer only sends startup & shutdown messages to the event handler. It should be sending messages whenever significant actions take place.

**NCR ID:** ECSed02502  
**Software:** PAS-B  
**Title:** FpLq only sends startup/shutdown messages  
**Severity:** 3  
**Problem:** The Load Queuer only sends startup & shutdown messages to the event handler. It should be sending messages whenever significant actions take place.

**NCR ID:** ECSed02503  
**Software:** PAS-B  
**Title:** FpFs only sends startup/shutdown messages  
**Severity:** 3  
**Problem:** The Aster Filter only sends startup & shutdown messages to the event handler. It should be sending messages whenever significant actions take place

**NCR ID:** ECSed02504  
**Software:** PAS-B  
**Title:** FpGs only sends startup/shutdown messages  
**Severity:** 3  
**Problem:** The General Scheduler only sends startup & shutdown messages to the event handler. It should be sending messages whenever significant actions take place.

**NCR ID:** ECSed02570  
**Software:** RCM  
**Title:** RCM archive status needs to be displayable  
**Severity:** 3  
**Problem:** Even though reconfiguration of the archive flag will not be possible until Release B, it would be helpful for the users to know when to expect archive output.

**NCR ID:** ECSed02619  
**Software:** FOS  
**Title:** FOS-services file should be replaced for B1  
**Severity:** 3  
**Problem:** Release A uses a file, FOS-services, to establish port numbers and hosts. A less cumbersome method needs to be found for Release B1.

**NCR ID:** ECSed02625  
**Software:** DB scripts-injest  
**Title:** Process for adding FOT-generated data needs to change workaround

**Severity:** 3  
**Problem:** The process for getting FOT-generated additions to the PDB into the database did not work for new cmd\_vardata file.

**NCR ID:** ECSed02666  
**Software:** PAS-B  
**Title:** FpTI PAS Timeline Gives Unnecessary Debug TIRsEditor  
**Severity:** 3  
**Problem:** When adding a new resource to the timeline to be displayed using the User Setup menu and Resources... submenu, the timeline processes give the following debug messages:  
"FpTIRsEditor::applyChanges applying resource edits"  
"FpTIRsEditor::applyChanges edits completed"

**NCR ID:** ECSed02690  
**Software:** TLM  
**Title:** Decom is not processing all packets sent from the Generator  
**Severity:** 3  
**Problem:** Decom reports missing packets, usually in groups of 6-8. The Driver was sending 1 telemetry packet every 2 seconds.

**NCR ID:** ECSed02707  
**Software:** FUI-B  
**Title:** Event numbers should be shown with the event message  
**Severity:** 3  
**Problem:** Event numbers should be provided with event messages displayed on the Event Display and Control Window for to allow for additional information to be gathered regarding the event. Such as, use the event number to search the Event Database.

**NCR ID:** ECSed02804  
**Software:** PAS-B  
**Title:** FpAd Activity Definer created w/o name, then save as failed  
**Severity:** 3  
**Problem:** specified new without a name for the activity, selected AM1 resource. Once I defined the commands in the activity, I selected save as, so I could name the activity appropriately. The save as issued the following warning:  
Save Failed: No activity or resource specified.  
I could not save the activity.

**NCR ID:** ECSed02806  
**Software:** CMS/FOS  
**Title:** ATC load name incorrectly specified  
**Severity:** 3

**Problem:** Selected das for day 216. The load name indicated 218. This could be related to the RW time utility conversions. This was generated on day 215(?) (8/1/96) We should probably be using the DAS id /version number. When multiple DASs are sent to cms the load files will be overwritten, because they will have the same name

**NCR ID:** ECSed02819

**Software:** DMS

**Title:** DMS Dependent On FUI and TLM Private Classes For ODF Generation

**Severity:** 3

**Problem:** As a result of the "re-VOBing" effort, it was uncovered that DMS is dependent on both FUI and TLM private classes for some ODF generation. This goes against the rules that any code/class that is shared by more than one subsystem is common code, and must therefore reside in the common VOB. Some action must be taken by DMS, FUI and TLM to eliminate these dependencies. It should be noted that in both of these cases, these ODF files are used exclusively by either FUI (SelectionFilter ODF) or TLM (Decom ODF). There are two possible solutions:

- 1) The subsystem takes over responsibility for the code to generate the ODFs. This would eliminate DMS's dependency on the other subsystems and give the subsystem's control of their own ODF files.
- 2) The FUI and TLM private code is moved to the Common Area. One thing to keep in mind is that this code is not really common. The only reason DMS must access this code is to generate the ODFs, which really means pulling the data pieces of data out of SYBASE. The ODFs are used exclusively by FUI or TLM. So this is not really a open and stuff common code issue.

**NCR ID:** ECSed02833

**Software:** PAS-B

**Title:** FpLq Load Queuer did not use activities within DAS boundry

**Severity:** 3

**Problem:** Brenda scheduled several activities on day 1996/220, timeline showed they were scheduled correctly. She then requested a DAS for 8/7/96 and none of the activities appeared in the DAS. She then changed the request to be for 1995-1999 and the activities did appear.

**NCR ID:** ECSed02835

**Software:** FUI-B

**Title:** Environment Controller Does Not Use \$BIN\_DIR When Starting Processes

**Severity:** 3

**Problem:** Environment Controller does not use the \$BIN\_DIR path when starting executables. As a result if EC is not started in the directory where the processes reside or the directory is not the "path" then EC will not be able to start the application. A simple solution to this problem is for EC to use \$BIN\_DIR when starting the executables. This is not critical because \$BIN\_DIR is automatically added to the "path" when

FosEnvVars is sourced when running the startup scripts. However, that is a work around to EC's problem.

**NCR ID:** ECSed02839  
**Software:** FUI-B  
**Title:** Environment Controller Does Not Register A Service With NameServer  
**Severity:** 3  
**Problem:** The Environment Controller does not register a "Service" with the NameServer. It needs to do so.

**NCR ID:** ECSed02841  
**Software:** FUI-B  
**Title:** Environment Controller Successive Pages Getting Wrong Position/Size  
**Severity:** 3  
**Problem:** If a page is brought up, moved and/or resized, and then the same type of page is brought up in the same room, like two Event Displays, the second page will be moved and resized to match the first window. The second window should be moved and sized to its DEFAULT position/size.

**NCR ID:** ECSed02842  
**Software:** FUI-B  
**Title:** Load Manager Does Not Have A Menu Bar  
**Severity:** 3  
**Problem:** The Load Manager window is a persistent page that is manipulated by the Room Controller, therefore it should have a Menu Bar at the top of the page with File and Help pulldown menus. It should not be designed like a dialog box with "Close" and "Help" buttons at the bottom.

**NCR ID:** ECSed02843  
**Software:** FUI-B  
**Title:** FUI Process Names Do Not Follow Naming Convention  
**Severity:** 3  
**Problem:** Most FUI process names do not begin with FuXx (EC, DynamicPage, RegCtrlWin, etc.). FUI must rename the offending processes. This renaming will effect data files, startup scripts, Makefiles, etc., so it should be done along with B1 development.

**NCR ID:** ECSed02854  
**Software:** Cmd Control  
**Title:** Hard-coded filename  
**Severity:** 3

**Problem:** CmdControl currently saves a dumpfile (which contains a list of as- executed directives) using a hard-coded file name and default working directory. This should be changed to use environment variables.

**NCR ID:** ECSed02855

**Software:** FUI-B

**Title:** Implement procedure controller proxy for KILL Directive

**Severity:** 3

**Problem:** The KILL directive needs to be implemented to perform a KILL-procedure operation. This can be done by calling the procedure controller proxy from the FuCIYaccy code.

**NCR ID:** ECSed02862

**Software:** FUI-B

**Title:** Does Not Allow Only A User Statistics Request

**Severity:** 3

**Problem:** The FuAnBuilder will not submit just a User Statistics request. All parameters requested in the user statistics dataset automatically appear in the request for a telemetry dataset.

**NCR ID:** ECSed03008

**Software:** PAS-B

**Title:** FpAd Activity Name Erroneously Appears on Delete Screen

**Severity:** 3

**Problem:**

**NCR ID:** ECSed03009

**Software:** PAS-B

**Title:** FpAd Delete screen has a blank line that is selectable

**Severity:** 3

**Problem:** If no activity is selected and the "Delete" option is selected from the Edit menu, the selection list on the delete screen contains a blank field that is selectable.

**NCR ID:** ECSed03021

**Software:** PAS-B

**Title:** FpTl doesn't give shutdown message upon exit

**Severity:** 3

**Problem:** Upon shutting down the timeline, an event message was not generated for shutdown.

**NCR ID:** ECSed03027

**Software:** PAS-B

**Title:** FpTl Resource List Not Alphabetized

**Severity:** 3  
**Problem:** When adding a resource to be displayed on the timeline from the list of available resources (under "User Setup" and submenu "Resources..."), it would be helpful if the list (under "Available Resources") were in alphabetical order to find it easier.

**NCR ID:** ECSed03028  
**Software:** PAS-B  
**Title:** FpTI Help button doesn't appear in right position on Menu Bar  
**Severity:** 3  
**Problem:** Help button doesn't appear in rightmost position on menu bar.

**NCR ID:** ECSed03033  
**Software:** FUI-B  
**Title:** Manual directives are inserted before the current directive  
**Severity:** 3  
**Problem:** When manual directives are entered, they are inserted into the ground script before the current directive, even if this directive has already been sent. Manual directives should only be inserted prior to the current directive if the directive has not yet reached its execution time.

**NCR ID:** ECSed03037  
**Software:** FUI-B  
**Title:** Table Load Builder does not handle empty table template response  
**Severity:** 3  
**Problem:** Table Load Builder does not handle the situation where an empty container of table templates is returned by the TableDefServer. The container was empty because the data base had not been populated.

**NCR ID:** ECSed03064  
**Software:** PAS  
**Title:** FpGs Core Dumps Upon Parm Modification, Schedule, Parm Modification  
**Severity:** 3  
**Problem:** Run the General Scheduler and choose an activity on a resource that contains a modifiable parameter (preferably an integer or float value). Go to the Command Parameters... option beneath the Edit menu. Select the command containing the modifiable parameters and then select one of the parameters in the Parameters window in the lower left corner. Modify this parameters value by specifying a valid value in the Current Value text field beneath the Parameter Type label. Hit the Apply button first and then hit the Ok button. The Parameters window disappears. Now schedule the activity containing the command with the modified parameter. Go back to the Command Parameters window and modify a parameter within the same command as before. As soon as the Apply button and Ok button are pressed the General Scheduler dies.

*Workaround:* After scheduling the activity with the command that contains the modified parameter, do not immediately update a parameter field for the same activity. Schedule or modify a command parameter for a different activity.

**NCR ID:** ECSed03079  
**Software:** FOS Common S/W  
**Title:** FoIpProxyBase Deep Copy Constructor isn't very deep.  
**Severity:** 3  
**Problem:** The FoIpProxyBase class contains a deep copy constructor that doesn't create a new portal for the attribute myPortal. This was crashing FrGrStringMgr. After talking to Ken Fregeolle, I learned that we shouldn't be using any copy constructors for the proxies. Since we shouldn't use them, and there's problems with them if we do, I suggest that we remove the copy constructors from any proxy base classes. Otherwise, they may be used in future development and cause problems later.

**NCR ID:** ECSed03123  
**Software:** PAS-B  
**Title:** FpAd allows complex activity to be defined using itself  
**Severity:** 3  
**Problem:** Activity Definer allows complex activity to be defined using itself. This recursive activity would cause problems.

**NCR ID:** ECSed03154  
**Software:** DMS  
**Title:** Queue Manager can send Blank FaReAnalysisRequest  
**Severity:** 3  
**Problem:** The DMS Queue Manager saves each FaReAnalysisRequest it receives to a file. If the directory permissions allow no writing, then the QueueMgr will read a blank request from a non-existent file when it sends the request to the Request Manager. The FaRmRequestManagerProxy should check that a request is valid before it sends it. Also, even though theoretically reach the FaAcCruncher, it does not clearly state to the user that the request was aborted because there was no data in it

**NCR ID:** ECSed03155  
**Software:** ANA/FUI  
**Title:** UserStats Dataset name  
**Severity:** 3  
**Problem:** The FaReAnalysisRequest has a member RWCString intended to hold the filename for the Userstats filename. The FaAcCruncher will append a ".stats" string to the filename, so the filename for the TLM dataset may be sufficient. However, the best solution is to give the user the option to use a different name, and then just use the TLM dataset filename if the User Stats filename is blank. This is what the FaAcCruncher will do, but the FuAnBuilder needs to eventually give the user the option to choose their own name.

**NCR ID:** ECSed03176  
**Software:** SYSTEM  
**Title:** CM and document operator .cshrc and .Xdefaults  
**Severity:** 3  
**Problem:** Environmental files, such as .Xdefaults and .cshrc, which contain definitions needed by a FOS operator's account need to be placed under CM and documented. The documentation - possibly in the User M

**NCR ID:** ECSed03183  
**Software:** DMS  
**Title:** Loss of FOT changes in the FOS Database  
**Severity:** 3  
**Problem:** When I&T data is loaded into the unvalidated tables, the tables are truncated prior to the load. The FOT data should not be deleted from these tables, and therefore a delete should be used instead.

During the PDB Validation process, the FOT source field in the PDB tables is not selected during the validation process when moving data between the am1\_fos\_unv and am1\_fos\_val databases. It is therefore marked as 'I&T' when moved into the am1\_fos\_val database. It needs to be selected so that this info is retained in the am1\_fos\_val and am1\_fos\_ops tables for reporting purposes.

**NCR ID:** ECSed03254  
**Software:** PAS-B  
**Title:** ECL Directive Selection Field Missing  
**Severity:** 3  
**Problem:** The 'ECL Directives' selection from the options menu resulted in an empty selection field. Expected a list of valid ECL Directives for inclusion in the activity being built.

This may be a release B capability!?

**NCR ID:** ECSed03261  
**Software:** PAS-B  
**Title:** List command description in Activity Definer  
**Severity:** 3  
**Problem:** List command description along with the command mnemonic in Activity Definer Tool. This NCR has been accepted on an 'enhancement' basis.

**NCR ID:** ECSed03262  
**Software:** DMS  
**Title:** Incomplete command list for MODIS  
**Severity:** 3

**Problem:** Activity Definer Command Window listed only 2 of 13 expected commands. Commands may not of passed PDB validation for various reasons. In which case this is not a software problem.

**NCR ID:** ECSed03263

**Software:** PAS-B

**Title:** Non-MODIS commands in MODIS cmd list

**Severity:** 3

**Problem:** Activity Definer Command Window listed many non-MODIS commands and allowed these commands to be included in the MODIS activity.

**NCR ID:** ECSed03264

**Software:** PAS-B

**Title:** Missing Date/Time Format in Activity Definer

**Severity:** 3

**Problem:** In many of the Activity Definer windows, there is no indication as to the required format for entering the date and time. Formats should be included in the window. Currently, the user only receives the correct format after entering an erroneous format.

**NCR ID:** ECSed03266

**Software:** PAS-B

**Title:** 'Apply' Confirmation message

**Severity:** 3

**Problem:** User does not receive a confirmation that the 'Apply' option executed successfully in most of the PAS windows.

**NCR ID:** ECSed03267

**Software:** PAS-B

**Title:** Missing MODIS Modes

**Severity:** 3

**Problem:** In 'Modes' window for MODIS, 'Calibration/SD View' and 'Calibration/SRC' were not listed as available modes. Test conductor expected them to appear in the list.

**NCR ID:** ECSed03268

**Software:** PAS-B

**Title:** Commands not listed in alphabetical order

**Severity:** 3

**Problem:** Activity Definer Command Window displays commands that are not in alphabetical order. Given that all subsystem/instrument commands are listed together and no search capability is available, alphabetized order is necessary.

**NCR ID:** ECSed03269  
**Software:** PAS-B  
**Title:** Incorrect Window Titles  
**Severity:** 3  
**Problem:** 'Activity List' window incorrectly titled 'BAP Definer'  
'Scheduling Info' window.....titled 'BAP Definer'  
'Command Parameters window.....titled 'BAP Definer'

**NCR ID:** ECSed03270  
**Software:** PAS-B  
**Title:** 'Save As' file not displayed  
**Severity:** 3  
**Problem:** 'Save As' option saved BAP correctly, however, the new BAP name was not reflected in the list of available BAPs.

**NCR ID:** ECSed03271  
**Software:** PAS  
**Title:** BAP Definer Crashed  
**Severity:** 3  
**Problem:** BAP Definer crashed when we set sequence=3 and Event=SUNSET within the Scheduling Information window.

**NCR ID:** ECSed03273  
**Software:** PAS-B  
**Title:** Timeline does not display time in GMT  
**Severity:** 3  
**Problem:** Timeline display of time is not in GMT. This is inconsistent with General Scheduler display in GMT.

**NCR ID:** ECSed03279  
**Software:** FUI-B  
**Title:** Time Selector displays 1 minute as 60 seconds  
**Severity:** 3  
**Problem:** Time Selector display does not 'roll over' to next minute. Example: 01:05:00 is displayed as 01:04:60

**NCR ID:** ECSed03281  
**Software:** FUI-B  
**Title:** Time Selector - North equator crossing event  
**Severity:** 3  
**Problem:** Option to select North equator or South equator crossing not available in Time Selector event field.

**NCR ID:** ECSed03282  
**Software:** FUI-B  
**Title:** Time Selector error message vague  
**Severity:** 3  
**Problem:** If an invalid value is entered in the orbit, sequence or frequency field, an error message reports an invalid integer or floating point, but does not indicate which field is in error.

**NCR ID:** ECSed03283  
**Software:** FUI-B  
**Title:** Time Selector (interval selector) needs additional fields  
**Severity:** 3  
**Problem:** the interval time selector does not have both an orbit and sequence field when entering an event. It only has one unlabeled field

**NCR ID:** ECSed03308  
**Software:** PAS-B  
**Title:** Cannot delete letters which have scrolled past widget  
**Severity:** 3  
**Problem:** I was using the activity definer to create a new activity. This activity had a particularly long name and so the first letters began to happily scroll out of sight as I typed the latter letters. Suddenly, I realized this was not the activity name I wanted at all, so I began to backspace to delete the entire name. When I had backspaced as far as I could go and the naming window was seemingly blank, I entered the new activity name and selected OK. To my dismay, I noticed in the main window that my activity name started with the first letters of the ill-fated initial activity name. What clearly needs to happen is for the backspace to continue to access and delete letters which have scrolled out of sight.

**NCR ID:** ECSed03317  
**Software:** FUI-B  
**Title:** DATABASEID needs to be optional for the STRING CREATE directive  
**Severity:** 3  
**Problem:** FUI needs to make the DATABASEID field optional within the STRING CREATE directive because there is a requirement stating that the default database ID is the current database ID. Currently, there really isn't a default database ID when the user always has to enter one.

**NCR ID:** ECSed03324  
**Software:** PAS-B  
**Title:** Closing deleted activities in the application window  
**Severity:** 3

**Problem:** Using the activity definer an activity is selected and is displayed in the application window. It is then decided that the activity had better be deleted. "Delete" is selected, the activity is selected and deleted. The activity is deleted from the list of activities in the "delete" window, however it remains open in the main application window. I think that once the activity has been deleted it should close itself in the main application window. Otherwise this becomes confusing to the user. Was it deleted? Why is it still here?

**NCR ID:** ECSed03374

**Software:** FUI-B

**Title:** Time Display Format

**Severity:** 3

**Problem:** In "Analysis Request Builder" window, "selected Telemetry" field, "statistics Rate" column, the time should be displayed in minutes- and-seconds when the time is 60 seconds (1 minute) or more.

**NCR ID:** ECSed03452

**Software:** FUI/DMS-B

**Title:** Event Display Filtering Option

**Severity:** 3

**Problem:** Spacecraft sub-systems & ground subsystems need to be separate event filters currently one or separate into separate columns - Also add "EDOS" as and Ground subsystem selection.

**NCR ID:** ECSed03455

**Software:** FUI-B

**Title:** 'Save As' Proc Builder #3

**Severity:** 3

**Problem:** No cursor shown in text field for entering file name.

**NCR ID:** ECSed03457

**Software:** FUI-B

**Title:** Data Source Management

**Severity:** 3

**Problem:** Selection of Data Source Management brings about a page called "Dynamic Page Data Source".

**NCR ID:** ECSed03466

**Software:** HW

**Title:** R/T Server Cabinet Height

**Severity:** 3

**Problem:** Realtime server cabinet is short. Requirement F-HRD-02075. The cabinet shall provide a minimum of 48 vertical units (1 unit = 1.75 inch) of equipment mounting height.

Issue: There is only 60 inches of equipment mounting height.

**NCR ID:** ECSed03468  
**Software:** HW  
**Title:** Workstation Screen  
**Severity:** 3  
**Problem:** Requirement is 19 inch diagonal non-glare screen. The screen measures 18 inches.

**NCR ID:** ECSed03490  
**Software:** FUI-B  
**Title:** No event messages generated when load manager window init failed  
**Severity:** 3  
**Problem:** No events messages were displayed when the attempt to invoke load manager display failed.

**NCR ID:** ECSed03492  
**Software:** System  
**Title:** FosEnvVars not sourced  
**Severity:** 3  
**Problem:** FosEnvVars should be sourced automatically with the startup scripts. It is located in the startup script but it is not getting sourced. Tried to echo some of the Environment Variables in FOSEnvVars but they came up as undefined - needs to be sourced in order for display pages to become active.

**NCR ID:** ECSed03498  
**Software:** FUI  
**Title:** Finding Parameters does not work  
**Severity:** 3  
**Problem:** In the Data Source Dialog window the Find option within the available parameters list does not work.

**NCR ID:** ECSed03504  
**Software:** FUI-B  
**Title:** FUI Control Window Iconify Wrong Name  
**Severity:** 3  
**Problem:** When the Control Window is iconified, the name of the icon is toplevelshellreg. It should have something to do with the Control Window so it is easier to find.

**NCR ID:** ECSed03514  
**Software:** FUI-B  
**Title:** Display Builder Corruption  
**Severity:** 3

**Problem:** On the display builder, a field or label can be placed anywhere on the screen. It will be transferred to the display page but an outline remains in the original spot.

**NCR ID:** ECSed03531

**Software:** FUI-B

**Title:** Selection Filter-Selected parameter not reset

**Severity:** 3

**Problem:** When using the display builder, a parameter is selected for a field in the display window. When the next field is chosen and a parameter is selected, the previous parameter will remain as the selected parameter until the user deselects it.

**NCR ID:** ECSed03581

**Software:** DMS

**Title:** Incorrect spelling in RCM-2000A error msg defined in GCMR ODF

**Severity:** 3

**Problem:** After entering the GCMR RECONFIG SSA forward Link Command the returned error message has an incorrect spelling. Reads > Forward Service is no in operation Should Read > Forward service is not in operation

**NCR ID:** ECSed03582

**Software:** FUI

**Title:** Incomplete error message during load generation

**Severity:** 3

**Problem:** During execution of the load generator window, error message indicated 'Invalid data in micro Load generation request'. The actual reason for invalid data is not presented.

**NCR ID:** ECSed03583

**Software:** FUI

**Title:** No Status or Confirmation msg. for an ingested file

**Severity:** 3

**Problem:** There is no confirmation or status message indicated when the load file is ingested into the load manager.

**NCR ID:** ECSed03584

**Software:** FUI

**Title:** No Status or error msg for ingesting non-existing file

**Severity:** 3

**Problem:** There is no error or status message indicated when a non-existing file is chosen to be ingested into the load manager.

**NCR ID:** ECSed03592

**Software:** FUI

**Title:** Cursor missing in load ingest window for file selection  
**Severity:** 3  
**Problem:** There is no cursor in the filter and selection input fields of the load ingest window.

**NCR ID:** ECSed03698  
**Software:** FUI-B  
**Title:** The control window truncates event messages containing commas.  
**Severity:** 3  
**Problem:** I expect the control window to display the entire event text message. However because commas are a delimiter in the control window event display table, events containing commas will be truncated at t

**NCR ID:** ECSed03816  
**Software:** FUI  
**Title:** Event messages displayed in control window not in event display  
**Severity:** 3  
**Problem:** The realtime server and data server and a userstation was up and running, brought up a userstation however the events from that userstation were displayed in the control window and not on the event display. Closed and reopened event display and user was able to see the second user's events.

**NCR ID:** ECSed03898  
**Software:** FUI  
**Title:** Analysis Request: Selected times & selected telemetry not fully displ  
**Severity:** 3  
**Problem:** The times and telemetry, in the Analysis Request Builder window, are cut off. The table fields are not big enough.

**NCR ID:** ECSed03899  
**Software:** FUI  
**Title:** Selecting Stats: have to enter on interval before stats are selected  
**Severity:** 3  
**Problem:** If the icon to select statistics is clicked, an error message is displayed indicating an invalid interval time chosen. The user must enter a time, click on the statistics icon and then select it.

**NCR ID:** ECSed03901  
**Software:** FUI  
**Title:** Analysis Request: Good Data only is not the default  
**Severity:** 3  
**Problem:** F-ANA-03070 The default data selection for an analysis request should be good data only but it is all data.

**NCR ID:** ECSed03902  
**Software:** FUI  
**Title:** The Contrl windw dfault filtr is diffrent from the dflt in selct windw  
**Severity:** 3  
**Problem:** The default event filter in the control window is show for all and no bold. If the filter button is clicked on to change filters, the selection filter window appears with none selected.

**NCR ID:** ECSed03903  
**Software:** FUI  
**Title:** Contrl windw evnts font changes for bold option  
**Severity:** 3  
**Problem:** The font for the Control window events is different for show only and show plus bold. The show/bold font is smaller.

**NCR ID:** ECSed03905  
**Software:** FUI  
**Title:** Analysis Telem Selectr: Params must be deselected  
**Severity:** 3  
**Problem:** After a parameter is selected for analysis, the user must deselect it before selecting the next parameter or it will be selected a second time and a message will be displayed stating that the parameter was already selected.

**NCR ID:** ECSed03916  
**Software:** FUI  
**Title:** Proc Bldr needs to send error msg when dirs are not accessible.  
**Severity:** 3  
**Problem:** There have been several instances when the proc directory or .Ecltemplate file or necessary odf's are not accessible. Proc Builder does not handle these instances properly (It can crash or appear to d

**NCR ID:** ECSed03948  
**Software:** FUI  
**Title:** Display Bldr need to delete 4 files to delete a page  
**Severity:** 3  
**Problem:** In order to delete a page, the user must delete 4 files individually. Two files in /newpages and two in /activepages. The user should be able to tell the system which page it wants deleted and all files associated with that page get deleted.

**NCR ID:** ECSed03968  
**Software:** FOS  
**Title:** No initial "No Data" flag for mnemonics  
**Severity:** 3

**Problem:** Mnemonics come up with a default value of 0 instead of "No Data". All Mnemonics should have a "No Data" flag before telemetry is generated.  
reference F-TLM-00610

**NCR ID:** ECSed03997

**Software:** FUI

**Title:** No space between mnemonic and data value

**Severity:** 3

**Problem:** On the Telemetry Header and TLM Decom pages, there is no space between the parameter mnemonic and the telemetry data value when the mnemonic is 20 characters long. There should always be at least one space to improve legibility

**NCR ID:** ECSed04008

**Software:** DMS-EventLogger

**Title:** Host Name for events

**Severity:** 3

**Problem:** Currently there is no way of knowing what host an event is coming from on the event display. This can be easily fixed by putting 'uname' into the EventLogger class. The EventLogger would know what host it is running on and put that into the event before sending it to the EventHandler.

**NCR ID:** ECSed04028

**Software:** FUI

**Title:** Incorrect syntax for CCW/CMW dialog box creates a non-userfriendly ms

**Severity:** 3

**Problem:** When users enter incorrect syntax in CCW/CMW dialog box. an error dialog box appears stating FuCmd control|Win ::InitGsProxy0 failed: CmdControl found 0 or more than 1 G/S con... This message is not user-friendly, the user has no indication that the error is due to invalid syntax

**NCR ID:** ECSed04044

**Software:** ANA

**Title:** FaAcCruncher needs to add an event

**Severity:** 3

**Problem:** The FaAcCruncher should send an event when no data exists for the timespan of the analysis request it is processing. Also, the Analysis Request Started event should be reworded to be more meaningful.

**NCR ID:** ECSed04078

**Software:** FUI

**Title:** Horizontal scroll bars in control window missing

**Severity:** 3

**Problem:** The control window no longer has a horizontal scroll bar in the "events" area; also the "message" column is smaller than before.

**NCR ID:** ECSed04092

**Software:** SYSTEM

**Title:** REL A requirement change initiated by GSFC CCR 505-01-41-105

**Severity:** 3

**Problem:** Requirement EOC5030#A needs to have changes made in accordance with GSFC CCR 505-01-41-105.

**NCR ID:** ECSed04154

**Software:** FOS Common

**Title:** clearmakes create (2) versions of same executable..

**Severity:** 3

**Problem:** The new makefile options create 2 versions of the same executable. One with the long Rogue Wave name, and then a COPY of that executable to the bin name. Since we are in such a crunch for disk space, I recommend we create a symbolic link between the two, or only create ONE executable.

**NCR ID:** ECSed04231

**Software:** FUI

**Title:** Find option for command does find cmd specified

**Severity:** 3

**Problem:** Attempted to use find option selected command, system did not find the CMD.

**NCR ID:** ECSed04328

**Software:** ANA FaRtDServer

**Title:** FaRtDServer will not run from a directory that it can not write to.

**Severity:** 3

**Problem:** The Expert Advisor Data Server (FaRtDServer) will not run from a directory that it can not write to, because it is trying to open a rwfile and fails. It also creates a log file, which will not be cre

**NCR ID:** ECSed04361

**Software:** FUI

**Title:** Cannot resize load-manager window

**Severity:** 3

**Problem:** Cannot resize the load manager window (F-FUI-01335)

**NCR ID:** ECSed04367

**Software:** PAS

**Title:** DMS-00160 level 4 requirement is unclear what is expected

**Severity:** 3  
**Problem:** Level 4 requirement DMS-00160 is unclear on what the software should contain .  
Requirement states: the FOS should have the following:  
1. command list  
2. parameter mapping def.  
3. parameter limits  
(F-DMS-00160)

**NCR ID:** ECSed04369  
**Software:** PAS  
**Title:** No time is displayed w/PAS resource data on data msg line  
**Severity:** 3  
**Problem:** Using the mouse to indicate the resource data values does not display the exact time for the data value on the data display line  
F-FUI-04290  
F-PAS-00605  
F-PAS-00610

**NCR ID:** ECSed04385  
**Software:** FUI  
**Title:** Search string text on event displays is blanked out  
**Severity:** 3  
**Problem:** When entering text for searching events the text in the "search string" field is grayed out

**NCR ID:** ECSed04388  
**Software:** HRD  
**Title:** EOC test connections; Tconnections & break-out boxes  
**Severity:** 3  
**Problem:** T connections & break-out boxes are not part of this type of lan configuration  
HRD-06010

**NCR ID:** ECSed04391  
**Software:** FUI  
**Title:** No events msgs provided by driver for DMS, SYS and PAS  
**Severity:** 3  
**Problem:** During the operation of the events driver, there were no event messages for DMS, SYS and pas. They are needed to test full filtering capabilities

**NCR ID:** ECSed04393  
**Software:** FUI  
**Title:** Must click on tool twice in tool dialog box to select it  
**Severity:** 3

**Problem:** After a tool is selected in the tools dialog box, the window closes . When the user opens it again the last tool chosen is still selected If the user wants to use another tool, the old tool is deselected on the first mouse click and the new tool is selected on the second. I would expect to click on the desired tool onec.

**NCR ID:** ECSed04394

**Software:** FUI

**Title:** Tools dialog box is corrupted when re-opened

**Severity:** 3

**Problem:** If the user closes and opens the tools dialog box quickly, parts of the window become black. Each time, different parts of the window become corrupt

**NCR ID:** ECSed04395

**Software:** HRD

**Title:** RAIDs not hosted to a minimum of 2 front-end processors

**Severity:** 3

**Problem:** RAID is only hosted to 1 front-end processor (only for release A)  
F-HRD-03040

**NCR ID:** ECSed04400

**Software:** FUI

**Title:** S/C ID field for event messages not consistent

**Severity:** 3

**Problem:** "S\C field in events" display -some events msgs show up lower case, some upper case

**NCR ID:** ECSed04401

**Software:** FUI

**Title:** The same window gets invoked 2 times; one is blank and cannot be clos

**Severity:** 3

**Problem:** If the user opens the same window up two times. For instance the telemetry dialog window, the first window comes up blank and the only way for the user to close it is to kill the process

**NCR ID:** ECSed04405

**Software:** TLM

**Title:** Space craft ID is 0 it should be 43

**Severity:** 3

**Problem:** When telemetry is flowing, the spacecraft ID is getting updated with 0 according to the ICD106 the space craft should be 43

**NCR ID:** ECSed04407

**Software:** FUI  
**Title:** Load Manager window is invoked with Room builder  
**Severity:** 3  
**Problem:** Displaying the room builder tool, will also invoke the load manager window. The room builder window was invoked from the tools dialog box

**NCR ID:** ECSed04409  
**Software:** FUI  
**Title:** Continuous scrolling ground script finished message  
**Severity:** 3  
**Problem:** When a user has completed ground script execution meaning ground script controller has successfully executed all cmds and directives a msg indicating "the current ground script has been finished scrolls continuously until ground script controller is killed or brought down.

**NCR ID:** ECSed04423  
**Software:** FUI  
**Title:** Iconifying load manager & control window names the icon as top level  
**Severity:** 3  
**Problem:** The name on the icon for the control and load manager is "top level" all iconified windows should have their window name be the same as icon name

**NCR ID:** ECSed04425  
**Software:** PAS  
**Title:** No Dialog MSG w/ Non-impact option  
**Severity:** 3  
**Problem:** During the scheduling option in a "non-impact" mode , a msg should appear saying what happened to the scheduled activity

**NCR ID:** ECSed04427  
**Software:** FUI  
**Title:** Event display timeline update is delayed  
**Severity:** 3  
**Problem:** When running the event driver, there is a delay of "one cycle" in updating the event display graphic timeline. The attached snap shows 7 text events at time 16:06:15. But the graphic timeline show only one event, which corresponds to the highlighted CMD event. (the first event in the sequence of 7 events). eventually the other 6 events were displayed on the graphic time line only after another event was introduced

**NCR ID:** ECSed04431  
**Software:** PAS  
**Title:** Error dialog box for activity scheduling has MsgDialogShell as title  
**Severity:** 3

**Problem:** Error dialog box has the wrong title. "error" should be the title

**NCR ID:** ECSed04436

**Software:** FUI

**Title:** Times from the pair time selector are different than the selected time

**Severity:** 3

**Problem:** The time selected in the pair time selector window was 19:00:00. When the user clicked OK, and viewed the time in the selected time table of the analysis request builder, the stop time was 18:59:59

**NCR ID:** ECSed04441

**Software:** FUI

**Title:** Stats Rate in selected param field is displayed in seconds only

**Severity:** 3

**Problem:** When the user selects parameters for a statistics request, the selected parameters table displays the rate in seconds. 1 day equals 86400 seconds. This should be displayed in Days, Hours, Minutes & seconds.

**NCR ID:** ECSed04442

**Software:** ANA

**Title:** Incorrect error message when saving an incomplete analysis request

**Severity:** 3

**Problem:** The user tried to save an analysis request without submitting times. Received an error message: Requests cannot be sent, start/stop times must be selected. Expected to see an error message indicating that request could not be saved rather than sent.

**NCR ID:** ECSed04443

**Software:** FUI

**Title:** Real-time graphs can't resize the graph display

**Severity:** 3

**Problem:** The size of the graph can not be changed. The user should be able to change the physical size of the graph.

**NCR ID:** ECSed04444

**Software:** FUI

**Title:** Real-time graphs can't specify graph length

**Severity:** 3

**Problem:** The length of the graph can not be specified. The graph continues to scroll. The user can never go back to see the beginning of the graph after a certain period of time.

**NCR ID:** ECSed04445

**Software:** FUI  
**Title:** Real-time tables - table is too big for window  
**Severity:** 3  
**Problem:** The user can't see the entire table unless the telemetry window is maximized. The scroll bars can't be used. The table should shrink down with the window.

**NCR ID:** ECSed04447  
**Software:** FUI  
**Title:** Wait 10 directive does not recognize suspend directive  
**Severity:** 3  
**Problem:** User entered a wait10 directive as part of a groundscript. User suspended the ground script while the system was in a wait state the ground script execution resumes automatically after the specified wait time, instead of waiting for the user to initiate the resume option

**NCR ID:** ECSed04450  
**Software:** DMS  
**Title:** No way to exit stored command indicator  
**Severity:** 3  
**Problem:** The stored cmd indicator field is supplied by the FOT. There is no way to set stored command indicator so it will pass validation

**NCR ID:** ECSed04453  
**Software:** ANA  
**Title:** Badly worded event msg upon analysis request submittal  
**Severity:** 3  
**Problem:** When submitting analysis request recieved msgs string x was created instead of meaningful event msg

**NCR ID:** ECSed04455  
**Software:** ANA  
**Title:** Number of simultaneous requests has not been determined  
**Severity:** 3  
**Problem:** The number of simultaneous requests that a user cab submit has not been determined  
F-ANA-08010

**NCR ID:** ECSed04457  
**Software:** FUI  
**Title:** Only one spacecraft to test filtering capabilities  
**Severity:** 3  
**Problem:** All filter capabilities can't br tested because there is only one spacecraft to filter on.  
F-FUI-03205  
03215

03220

**NCR ID:** ECSed04459

**Software:** HRD

**Title:** Data server processors shall be individual

**Severity:** 3

**Problem:** There is only one data server in the EOC. Unable to compare it with any other data server

**NCR ID:** ECSed04460

**Software:** HRD

**Title:** H9A10 cabinet panel do not remove

**Severity:** 3

**Problem:** Unable to locate in vendor documentation that side panels remove. Unable to test removal due to cabinet placement

# Appendix A. Build Instructions

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This appendix describes the necessary installation/build procedure which will be used for installing the FOS custom software released by the CM at the various DAACs. This procedure is based on the assumption that the necessary tar files have been copied (using ftp) from the CM directory to the directories on the FOS machine where the installation is to be done.

## A.1 Build Process

The FOS custom software build process is performed in order to generate a new set of executables. These files are subsequently loaded into specific workstations and file servers in order to meet the functional requirements of the FOS program.

The build process inputs consist of the following:

1. ClearCase views for each sub-system
2. The correct file versions dictated by the views' configuration specification
3. The pertinent NCRs that were addressed by the build

Scripts are invoked in order to perform the builds. There are two ways of actually doing this. One is by using an enhanced version of ClearCase's Graphical User Interface (GUI). The other is by keying in commands and executing them in a Command Line Interface (CLI). The GUI performs the same commands as the CLI, however the GUI executes the scripts by pointing and clicking a mouse, rather than keying in all of the detail UNIX and Cleartool commands.

The FOS custom software is partitioned into ten (10) areas. The first partition is known as FOSCOMMON, and is comprised of common code that is referenced by the remaining nine subsystems. The nine subsystems are:

- Analysis Subsystem (ANA)
- Command Subsystem (CMD)
- Command Management Subsystem (CMS)
- Data Management Subsystem (DMS)
- FOS User Interface Subsystem (FUI)
- Planning and Scheduling Subsystem (PAS)
- Real-Time Contact Management Subsystem (RCM)
- Resource Management Subsystem (RMS)
- Telemetry Subsystem (TLM)

FOSCOMMON is built *first*. DMS is built *last*. Other than these two constraints, the build order is arbitrary. Each subsystem is built by performing the following five steps:

- Set the view
- Set the path to the subsystem
- Specify the target platform (Sun or DEC)
- Source the .buildrc file

- Enter `clearmake -C GNU -V`

The CLI interface commands are located in the `/scripts/` area. The `xclearcase` GUI enhanced menu, Configuration Management/Change Control (CM/CC), performs all of the housekeeping for building FOS custom software.

## A.2 GUI Build Process

The GUI build process is described below:

1. Ensure that the `cm-cc.grp` menu file resides in `/home/$USER/grp` path
2. Run “xclearcase” from a licensed node

```
voyager{user}6: xclearcase &
```

Using the menu, select the view needed for building FOSCOMMON, expand the menu to fill the monitor by clicking the larger upper right corner button. Ensure that the subsystem `make.targets` file has the target platform set.

3. Click on “CM/CC”
4. Click on “Build FOS S/W”
5. Click on “Foscommon”
6. Display the transcripts window to provide visibility to the FOSCOMMON build.

The FOSCOMMON build is complete when the `build-foscommon` script finishes. For each of the remaining nine subsystems, perform the following steps:

7. Using the menu, select the view needed for building the next subsystem
8. Ensure that the subsystem `make.targets` file has the target platform set
9. Click on “CM/CC”
10. Click on “Build FOS S/W”
11. Click on the next subsystem
12. Display the transcripts window to provide visibility to the subsystem build. The FOSCOMMON build is complete when the `build-subsystem` script finishes

A record of the build is saved into a logfile, named `/home/$USER/logfile`. This file can be saved and printed to record the build process for Quality Assurance purposes.

## A.3 CLI Build Process

The CLI build process is described below:

1. Build FOSCOMMON:

- Enter the command: `cleartool setview {appropriate view tag}`
2. Set the correct path for FOSCOMMON: `cd /ecs/formal/fos/foscommon2`
  3. Ensure that the subsystem `make.targets` file has the target platform set. Enter the command: `source .buildrc`
  4. Enter the command: `Clearmake -C GNU -V`

FOSCOMMON build is complete when the Clearmake finishes. For the remaining nine subsystems, perform the following steps:

### **A.3.1 Build ANA**

1. Enter the command:  
`cleartool setview {appropriate view tag}`
2. Set the correct path for ANA: `cd /ecs/formal/fos/ana2`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

ANA build is complete when the Clearmake finishes

### **A.3.2 Build CMD**

1. Enter the command:  
`cleartool setview {appropriate view tag}`
2. Set the correct path for CMD: `cd /ecs/formal/fos/cmd2`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

CMD build is complete when the Clearmake finishes

### **A.3.3 Build CMS**

1. Enter the command:  
`cleartool setview {appropriate view tag}`
2. Set the correct path for CMS: `cd /ecs/formal/fos/cms`
3. Ensure that the subsystem `make.targets` file has the target platform set

4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

CMS build is complete when the Clearmake finishes

### **A.3.4 Build FUI**

1. Enter the command:  
`cleartool setview {appropriate view tag}`
2. Set the correct path for FUI: `cd /ecs/formal/fos/fui3`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

FUI build is complete when the Clearmake finishes

### **A.3.5 Build PAS**

1. Enter the command:  
`cleartool setview {appropriate view tag}`
2. Set the correct path for PAS: `cd /ecs/formal/fos/pas`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

PAS build is complete when the Clearmake finishes

### **A.3.6 Build RCM**

1. Enter the command:  
`cleartool setview {appropriate view tag}`
2. Set the correct path for RCM: `cd /ecs/formal/fos/rcm3`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

RCM build is complete when the Clearmake finishes

### A.3.7 Build RMS

1. Enter the command:

```
cleartool setview {appropriate view tag}
```

2. Set the correct path for RMS: `cd /ecs/formal/fos/rms2`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

RMS build is complete when the Clearmake finishes

### A.3.8 Build TLM

1. Enter the command:

```
cleartool setview {appropriate view tag}
```

2. Set the correct path for TLM: `cd /ecs/formal/fos/tlm2`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

TLM build is complete when the Clearmake finishes

### A.3.9 Build DMS

1. Enter the command:

```
cleartool setview {appropriate view tag}
```

2. Set the correct path for DMS: `cd /ecs/formal/fos/dms4`
3. Ensure that the subsystem `make.targets` file has the target platform set
4. Enter the command: `source .buildrc`
5. Enter the command: `Clearmake -C GNU -V`

DMS build is complete when the Clearmake finishes

The entire Build process is complete when all the subsystems have successfully built after the FOSCOMMON. It is now possible to begin the Installation process.

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## Appendix B. Installation Procedure

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This section outlines the installation procedure for the FOS custom software.

1. Untar tar file. The command is: `tar xvf file.tar`
2. Uncompress file. The command is: `uncompress file.tar.Z`
3. Copy files at the directory level.

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## Appendix C. Special Operating Instructions

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Along with the formal documents, FOS software is delivered with README files for most of the subsystems. These files are located in the doc directory for each subsystem. The following disclaimer applies to these files.

These README files have not been verified. They do, however, contain valid and useful information concerning the setting of environment variables and compile instructions. However, should there be any errors or discrepancies between the instructions contained in the README files and the delivered documentation, the delivered documentation should take precedence.

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# Appendix D. User Feedback Procedures

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## **Feedback from the Users**

Collating user feedback is one of the primary goals of FOS. Collected user feedback will be provided directly to the subsequent release teams for further assessment and action. Several feedback channels will be provided for effective collection of data.

### **URDB**

Link to URDB will be provided on the FOS WEB page which is under construction.

### **Bulletin board**

FOS bulletin board server is located on <http://newsroom.hitc.com/fos/fos.html>.

## **Non Conformance Reports (NCR)**

NCRs for FOS are submitted using the FOS NCR WEB page (URL <http://newsroom.gsfc.nasa.gov/sit/ddts/ddts.html>). This page provides a direct link to the EDF DDTs database which tracks the FOS NCRs. The access is allowed only to authorized ECS users. The procedure for submitting NCRs is explained in detail in the Project Instruction (PI) SD-1-014, Software Nonconformance Reporting.

## **Feedback to the users**

Keeping the users of the system informed about the status and operational aspects of the system is also as important as collecting feedback from the users. Consistent with this approach, users will be able to get FOS data from the following channels:

### *Bulletin board*

Information will be posted to the bulletin board at <http://newsroom.hitc.com/fos/fos.html>.

### *FOS WEB Page*

FOS WEB Page (under construction) will also provide useful information including access to the FOS documentation on-line.

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# Abbreviations and Acronyms

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ANA	Analysis Subsystem
CC	Change Control
CCB	Change Control Board (Hughes Convention)
CCR	Configuration Change Request
CCSDS	Consultative Committee for Space Data Systems
CDRL	Contract Deliverable Requirements List
CERES	Clouds and Earth Radiant Energy System
CI	Configuration Item
CLI	Command Line Interface
CLTU	Command Link Transmission Unit
CM	Configuration Management
CMD	Command Subsystem
CMS	Command Management Subsystem
COTS	Commercial off-the-shelf Software
CSMS	Communications and Systems Management Segment (ECS)
CRC	Cyclic Redundancy Code
CSC	Coordinate System Conversion
CSCI	Computer Software Configuration Item
CSS	Communication Subsystem
DAAC	Distributed Active Archive Center
DCE	Distributed Computing Environment
DCN	Document Change Notice
DDTS	Distributed Defect Tracking system
DID	Data Item Description
DMS	Data Management Subsystem
DSN	Deep Space Network

DSS	Data Server Subsystem
ECL	ECS Command Language
ECS	EOSDIS Core System
EDHS	ECS Data Handling System
EDOS	EOS Data and Operations System
EOC	EOS Operations Center
EOS	Earth Observing System
EOSAM	EOS AM Project (morning spacecraft series)
EOSDIS	EOS Data and Information System
EOSPM	EOS PM Project (afternoon spacecraft series)
ESDIS	Earth Science Data and Information System
FOP	Frame Operations Procedure
FOS	Flight Operations Segment
FOT	Flight Operations Team
ftp	File Transfer Protocol
FUI	FOS User Interface Subsystem
GSFC	Goddard Space Flight Center
GUI	Graphical User Interface
HAIS	Hughes Applied Information Systems
HITC	Hughes Information Technology Company
I&T	Integration & Test
I/O	Input/Output
IP	International Partner
ISS	Internetworking Subsystem
IST	Instrument Support Toolkit
LaRC	Langley Research Center
M&O	Maintenance and Operation
MET	Metadata
MSS	Management Subsystem

NASA	National Aeronautics and Space Administration
NCC	Network Control Center (GSFC)
NCR	Nonconformance Report
NCSA	National Center for Supercomputer Applications
PAS	Planning and Scheduling
PDB	Project Data Base
PDR	Preliminary Design Review
PI	Project Instruction or Principal Investigation
QA	Quality Assurance
RCM	Real-Time Contact Management Subsystem
RMS	Resource Management Subsystem
RRDB	Recommended Requirements Database
SCF	Science Computing Facility
SDP	Science Data Production
SDPS	Science Data Processing Segment
SDPF	Science Data Processing Facility
TBD	To Be Determined
TL	Team Leader
TLM	Telemetry Subsystem
TRMM	Tropical Rainfall Measuring Mission (joint US - Japan)
URL	Universal Research Locator
US	United States
WWW	World Wide Web

