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EOSDIS Core System Project

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

Version 1.01

November 12, 1996

Hughes Information Technology Systems
Upper Marlboro, Maryland

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Prepared Under Contract NAS5-60000

SUBMITTED BY

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Preface

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.

Any questions regarding distribution should be addressed to:

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Abstract

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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Change Information Page

List of Effective Pages	
Page Number	**Issue**
Title	Version 1.01
iii through xii	Version 1.01
1-1 and 1-2	Version 1.01
2-1 and 2-2	Version 1.01
3-1 through 3-4	Version 1.01
4-1 through 4-22	Version 1.01
5-1 through 5-46	Version 1.01
A-1 through A-6	Version 1.01
B-1 and B-2	Version 1.01
C-1 and C-2	Version 1.01
D-1 and D-2	Version 1.01
AB-1 through AB-4	Version 1.01

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Contents

Preface

Abstract

Change Information Page

Contents

1. Introduction

1.1 Identification of Document 1-1
1.2 Scope of Document 1-1
1.3 Purpose and Objectives of Document 1-1
1.4 Document Status and Schedule 1-1
1.5 Document Organization 1-1

2. Related Documentation

2.1 Parent Document 2-1
2.2 Applicable Documents 2-1
2.3 Information Documents 2-1

3. Product Description

3.1 Product Description and General Capabilities 3-1
3.1.1 Analysis Subsystem (ANA) 3-1
3.1.2 Command Subsystem (CMD) 3-2
3.1.3 Command Management Subsystem (CMS) 3-2

3.1.4 Data Management Subsystem (DMS) 3-2
3.1.5 FOS User Interface Subsystem (FUI) 3-2
3.1.6 Planning and Scheduling (PAS) 3-2
3.1.7 Real-Time Contact Management Subsystem (RCM) 3-2
3.1.8 Resource Management Subsystem (RMS) 3-3
3.1.9 Telemetry Subsystem (TLM) 3-3

4. Product Inventory

4.1 Inventory of Materials 4-1
4.1.1 Documentation 4-1
4.1.2 Archive Tapes 4-1
4.1.3 Utility and Support Software 4-1
4.1.4 COTS Software Inventory 4-1
4.1.5 Shareware Inventory 4-5
4.2 FOS Custom Software 4-7
4.2.1 FOS Custom Software Version 1.00 Tar File Listing 4-7

5. Non-Conformance Status

5.1 Known Problems with FOS 5-1
5.2 FOS Non-Conformance Reports (Closed Status) 5-1
5.3 FOS Non-Conformance Reports (Open Status) 5-1

Tables

4-1 COTS Software Inventory List (GSFC) 4-2
4-2 Shareware Inventory List (GSFC) 4-6

Appendix A. Build Instructions

Appendix B. Installation Procedure

Appendix C. Special Operating Instructions

Appendix D. User Feedback Procedures

Abbreviations and Acronyms

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1. Introduction

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

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-001-001	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

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3. Product Description

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

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-001-001
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- PR-025-001
Label: FOS_v1.0_111196 Distribution Date: November 11, 1996
>>> 5.0gbyte format (high density) <<<

FOS_v1.0_111196.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-001-001) 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 Revision for 9.0	-	-	HP	A4030B OPT#APH
	C++ Softbench	3.2	-	HP	B2617B
	C++ Softbench End Users Kit	3.2	-	HP	B2620B
	C++ Softbench CD Certificate	3.2	-	HP	B2620B OPT# AAU
	HP-UX CD-ROM Media	-	-	HP	B2826B
	HP-UX Software on Disk	-	-	HP	B2826B OPT#AAF
	C++ Class Library LTU	-	-	HP	B2914AA
	Version of DCE	9.0	-	HP	B2920A OPT#APH
	Applications Development	9.0	-	HP	B2922BA
	HP-UX 9.0 Version of DCE	-	-	HP	B2922BA OPT#APH
	Runtime Instant Ignition	-	-	HP	B3945AA
	English Localization	-	-	HP	B3945AA OPT#ABA
	Revised for HP-UX 9.0	-	-	HP	B3945AA OPT#APH
	Driver for EISA	8.x, 9.x, & 10	-	HP	WA-C285
	C++ Softbench Hard Copy Manuals	-	-	HP	B2620B OPT#OB1
CSS-EOC-1 (CSS Server)	DCE Client License	1.1	-	HP	B2923A
	DCE CDS Server	1.1	-	HP	B2924A
	DCE Security Server	1.1	-	HP	B2925A
	X/Motif	-	-	-	-
	ClearCase Client 2.1	2.1	patch 2.1-127	-	-
	ClearCase Client 2.1	2.1	patch 2.1-109	-	-
	ClearCase Client 2.1	2.1	patch 2.1-141	-	-
	DCE Client	1.0.3 (a)	-	-	-
	Tivoli Client	-	-	-	-
	Netscape Browser	2.02	-	-	-
	/usr/local/rogue61/net.h++	1.0.1	-	-	-
	/usr/local/rogue61/tools.h++	6.1	-	-	-
	/usr/local/rogue61/dbtools.h++	1.1	-	-	-
ISS-EOC-1 (Internetworking Equipment)	Firmware	1.07.05	-	CBL	2162059
FOS-EOC-2 (RAID File Server)	Digital UNIX Operating System	3.2	-	DEC	QA-MT4AA-H
	DEC Storage Works Library	-	-	DEC	QA-054AA-C
	Network Applications Support	-	-	DEC	QL-306AE-AA
	OSF/Motif Base Software	1.2.3	-	DEC	QL-MT4AE-6R

	OSF/Motif USR Digital Unix, 8 user	n/a	n/a	DEC	QL-MT7AM-3E

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

Identification:	Component Description	Version	Patches	Vendor	Part Number
	UNIX SF LIN on CD-ROM	n/a	n/a	DEC	QT-054AA-C
	Jukebox Tier 1	n/a	n/a	DEC	QL-04VAL-3B
	DCE Client	1.0.3 (a)	-	-	-
	Media & Documentation	n/a	n/a	DEC	QT-MT4AA-E
CSS-EOC-4	Firmware version 5.6	5.6	-	Advanced Computer Concepts	FIRM
	Micro Plex Ethernet Print Server	1.2	-	Advanced Computer Concepts	PRINT SERVER
FOS-EOC-5 (FOT User Station)	DCE for Solaris 2.4	1.0.3a		SUN	BASE-SVC
	X/Motif				
	RogueWave libraries	6.1			
	Kerberos	5b5		Cygnus	
	Sybase Client	10.02			
	Netscape Browser	2.02			
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			
FOS-EOC-2 (Real Time Server)	IDL	4.0	-	DEC	IDL
	Digital UNIX Alpha Lib	3.0a	-	DEC	QA-065AA-H8
	DEC Fuse For OSF-1	-	-	DEC	QL-092AM-3B
	DEC Fuse For OSF-1	-	-	DEC	QL-094AM-3B
	Network Application Support	-	-	DEC	QL-306AE-AA
	OSF/Motif Base Software	-	-	DEC	QL-MT4AE-6R
	DEC OSF-1 AXP Developers Ext.	-	-	DEC	QL-MT5AE-AA
	OSF/Motif USR Digital Unix, 8 user	n/a	n/a	DEC	QL-MT7AM-3E
	DEC C++ For U/A	1.3B	-	DEC	QL-MTRAE-AA
	RogueWave libraries	6.1	-	-	-
	Sybase SQL Server	10.0.2	-	-	-
	Sybase Open Client/C	10.0.2	-	-	-
	Sybase Embedded SQL/C	10.0.2	-	-	-
	IMSL/C	2.0	-	-	-
	Kerberos 5B5	-	-	-	-
	DCE Client	1.0.3 (a)	-	-	-
	Npassword	1.2.4	-	-	-
	TCP Wrappers	7.3	-	-	-
	Tripwire	1.2	-	-	-

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

Identification:	Component Description	Version	Patches	Vendor	Part Number
FOS-EOC-7 (Data Server)	Digital OS	-	-	DEC	QA-054AA-H8
	DEC Fuse For OSF-1	-	-	DEC	QL-092AM-3B
	DEC Fuse For OSF-1	-	-	DEC	QL-094AM-3B
	Network Application Support	-	-	DEC	QL-306AE-AA
	OSF/Motif Base Software	-	-	DEC	QL-MT4AE-6R
	DEC OSF-1 AXP Developers Ext.	-	-	DEC	QL-MT5AE-AA
	OSF/Motif USR Digital Unix, 8 user	n/a	n/a	DEC	QL-MT7AM-3E
	DEC C++ For U/A	1.3B	-	DEC	QL-MTRAE-AA
	RogueWave libraries	6.1	-	-	-
	Sybase SQL Server	10.0.2	-	-	-
	Sybase Open Client/C	10.0.2	-	-	-
	Sybase Embedded SQL/C	10.0.2	-	-	-
	IMSL/C	2.0	-	-	-
	DCE Client	1.0.3 (a)	-	-	-
FOS-EOC-8 (FOT User Station)	DCE for Solaris 2.4	1.0.3a		SUN	BASE-SVC
	X/Motif				
	RogueWave libraries	6.1			
	Sybase Client	10.02			
	Netscape Browser	2.02			
FOS-EOC-9 (FOT User Station)	DCE for Solaris 2.4	1.0.3a		SUN	BASE-SVC
	X/Motif				
	RogueWave libraries	6.1			
	Sybase Client	10.02			
	Netscape Browser	2.02			
	RTie (SSR & Activity log)	3.5	-	-	-
	RT Server	3.5	-	-	-
FOS-EOC-10 (FOT User Station)	C++ Products Media, Documentation	2.1	-	SUN	VWSCPL-P
	Visual Workshop Slimkit	2.1	-	SUN	VWSCPL-S
	DCE for Solaris 2.4	1.0.3a		SUN	BASE-SVC
	X/Motif				
	RogueWave libraries	6.1			
	Sybase Client	10.02			
	Netscape Browser	2.02			
	RTie (Expert Advisor)	3.5	-	-	-
	RT Server	3.5	-	-	-
	RThci	3.5	-	-	-

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

Identification:	Component Description	Version	Patches	Vendor	Part Number
FOS-EOC-11 (Console Manager)	Unix Software library LPS CD-ROM	-	-	DEC	QA-054AA-HA
	Open 3D	-	-	DEC	QL-0AFAE-AA
	Multimedia Services RT-DEC OSF-1	-	-	DEC	QL-20YA9-AA
	PCM Documentation Kit	-	-	DEC	QA-MU1AA-G
	PCM Documentation Kit	-	-	DEC	QA-OLWAF-H
	OSF-BASE	-	-	DEC	QL-MT4AE-6X
FOS-EOC-12 (Console Manager)	Open 3D	-	-	DEC	QL-0AFAE-AA
	Multimedia Services RT-DEC OSF-1	-	-	DEC	QL-20YA9-AA
FOS-EOC-12 Time Gateway (	Operation and Technical Manual	-	-	CMA	TS2000
MSS-EOC-2 Management Subsystem Workstation	WABI	2.1	-	SUN	724-2120-01
	SPARCompiler C	3.0.1	-	SUN	CC-S
	SPARCompiler C++	4.0.1	-	SUN	CPL-S
	SPARCWorks	3.0.1	-	SUN	SCC-P
	Solaris Operating System	2.4	-	SUN	SOL
	Solaris Media	2.4	-	SUN	SOLD-C
	DCE for Solaris 2.4	1.0.3a	-	SUN	BASE-SVC
	RogueWave 6.1 Libraries				
	ClearCase Server & Client	2.1	2.0.3-119	Atria	
			2.0.3-101	Atria	
			2.0.3-139	Atria	
	Tivoli Client				
	Netscape Browser	2.02			
	DDTS	3.1.12			
	XRP II	v3.0			
MSS-EOC-3 Management Subsystem Server	WABI	2.1	-	SUN	724-2120-01
	SPARCompiler C	3.0.1	-	SUN	CC-S
	SPARCompiler C++	4.0.1	-	SUN	CPL-S
	SPARCWorks	3.0.1	-	SUN	SCC-P
	Solaris Operating System	2.4	-	SUN	SOL
	Solaris Media	2.4	-	SUN	SOLD-C
	DCE for Solaris 2.4	1.0.3a	-	SUN	BASE-SVC
	X/Motif				
	RogueWave 6.1 Libraries				
	ClearCase Server & Client	2.1	2.0.3-119	Atria	
			2.0.3-101	Atria	
			2.0.3-139	Atria	
	Tivoli Client				
	Netscape Browser	2.02			

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

Identification:	Component Description	Version	Patches	Vendor	Part Number
	DDTS	3.1.12			
	XRP II	v3.0			

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-001-001) 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)	Npassword	1.2.4	-	-	-
	TCP Wrappers	7.3	-	-	-
	Tripwire	1.2	-	-	-
FOS-EOC-2 (RAID File Server)	Kerberos 5B5	-	-	-	-
	Npassword	1.2.4	-	-	-
	TCP Wrappers	7.3	-	-	-
	Tripwire	1.2	-	-	-
FOS-EOC-7 (Data Server)	Kerberos 5B5	-	-	-	-
	Npassword	1.2.4	-	-	-
	TCP Wrappers	7.3	-	-	-
	Tripwire	1.2	-	-	-
FOS-EOC-8 (FOT User Station)	Kerberos	5b5		Cygnus	
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			
	NCSA httpd Server	1.5.1	-	-	-
FOS-EOC-9 (FOT User Station)	Kerberos	5b5		Cygnus	
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			

FOS-EOC-10 (FOT User Station)	Kerberos	5b5		Cygnus	
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			
FOS-EOC-11(Console Manager)	Kerberos	5B5			
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			

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

Identification:	Component Description	Version	Patches	Vendor	Part Number
FOS-EOC-12 (Console Manager)	Kerberos	5B5			
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			
MSS-EOC-2 Management Subsystem Workstation	Crack	4.1			
	Satan	1.1.1			
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			
MSS-EOC-3 Management Subsystem Server	Crack	4.1			
	Satan	1.1.1			
	Npassword	1.2.4			
	TCP Wrappers	7.3			
	Tripwire	1.2			

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 10 vobadm       8192 Nov  8 15:34 bin
drwxrwxr-x  2 vobadm       8192 Nov 11 14:53 config
```

```
drwxrwxr-x  6 vobadm       8192 Nov 11 13:56 data
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 datasets
drwxrwxr-x  3 vobadm      16384 Nov  8 16:03 db
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 dbinit
drwxrwxr-x  4 vobadm       8192 Nov  8 15:34 displaydefs
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 dumps
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 edos
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 events
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 fdf
drwxrwxr-x  6 vobadm       8192 Nov  8 15:34 groundsched
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 helpdocs
drwxrwxr-x  3 vobadm       8192 Nov  8 15:34 loadcatalog
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 loadcontents
drwxrwxr-x  7 vobadm       8192 Nov  8 15:34 loads
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 ltip
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 ltsp
drwxrwxr-x  6 vobadm       8192 Nov 11 14:39 odf
drwxrwxr-x  6 vobadm       8192 Nov  8 15:54 pdb
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 procs
drwxrwxr-x  3 vobadm       8192 Nov  8 15:34 reports
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 requestfiles
drwxrwxr-x  2 vobadm       8192 Nov  8 16:05 res
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 results
drwxrwxr-x  2 vobadm       8192 Nov 11 14:55 roomdefs
drwxrwxr-x  3 vobadm       8192 Nov  8 15:34 schedcontr
drwxrwxr-x  3 vobadm       8192 Nov  8 15:34 scripts
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 statistics
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 tlmarchive

bin:
total 64
drwxrwxr-x  2 vobadm       8192 Nov 11 14:50 dec_osf_3-2
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 dec_osf_4-0
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 hp_ux_10-01
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 hp_ux_10-10
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 hp_ux_9-05
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 sgi_irix32_5-3
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 sgi_irix64_6-2
drwxrwxr-x  2 vobadm       8192 Nov 11 14:53 sun_sparc_5-4

bin/dec_osf_3-2:
total 196964
-rwxrwx---  1 vobadm    3129344 Nov  8 12:57 EC
-rwxrwx---  1 vobadm    3342336 Nov  6 16:39 FcCdFormat
-rwxrwx---  1 vobadm    2547712 Oct 21 20:17 FcCmFop
-rwxrwx---  1 vobadm    2875392 Oct 21 20:11 FcCmXmit
-rwxr-x---  1 vobadm    6193152 Oct 19 01:35 FdEvEventHandler
-rwxrwx---  1 vobadm    2482176 Oct 21 21:07 FgEiEdosIn
-rwxrwx---  1 vobadm    2514944 Oct 21 21:09 FgEoEdosOut
-rwxrwx---  1 vobadm    3661824 Oct 21 21:04 FgGmNccGroundMgr
-rwxrwx---  1 vobadm    2949120 Oct 21 20:58 FgSmNccStatusMgr
-rwxrwx---  1 vobadm    3661824 Oct 21 21:54 FmGsGroundSchedule
-rwxrwx---  1 vobadm    4661248 Oct 21 22:01 FmLdAM1LoadCatalog
-rwxrwx---  1 vobadm    4562944 Oct 21 22:05 FmScAM1ScheduleController
-rwxrwx---  1 vobadm    5308416 Oct 21 13:24 FoNsNameServer
-rwxrwx---  1 vobadm    2334720 Oct 21 13:30 FoPsParameterServer
-rwxrwx---  1 vobadm   10420224 Oct 25 16:08 FpAdActivityDefiner
```

```
-rwxrwx---  1 vobadm    9691136 Oct 25 16:10 FpBdBapDefiner
-rwxrwx---  1 vobadm    3989504 Oct 25 16:18 FpEhEventHandler
-rwxrwx---  1 vobadm    5488640 Oct 25 16:21 FpFsAsterFilter
-rwxrwx---  1 vobadm   10010624 Oct 25 16:23 FpGsGeneralScheduler
-rwxrwx---  1 vobadm    8003584 Oct 25 16:27 FpLgLoadGenerator
-rwxrwx---  1 vobadm    7774208 Oct 25 16:33 FpLqLoadQueuer
-rwxrwx---  1 vobadm    5890048 Oct 22 05:13 FpNsNameServer
-rwxrwx---  1 vobadm    6225920 Oct 25 16:39 FpRmResourceModel
-rwxrwx---  1 vobadm   10575872 Oct 25 16:46 FpTlTimeline
-rwxrwx---  1 vobadm    5152768 Oct 21 20:48 FrGrStringMgr
-rwxrwx---  1 vobadm    2154496 Oct 21 20:24 FrRpRepeater
-rwxrwx---  1 vobadm    3465216 Oct 21 14:47 FtDcDecom
-rwxrwx---  1 vobadm   10547536 Nov  8 13:04 FuGsGroundScriptControl
-rwxrwx---  1 vobadm    7421952 Nov  8 13:07 FuLbTableLoadBuilder
-rwxrwx---  1 vobadm   15196032 Nov  8 13:19 FuPbProcBuilderWin
-rwxrwxr-x  1 vobadm   13869056 Oct 18 10:57 FuPcProcController
-rwxrwx---  1 vobadm    5734400 Nov  8 13:26 FuRbRoomBuilder
-rwxrwx---  1 vobadm      36864 Nov  8 12:58 evtdis.uid
-rwxrwxr-x  1 vobadm    7569408 Oct 14 16:55 ncc

bin/dec_osf_4-0:
total 0

bin/hp_ux_10-01:
total 0

bin/hp_ux_10-10:
total 0

bin/hp_ux_9-05:
total 0

bin/sgi_irix32_5-3:
total 0

bin/sgi_irix64_6-2:
total 0

bin/sun_sparc_5-4:
total 193817
-rwxrwx---  1 vobadm    1415272 Oct 17 21:25 A2tlm
-rwxrwx---  1 vobadm    5802096 Nov 11 13:01 CmdControl
-rwxrwx---  1 vobadm    1560528 Oct 22 18:57 CreateRTS
-rwxrwx---  1 vobadm     327600 Oct 24 12:56 CreateTlmCmdFilterKeys
-rwxrwx---  1 vobadm    1071776 Oct 22 18:58 DeleteRTS
-rwxrwx---  1 vobadm    5784332 Nov 11 13:01 DisplayBuilder
-rwxrwx---  1 vobadm        230 Oct 29 10:38 DisplayBuilder.ini
-rwxrwx---  1 vobadm    4214664 Nov 11 13:01 DynamicPage
-rwxrwx---  1 vobadm    1947504 Nov  7 11:22 EC
-rwxrwx---  1 vobadm    2151084 Nov  6 11:13 FaAcCruncher
-rwxrwx---  1 vobadm     857996 Nov  6 13:50 FaDrReaderDriver
-rwxrwx---  1 vobadm    1645932 Nov  6 11:24 FaRmRequestManager
-rwxrwx---  1 vobadm    1789216 Nov  6 11:17 FaRtDServer
-rwxrwx---  1 vobadm    1988500 Oct 18 01:49 FcCdFormat
-rwxrwx---  1 vobadm    1399560 Oct 18 01:45 FcCmFop
-rwxrwx---  1 vobadm    1576712 Oct 18 01:38 FcCmXmit
-rwxrwx---  1 vobadm    1487008 Oct 18 01:27 FdArTlmArchiver
```

```
-rwxrwx---  1 vobadm    1080208 Oct 18 01:03 FdDbBuildAnlOdf
-rwxrwx---  1 vobadm    1314596 Nov  6 10:49 FdDbBuildCmsOdf
-rwxrwx---  1 vobadm    1144812 Oct 18 01:23 FdDbBuildEventOdf
-rwxrwx---  1 vobadm    1316400 Oct 18 01:24 FdDbBuildFuiCmdOdf
-rwxrwx---  1 vobadm    1382852 Oct 18 01:33 FdDbBuildFuiOdf
-rwxrwx---  1 vobadm    1271920 Oct 18 01:25 FdDbBuildNccOdf
-rwxrwx---  1 vobadm    1283292 Oct 18 01:35 FdDbBuildPidsOdf
-rwxrwx---  1 vobadm    1788392 Oct 18 01:06 FdDbBuildSysOdf
-rwxrwx---  1 vobadm    2916784 Oct 18 01:31 FdDbBuildTlmOdf
-rwxrwx---  1 vobadm    2076896 Oct 18 01:00 FdDbEventDbSrv
-rwxrwx---  1 vobadm    1271668 Oct 18 01:13 FdDbEvtDefWebDbClient
-rwxrwx---  1 vobadm    2011336 Oct 18 01:29 FdDbFileMetaServer
-rwxrwx---  1 vobadm    1400900 Oct 18 01:15 FdDbFormEvntWebDbClient
-rwxrwx---  1 vobadm    1262984 Oct 18 00:54 FdDbGroundParamWebClient
-rwxrwx---  1 vobadm    2125512 Oct 18 01:11 FdDbLoadCatSrv
-rwxrwx---  1 vobadm    1290124 Oct 18 00:53 FdDbNameServerWebClient
-rwxrwx---  1 vobadm    1988020 Oct 18 00:48 FdDbOdfTable
-rwxrwx---  1 vobadm    1870260 Oct 18 00:50 FdDbOrbEvtWebClient
-rwxrwx---  1 vobadm    2037468 Oct 18 00:52 FdDbOrbitEventServer
-rwxrwx---  1 vobadm    2119984 Oct 18 01:09 FdDbTableDefSrv
-rwxrwx---  1 vobadm    1932720 Oct 18 01:21 FdDbTlmCataServer
-rwxrwx---  1 vobadm    1462480 Oct 18 01:02 FdEvEventArchiver
-rwxr-xr-x  1 vobadm    1186024 Oct 19 15:30 FdEvEventDriver
-rwxrwx---  1 vobadm    1140200 Oct 18 00:56 FdEvEventHandler
-rwxrwx---  1 vobadm    1092920 Oct 18 00:57 FdEvEventRouter
-rwxrwx---  1 vobadm    2296696 Oct 18 01:17 FdQmQueueMgr
-rwxrwx---  1 vobadm    1325072 Oct 18 02:26 FgEiEdosIn
-rwxrwx---  1 vobadm    1353840 Oct 18 02:28 FgEoEdosOut
-rwxrwx---  1 vobadm    2079868 Oct 18 02:24 FgGmNccGroundMgr
-rwxrwx---  1 vobadm    1610852 Oct 18 02:18 FgSmNccStatusMgr
-rwxrwx---  1 vobadm    2284868 Oct 22 18:46 FmGsGroundSchedule
-rwxrwx---  1 vobadm    3094392 Oct 22 18:51 FmLdAM1LoadCatalog
-rwxrwx---  1 vobadm    1755844 Oct 22 19:00 FmPcTest
-rwxrwx---  1 vobadm    3110540 Oct 22 18:55 FmScAM1ScheduleController
-rwxrwx---  1 vobadm    1920608 Oct 17 18:16 FoNsNameServer
-rwxrwx---  1 vobadm    1204996 Oct 17 18:21 FoPsParameterServer
-rwxrwx---  1 vobadm    6903536 Oct 21 12:20 FpAdActivityDefiner
-rwxrwx---  1 vobadm    5893248 Oct 21 12:23 FpBdBapDefiner
-rwxrwx---  1 vobadm    2399752 Oct 21 12:31 FpEhEventHandler
-rwxrwx---  1 vobadm    4902160 Oct 21 12:33 FpFsAsterFilter
-rwxrwx---  1 vobadm    6394848 Oct 21 12:37 FpGsGeneralScheduler
-rwxrwx---  1 vobadm    4008416 Oct 21 12:39 FpLgLoadGenerator
-rwxrwx---  1 vobadm    6323028 Oct 21 12:46 FpLqLoadQueuer
-rwxrwx---  1 vobadm    2353576 Oct 19 00:24 FpNsNameServer
-rwxrwx---  1 vobadm    5737980 Oct 21 12:55 FpRmResourceModel
-rwxrwx---  1 vobadm    6952856 Oct 21 13:00 FpTlTimeline
-rwxrwx---  1 vobadm    3365032 Oct 18 02:09 FrGrStringMgr
-rwxrwx---  1 vobadm    1039972 Oct 18 01:52 FrRpRepeater
-rwxrwx---  1 vobadm    2032644 Oct 17 21:19 FtDcDecom
-rwxrwx---  1 vobadm    3742140 Nov 11 13:01 FuAnBuild
-rwxrwx---  1 vobadm    1547980 Nov  7 10:23 FuAnHandler
-rwxrwx---  1 vobadm    1795552 Nov  7 11:30 FuEvEvtdis
-rwxrwx---  1 vobadm    4208432 Nov  7 11:35 FuGsGroundScriptControl
-rwxrwx---  1 vobadm    2772064 Nov  7 11:42 FuLbTableLoadBuilder
-rwxrwx---  1 vobadm    2528436 Nov  7 11:45 FuLmLoadManager
-rwxrwx---  1 vobadm    3784756 Nov  7 11:50 FuPbProcBuilderWin
-rwxrwx---  1 vobadm    3254568 Nov  7 11:52 FuPcProcController
```

```
-rwxrwx---  1 vobadm    1321000 Nov  7 11:55 FuRbRoomBuilder
-rwxrwxr-x  1 vobadm    3447604 Nov  2 14:15 FuTsdriver
-rwxrwx---  1 vobadm    4965116 Nov 11 13:01 RegCtrlWin
-rwxrwx---  1 vobadm    1381044 Oct 18 01:19 TlmRetriever
-rwxrwx---  1 vobadm      32768 Nov  7 11:30 evtdis.uid
-rwxr-xr-x  1 vobadm    2237568 Oct 14 09:18 ncc
-rwxrwx---  1 vobadm    1784752 Nov  7 11:13 writeDefs
-rwxrwx---  1 vobadm    1177892 Nov  7 11:16 writePms
-rwxrwx---  1 vobadm    1153292 Oct 29 16:14 writeRoom

config:
total 13321
-rw-rw-r--  1 vobadm         45 Nov 11 09:16 NccConfig.data
-rwxrwxr-x  1 vobadm     147999 Nov  8 17:18 act.db
-rwxrwx---  1 vobadm        193 Jul 11 14:31 alloc.db
-rwxrwx---  1 vobadm        311 Jul 24 17:32 asteract.db
-rwxrwx---  1 vobadm          0 Jul 11 14:34 bap.db
-rwxrwx---  1 vobadm        141 Jul 11 14:31 cmdproc.db
-rw-rw-r--  1 vobadm     287871 Oct 30 13:41 command.db
-rwxrwx---  1 vobadm    6488064 Oct 22 06:53 createCmdActs
-rwxrwx---  1 vobadm    6479872 Oct 22 06:49 createCmds
-rwxrwx---  1 vobadm        195 Oct 23 17:27 data.db
-rwxrwx---  1 vobadm       1387 Sep 29 18:01 etlConfig.db
-rwxrwx---  1 vobadm        161 Jul 11 14:32 event.db
-rwxrwx---  1 vobadm        103 Oct 23 11:38 gchw.db
-rwxrwx---  1 vobadm        111 Oct 23 11:36 gcuser.db
-rwxrwx---  1 vobadm        103 Oct 23 11:31 hw.db
-rwxrwx---  1 vobadm       5429 Jul 11 14:32 mode.db
-rwxrwx---  1 vobadm        305 Jul 11 14:32 orb.aos.db
-rwxrwx---  1 vobadm        305 Jul 11 14:32 orb.los.db
-rwxrwx---  1 vobadm        312 Jul 11 14:32 orb.sunrise.db
-rwxrwx---  1 vobadm        312 Jul 11 14:32 orb.sunset.db
-rwxrwx---  1 vobadm        729 Jul 11 14:32 plan.db
-rwxrwx---  1 vobadm       7413 Sep 20 14:41 rconn.db
-rwxrwx---  1 vobadm      11984 Jul 11 14:33 rs.db
-rwxrwx---  1 vobadm       6212 Jul 11 14:33 srs.db
-rwxrwx---  1 vobadm       1193 Jul 11 14:33 srsconn.db
-rwxrwx---  1 vobadm        264 Oct 29 10:36 st_cmdActs
-rwxrwx---  1 vobadm        200 Oct 29 10:36 st_cmds
-rwxrwx---  1 vobadm     100167 Jul 11 14:33 state.db
-rwxrwx---  1 vobadm        111 Oct 23 11:29 user.db

data:
total 46
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 ANA
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 DMS
drwxrwxr-x  3 vobadm       8192 Nov  8 15:34 FUI
drwxrwxr-x  2 vobadm       8192 Nov  8 16:05 PAS
-rwxrwx---  1 vobadm         40 Aug 29 15:13 event.dat
-rwxrwx---  1 vobadm       1241 Oct 10 12:56 evtfilter.fdl
-rwxrwx---  1 vobadm        735 Oct 25 10:59 fose10oe.fos-services
-rwxrwx---  1 vobadm        732 Oct 25 10:59 fose5oe.fos-services
-rwxrwx---  1 vobadm        732 Oct 25 11:00 fose8oe.fos-services
-rwxrwx---  1 vobadm        738 Oct 25 11:00 fose9oe.fos-services
-rwxrwx---  1 vobadm        732 Oct 25 11:01 foseoc6.fos-services
-rwxrwx---  1 vobadm        732 Oct 25 11:01 foseoc7.fos-services
-rwxrwx---  1 vobadm        732 Oct 25 11:02 msse4of.fos-services
```

```
-rwxrwx---  1 vobadm        732 Oct 25 11:02 msseoc2.fos-services
-rwxrwx---  1 vobadm        394 May  7  1996 orbitEventB.dat
-rwxrwx---  1 vobadm        291 May 31 11:16 sc.dat
-rwxrwx---  1 vobadm         72 Oct 31 16:25 subsys.dat

data/ANA:
total 0

data/DMS:
total 0

data/FUI:
total 8
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 requests

data/FUI/requests:
total 0

data/PAS:
total 7
-rwxrwx---  1 vobadm        337 Jul 24 19:27 ASTER_ODA_1999165007.txt
-rwxrwx---  1 vobadm        337 Jul 24 19:27 ASTER_ODS_1999165005.txt
-rwxrwx---  1 vobadm        304 Jul 24 19:27 ASTER_ODS_1999165006.txt
-rwxrwx---  1 vobadm        337 Jul 24 19:27 ASTER_STA_1999165004.txt
-rwxrwx---  1 vobadm        337 Jul 24 19:27 ASTER_STS_1999165002.txt
-rwxrwx---  1 vobadm        304 Jul 24 19:27 ASTER_STS_1999165003.txt
-rwxrwx---  1 vobadm        112 Jul 24 19:03 ASTER_STS_1999165009.txt

datasets:
total 0

db:
total 868
-rwxrwx---  1 vobadm       5791 Aug  1 16:38 bcp_cmd_pdb.script
-rwxrwx---  1 vobadm        731 Oct 11 11:47 bcp_events_in.script
-rwxrwx---  1 vobadm        686 Oct 11 11:47 bcp_events_out.script
-rwxrwx---  1 vobadm        871 Oct 11 11:46 bcp_pids_in.script
-rwxrwx---  1 vobadm        816 Oct 11 11:47 bcp_pids_out.script
-rwxrwx---  1 vobadm       8000 Jul 25 10:53 bcp_tlm_pdb.script
-rwxrwx---  1 vobadm       5163 Jul 25 10:53 cmd_desc_ins.trig
-rwxrwx---  1 vobadm        943 Jul 25 10:53 cmd_desc_pdb.sql
-rwxrwx---  1 vobadm       1915 Jul 25 10:53 cmd_errmsg.sql
-rwxrwx---  1 vobadm       6285 Jul 23 11:08 cmd_fixdata_ins.trig
-rwxrwx---  1 vobadm       1006 Jul 25 10:53 cmd_fixdata_pdb.sql
-rwxrwx---  1 vobadm       6595 Jul 25 10:54 cmd_flddef_ins.trig
-rwxrwx---  1 vobadm       1154 Jul 25 10:54 cmd_flddef_pdb.sql
-rwxrwx---  1 vobadm        898 Jul 25 10:54 cmd_mmask_pdb.sql
-rwxrwx---  1 vobadm       8378 Jul 25 10:54 cmd_parm_ins.trig
-rwxrwx---  1 vobadm       1038 Jul 25 10:54 cmd_parm_pdb.sql
-rwxrwx---  1 vobadm       6263 Jul 25 10:54 cmd_pstate_ins.trig
-rwxrwx---  1 vobadm       1057 Jul 25 10:54 cmd_pstate_pdb.sql
-rwxrwx---  1 vobadm       4412 Jul 25 10:54 cmd_tbldef_ins.trig
-rwxrwx---  1 vobadm        998 Jul 23 14:32 cmd_tbldef_pdb.sql
-rwxrwx---  1 vobadm        698 Jul 25 10:54 cmd_type_cfx.sql
-rwxrwx---  1 vobadm       1386 Jul 25 10:54 cmd_type_data.sql
-rwxrwx---  1 vobadm        713 Jul 25 10:54 cmd_user_auth.sql
-rwxrwx---  1 vobadm        838 Jul 25 10:54 cmd_user_auth_data.sql
```

```
-rwxrwx---  1 vobadm        731 Jul 25 10:54 cmd_ustat_auth.sql
-rwxrwx---  1 vobadm        960 Jul 25 10:54 cmd_ustat_auth_data.sql
-rwxrwx---  1 vobadm        808 Jul 25 10:54 cmd_val_log.sql
-rwxrwx---  1 vobadm       6668 Jul 25 10:55 cmd_vardata_ins.trig
-rwxrwx---  1 vobadm       1785 Jul 25 10:55 cmd_vardata_pdb.sql
-rwxrwx---  1 vobadm       6480 Jul 25 10:55 cmd_verify_ins.trig
-rwxrwx---  1 vobadm       1100 Jul 25 10:55 cmd_verify_pdb.sql
-rwxrwx---  1 vobadm       1665 Jul 25 10:55 const_type_data.sql
-rwxrwx---  1 vobadm        656 Jul 25 10:55 const_type_tfx.sql
-rwxrwx---  1 vobadm       1358 Jul 25 10:55 conv_type_data.sql
-rwxrwx---  1 vobadm        681 Jul 25 10:55 conv_type_tfx.sql
-rwxrwx---  1 vobadm        692 Jul 25 10:55 cre_cmd_cfx.script
-rwxrwx---  1 vobadm        796 Jul 25 10:55 cre_cmd_cfx.sql
-rwxrwx---  1 vobadm        719 Jul 25 10:55 cre_cmd_procs.script
-rwxrwx---  1 vobadm        887 Jul 30 16:55 cre_cmd_procs.sql
-rwxrwx---  1 vobadm        688 Jul 25 10:55 cre_cmd_trigs.script
-rwxrwx---  1 vobadm        810 Jul 25 10:55 cre_cmd_trigs.sql
-rwxrwx---  1 vobadm        711 Jul 25 10:55 cre_tlm_procs.script
-rwxrwx---  1 vobadm       1023 Jul 30 16:56 cre_tlm_procs.sql
-rwxrwx---  1 vobadm        695 Jul 25 10:55 cre_tlm_tfx.script
-rwxrwx---  1 vobadm        810 Jul 25 10:55 cre_tlm_tfx.sql
-rwxrwx---  1 vobadm        693 Jul 25 10:56 cre_tlm_trigs.script
-rwxrwx---  1 vobadm       1043 Jul 30 16:56 cre_tlm_trigs.sql
-rwxrwx---  1 vobadm       1960 Jul 25 10:56 create_am1_dbs.script
-rwxrwx---  1 vobadm       1051 Jul 25 12:51 create_am1_dspace.sql
-rwxrwx---  1 vobadm        843 Jul 23 14:33 create_am1_errmsgs.script
-rwxrwx---  1 vobadm        900 Jul 25 10:56 create_am1_fos_ops.sql
-rwxrwx---  1 vobadm        980 Jul 25 10:56 create_am1_fos_unv.sql
-rwxrwx---  1 vobadm        885 Jul 25 10:56 create_am1_fos_val.sql
-rwxrwx---  1 vobadm        769 Jul 25 10:56 create_am1_procs.script
-rwxrwx---  1 vobadm        699 Jul 25 10:56 create_fos_dba.sql
-rwxrwx---  1 vobadm        846 Jul 23 14:33 create_lcthres_proc.sql
-rwxrwx---  1 vobadm        914 Jul 25 10:56 create_ops_cmd.sql
-rwxrwx---  1 vobadm       2255 Aug 24 13:23 create_ops_tbls.sql
-rwxrwx---  1 vobadm       1016 Jul 25 10:56 create_ops_tlm.sql
-rwxrwx---  1 vobadm        967 Jul 25 10:56 create_unv_cmd.sql
-rwxrwx---  1 vobadm        657 Jul 23 14:33 create_unv_tbls.sql
-rwxrwx---  1 vobadm       1067 Jul 25 10:56 create_unv_tlm.sql
-rwxrwx---  1 vobadm        925 Jul 25 10:56 create_val_cmd.sql
-rwxrwx---  1 vobadm       1430 Jul 29 13:19 create_val_tbls.sql
-rwxrwx---  1 vobadm       1040 Jul 25 10:56 create_val_tlm.sql
-rwxrwx---  1 vobadm       1251 Jul 25 10:56 data_rep_data.sql
-rwxrwx---  1 vobadm        651 Jul 25 10:56 data_rep_tfx.sql
-rwxrwx---  1 vobadm       1993 Jul 25 10:56 derived_oper_data.sql
-rwxrwx---  1 vobadm        662 Jul 25 10:57 derived_oper_tfx.sql
-rwxrwx---  1 vobadm        764 Jul 25 10:57 event_severity_data.sql
-rwxrwx---  1 vobadm        820 Jul 25 10:57 event_severity_fix.sql
-rwxrwx---  1 vobadm        784 Jul 25 10:57 file_loc_data.sql
-rwxrwx---  1 vobadm        797 Jul 25 10:57 file_loc_fix.sql
-rwxrwx---  1 vobadm        886 Oct 11 11:38 file_meta.sql
-rwxrwx---  1 vobadm       2472 Oct 16 13:23 file_types_data.sql
-rwxrwx---  1 vobadm        876 Jul 31 15:17 file_types_fix.sql
-rwxrwx---  1 vobadm        529 Jul 31 17:01 fos_dba_env.script
-rwxrwx---  1 vobadm       1059 Jul 31 15:17 fos_event_archive.sql
-rwxrwx---  1 vobadm      35039 Oct 29 10:41 fos_events.bcp
-rwxrwx---  1 vobadm       1063 Jul 25 10:57 fos_events.sql
-rwxrwx---  1 vobadm       2848 Jul 25 10:57 fos_events_ins.trig
```

```
-rwxrwx---  1 vobadm       1988 Jul 23 14:34 fos_load_cat.sql
-rwxrwx---  1 vobadm       1608 Jul 23 14:34 fos_pids.sql
-rwxrwx---  1 vobadm       1506 Oct 11 11:46 fos_pids_ins.trig
-rwxrwx---  1 vobadm     148698 Oct 11 11:46 fos_pids_ops.bcp
-rwxrwx---  1 vobadm       1851 Oct 11 11:39 fos_pids_ops.sql
-rwxrwx---  1 vobadm     130825 Oct 11 11:46 fos_pids_val.bcp
-rwxrwx---  1 vobadm        986 Jul 23 14:34 fos_request_queue.sql
-rwxrwx---  1 vobadm        968 Jul 25 10:57 fos_rms_role.sql
-rwxrwx---  1 vobadm        965 Jul 25 10:57 fos_rms_role_data.sql
-rwxrwx---  1 vobadm       1212 Jul 25 10:57 fos_subsys_data.sql
-rwxrwx---  1 vobadm       1097 Jul 25 10:57 fos_subsys_fix.sql
-rwxrwx---  1 vobadm       1691 Aug  7 07:57 fos_sysparms_data.sql
-rwxrwx---  1 vobadm       1281 Jul 23 14:34 fos_sysparms_ins.trig
-rwxrwx---  1 vobadm       1216 Jul 25 10:57 fos_system_parms.sql
-rwxrwx---  1 vobadm        997 Jul 25 10:57 fos_uplinkinfo_cat.sql
-rwxrwx---  1 vobadm       3027 Jul 30 15:25 gen_ops_cmd.proc
-rwxrwx---  1 vobadm        620 Jul 23 14:34 gen_ops_cmd.sql
-rwxrwx---  1 vobadm       1726 Jul 23 14:34 gen_ops_db.script
-rwxrwx---  1 vobadm        673 Jul 23 14:34 gen_ops_pdefs.sql
-rwxrwx---  1 vobadm       4241 Jul 23 14:34 gen_ops_pids.proc
-rwxrwx---  1 vobadm        615 Jul 23 14:34 gen_ops_pids.sql
-rwxrwx---  1 vobadm        680 Jul 23 14:34 gen_ops_sys.sql
-rwxrwx---  1 vobadm       4064 Jul 23 14:35 gen_ops_tlm.proc
-rwxrwx---  1 vobadm        622 Jul 23 14:35 gen_ops_tlm.sql
-rwxrwx---  1 vobadm        667 Oct 11 11:47 grd_sys_upd.script
-rwxrwx---  1 vobadm       1219 Oct 11 11:47 grd_sys_upd.sql
-rwxrwx---  1 vobadm        754 Jul 25 10:58 interface_data.sql
-rwxrwx---  1 vobadm        681 Jul 25 10:58 interface_fix.sql
-rwxrwx---  1 vobadm       1454 Aug 24 13:23 name_srvr_met.sql
-rwxrwx---  1 vobadm        762 Aug  5 12:35 odf_table.sql
-rwxrwx---  1 vobadm        768 Aug 24 13:23 odf_table_data.sql
-rwxrwx---  1 vobadm        759 Jul 23 14:35 orbit_event_fdf.sql
-rwxrwx---  1 vobadm        881 Jul 25 10:58 packet_defs.sql
-rwxrwx---  1 vobadm      25805 Oct 11 11:39 packet_defs_data.sql
-rwxrwx---  1 vobadm       2601 Oct 18 12:11 packet_defs_ins.trig
-rwxrwx---  1 vobadm        813 Jul 25 10:58 packet_types.sql
-rwxrwx---  1 vobadm       1618 Jul 25 10:58 packet_types_data.sql
-rwxrwx---  1 vobadm        806 Aug 24 13:23 parm_type_data.sql
-rwxrwx---  1 vobadm        757 Jul 25 10:58 parm_type_fix.sql
-rwxrwx---  1 vobadm        552 Jul 23 14:35 pdb_env.script
-rwxrwx---  1 vobadm       1092 Jul 25 10:58 pdb_load.script
-rwxrwx---  1 vobadm       2995 Jul 25 10:59 pdb_setup.script
-rwxrwx---  1 vobadm        673 Jul 25 10:59 rt_name_cfx.sql
-rwxrwx---  1 vobadm       1715 Jul 25 10:59 rt_name_data.sql
-rwxrwx---  1 vobadm       1223 Jul 23 14:35 sns_register_pst.sql
-rwxrwx---  1 vobadm        686 Jul 25 10:59 tbl_type_cfx.sql
-rwxrwx---  1 vobadm        701 Jul 25 10:59 tbl_type_data.sql
-rwxrwx---  1 vobadm       8641 Jul 25 10:59 tlm_calcurve_ins.trig
-rwxrwx---  1 vobadm       1344 Jul 25 10:59 tlm_calcurve_pdb.sql
-rwxrwx---  1 vobadm        637 Aug 24 13:23 tlm_cata.sql
-rwxrwx---  1 vobadm       4150 Jul 25 10:59 tlm_constant_ins.trig
-rwxrwx---  1 vobadm        919 Jul 25 10:59 tlm_constant_pdb.sql
-rwxrwx---  1 vobadm       4050 Jul 25 10:59 tlm_context_del.trig
-rwxrwx---  1 vobadm       4208 Jul 25 10:59 tlm_context_ins.trig
-rwxrwx---  1 vobadm       1159 Jul 25 10:59 tlm_context_pdb.sql
-rwxrwx---  1 vobadm       4956 Jul 25 10:59 tlm_delta_ins.trig
-rwxrwx---  1 vobadm        868 Jul 25 10:59 tlm_delta_pdb.sql
```

```
-rwxrwx---  1 vobadm       8138 Jul 25 10:59 tlm_derived_ins.trig
-rwxrwx---  1 vobadm       1435 Jul 25 11:00 tlm_derived_pdb.sql
-rwxrwx---  1 vobadm       6387 Oct 22 14:57 tlm_desc_ins.trig
-rwxrwx---  1 vobadm       1004 Jul 25 11:00 tlm_desc_pdb.sql
-rwxrwx---  1 vobadm       5521 Jul 25 11:00 tlm_dstate_ins.trig
-rwxrwx---  1 vobadm        933 Jul 25 11:00 tlm_dstate_pdb.sql
-rwxrwx---  1 vobadm       3670 Oct 18 12:13 tlm_errmsg.sql
-rwxrwx---  1 vobadm       4018 Jul 25 11:00 tlm_limsel_del.trig
-rwxrwx---  1 vobadm       4592 Jul 25 12:34 tlm_limsel_ins.trig
-rwxrwx---  1 vobadm       1063 Jul 25 12:34 tlm_limsel_pdb.sql
-rwxrwx---  1 vobadm       3866 Jul 25 12:34 tlm_lineconv_ins.trig
-rwxrwx---  1 vobadm       2397 Jul 25 12:34 tlm_lineconv_pdb.sql
-rwxrwx---  1 vobadm       4565 Jul 25 12:34 tlm_packet_ins.trig
-rwxrwx---  1 vobadm       1073 Jul 25 12:34 tlm_packet_pdb.sql
-rwxrwx---  1 vobadm       8448 Oct 18 12:13 tlm_parm_ins.trig
-rwxrwx---  1 vobadm       1798 Oct 18 12:13 tlm_parm_pdb.sql
-rwxrwx---  1 vobadm       2152 Aug 13 16:50 tlm_pids_upd.trig
-rwxrwx---  1 vobadm       4590 Jul 25 12:35 tlm_polyconv_ins.trig
-rwxrwx---  1 vobadm       1342 Jul 25 12:35 tlm_polyconv_pdb.sql
-rwxrwx---  1 vobadm       6652 Aug  6 12:17 tlm_rylim_ins.trig
-rwxrwx---  1 vobadm       1070 Jul 25 12:35 tlm_rylim_pdb.sql
-rwxrwx---  1 vobadm        812 Jul 25 12:35 tlm_val_log.sql
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 tools
-rwxrwx---  1 vobadm        655 Jul 25 12:35 trunc_cmd_desc.sql
-rwxrwx---  1 vobadm        658 Jul 25 12:35 trunc_cmd_fixdata.sql
-rwxrwx---  1 vobadm        662 Jul 25 12:35 trunc_cmd_flddef.sql
-rwxrwx---  1 vobadm        652 Jul 25 12:35 trunc_cmd_mmask.sql
-rwxrwx---  1 vobadm        653 Jul 25 12:35 trunc_cmd_parm.sql
-rwxrwx---  1 vobadm        667 Jul 25 12:35 trunc_cmd_pstate.sql
-rwxrwx---  1 vobadm        656 Jul 25 12:35 trunc_cmd_tbldef.sql
-rwxrwx---  1 vobadm        663 Jul 25 12:35 trunc_cmd_vardata.sql
-rwxrwx---  1 vobadm        670 Jul 25 12:35 trunc_cmd_verify.sql
-rwxrwx---  1 vobadm        822 Jul 23 14:36 trunc_cmdpdb.sql
-rwxrwx---  1 vobadm        613 Oct 11 11:47 trunc_events.sql
-rwxrwx---  1 vobadm        676 Jul 23 14:36 trunc_ops_pdb.sql
-rwxrwx---  1 vobadm        641 Jul 23 14:36 trunc_ops_pdefs.sql
-rwxrwx---  1 vobadm        643 Jul 23 14:36 trunc_ops_sys.sql
-rwxrwx---  1 vobadm        610 Oct 11 11:46 trunc_pids_ops.sql
-rwxrwx---  1 vobadm        610 Oct 11 11:46 trunc_pids_val.sql
-rwxrwx---  1 vobadm        648 Jul 25 12:35 trunc_tlm_calcurve.sql
-rwxrwx---  1 vobadm        648 Jul 25 12:35 trunc_tlm_constant.sql
-rwxrwx---  1 vobadm        645 Jul 25 12:35 trunc_tlm_context.sql
-rwxrwx---  1 vobadm        639 Jul 25 12:35 trunc_tlm_delta.sql
-rwxrwx---  1 vobadm        645 Jul 25 12:35 trunc_tlm_derived.sql
-rwxrwx---  1 vobadm        657 Jul 25 12:35 trunc_tlm_desc.sql
-rwxrwx---  1 vobadm        665 Jul 25 12:35 trunc_tlm_dstate.sql
-rwxrwx---  1 vobadm        665 Jul 25 12:35 trunc_tlm_limsel.sql
-rwxrwx---  1 vobadm        671 Jul 25 12:35 trunc_tlm_lineconv.sql
-rwxrwx---  1 vobadm        642 Jul 25 12:36 trunc_tlm_packet.sql
-rwxrwx---  1 vobadm        640 Jul 25 12:36 trunc_tlm_parm.sql
-rwxrwx---  1 vobadm        675 Jul 25 12:36 trunc_tlm_polyconv.sql
-rwxrwx---  1 vobadm        665 Jul 25 12:36 trunc_tlm_rylim.sql
-rwxrwx---  1 vobadm        947 Jul 23 14:36 trunc_tlmpdb.sql
-rwxrwx---  1 vobadm       9537 Jul 25 12:36 unit_format_data.sql
-rwxrwx---  1 vobadm        783 Jul 25 12:36 unit_format_fix.sql
-rwxrwx---  1 vobadm       2183 Jul 25 12:36 unit_type_data.sql
-rwxrwx---  1 vobadm        879 Jul 25 12:36 unit_type_fix.sql
```

```
-rwxrwx---  1 vobadm       1425 Jul 23 14:36 upd_fos_pids.sql
-rwxrwx---  1 vobadm       2656 Jul 23 14:36 val_cmd_desc.proc
-rwxrwx---  1 vobadm       2743 Jul 23 14:36 val_cmd_fixdata.proc
-rwxrwx---  1 vobadm       3357 Jul 25 12:36 val_cmd_flddef.proc
-rwxrwx---  1 vobadm       2204 Jul 25 12:36 val_cmd_mmask.proc
-rwxrwx---  1 vobadm       2818 Jul 25 12:36 val_cmd_parm.proc
-rwxrwx---  1 vobadm       5171 Jul 25 12:36 val_cmd_pstate.proc
-rwxrwx---  1 vobadm       2394 Jul 25 12:36 val_cmd_tbldef.proc
-rwxrwx---  1 vobadm       5712 Jul 25 12:36 val_cmd_vardata.proc
-rwxrwx---  1 vobadm       2934 Jul 25 12:36 val_cmd_verify.proc
-rwxrwx---  1 vobadm       3119 Jul 25 12:36 val_cmdpdb.proc
-rwxrwx---  1 vobadm        690 Jul 25 12:36 val_cmdpdb.script
-rwxrwx---  1 vobadm        622 Jul 25 12:36 val_cmdpdb.sql
-rwxrwx---  1 vobadm       6982 Jul 25 12:36 val_tlm_calcurve.proc
-rwxrwx---  1 vobadm       2611 Jul 25 12:36 val_tlm_constant.proc
-rwxrwx---  1 vobadm       6787 Jul 25 12:36 val_tlm_context.proc
-rwxrwx---  1 vobadm       2516 Jul 25 12:37 val_tlm_delta.proc
-rwxrwx---  1 vobadm       4068 Jul 25 12:37 val_tlm_derived.proc
-rwxrwx---  1 vobadm       3307 Oct 22 14:57 val_tlm_desc.proc
-rwxrwx---  1 vobadm       5879 Jul 25 12:37 val_tlm_dstate.proc
-rwxrwx---  1 vobadm       6967 Jul 25 12:37 val_tlm_limsel.proc
-rwxrwx---  1 vobadm       5404 Jul 25 12:37 val_tlm_lineconv.proc
-rwxrwx---  1 vobadm       2455 Jul 25 12:37 val_tlm_packet.proc
-rwxrwx---  1 vobadm       8484 Oct 18 12:13 val_tlm_parm.proc
-rwxrwx---  1 vobadm       3013 Jul 25 12:37 val_tlm_polyconv.proc
-rwxrwx---  1 vobadm       2937 Jul 25 12:37 val_tlm_rylim.proc
-rwxrwx---  1 vobadm       5531 Oct 22 14:57 val_tlmpdb.proc
-rwxrwx---  1 vobadm        649 Jul 25 12:37 val_tlmpdb.script
-rwxrwx---  1 vobadm        624 Jul 25 12:37 val_tlmpdb.sql
-rwxrwx---  1 vobadm        694 Jul 25 12:37 value_type_cfx.sql
-rwxrwx---  1 vobadm        667 Jul 25 12:37 value_type_data.sql

db/tools:
total 0

dbinit:
total 0

displaydefs:
total 16
drwxrwxr-x  2 vobadm       8192 Nov 11 13:57 activepages
drwxrwxr-x  2 vobadm       8192 Nov 11 13:57 newpages

displaydefs/activepages:
total 33
-rwxrwx---  1 vobadm       7129 Oct 30 13:18 cfgops
-rwxrwx---  1 vobadm       1396 Oct 30 13:19 cfgops.pms
-rwxrwx---  1 vobadm       7137 Oct 30 13:18 cfgtest
-rwxrwx---  1 vobadm       1398 Oct 30 13:21 cfgtest.pms
-rwxrwx---  1 vobadm       7130 Oct 30 13:19 cfgtrain
-rwxrwx---  1 vobadm       1400 Oct 30 13:21 cfgtrain.pms
-rwxrwx---  1 vobadm       1295 Oct 30 13:22 pageSystem.dat
-rwxrwx---  1 vobadm       4096 Oct 30 13:23 pageUser.dat

displaydefs/newpages:
total 27
-rwxrwx---  1 vobadm       7129 Oct 30 13:29 cfgops
```

```
-rwxrwx---  1 vobadm       1396 Oct 30 13:30 cfgops.pms
-rwxrwx---  1 vobadm       7137 Oct 30 13:29 cfgtest
-rwxrwx---  1 vobadm       1398 Oct 30 13:31 cfgtest.pms
-rwxrwx---  1 vobadm       7130 Oct 30 13:30 cfgtrain
-rwxrwx---  1 vobadm       1400 Oct 30 13:31 cfgtrain.pms

dumps:
total 0

edos:
total 0

events:
total 0

fdf:
total 0

groundsched:
total 32
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 archive
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 report
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 script
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 working

groundsched/archive:
total 0

groundsched/report:
total 0

groundsched/script:
total 0

groundsched/working:
total 0

helpdocs:
total 0

loadcatalog:
total 8
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 working

loadcatalog/working:
total 0

loadcontents:
total 0

loads:
total 40
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 atc
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 fsw
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 mp
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 rts
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 table
```

```
loads/atc:
total 0

loads/fsw:
total 0

loads/mp:
total 0

loads/rts:
total 0

loads/table:
total 0

ltip:
total 0

ltsp:
total 0

odf:
total 5653
-rw-rw-r--  1 vobadm     291687 Nov  4 09:24 AnalysisOdf_1.0
-rw-rw-r--  1 vobadm       3363 Nov  4 09:46 CmdSelectFilterOdf_1.0
-rw-rw-r--  1 vobadm     719148 Nov  4 09:32 CommandOdf_1.0
-rwxrwx---  1 vobadm      15602 Oct 25 12:36 DirKeywords.dat
-rw-rw-r--  1 vobadm      43214 Nov  4 09:33 EventOdf_1.0
-rw-rw-r--  1 vobadm     686296 Nov  4 09:43 FuiCommandOdf_1.0
-rw-rw-r--  1 vobadm      11701 Nov  4 09:46 GcmrOdf_1.0
-rw-rw-r--  1 vobadm     419957 Nov  4 09:46 ParmDataOdf_1.0
-rw-rw-r--  1 vobadm     200816 Nov  4 09:47 PidsOdf_1.0
-rw-rw-r--  1 vobadm         51 Nov  4 09:48 SystemOdf_1.0
-rw-rw-r--  1 vobadm         89 Nov  4 09:48 SystemPidsOdf_1.0
-rw-rw-r--  1 vobadm       9571 Oct 24 13:29 Tlm16kDiagOdf_1.0
-rw-rw-r--  1 vobadm       8861 Oct 24 13:29 Tlm1kDiagOdf_1.0
-rw-rw-r--  1 vobadm       9571 Oct 24 13:29 TlmCtiuOdf_1.0
-rw-rw-r--  1 vobadm     712144 Oct 24 13:29 TlmHealthOdf_1.0
-rw-rw-r--  1 vobadm    2160564 Oct 24 13:26 TlmHouseOdf_1.0
-rw-rw-r--  1 vobadm      19388 Nov  4 09:46 TlmSelectFilterOdf_1.0
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 fuiodf
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 ops
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 test
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 training

odf/fuiodf:
total 0

odf/ops:
total 0

odf/test:
total 0

odf/training:
total 0
```

```
pdb:
total 33
drwxrwxr-x  2 vobadm       8192 Nov  8 16:03 data
drwxrwxr-x  4 vobadm       8192 Nov  8 15:34 input
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 load
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 log
-rwxrwx---  1 vobadm        552 Jul 23 14:35 pdb_env.script

pdb/data:
total 16
-rwxrwx---  1 vobadm        189 Feb  8  1996 cmd_desc.fmt
-rwxrwx---  1 vobadm        125 Feb  8  1996 cmd_fixdata.fmt
-rwxrwx---  1 vobadm        246 Feb  8  1996 cmd_parm.fmt
-rwxrwx---  1 vobadm        188 Feb  8  1996 cmd_pstate.fmt
-rwxrwx---  1 vobadm       1084 Feb  8  1996 cmd_vardata.fmt
-rwxrwx---  1 vobadm        280 Feb  8  1996 cmd_verify.fmt
-rwxrwx---  1 vobadm        384 Feb  8  1996 tlm_calcurve.fmt
-rwxrwx---  1 vobadm        128 Feb  8  1996 tlm_delta.fmt
-rwxrwx---  1 vobadm        307 Feb  8  1996 tlm_desc.fmt
-rwxrwx---  1 vobadm        160 Feb  8  1996 tlm_dstate.fmt
-rwxrwx---  1 vobadm        189 Feb  8  1996 tlm_limsel.fmt
-rwxrwx---  1 vobadm         95 Feb  8  1996 tlm_packet.fmt
-rwxrwx---  1 vobadm        276 Oct 24 14:06 tlm_parm.fmt
-rwxrwx---  1 vobadm        235 Feb  8  1996 tlm_polyconv.fmt
-rwxrwx---  1 vobadm        249 Feb  8  1996 tlm_rylim.fmt

pdb/input:
total 16
drwxrwxr-x  2 vobadm       8192 Nov 11 13:57 003
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 999

pdb/input/003:
total 5162
-rwxrwx---  1 vobadm     437219 Nov  8 09:40 cmd_desc_003.pdb
-rwxrwx---  1 vobadm     200900 Nov  8 09:40 cmd_fixdata_003.pdb
-rwxrwx---  1 vobadm     203299 Nov  8 09:41 cmd_parm_003.pdb
-rwxrwx---  1 vobadm       2075 Nov  8 09:53 cmd_pstate_003.pdb
-rwxrwx---  1 vobadm     249065 Nov  8 09:42 cmd_vardata_003.pdb
-rwxrwx---  1 vobadm      97890 Nov  8 09:43 cmd_verify_003.pdb
-rwxrwx---  1 vobadm     238788 Nov  8 09:43 tlm_calcurve_003.pdb
-rwxrwx---  1 vobadm       3772 Nov  8 09:44 tlm_delta_003.pdb
-rwxrwx---  1 vobadm    1237745 Nov  8 09:45 tlm_desc_003.pdb
-rwxrwx---  1 vobadm     164604 Nov  8 09:47 tlm_dstate_003.pdb
-rwxrwx---  1 vobadm       2964 Nov  8 09:47 tlm_limsel_003.pdb
-rwxrwx---  1 vobadm        545 Nov  8 09:54 tlm_packet_003.pdb
-rwxrwx---  1 vobadm    2075066 Nov  8 09:48 tlm_parm_003.pdb
-rwxrwx---  1 vobadm      54229 Nov  8 09:49 tlm_polyconv_003.pdb
-rwxrwx---  1 vobadm      66720 Nov  8 09:49 tlm_rylim_003.pdb

pdb/input/999:
total 0

pdb/load:
total 0

pdb/log:
```

```
total 0

procs:
total 0

reports:
total 8
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 loads

reports/loads:
total 0

requestfiles:
total 0

res:
total 6
-rwxrwx---  1 vobadm         87 Jul 11 13:56 ATCLOADGEN
-rwxrwx---  1 vobadm        117 Jul 11 13:56 ActDef
-rwxrwx---  1 vobadm        112 Jul 11 13:56 BAP
-rwxrwx---  1 vobadm        111 Jul 11 13:56 CMS
-rwxrwx---  1 vobadm        113 Jul 11 13:56 FpTlXtl
-rwxrwx---  1 vobadm        127 Jul 11 13:56 GenSched

results:
total 0

roomdefs:
total 3
-rw-rw-r--  1 vobadm        499 Oct 28 14:14 roomSystem.dat
-rw-rw-r--  1 vobadm       1367 Nov  4 14:56 roomUser.dat

schedcontr:
total 8
drwxrwxr-x  2 vobadm       8192 Nov  8 15:34 working

schedcontr/working:
total 0

scripts:
total 1656
-rwxrwx---  1 vobadm    1625652 Oct 29 09:36 psutil
drwxrwxr-x  2 vobadm       8192 Nov 11 15:01 setup

scripts/setup:
total 1584
-rwxrwx---  1 vobadm       2134 Oct 25 09:22 A2_DataServerStartup
-rwxrwx---  1 vobadm       1040 Oct 25 09:40 A2_RealTimeServerStartup
-rwxrwx---  1 vobadm       1966 Oct 25 09:40 A2_UserStationStartup
-rwxrwxr-x  1 vobadm       1446 Oct 28 15:05 A2_UserStationStartup_NONPAS
-rwxrwxr-x  1 vobadm       1401 Oct 28 13:25 A2_UserStationStartup_PAS
-rwxr-xr-x  1 vobadm       1032 Aug 19 11:02 A2tlmEnvVars
-rwxr-xr-x  1 vobadm    1258085 Aug 19 11:15 A2tlmHKValues
-rwxr-xr-x  1 vobadm     208772 Aug 19 11:15 A2tlmHSValues
-rwxr-xr-x  1 vobadm       2483 Oct  1 16:52 FosArch
-rwxrwx---  1 vobadm       6060 Nov  1 17:03 FosEnvVars
-rwxrwxr-x  1 vobadm      16033 Jun 25 10:10 MachArch
```

```
-rwxrwx---  1 vobadm       5880 Oct 25 09:41 MyKill
-rwxr-xr-x  1 vobadm        169 Oct  5 12:09 ProcessPms
lrwxrwxrwx  1 vobadm         49 Nov 11 13:42 evtdis.uid ->
/net/beeper/fos/cm/am1/bin/dec_osf_3-2/evtdis.uid
-rwxrwx---  1 vobadm       1336 Oct 25 09:41 fos_sybsetup.script
-rwxrwx---  1 vobadm         37 Oct 15 10:41 rm_10.script
-rwxrwx---  1 vobadm        139 Oct 15 10:41 rm_10.sql
-rwxrwx---  1 vobadm         36 Oct 15 10:42 rm_2.script
-rwxrwx---  1 vobadm        137 Oct 15 10:42 rm_2.sql
-rwxrwx---  1 vobadm         36 Oct 15 10:43 rm_4.script
-rwxrwx---  1 vobadm        137 Oct 15 10:43 rm_4.sql
-rwxrwx---  1 vobadm         36 Oct 15 10:43 rm_5.script
-rwxrwx---  1 vobadm        137 Oct 15 10:44 rm_5.sql
-rwxrwx---  1 vobadm         36 Oct 25 10:11 rm_6.script
-rwxrwx---  1 vobadm        137 Oct 25 10:11 rm_6.sql
-rwxrwx---  1 vobadm         36 Oct 25 10:12 rm_7.script
-rwxrwx---  1 vobadm        137 Oct 25 10:12 rm_7.sql
-rwxrwx---  1 vobadm         36 Oct 15 10:44 rm_8.script
-rwxrwx---  1 vobadm        137 Oct 15 10:44 rm_8.sql
-rwxrwx---  1 vobadm         36 Oct 15 10:44 rm_9.script
-rwxrwx---  1 vobadm        137 Oct 15 10:45 rm_9.sql
-rwxrwx---  1 vobadm         38 Oct 15 10:45 rm_all.script
-rwxrwx---  1 vobadm         50 Oct 15 10:45 rm_all.sql
-rwxrwx---  1 vobadm         39 Oct 15 10:46 show_10.script
-rwxrwx---  1 vobadm        143 Oct 15 10:46 show_10.sql
-rwxrwx---  1 vobadm         38 Oct 15 10:47 show_2.script
-rwxrwx---  1 vobadm        141 Oct 15 10:47 show_2.sql
-rwxrwx---  1 vobadm         38 Oct 15 10:47 show_4.script
-rwxrwx---  1 vobadm        141 Oct 15 10:48 show_4.sql
-rwxrwx---  1 vobadm         38 Oct 15 10:49 show_5.script
-rwxrwx---  1 vobadm        141 Oct 15 10:49 show_5.sql
-rwxrwx---  1 vobadm         38 Oct 25 10:12 show_6.script
-rwxrwx---  1 vobadm        141 Oct 25 10:13 show_6.sql
-rwxrwx---  1 vobadm         38 Oct 25 10:13 show_7.script
-rwxrwx---  1 vobadm        141 Oct 25 10:13 show_7.sql
-rwxrwx---  1 vobadm         38 Oct 15 10:50 show_8.script
-rwxrwx---  1 vobadm        141 Oct 15 10:50 show_8.sql
-rwxrwx---  1 vobadm         38 Oct 15 10:50 show_9.script
-rwxrwx---  1 vobadm        141 Oct 15 10:51 show_9.sql
-rwxrwx---  1 vobadm         40 Oct 15 10:51 show_all.script
-rwxrwx---  1 vobadm         52 Oct 15 10:51 show_all.sql
-rwxrwx---  1 vobadm       1194 Aug  5 11:50 st_ad
-rwxrwx---  1 vobadm       1091 Aug  5 11:50 st_bd
-rwxrwx---  1 vobadm        208 Aug  5 11:50 st_eh
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.2
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.3
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.4
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.5
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.6
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.7
-rwxrwx---  1 vobadm        346 Aug  5 11:50 st_fs.9
-rwxrwx---  1 vobadm       1045 Aug  5 11:50 st_gs
-rwxrwx---  1 vobadm        224 Aug  5 11:50 st_lg
-rwxrwx---  1 vobadm        208 Aug  5 11:50 st_lq
-rwxrwx---  1 vobadm        581 Aug  5 11:50 st_ns
-rwxrwx---  1 vobadm        738 Aug  5 11:50 st_rm
```

```
-rwxrwx---  1 vobadm        363 Sep 29 18:01 st_tl
-rwxr-xr-x  1 vobadm        169 Aug 19 11:19 telemetry.db

statistics:
total 0

tlmarchive:
total 0
```

5. Non-Conformance StatusÄ

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: FpTl 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: **E**CSed02856
Software: DMS
Title: Needs to add telemetry limits and states to PidOdfl.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 PidsOdfl.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 ther 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 determince 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 uanable 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-swapable.

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: Diplay 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 polymonial 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 occured.

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 inconsistant 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, recieved error messages illegal conversion types U-6D, U_TD, Line. These are conversion ytpes 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 inconsistant time values. With in the span of on minute the values for this parameter are drastically different

NCR ID: ECSed04387
Software: FUI
Title: Mnemonic names trucated 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 paeg 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 rqts: 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 inacurate 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: FpTl 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: FpTl 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: FpTl 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: FpTl 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: FpTl PAS Timeline Gives Unnecessary Debug TlRsEditor
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:
"FpTlRsEditor::applyChanges applying resource edits"
"FpTlRsEditor::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, seleted 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 responsiblility 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 date 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 Envrironment 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 Directve
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 FuClYaccy 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: FpTl 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 is 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 valid before it sends it. Also, even though theoretical 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 filesname for the Userstats filename. The FaAcCruncher will append a ".stats" string to the filename, so the filename for the TLM dataset may be suffucient. 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 chose 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 capablitiy!?

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 seperate 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 dis- played indicating an invalid interval time chosen. The user must enter a time, click on the statistics icon and then selet 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 diffrnt 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 acessible. 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 aways be at least one space to improve legiblity

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 diplays 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. Th 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 contol 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 runnig 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 wring title. "error" should be the title

NCR ID: ECSed04436
Software: FUI
Title: Times from the pair time selector are different than the selected tim
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 selectes 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 err msg when saving an incomplete analysis reqst
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

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

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≠

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

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

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