

ELISTdb.8100.Final.SOL7.SVD

**Defense Information Infrastructure (DII)
Common Operating Environment (COE)**

**Software Version Description (SVD)
for the
Enhanced Logistics Intratheater Support Tool (ELIST)
Database Segment Version 8.1.0.0
for Solaris 7**

26 February 2002

Prepared for:

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1. Scope

This document is the *Software Version Description (SVD) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment*. It contains basic information about the segment.

1.1 Identification

The ELIST Database Segment is one of seven segments that make up the DII COE ELIST mission application. The distributed segment software, data, and documentation are **Unclassified**.

Table 1 identifies all the segments of the ELIST mission application. In the table, each segment is given a number by which it may be referenced in this document. The table also gives the name, the segment type (and, if a data segment, the segment scope), the current version number, and the directory name assigned to each segment.

Table 1. Segments of the ELIST Mission Application

Segment Number	Segment Name	Segment Type / Scope	Version Number	Directory Name
1	ELIST Global Data Segment	Data / Global	8.1.0.0	ELISTglob
2	ELIST Database Instance Segment	Data / Segment	8.1.0.0	ELISTdbinst
3	ELIST Database Fill Segment	Data / Local	8.1.0.0	ELISTdbfill
4	ELIST Database Segment	Database	8.1.0.0	ELISTdb
5	ELIST Database Utility Segment	Software	8.1.0.0	ELISTdbutil
6	ELIST Software Segment	Software	8.1.0.0	ELISTexec
7	ELIST Reference Data Segment	Data / Local	8.1.0.0	ELISTrefdata

All seven segments have the following identification properties in common:

Segment Prefix¹:	ELIST
Platform(s)²:	Sun/Solaris 7
DII COE Versions:	4.2.0.0P4 or later

All seven of the ELIST segments must be installed before you can use the ELIST mission application.³

Refer to the *Introduction to the Enhanced Logistics Intratheater Support Tool (ELIST) Mission Application and its Segments: Global Data Segment, Database Instance Segment, Database Fill Segment, Database Segment, Database Utility Segment, Software Segment, and Reference Data Segment* for the following:

¹ Note carefully that all segments have the same prefix. This is not typical of multisegment DII COE mission applications.

² Implementation of the ELIST segments for PC/Windows NT 4.0 will follow shortly. This documentation covers only the Sun/Solaris 7 platform but will be supplemented or replaced when an implementation becomes available for NT.

³To save space, however, the ELIST Database Fill Segment can be removed after successfully installing the ELIST Database Segment.

- an overview of the mission application and all of its segments in the context of the application;
- considerations applicable to the use of ELIST with classified data;
- the definitions of key concepts and terms used throughout the ELIST documentation;
- a complete list of the available ELIST documentation;
- a brief history of ELIST; and
- basic information pertinent to the client/server configuration and installation of the ELIST segments.

1.2 Segment Overview

Installation of the ELIST Database Segment creates the ELIST database in the database instance identified (and possibly created) during the prior installation of the ELIST Database Instance Segment. This process creates the application-specific tablespaces (or data stores), defines user roles, creates database owner accounts and defines their roles, and creates the tables and other schema objects required by ELIST. It also fills some of those tables with the initial data provided by the ELIST Database Fill Segment. The latter segment can be removed after the successful installation of the ELIST Database Segment.

The ELIST Database Segment should be installed by, or in the presence of, the DBA (using the usual `sysadmin` account) because it prompts for the `SYSTEM` password of the ELIST database instance.

Scripts for maintaining ELIST database user accounts are contained in a different segment, the ELIST Database Utility Segment.

The structure of the ELIST database schema is described in the *Database Design Document (DBDD) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment*.

The *System Administrator's Manual (SAM) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment* provides guidance for recovering from errors that can occur during the segment's installation or deinstallation. It also outlines methods for extending database storage should it become filled during the operation of ELIST.

1.3 Points of Contact

The development of ELIST was sponsored by the Military Traffic Management Command (MTMC) Transportation Engineering Agency (TEA). ELIST was implemented by MTMC/TEA and Argonne National Laboratory (ANL). For administrative and program management support, including the permission that DISA Configuration Management (CM) requires to release the distribution media for the ELIST mission application to prospective users, contact

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For technical support of a segment-specific (*i.e.*, DII COE-related) nature, contact

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1.4 Product Information

- Product Qualification:** Completed in-house testing
- Product Restrictions:** Releasable to military organizations (like OSD; Joint Staff; EUCOM, CENTCOM, and other CINCs) and perhaps other government organizations with approval of MTMCTEA. Consult Chapter 8 of Army Regulation 5-11 (see citation in Section 2.1.4, below), then contact the ELIST Project Officer at the address given in Section 1.3
- Product Dependencies:** ORACLE RDBMS (ORAS) 2.1.0.0/8.1.6.1 or later
Database Administrator Server (DBAdmS) 3.0.2.0 or later
Database Administrator Runtime (DBAdmR) 3.0.2.0 or later
ELIST Global Data Segment (ELIST) 8.1.0.0 or later
ELIST Database Instance Segment (ELIST) 8.1.0.0 or later
ELIST Database Fill Segment (ELIST) 8.1.0.0 or later

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2. Referenced Documents

The following other documents are referenced in this document.

2.1 Government Documents

2.1.1 DII COE ELIST Documents

Introduction to the Enhanced Logistics Intratheater Support Tool (ELIST) Mission Application and its Segments: Global Data Segment Version 8.1.0.0, Database Instance Segment Version 8.1.0.0, Database Fill Segment Version 8.1.0.0, Database Segment Version 8.1.0.0, Database Utility Segment Version 8.1.0.0, Software Segment Version 8.1.0.0, and Reference Data Segment Version 8.1.0.0 for Solaris 7, ELIST.8100.Final.SOL7.Intro, Argonne National Laboratory, 26 February 2002

Installation Procedures (IP) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment Version 8.1.0.0, Database Instance Segment Version 8.1.0.0, Database Fill Segment Version 8.1.0.0, Database Segment Version 8.1.0.0, Database Utility Segment Version 8.1.0.0, Software Segment Version 8.1.0.0, and Reference Data Segment Version 8.1.0.0 for Solaris 7, ELIST.8100.Final.SOL7.IP, Argonne National Laboratory, 26 February 2002

System Administrator's Manual (SAM) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment Version 8.1.0.0 for Solaris 7, ELISTdb.8100.Final.SOL7.SAM, Argonne National Laboratory, 26 February 2002

Software Test Plan/Description/Report (STP/STD/STR) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment Version 8.1.0.0, Database Instance Segment Version 8.1.0.0, Database Fill Segment Version 8.1.0.0, Database Segment Version 8.1.0.0, Database Utility Segment Version 8.1.0.0, Software Segment Version 8.1.0.0, and Reference Data Segment Version 8.1.0.0 for Solaris 7, ELIST.8100.Final.SOL7.STP_STD_STR, Argonne National Laboratory, 26 February 2002

Database Design Document (DBDD) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment Version 8.1.0.0 for Solaris 7, ELISTdb.8100.Final.SOL7.DBDD, Argonne National Laboratory, 26 February 2002

2.1.2 Other DII COE Documents

N/A.

2.1.3 Other ELIST Documents

N/A.

2.1.4 Other Government Documents

Army Regulation 5-11, *Management of Army Models and Simulations*, Army HQ, Washington DC, 10 July 1997. Available on the World Wide Web at <http://www.amso.army.mil/ar5-11>. POC: Debra Ridgeway, Army Model Simulation Office, DSN 329-0012 ext. 24, comm. (703) 601-0012 ext. 24, email debra.ridgeway@hqda.army.mil

2.2 Non-Government Documents

N/A.

3. Version Description

3.1 Inventory of Materials Released

NOTE: See Section 1.4 for Product (*i.e.*, Releasability) Restrictions.

The ELIST Database Segment for Solaris 7, Version 8.1.0.0, CM Number 10108, 26 February 2002, is distributed in `MakeInstall` format on two CDs, one externally labeled “Master” and the other “Backup,” and both externally labeled “ELIST Mission Application Software.” The other segments of the ELIST mission application are distributed on the same CDs.

Documentation for the ELIST Database Segment is also distributed on two CDs, one externally labeled “Master” and the other “Backup,” and both externally labeled “ELIST Mission Application Documentation.” Documentation for the other segments of the ELIST mission application is distributed on the same CDs. On these CDs, the documentation pertinent to the ELIST Database Segment can be found in the following directories:

- ELIST directory
 - *Introduction to the Enhanced Logistics Intratheater Support Tool (ELIST) Mission Application and its Segments: Global Data Segment Version 8.1.0.0, Database Instance Segment Version 8.1.0.0, Database Fill Segment Version 8.1.0.0, Database Segment Version 8.1.0.0, Database Utility Segment Version 8.1.0.0, Software Segment Version 8.1.0.0, and Reference Data Segment Version 8.1.0.0 for Solaris 7, ELIST.8100.Final.SOL7.Intro, Argonne National Laboratory, 26 February 2002*
 - *Installation Procedures (IP) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment Version 8.1.0.0, Database Instance Segment Version 8.1.0.0, Database Fill Segment Version 8.1.0.0, Database Segment Version 8.1.0.0, Database Utility Segment Version 8.1.0.0, Software Segment Version 8.1.0.0, and Reference Data Segment Version 8.1.0.0 for Solaris 7, ELIST.8100.Final.SOL7.IP, Argonne National Laboratory, 26 February 2002*
 - *Software Test Plan/Description/Report (STP/STD/STR) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment Version 8.1.0.0, Database Instance Segment Version 8.1.0.0, Database Fill Segment Version 8.1.0.0, Database Segment Version 8.1.0.0, Database Utility Segment Version 8.1.0.0, Software Segment Version 8.1.0.0, and Reference Data Segment Version 8.1.0.0 for Solaris 7, ELIST.8100.Final.SOL7.STP_STD_STR, Argonne National Laboratory, 26 February 2002*
- ELISTdb directory
 - *Software Version Description (SVD) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment Version 8.1.0.0 for*

Solaris 7, ELISTdb.8100.Final.SOL7.SVD, Argonne National Laboratory, 26 February 2002

- *System Administrator Manual (SAM) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment Version 8.1.0.0 for Solaris 7, ELISTdb.8100.Final.SOL7.SAM, Argonne National Laboratory, 26 February 2002*
- *Database Design Document (DBDD) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment Version 8.1.0.0 for Solaris 7, ELISTdb.8100.Final.SOL7.DBDD, Argonne National Laboratory, 26 February 2002*

3.2 Pertinent Documentation

All pertinent documentation is delivered with the segment (see Section 3.1).

3.3 Inventory of Software Contents

The directory structure of the ELIST Database Segment, as distributed, can be inferred from the listing of the `FileAttribs` descriptor file in Appendix A.7.

The segment is a database segment. It contains directories and data files pertinent to the creation of the ELIST database. There are no executables and no scripts except for the installation and deinstallation scripts, including various database creation scripts (*e.g.*, SQL scripts).

3.4 Changes Installed

N/A.

3.5 Waivers

See Appendix C.

3.6 Adaptation Data

Although an effort was made in developing the ELIST Database Segment to determine database parameters that are suitable for an ELIST database at a wide variety of sites, some sites may have unique requirements. Information on adapting the database parameters to the specific needs of a site can be found in the *System Administrator Manual (SAM) for the Enhanced Logistics Intratheater Support Tool (ELIST) Database Segment*.

3.7 Installation Instructions

Installation instructions for all the segments of the ELIST mission application can be found in the *Installation Procedures (IP) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment, Database Instance Segment, Database Fill Segment, Database Segment, Database Utility Segment, Software Segment, and Reference Data Segment*.

The computer system resources required by the ELIST Database Segment are as follows:

- RAM required: 20 MB⁴
- Disk space required: 332 KB

The figure given above for disk space is for storing the segment directories and files. The total initial RDBMS disk space required for an ELIST database in the relevant Oracle directories is approximately 5.125 GB. (See the *Installation Procedures (IP) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment, Database Instance Segment, Database Fill Segment, Database Segment, Database Utility Segment, Software Segment, and Reference Data Segment* for further information.)

There are no “features” of the ELIST Database Segment that can be executed after installation; all the processing involved in the creation of a database takes place during installation, under the control of the `PostInstall` script.

Scripts for creating and managing ELIST database user accounts are provided as features of the ELIST Database Utility Segment.

3.8 Possible Problems and Known Errors

There were no known problems or errors when this document was prepared.

⁴ Nominal requirement for the kernel and RDBMS tools invoked by the scripts of this segment.

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4. Notes

The ELIST Database Segment must be installed on a platform configured as a database server. In the current implementation, that platform must be a Sun workstation. Installation of the ELIST Database Segment requires the ORACLE RDBMS (ORAS) segment, the Database Administrator Server (DBAdmS) segment, the Database Administrator Runtime (DBAdmR) segment, the ELIST Global Data Segment (ELIST), the ELIST Database Instance Segment (ELIST), and the ELIST Database Fill Segment (ELIST) to be resident on the same platform. The prerequisites for those segments, in turn, are documented in their SVDs. Further information on system configuration can be found in the *Installation Procedures (IP) for the Enhanced Logistics Intratheater Support Tool (ELIST) Global Data Segment, Database Instance Segment, Database Fill Segment, Database Segment, Database Utility Segment, Software Segment, and Reference Data Segment*.

The following acronyms are (or may be) used in this document.

Acronym	Definition
ANL	Argonne National Laboratory
CD	Compact Disk
CENTCOM	Central Command
CINC	Combined Intelligence Center (as used in this document)
CM	Configuration Management
COE	Common Operating Environment
COTS	Commercial Off-the-Shelf
DB	Database
DBA	Database Administrator
DBAdmR	Database Administrator Runtime (DII COE segment prefix)
DBAdmS	Database Administrator Server (DII COE segment prefix)
DBDD	Database Design Document
DII	Defense Information Infrastructure
DISA	Defense Information Systems Agency
DSN	Defense Switched Network
ELIST	Enhanced Logistics Intratheater Support Tool (DII COE segment prefix)
ETEdit	ETPFDD Editor
ETPFDD	Expanded Time Phased Force Deployment Data
EUCOM	European Command
GB	Gigabyte(s)
HQ	Headquarters
IP	Installation Procedures
I&RTS	Integration and Runtime Specification
LAN	Local Area Network
KB	Kilobyte(s)
MB	Megabyte(s)
MTMC	Military Traffic Management Command
N/A	Not Applicable
NFS	Network File System
NT	New Technology (an Operating System for Microsoft Windows)

ORAS	ORACLE RDBMS (DII COE segment prefix)
OSD	Office of the Secretary of Defense
PC	Personal Computer
POC	Point of Contact
RDBMS	Relational Database Management System
RAM	Random Access Memory
SAM	System Administrator's Manual
SQL	Structured Query Language
STD	Software Test Description
STP	Software Test Plan
STR	Software Test Report
SVD	Software Version Description
TEA	Transportation Engineering Agency
UM	User's Manual

5. Acknowledgements

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6. Documentation Improvement and Feedback

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Appendix A. Contents of the Descriptor Files in the SegDescrip Directory

The contents of the descriptor files in the SegDescrip directory are reproduced in this appendix.

A.1 SegName File

```
#####
# SegName descriptor file for the ELIST Database Segment
# Segment Prefix: ELIST
# Segment Directory: ELISTdb
#####

$TYPE:DATABASE
$NAME:ELIST Database Segment
$PREFIX:ELIST

# END OF FILE
```

A.2 SegInfo File

```
# This is the SegInfo file for the ELIST Database Segment.

[Database]
$DATABASE_ID:ORACLE
$ROLES
etpfd_user
elist_user
$SCOPE:UNIQUE

[Security]
UNCLASS

[Hardware]
$CPU:SPARC
$DISK:332:1
$OPSYS:SOL
$MEMORY:20000

[Requires]
ELIST Global Data Segment:ELIST:/h/ELISTglob:8.1.0.0
ELIST Database Instance Segment:ELIST:/h/ELISTdbinst:8.1.0.0
ELIST Database Fill Segment:ELIST:/h/ELISTdbfill:8.1.0.0
ORACLE RDBMS:ORAS:/h/COTS/ORAS:2.1.0.0/8.1.6.1
Database Administrator Server:DBAdmS:/h/DBAdmS:3.0.2.0
Database Administrator Runtime:DBAdmR:/h/DBAdmR:3.0.2.0

# Note: The dependency on the ELIST Database Instance Segment is made explicit
# above only for documentation purposes. This segment does not directly
# reference anything in the ELIST Database Instance Segment. However, that
# segment must have been previously installed, so that the instance name is
# known to have been recorded in the Instance_Info file of the ELIST Global
# Data Segment. It is sufficient to name the ELIST Database Fill Segment as
# being required, since that in turn requires the ELIST Database Instance
# Segment.

[Direct]
$ROOT:PostInstall
$ROOT:DEINSTALL

[FilesList]
$PATH:$DATA_DIR/global/ELISTglob/data
$FILES
# This segment reads the following file to determine the SID of the ELIST
# database instance:
```

```

Instance_Info
# This segment writes the following log files during its installation:
Logs/ELISTdb/Install_Log
Logs/ELISTdb/Install_Log.old
# This segment writes the following log files during its deinstallation:
Logs/ELISTdb/Deinstall_Log
Logs/ELISTdb/Deinstall_Log.old
# This segment writes the following user-list files during its deinstallation
# and reads them during a subsequent reinstallation:
Users_When_ELISTdb_Deinstalled/Users_With_The_elist_user_Role
Users_When_ELISTdb_Deinstalled/Users_With_The_etpfdd_user_Role
$PATH:/h/ELISTdbfill
$FILES
# This segment imports the following .dmp files to load the ELIST database
# with initial data:
data/elist.dmp
data/etpfdd.dmp
$PATH:$DATA_DIR/global/DBAdmS
$FILES
# This segment reads the following file to find Oracle's bin directory:
etc/DBAServerStatus
$PATH:/h/DBAdmS
$FILES
# This segment directly invokes the following public APIs of DBAdmS:
bin/DBAdmSStartServer
bin/DBAdmSPromptPassword
bin/DBAdmSCreateDS
bin/DBAdmSDropDS
# The following Oracle files and directories are those used or modified during
# the process of database creation and removal:
$PATH:/var/opt/oracle
$FILES
oratab
listener.ora
tnsnames.ora
$PATH:/etc
$FILES
init.d/dbora
rc2.d/S99dbora
rc0.d/K01dbora
$PATH:/
$DIRS
ora01
ora02
ora03
ora04
ora01/oradata
ora02/oradata
ora03/oradata
ora04/oradata
ora01/app/oracle/admin
ora01/app/oracle/oradba
ora01/app/oracle/product/8.1.6/dbs
ora01/app/oracle/product/8.1.6/rdbms/log
$PATH:/ora01/app/oracle/product/8.1.6
$FILES
# This segment directly invokes the following ORACLE vendor tools:
bin/sqlplus
bin/imp

# END OF FILE

```

A.3 VERSION File

```

# This is the VERSION descriptor for the ELIST Database Segment.
8.1.0.0 : 01/28/2002 : 10:00

# END OF FILE

```

A.4 ReleaseNotes File

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This is the ReleaseNotes file for the ELIST Database Segment.

The purpose of this segment is to create the tablespaces, DBO accounts, user roles, and schema objects (tables, constraints, indexes) for the ELIST database and to load the database with initial data. The database instance in which this is performed already exists; its existence was secured by the installation of a prior segment, the ELIST Database Instance Segment, and its identity has been recorded in a data file created by the ELIST Global Data Segment.

The storage structure, the schema objects, and the database vendor tools used by the ELIST database are documented in the Database Design Document (DBDD) for this segment. Among other information, this documentation includes descriptions of the tables and elements, the range of valid element values, and the functions performed by each SQL script used by this segment, the ELIST Database Utility Segment, and the ELIST Software Segment.

This segment must be installed on the Database Server platform on which the ELIST Global Data Segment, the ELIST Database Instance Segment, and the ELIST Database Fill Segment have already been installed and on which the ELIST Database Utility Segment will subsequently be installed. That machine is the one on which the Oracle RDBMS (ORAS) has already been installed.

After this segment is installed, the ELIST Database Fill Segment can, and should, be deinstalled (to save space). A subsequent reinstallation of this segment will require the ELIST Database Fill Segment to be reinstalled first.

The person installing this segment must be prepared to reply to a prompt for the password that was previously assigned to the SYSTEM user of the ELIST database instance.

The tablespaces created by the installation of this segment require, initially, approximately 1.2 Gb.

Installation and deinstallation of this segment create log files, Install_Log and Deinstall_Log respectively, in /h/data/global/ELISTglob/data/Logs/ELISTdb. These logs may be consulted if the installation or deinstallation of this segment fails.

END OF FILE

A.5 PostInstall File

```
#!/bin/sh

# This is the PostInstall script for the ELIST Database Segment.
# Its purpose is to create the tablespaces, tables, roles, etc. for the
# ELIST database in the database instance previously secured by the
# installation of the ELIST Database Instance Segment. That database instance
# is identified in the data/Instance_Info file of the ELIST Global Data
# Segment (i.e., in /h/global/data/ELISTglob/data/Instance_Info).

# Set convenient abbreviations for the ELIST database definition scripts.

ELIST_Scripts=$INSTALL_DIR/install/ELIST_DB_Defn_Scripts
ETPFDD_Scripts=$INSTALL_DIR/install/ETPFDD_DB_Defn_Scripts
ELIST_SQL=$INSTALL_DIR/install/sql
export ELIST_SQL
ELIST_DSLISTS=$INSTALL_DIR/data
export ELIST_DSLISTS

# The following reference to ELISTglob/data is valid, because the ELIST Global
# Data Segment is required by this segment and must therefore already have been
# installed.

ELIST_glob=$DATA_DIR/global/ELISTglob/data
INFO=$ELIST_glob/Instance_Info

# Likewise, the following reference to ELISTdbfill/data is valid, because the
# ELIST Database Fill Segment is required by this segment and must therefore
# already have been installed.

ELIST_DBFILL=$DATA_DIR/local/ELISTdbfill/data
```

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```

export ELIST_DBFILL

# Get the SID (name) of the ELIST database instance.

ELIST_SID=`awk -F= 'NR==3 {print $2}' "$INFO"`
export ELIST_SID

# The DBAdmS segment can be assumed to exist because this segment requires it.

DBA_SERVER_HOME=`COEFindSeg 'Database Administrator Server' | \
    awk -F: '{print $1}'`

# Append the bin directory of DBAdmS to the path.

PATH=${PATH}:$DBA_SERVER_HOME/bin

# Identify the RDBMS being used. At present, it is only ORACLE, but at some
# future time SYBASE and INFORMIX may (have to) be supported as well.

ELIST_RDBMS=ORACLE
export ELIST_RDBMS

# Append Oracle's bin directory to the path.

ORACLE_HOME=`awk -F\; \
    '$1=="$COE_HOST"' && $2=="$ELIST_RDBMS"' && $3=="$ELIST_SID"' {print $4}' \
    $DATA_DIR/global/DBAdmS/etc/DBAServerStatus`
if [ ${ORACLE_HOME:=none} = none ] ; then
    MSG=`echo 'A server status file needs to be updated before'; \
        echo 'installing this segment. Log on as a user (a DBA) with'; \
        echo 'access to the features of the Database Administrator Server'; \
        echo '(DBAdmS) segment and launch its DB Server Snapshot feature.'; \
        echo 'Then try installing this segment again.'`
    COEInstError "$MSG" || exit
fi
export ORACLE_HOME
PATH=${PATH}:$ORACLE_HOME/bin
export PATH

# Start the RDBMS, if necessary.

DBAdmSStartServer $ELIST_RDBMS $ELIST_SID
STATUS=$?

case $STATUS in
1)
    MSG=`echo 'DBAdmSStartServer failed to start the server for the'; \
        echo "$ELIST_SID database instance (it returned a status code"; \
        echo 'of 1). Aborting the install. Consult the System'; \
        echo "Administrator's Manual (SAM) for this segment."`
    COEInstError "$MSG" || exit
;;
esac

# Prompt for the password for the SYSTEM user of the ELIST database instance.

ELIST_DBA_PASSWD=`DBAdmSPromptPassword $ELIST_RDBMS $ELIST_SID`
STATUS=$?

case $STATUS in
0)
    export ELIST_DBA_PASSWD
;;
*)
    MSG=`echo 'DBAdmSPromptPassword failed to verify the password for the'; \
        echo "SYSTEM user of the $ELIST_SID database instance that you"; \
        echo 'entered, or you canceled the password prompt (it returned a'; \
        echo "status code of $STATUS). Aborting the install. Consult"; \
        echo "the System Administrator's Manual (SAM) for this segment."`
    COEInstError "$MSG" || exit

```

```

;;
esac

# Set up for spooling and logging.

# Log files are written into the DB_Install_Logs subdirectory of the ELIST
# Database Instance Segment's data directory (not the data directory of this
# segment). That way, they will persist if this segment fails during
# installation, and after it is deinstalled.

ELIST_SPOOL=$TMPDIR/tmp.lst
export ELIST_SPOOL
ELIST_LOG=$ELIST_glob/Logs/ELISTdb/Install_Log
export ELIST_LOG
# Preserve one old install log.
cp -f $ELIST_LOG $ELIST_LOG.old
echo 'Starting ELIST Database installation' > $ELIST_LOG
echo "ELIST database instance = $ELIST_SID" >> $ELIST_LOG
date >> $ELIST_LOG

# Invoke the main install scripts from the install directory.

User_Lists=$ELIST_glob/Users_When_ELISTdb_Deinstalled

$INSTALL_DIR/install/Install_DB elist elist elist $ELIST_Scripts \
    $User_Lists/Users_With_The_elist_user_Role
ELIST_STATUS=$?

$INSTALL_DIR/install/Install_DB etpfdd 'etpfdd and target' \
    'etpfdd and/or target' $ETPFDD_Scripts \
    $User_Lists/Users_With_The_etpfdd_user_Role
ETPFDD_STATUS=$?

# Clean up.

rm -f $ELIST_SPOOL

# Note the status.

if [ $ELIST_STATUS -eq 0 -a $ETPFDD_STATUS -eq 0 ] ; then
    MSG=`echo 'The ELIST database appears to have been successfully'; \
        echo 'created. However, you should check the log file,'; \
        echo "$ELIST_LOG,"; \
        echo 'carefully to make sure there were no undetected failures.'; \
        echo 'If you find failures other than "ORA-00942: table or view'; \
        echo 'does not exist," which is innocuous, you should consult the'; \
        echo "System Administrator's Manual (SAM) for this segment."`
else
    MSG=`echo 'One or more failures were detected during the creation of'; \
        echo 'the ELIST database, as previously noted. In addition to'; \
        echo 'carrying out the instructions previously given, you should'; \
        echo 'check the log file,'; \
        echo "$ELIST_LOG,"; \
        echo 'carefully to make sure there were no undetected failures.'; \
        echo 'If you find failures that were not previously noted, other'; \
        echo 'than "ORA-00942: table or view does not exist," which is'; \
        echo 'innocuous, you should consult the System Administrator's'; \
        echo 'Manual (SAM) this segment.'`
fi
COEMsg "$MSG"

# END OF FILE

```

A.6 DEINSTALL File

```

#!/bin/sh

# This is the DEINSTALL script for the ELIST Database Segment.

# Check whether segments that depend on this one have already been removed.
# If not, display a message and abort; the installer should remove those

```

ELISTdb.8100.Final.SOL7.SVD

```
# segments first. This ensures that they do not remain on the system without
# the segments on which they depend, which would cause problems if one tried
# to "use" them. Aborting the deinstall is tolerable here, because there is
# a clear way to make progress.

# Check the ELIST Database Utility Segment. If found, abort as described above.
if [ "`COEFindSeg 'ELIST Database Utility Segment'`" != 'Not Found' ] ; then

    MSG=`echo 'The ELIST Database Utility Segment, which depends on the'; \
        echo 'segment you are trying to deinstall, is still installed.'; \
        echo 'You must deinstall it before you can deinstall this segment.'; \
        echo 'Aborting the deinstall.'`
    COEInstError "$MSG" || exit

fi

# There are several more situations below in which this deinstall may be
# aborted, but those are tolerable, too, because there is a (more-or-less)
# clear way to make progress.

# Set convenient abbreviations for the ELIST database definition scripts.
ELIST_Scripts=$INSTALL_DIR/install/ELIST_DB_Defn_Scripts
ETPFDD_Scripts=$INSTALL_DIR/install/ETPFDD_DB_Defn_Scripts
ELIST_SQL=$INSTALL_DIR/install/sql
export ELIST_SQL
ELIST_DSLISTS=$INSTALL_DIR/data
export ELIST_DSLISTS

# The following reference to ELISTglob/data is valid, because the ELIST Global
# Data Segment must still be installed if this segment is. (It cannot be
# deinstalled until all later ELIST Database Server segments are first
# deinstalled, in the reverse order of their installation.)

ELIST_glob=$DATA_DIR/global/ELISTglob/data
INFO=$ELIST_glob/Instance_Info

# Get the SID (name) of the ELIST database instance.
ELIST_SID=`awk -F= 'NR==3 {print $2}' "$INFO"`
export ELIST_SID

# Check that the DBAdmS segment is still installed. (Although required by this
# segment, it could have been deinstalled after this segment was installed.)

DBA_SERVER_HOME=`COEFindSeg 'Database Administrator Server' | \
    awk -F: '{print $1}'`
if [ "$DBA_SERVER_HOME" = 'Not Found' ] ; then
    MSG=`echo 'The Database Administrator Server (DBAdmS) segment, which is'; \
        echo 'required, has been deinstalled, hence the deinstallation'; \
        echo 'of the ELIST Database Segment cannot proceed. Reinstall'; \
        echo 'that segment, then repeat the deinstallation of this'; \
        echo 'segment.'`
    COEInstError "$MSG" || exit
fi

# Append the bin directory of DBAdmS to the path.
PATH=${PATH}:$DBA_SERVER_HOME/bin

# Identify the RDBMS being used. At present, it is only ORACLE, but at
# some future time SYBASE and INFORMIX may (have to) be supported as well.
ELIST_RDBMS=ORACLE
export ELIST_RDBMS

# Append Oracle's bin directory to the path.
ORACLE_HOME=`awk -F\; \
    '$1=="$COE_HOST"' && $2=="$ELIST_RDBMS"' && $3=="$ELIST_SID"' {print $4}' \
    $DATA_DIR/global/DBAdmS/etc/DBAServerStatus`
if [ ${ORACLE_HOME:=none} = none ] ; then
    MSG=`echo 'A server status file needs to be updated before'; \
```

ELISTdb.8100.Final.SOL7.SVD

```

        echo 'deinstalling this segment. Log on as a user (a DBA) with'; \
        echo 'access to the features of the Database Administrator Server'; \
        echo '(DBAdmS) segment and launch its DB Server Snapshot feature.'; \
        echo 'Then try deinstalling this segment again.'`
    COEInstError "$MSG" || exit
fi
export ORACLE_HOME
PATH=${PATH}:$ORACLE_HOME/bin
export PATH

# Start the RDBMS, if necessary.

DBAdmSStartServer $ELIST_RDBMS $ELIST_SID
STATUS=$?

case $STATUS in
1)
    MSG=`echo 'DBAdmSStartServer failed to start the server for the'; \
        echo "$ELIST_SID database instance (it returned a status code"; \
        echo 'of 1). Aborting the deinstall. Consult the System'; \
        echo "Administrator's Manual (SAM) for this segment."`
    COEInstError "$MSG" || exit
;;
esac

# Prompt for the password for the SYSTEM user of the ELIST database instance.

ELIST_DBA_PASSWD=`DBAdmSPromptPassword $ELIST_RDBMS $ELIST_SID`
STATUS=$?

case $STATUS in
0)
    export ELIST_DBA_PASSWD
;;
*)
    MSG=`echo 'DBAdmSPromptPassword failed to verify the password for the'; \
        echo 'SYSTEM user of the $ELIST_SID database instance that you'; \
        echo 'entered, or you canceled the password prompt (it returned a'; \
        echo 'status code of $STATUS). Aborting the deinstall. Consult'; \
        echo 'the System Administrator's Manual (SAM) for this segment.'`
    COEInstError "$MSG" || exit
;;
esac

# Beyond this point, this segment will definitely be removed (i.e., the current
# deinstall will not be deliberately aborted by calling COEInstError),
# regardless of what failure might be detected. This ensures that it is always
# possible to remove this segment, even if it means leaving some of the external
# effects of its installation unreversed. The installer is directed to the SAM
# for this segment, which gives tips that a DBA might find useful in recovering,
# by means outside this segment, from the failure to reverse the external
# effects of its installation.

# Set up for spooling and logging.

# Log files are written into the Logs/ELISTdb subdirectory of the ELIST
# Database Instance Segment's data directory (not the data directory of this
# segment). That way, they will persist if this segment fails during
# installation, and after it is deinstalled.

ELIST_SPOOL=$TMPDIR/tmp.lst
export ELIST_SPOOL
ELIST_LOG=$ELIST_glob/Logs/ELISTdb/Deinstall_Log
export ELIST_LOG
# Preserve one old deinstall log.
cp -f $ELIST_LOG $ELIST_LOG.old
echo 'Starting ELIST Database deinstallation' > $ELIST_LOG
echo "ELIST database instance = $ELIST_SID" >> $ELIST_LOG
date >> $ELIST_LOG

```

```
# Invoke the main deinstall scripts from the install directory.

User_Lists=$ELIST_glob/Users_When_ELISTdb_Deinstalled

$INSTALL_DIR/install/Deinstall_DB elist elist elist $ELIST_Scripts \
                                $User_Lists/Users_With_The_elist_user_Role
ELIST_STATUS=$?

$INSTALL_DIR/install/Deinstall_DB etpfdd 'etpfdd and target' \
                                'etpfdd and/or target' $ETPFDD_Scripts \
                                $User_Lists/Users_With_The_etpfdd_user_Role
ETPFDD_STATUS=$?

# Clean up.

rm -f $ELIST_SPOOL

# Note the status.

if [ $ELIST_STATUS -eq 0 -a $ETPFDD_STATUS -eq 0 ] ; then
    MSG=`echo 'The ELIST database appears to have been successfully'; \
        echo 'removed. However, you should check the log file,'; \
        echo "$ELIST_LOG,"; \
        echo 'carefully to make sure there were no undetected failures.'; \
        echo 'If you find failures, you should consult the System'; \
        echo "Administrator's Manual (SAM) for this segment."`
else
    MSG=`echo 'One or more failures were detected during the removal of the'; \
        echo 'ELIST database, as previously noted. In addition to'; \
        echo 'carrying out the instructions previously given, you should'; \
        echo 'check the log file,'; \
        echo "$ELIST_LOG,"; \
        echo 'carefully to make sure there were no undetected failures.'; \
        echo 'If you find failures that were not previously noted, you'; \
        echo "should consult the System Administrator's Manual (SAM) for"; \
        echo 'this segment.'`
fi
COEMsg "$MSG"

exit 0

# END OF FILE
```

A.7 FileAttribs File

```
# This is the FileAttribs descriptor for the ELIST Database Segment.

$SegDir:750:418:419
750:418:419:SegDescrip
750:418:419:SegDescrip/DEINSTALL
640:418:419:SegDescrip/FileAttribs
750:418:419:SegDescrip/PostInstall
640:418:419:SegDescrip/ReleaseNotes
640:418:419:SegDescrip/SegInfo
640:418:419:SegDescrip/SegName
640:418:419:SegDescrip/VERSION
640:418:419:SegDescrip/Validated
750:418:419:Integ
640:418:419:Integ/IntgNotes
640:418:419:Integ/VSOOutput
750:418:419:install
740:418:419:install/Install_DB
740:418:419:install/Deinstall_DB
750:418:419:install/sql
640:418:419:install/sql/assign_user_grant.sql
640:418:419:install/sql/check_roles.sql
640:418:419:install/sql/create_role.sql
640:418:419:install/sql/disconnect_user.sql
640:418:419:install/sql/drop_elist_tables.sql
640:418:419:install/sql/drop_etpfdd_tables.sql
640:418:419:install/sql/drop_target_tables.sql
```

```

640:418:419:install/sql/drop_role.sql
640:418:419:install/sql/elist_grants.sql
640:418:419:install/sql/etpfdd_grants.sql
640:418:419:install/sql/target_grants.sql
640:418:419:install/sql/list_users1.sql
640:418:419:install/sql/list_users2.sql
640:418:419:install/sql/make_elist_tables.sql
640:418:419:install/sql/make_etpfdd_tables.sql
640:418:419:install/sql/make_target_tables.sql
640:418:419:install/sql/reconnect_user.sql
750:418:419:install/ELIST_DB_Defn_Scripts
750:418:419:install/ELIST_DB_Defn_Scripts/Schema_Scripts
750:418:419:install/ELIST_DB_Defn_Scripts/Storage_Scripts
750:418:419:install/ELIST_DB_Defn_Scripts/Owner_Scripts
750:418:419:install/ELIST_DB_Defn_Scripts/Role_Scripts
750:418:419:install/ETPFDD_DB_Defn_Scripts
750:418:419:install/ETPFDD_DB_Defn_Scripts/Schema_Scripts
750:418:419:install/ETPFDD_DB_Defn_Scripts/Storage_Scripts
750:418:419:install/ETPFDD_DB_Defn_Scripts/Owner_Scripts
750:418:419:install/ETPFDD_DB_Defn_Scripts/Role_Scripts
750:418:419:data
640:418:419:data/ELIST_Store_List
640:418:419:data/ETPFDD_Store_List

# END OF FILE

```

A.8 VSDBOutput File

VSDBOutput Mon Jan 28 16:00:53 2002

```

Warning! The 'DBS_files' directory was not found!
This is acceptable if you are using the DBAdmSCreatedS API
*-----*

```

***** Explanation:

I am!

This page intentionally left blank.

Appendix B. Contents of the Files in the Integ Directory

The contents of the files in the Integ directory are reproduced in this appendix.

B.1 IntgNotes File

This is the IntgNotes file for the ELIST Database Segment.

This submission Version 8.1.0.0 is the initial submission of the segment.

The ELIST Database Segment is part of the ELIST mission application. There are six other segments. All seven segments have the same segment prefix (ELIST).

The installation of this segment creates the ELIST database in the database instance previously created by the installation of the ELIST Database Instance Segment, and its deinstallation removes the database. If this segment is deinstalled and then replaced with a later version, and the ELIST Database Instance Segment is NOT deinstalled in the process, existing ELIST database user accounts will continue to exist and have the appropriate user roles.

The ELIST database currently has Unique scope.

Refer to the "Introduction to the Enhanced Logistics Intratheater Support Tool (ELIST) Mission Application and its Segments: Global Data Segment, Database Instance Segment, Database Fill Segment, Database Segment, Database Utility Segment, Software Segment, and Reference Data Segment" for the following:

- + an overview of the mission application and all of its segments in the context of the application;
- + the definitions of key concepts and terms used throughout the ELIST documentation;
- + a complete list of the available ELIST documentation;
- + a brief history of ELIST; and
- + basic information pertinent to the client/server configuration and installation of the ELIST segments.

END OF FILE

B.2 Annotated vsOutput File

```
(W)-----|
[Database] is reserved for future use
```

***** Explanation:

That message is obsolete and should no longer be generated.

```
(W)-----|
Directory './ELISTdb/Scripts' was expected but not found.
This may be an error or indicate a violation of the COE.
```

***** Explanation:

This segment does not need a Scripts directory, which is deprecated anyway by the I&RTS. All of its scripts are self-contained and take care to establish the necessary environment.

```
(W)-----|
Variable ORACLE_HOME must begin with the segment prefix (ELIST_)
(W)-----|
Variable ORACLE_HOME must begin with the segment prefix (ELIST_)
```

***** Explanation:

This segment invokes public ORACLE APIs (provided by the ORAS segment). ORACLE expects ORACLE_HOME to be set.

This segment therefore sets ORACLE_HOME by obtaining it from the entry for the ELIST DB's SID in the DBAServerStatus file. ORACLE_HOME has to be exported in order to be used by ORACLE. This is done in PostInstall and in DEINSTALL, accounting for the two instances of the above warning.

Results of verification:

```
"/ELISTdb":  
  Totals  
  -----  
  Errors:    0  
  Warnings:  4
```

Appendix C. Chief Engineer Permissions and Waivers Requested

Chief Engineer Permission Request

SEGMENT DESIGNATION: ELIST Database Segment (ELIST)

CM Number: 10108

OPERATING SYSTEM: Solaris 7

MISSION APPLICATION NAME: Enhanced Logistics Intratheater Support Tool

TECHNICAL POC: Kenneth W. Dritz
Decision and Information Sciences Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
dritz@anl.gov

APPROVAL REQUESTED FROM: GCSS Chief Engineer

CHECKLIST ITEM: 5-7, Security Services section, “(UNIX) If privileged user permissions are required during segment installation or removal, the Chief Engineer has granted prior approval.”

APPROVAL REQUESTED: To use the \$ROOT keyword for this segment’s PostInstall and DEINSTALL scripts.

RATIONALE: During the installation and deinstallation of this segment, spool output from SQL*Plus (in the ORACLE RDBMS (ORAS) segment) is written into files of the ELIST Global Data Segment. In addition, during deinstallation of this segment, a list of the ELIST database accounts (the ones to whom the application roles have been granted) is saved in files of that same segment, where it is available for use during the subsequent installation of a later version of this segment to determine to which accounts those roles must be regranted. (The grants are automatically and unavoidably revoked as a byproduct of the dropping of the roles when the database is removed during deinstallation.) These files are owned by the `elistown` (418) file owner account registered by the ELIST segments, and they are writeable only by the owner. (Those two provisions are essential elements in the strategy for implementing Requirement 7-2.) The preferred mechanism for obtaining write access to such files is for the writing to be performed by SUID scripts owned by the file owner account and executable by the appropriate group (which does not, itself, have permission to write into the files). However, there is no appropriate directory into which to place these scripts, since database segments cannot have a `bin` directory and the role of the `install` directory is unrelated to this use. The only real alternative is to

let `PostInstall` and `DEINSTALL` write into the desired files by running as `root`. Making the Segment Installer do a `setuid` to the UID of `PostInstall` and `DEINSTALL` (which is already that of the file owner account) would allow this Permission Request to be dropped.

Alternatively, permitting database segments to have a `bin` directory would allow for the use of SUID scripts as discussed above. In the latter case, this segment would need Chief Engineer permission for Rule 6-53, and it would still need Chief Engineer permission for Rule 5-7, but for a different reason; however, `PostInstall` would no longer have to exploit its `root` permission to write into the desired files. This latter solution is not really practical, since SUID scripts would have to be called from many places within `PostInstall` (or its descendants in `install`).

Chief Engineer Permission Request

SEGMENT DESIGNATION: ELIST Database Segment (ELIST)
CM Number: 10108
OPERATING SYSTEM: Solaris 7
MISSION APPLICATION NAME: Enhanced Logistics Intratheater Support Tool
TECHNICAL POC: Kenneth W. Dritz
Decision and Information Sciences Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
dritz@anl.gov

APPROVAL REQUESTED FROM: GCSS Chief Engineer
CHECKLIST ITEM: 6-8, Standards Compliance section, “The segment is available on all COE-supported platforms unless otherwise approved by the Chief Engineer.”

APPROVAL REQUESTED: To provide this segment only for the Sun/Solaris 7 and PC/NT (or Win2K) platforms. At the present time, only the Solaris 7 version has been registered and implemented, but the Windows version will be registered and implemented in the near future.

RATIONALE: The sponsor, MTMC-TEA, only requires the ELIST mission application to operate on these platforms.

I&RTS Compliance Waiver Request

SEGMENT DESIGNATION: ELIST Database Segment (ELIST)
CM Number: 10108
OPERATING SYSTEM: Solaris 7
MISSION APPLICATION NAME: Enhanced Logistics Intratheater Support Tool
TECHNICAL POC: Kenneth W. Dritz
Decision and Information Sciences Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
dritz@anl.gov

CHECKLIST ITEM: 5-39, Database Services section, “The database owner account must use the segment prefix to ensure its uniqueness within the COE community.”

RATIONALE: Historically, because the ELIST database supports the functionality of two subsystems (ELIST and ETEdit), the database has included objects owned by two DBOs (named `elist` and `etpfdd`, respectively); the objects are therefore in two schemas. Since the sponsor requires the DII COE version of ELIST to share a common code base with the non-DII COE version from which it originated (and which continues to be supported), so that two versions do not have to be maintained, we have avoided making changes that introduce version differences.

MITIGATION STRATEGY: We are still investigating whether changing the DBO names in the DII COE version has ramifications that extend no further than the database creation scripts. If that can be verified, the differences will be acceptable, and we should be able to comply with the requirement in the next release. Alternatively, we may be able to verify that the DBO names are arbitrary enough that they can be changed, in both versions, so as to comply with the requirement and still not introduce differences.

I&RTS Compliance Waiver Request

SEGMENT DESIGNATION:	ELIST Database Segment (ELIST)
CM Number:	10108
OPERATING SYSTEM:	Solaris 7
MISSION APPLICATION NAME:	Enhanced Logistics Intratheater Support Tool
TECHNICAL POC:	Kenneth W. Dritz Decision and Information Sciences Division Argonne National Laboratory 9700 S. Cass Ave. Argonne, IL 60439 dritz@anl.gov
CHECKLIST ITEM:	6-24, Database Services section, “Data objects and elements follow naming conventions specified in the DII COE Data Concepts chapter.”
RATIONALE:	Most of the conventions are already followed, but three are not: (1) Object and element names are not always upper case (they are variously in upper, lower, and mixed case). The database creation scripts that create these objects and their elements are essentially the same ones used in the non-DII COE version of ELIST. Since the sponsor has no requirement to use RDBMSs other than Oracle, which is case insensitive, the case of these object and element names is not an issue to the sponsor. (2) Role names are not always upper case. There are two roles (<code>elist_user</code> and <code>etpfdd_user</code>), both arbitrarily written in lower case in the database creation scripts. (3) Role names do not in all cases incorporate the database or application name (presumably this means ELIST, the segment prefix). The two roles are historically named to avoid creating differences between the DII COE version of ELIST and the non-DII COE version.
MITIGATION STRATEGY:	(1) Obviously, nothing is affected by changing all object and element names in the database creation scripts to upper case. Although unproductive, such a change <i>can</i> be made in the future if the sponsor approves the expenditure of funds for that purpose. There are over 100 tables and over 1100 elements in the ELIST database, so it is not a trivial change. Globally changing the table creation scripts to upper case is not a solution, because we do not wish to change the case of table and element comments. (2) Changing the two role names to upper case is trivial and will be done in the next release. (3) Compatibility with the non-DII COE version of ELIST is not an issue, and the two role names <i>can</i> be changed to comply. However, the current names

(which *mean*, respectively, “user of the objects in the `elist` schema” and “user of the objects in the `etpfdd` schema,” where `elist` and `etpfdd` are the names of the two historical DBO accounts in the ELIST database) are more meaningful and less cumbersome and confusing within the ELIST community than the obvious alternatives (`elist_elist_user` and `elist_etpfdd_user`, or their upper-case equivalents). We therefore prefer to retain the existing names (but change them to upper case).

I&RTS Compliance Waiver Request

SEGMENT DESIGNATION:	ELIST Database Segment (ELIST)
CM Number:	10108
OPERATING SYSTEM:	Solaris 7
MISSION APPLICATION NAME:	Enhanced Logistics Intratheater Support Tool
TECHNICAL POC:	Kenneth W. Dritz Decision and Information Sciences Division Argonne National Laboratory 9700 S. Cass Ave. Argonne, IL 60439 dritz@anl.gov
CHECKLIST ITEM:	6-25, Database Services section, “Descriptive definitions for tables, elements, and views are stored in the system’s data dictionary tables as comments less than 255 characters.”
RATIONALE:	Although these comments are indeed used for all tables and their elements (there are no views), in a dozen (out of more than 1200) cases they are longer than 255 characters, with the longest being 683 characters. Two factors influence their length: (1) They satisfy the project-defined goal of conveying useful information, such as the range or set of permissible element values. (2) They follow certain project-defined style conventions that allow most of the information appearing in the DBDD for this segment to be derived mechanically. Since Oracle allows descriptive comments in the data dictionary to be up to 4000 characters in length, and the sponsor has no requirement for the use of RDBMSs other than Oracle, the fact that some of these comments exceed 255 characters is not an issue to the sponsor.
MITIGATION STRATEGY:	Although one would think that no impediment to reducing the length of these comments exists, there is no guarantee that the project goals for both meaningful comments and the automated generation of information for the DBDD can continue to be met by forcing these comments to be less than 255 characters in all cases. Therefore, we prefer to retain the existing comments.

I&RTS Compliance Waiver Request

SEGMENT DESIGNATION: ELIST Database Segment (ELIST)
CM Number: 10108
OPERATING SYSTEM: Solaris 7
MISSION APPLICATION NAME: Enhanced Logistics Intratheater Support Tool
TECHNICAL POC: Kenneth W. Dritz
Decision and Information Sciences Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
dritz@anl.gov

CHECKLIST ITEM: 6-28, Database Services section, “CREATE TABLE statements explicitly stipulate NOT NULL or NULL constraints for every column for all tables.”

RATIONALE: In some (actually, many) cases, neither NOT NULL nor NULL is explicitly stated. In so doing, we have relied on the default behavior, which is to consider the constraint to be NULL (meaning that the element need not have a value).

MITIGATION STRATEGY: If the sponsor approves the expenditure of funds for complying with this requirement, we will satisfy it in the next release.

Documentation Waiver Request

SEGMENT DESIGNATION: ELIST Database Segment (ELIST)
CM Number: 10108
OPERATING SYSTEM: Solaris 7
MISSION APPLICATION NAME: Enhanced Logistics Intratheater Support Tool
TECHNICAL POC: Kenneth W. Dritz
Decision and Information Sciences Division
Argonne National Laboratory
9700 S. Cass Ave.
Argonne, IL 60439
dritz@anl.gov

DOCUMENTATION: Installation Procedures (IP)
REQUEST: To combine the Installation Procedures (IP) document for this segment with those of the other ELIST segments.

RATIONALE: The installation and deinstallation of this segment are intimately related to those of the other six segments of the ELIST mission application, and all seven segments must be installed to use the features of ELIST. Certain steps must be taken, and certain choices considered, to prepare for the installation of these segments, and certain special requirements come into play between the installation of individual segments or when segments are deinstalled and replaced with later versions. For all these reasons, as well as to allow installation guidelines common to all the segments to be expressed in one place and to allow for helpful cross-referencing between the installation (or deinstallation) instructions of one segment and those of another, the roles and functions of the IP documents normally associated with the seven segments individually have been combined into a single IP document. All the information that would have been provided in seven separate IP documents is available in this one document. There are clearly identified sections for each segment. This organization of the material is believed to be uncommonly helpful to the end user (the installer).

MITIGATION STRATEGY: Because much would be lost by conforming rigidly to the one-IP-per-segment expectation, there are no plans to do so.

Documentation Waiver Request

SEGMENT DESIGNATION:	ELIST Database Segment (ELIST)
CM Number:	10108
OPERATING SYSTEM:	Solaris 7
MISSION APPLICATION NAME:	Enhanced Logistics Intratheater Support Tool
TECHNICAL POC:	Kenneth W. Dritz Decision and Information Sciences Division Argonne National Laboratory 9700 S. Cass Ave. Argonne, IL 60439 dritz@anl.gov
DOCUMENTATION:	Software Test Plan (STP), Software Test Description (STD), and Software Test Report (STR)
REQUEST:	To combine the Software Test Plan (STP), Software Test Description (STD), and Software Test Report (STR) documents for this segment into a single combined Software Test Plan/Description/Report (STP/STD/STR) document, and furthermore to combine the STP/STD/STR document for this segment with those of the other ELIST segments.
RATIONALE:	Several of the ELIST segments are passive (data) segments for which the only appropriate test is the verification that the segment appears in the Segment Installer's list of currently installed segments after installation. The installation and deinstallation testing of other segments involves verification that <code>PostInstall</code> and <code>DEINSTALL</code> behave as anticipated when interacting with the system administrator. Functional testing of the two software segments benefits from a carefully orchestrated order of testing, so that verified features can be used to verify other features. For all these reasons, and because there is really only one Software Test Plan for the entire ELIST mission application, it makes eminent sense to combine several manuals as described in the Request. All the information that would have been presented in separate documents is available in the combined document, with a minimum of repetition. This organization recognizes the essential unity of the ELIST mission application and the uselessness of individual ELIST segments except in the context of the mission application as a whole.
MITIGATION STRATEGY:	It is not practical or useful to conform to the rigid document guidelines concerning the STP/STD/STR documents, and there are no plans to do so.