AFCTN Report 94-110

AFCTB-ID 94-106

Technical Raster Transfer Installation Drawing: Waveguide LPCR-130-2 Radar

Submitted By:
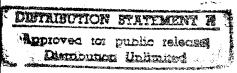**Lockheed Aeronautical Systems**

Supporting:
WR-ALC/TILCA's EDCARS Program

Contract #F33657-90-C-0071-P00013BL2

MIL-STD-1840A
MIL-R-28002A (Raster)

Quick Short Test Report

03 August 1994

19960822 124

DTIC QUALITY INSPECTED 3

DISCLAIMER NOTICE

THIS DOCUMENT IS BEST
QUALITY AVAILABLE. THE COPY
FURNISHED TO DTIC CONTAINED
A SIGNIFICANT NUMBER OF
COLOR PAGES WHICH DO NOT
REPRODUCE LEGIBLY ON BLACK
AND WHITE MICROFICHE.

Technical Raster Transfer Installation Drawing:

Waveguide, LPCR-130-2 Radar

Submitted By:

Lockheed Aeronautical Systems Company

Supporting:

WR-ALC/TILCA's EDCARS Program

(Contract #F33657-90-C-0071-P00013BL2)

MIL-STD-1840A

MIL-R-28002A (Raster)

Quick Short Test Report

03 August 1994

Prepared By
Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

AFCTB Contact
Gary Lammers
(513) 427-2295

AFCTN Contact
Mel Lammers
(513) 427-2295

DISCLAIMER

This document was prepared as an account of the work spon-
sored by the Air Force. Neither the United States Govern-
ment, the Air Force, nor any of their employees makes any
warranty, expressed or implied, or assumes any legal liabil-
ity or responsibility for the accuracy, completeness, or
usefulness of any information, apparatus, product, or
process disclosed, nor represents that its use would not
infringe on privately owned rights. Reference herein to any
specific commercial products, process, or service by trade
name, trademark, manufacturer, or otherwise, does not
necessarily constitute or imply its endorsement, recommen-
dation, or favoring by the United States Government or the
Air Force. The views and opinions of authors expressed
herein do not necessarily state or reflect those of the
United States Government or the Air Force, and shall not be
used for advertising or product endorsement purposes.

This report and those involved in its preparation do not
endorse any product, process, or company stated herein. Use
of these means by anyone does not imply certification by the
Air Force CALS Test Network (AFCTN).

Air Force CALS Test Bed

Notification of Test Results

03 August 1994

This notice documents the results of an Air Force CALS Test Bed (AFCTB) Quick
Short Test Report (QSTR) evaluation of data submitted by:

Lockheed Aeronautical Systems

Identified as follows:

Title:	**Installation Drawings: Waveguide, LPCR-130-2-Radar**
Program:	**EDCARS**
Program Office:	**WR-ALC/TILCA**
Contract No.:	**F33657-90-C-0071-P00013BL2**
QSTR No.:	**AFCTB-ID 94-106**

Received on the following media: **Two 9-Track Tapes**

The results of the QSTR evaluation are as follows:

MIL-STD-1840B Standard:	**Tape 1: Fail/Tape 2: Pass**
MIL-STD-1840B Media Format:	**Tape 1: Fail/Tape 2: Pass**
MIL-D-28000A IGES:	**N/A**
MIL-M-28001B SGML:	**N/A**
MIL-R-28002A Raster:	**Tape 1: Fail/Tape 2: Pass**
MIL-D-28003 CGM:	**N/A**

Formal results with associated disclaimer are documented and available from the
AFCTB.

Contents

1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Ac-
quisition and Life-cycle Support (CALS) Test Network (AFCTN)
is conducting tests of the military standard for the Auto-
mated Interchange of Technical Information, MIL-STD-1840A,
and its companion suite of military specifications. The
AFCTN is a DoD sponsored confederation of voluntary partic-
ipants from industry and government managed by the Elec-
tronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effec-
tiveness of the CALS standards for technical data inter-
change and to demonstrate the technical capabilities and
operational suitability of those standards. Two general
categories of tests are performed to evaluate the standards;
formal and informal.

Formal tests are large and comprehensive, which follow a
written test plan, require specific authorization from the
DoD, and may take months to prepare, execute, and report.

Informal tests are quick and short, used by the AFCTN tech-
nical staff, to broaden the testing base. They include
representative samples of the many systems and applications
used by AFCTN participants. They also allow the AFCTN staff
to gain feedback from many industry and government inter-
pretations of the standards, to increase the base of par-
ticipation in the CALS initiative, and respond to the many
requests for help that come from participants. Partici-
pants take part voluntarily, benefit by receiving an evalu-
ation of their latest implementation (interpretation) of the
standards, interact with the AFCTN technical staff, gain
experience using the standards, and develop increased
confidence in them. The results of informal tests are
reported in Quick Short Test Reports (QSTRs) that briefly
summarize the standard(s) tested, the hardware and software
used, the nature of the test, and the results.

1.2 Purpose

The purpose of the informal test, reported in this QSTR, was
to analyze Lockheed Aeronautical Systems' interpretation and
use of the CALS standards in transferring technical Raster
data.   Lockheed used its CALS Technical Data Interchange
System to produce data, in accordance with the standards,
and delivered it to the AFCTN technical staff on a 9-track
magnetic tape.

After the initial tape failed the evaluation, Lockheed Aero-
nautical System submitted a corrected 9-track magnetic tape.

2. Test Parameters

Test Plan: AFCTB 94-106

**Date of
Evaluation:**   03 August 1994 - 1st Tape
                                        05 August 1994 - 2nd Tape

Evaluator: George Elwood
                                        Air Force CALS Test Bed
                                        DET 2 HQ ESC/AV-2P
                                        4027 Colonel Glenn Hwy
                                        Suite 300
                                        Dayton OH 45431-1672

**Data
Originator:**   Darlene Bittaker
                                        Lockheed Aeronautical Systems Company
                                        D/73-34, Zone 0318
                                        86 South Cobb Drive
                                        Marietta GA 30063
                                        (404) 494-4396

**Data
Description:**   Technical Raster Test
                                                29 Document Declaration files (2)
                                                80 Raster files (2)

**Data
Source System:**
                        1840
                                HARDWARE
                                        SPARC System 630 MP
                                SOFTWARE
                                        FORMTEK CALS Delivery Proprietary Software

                        Raster
                                HARDWARE
                                        SPARC System 630 MP

                                SOFTWARE
                                        FORMTEK CALS Delivery Proprietary Software

Evaluation Tools Used:

        MIL-STD-1840A (TAPE)
            SUN 3/280
                    AFCTN *Tapetool v1.2.10 UNIX*
                    XSoft *CAPS/CALS v40.4*

        MIL-R-28002 (Raster)
            HP 735
                    AFCTN *xrastb.hp*
                    InterCAP *X-Change v7.82*
                    Carberry *CADLeaf 3.1.2*
            SUN SparcStation 2
                    AFCTN *validg4*
                    AFCTN *xrastb.sun4*
                    IGES Data Analysis (IDA) *IGESView v3.0*

Standards
Tested: MIL-STD-1840A
                             MIL-R-28002A

3. 1840A Analysis

3.1 External Packaging

The first tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was not enclosed in a barrier bag or barrier sheet material, as required by MIL-STD-1840A, para. 5.3.1.2. The tape reel did not contain a label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. Some 9-track tape units require this BPI to be set manually. A packing list showing all files recorded on the tape was not enclosed.

The second tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a box in accordance with ASTM D 3951. The exterior of the box was marked with a magnetic tape warning label, as required by MIL-STD-1840A, para. 5.3.1.3.

The tape was enclosed in a barrier bag, as required by MIL-STD-1840A, para. 5.3.1.2. The tape reel did not contain a label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1. A packing list showing all files recorded on the tape was not enclosed.

3.2 Transmission Envelope

Both 9-track tapes received by the AFCTB contained MIL-STD-1840A files. The files were named per the standard conventions.

3.2.1 Tape Formats

3.2.1.1 Tape One

The first tape was run through the AFCTN *Tapetool v1.2.10* utility. Thirty errors and 29 Notes were reported while evaluating the contents of the tape labels. All were "Invalid record size encountered" errors. See Appendix A, Section Two, of the Tape Import Log for a complete listing of these errors.

All of the errors relate to the tape label Record Length field for Type D files. Type D files contain variable length records that do not span blocks. All of the Type D files, the Declaration Files, written on the tape were flagged with an illegal value for Record Length. The AFCTN *Tapetool* is expecting a value of 260 in the Record Length field, but encountered a record length of 1. MIL-STD-1840A para. 5.2.1.3 requires the variable record size be a maximum of 256 bytes. ANSI X3.27 para. 7.2.3 further states that the length of a Record Control Word (RCW) must be included in a Measured Data Unit (MDU) record length computation. This adds four bytes to the 256 for a MDU total of 260 bytes. ANSI X3.27 para. 8.5.2.6 states that the Record Length field for Type D files shall contain the maximum length of a MDU. While MIL-STD-1840A permits variable length records, some software programs are sensitive to the number 260, because it is used to limit the record size when unblocking data. Some systems need this value to declare the maximum allowable record size as an attribute of a file when it is created.

   Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
   Record Control Word contained an invalid record length.
   Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

   Number of data blocks read = 1.

It was noted that no Document Declaration file data was present on the the first tape.

A note was reported on the tape label version. MIL-STD-1840A permits the use of both version three and four. The use of the most current standard should be used and noted.

An attempt to read the tape using XSoft's *CAPS read1840A* utility was unsuccessful. The utility stopped while trying to read the first file on the tape.

The media structure of the first tape does not meet the requirements define in MIL-STD-1840A and ANSI 3.27.

3.2.1.2 Tape Two

The second tape was run through the AFCTN *Tapetool v1.2.10* utility. No errors and one note was reported while evaluating the contents of the tape label. MIL-STD-1840A permits the use of both version three and four. The use of the most current standard should be used and noted.

An attempt was made to read the tape using XSoft's *CAPS read1840A* utility. This utility stopped after reading the first 20 Document Declaration files because of design limitation in the software. No data files were read.

The media structure of the second tape meets the requirements define in MIL-STD-1840A and ANSI 3.27.

3.2.2 Declaration and Header Fields

3.2.2.1 Tape One

The first tape contained 29 errors in the Document Decla-
ration files and data file headers. No data was found in
any of the 29 Declaration files. Because no data was found
in the Declaration files, AFCTN's *Tapetool* did not evaluate
the Raster files located in the tape.

```
Extracting Document Declaration Header Records...
*** ERROR (MIL-STD-1840A; 5.1) - Invalid number of header records.
    Expected = 15; Records read = 0
    from /cals/u1210/Set055/D001/D001_HDR.

*** I/O ERROR - MIL-STD-1840A Document Declaration Header Records
    could not be extracted from
    /cals/u1210/Set055/D001/D001_HDR
```

The CALS headers and Document Declaration files, from the
first tape, do not meet the CALS MIL-STD-1840A requirements.

3.2.2.2 Tape Two

The second tape contained 218 errors and 218 notes in the
Document Declaration files and data file headers.   All of
the errors and notes were reported for the "srcdocid" and
"dstdocid" records. The AFCTN *Tapetool* will report an error
if there is more than one space after the colon for any
record, per MIL-STD-1840A, para. 5.1.1.2.   The data con-
tained in these records is correct, with the space being a
valid character.   The reported errors are not valid MIL-
STD-1840A errors.

```
srcdocid:   3338432        98897          LG   00020002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Value contains leading spaces.
*** NOTE - Correction made in new Document Declaration Header File.
```

The CALS headers and Document Declaration files from the
second tape meet the CALS MIL-STD-1840A requirements.

4. Raster Analysis

4.1 Tape One

The first tape contained 80 Raster files. All files were
evaluated using the AFCTN *validg4* utility.   This program
reported all 80 files failed to meet the CALS MIL-R-28002A
specification. The reported error was located on the first
scan line.

```
wpaftb2% validg4 D001R001 -stat
 density     = 200
 path length = 6848
 scan lines  = 8800
 bit format  = MSB

error, scan length exceeds pel count
s=1 a0=6849 bstop=6848 pos=2

file = D001R001
```

When a dump of the Raster files was made, it was noted that
the last record was not padded to the correct length. MIL-
STD-1840A, para 5.2.1.6 says that a Raster file shall be
written in block lengths of 2048 with the data starting in
the second block. The data for a Raster file should start
at location 4000 in the screen dump shown below.

```
0001600    r   o   r   i   e   n   t   :  sp   0   9   0   ,   2   7   0
0001620   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002000    r   p   e   l   c   n   t   :  sp   0   0   6   8   4   8   ,
0002020    0   0   8   8   0   0  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
0002040   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002200    r   d   e   n   s   t   y   :  sp   0   2   0   0  sp  sp  sp
0002220   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002400    n   o   t   e   s   :  sp   N   /   A  sp  sp  sp  sp  sp  sp
0002420   sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp  sp
*
0002600  del del del del del del del del del del del del del del   e  gs
0002620    M dc4   " dc4  bs   "   "  nl   [   %   d   :   #  em   v   a
```

```
0002640  dcl   c  bs  so   d   q dcl   Q  gs dcl   b   :   # etx enq   H
0002660  so   bs   a stx   8   g   #   D   t   G dc4   8   0   G dle  so
0002700   d    p   S   # soh   h   @   (   . bel   `  bs dle   8  ht etx
0002720   C    8   d   A   I  so   g   8   e  so   P   d can  fs can   e
0002740  so    a   J   C   9   P   L   r nul   | bel   Y enq enq   ;   "
0002760   9  can stx   2   `   x   m etb ack  ht   C  bs  bs   b   "   "
```

Because the file structure was incorrect none of the Raster viewers, in the AFCTB, would read the files.

The Raster files on tape one do not meet the CALS MIL-R-28002A specification.

4.2 Tape Two

The second tape contained 80 Raster files. Due to the number of files, a sample of the files was evaluated. The AFCTB has several tools for viewing Raster files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. Many of these products are used in the development of technical publications and are good indicators of usability. The use of these products is not an endorsement nor an indication of CALS capability. All operations were performed using the default settings.

The files were evaluated using the AFCTN *validg4* utility. This program reported that all of the files sampled meet the CALS MIL-R-28002A specification.

The tape was constructed with 29 documents. Each document consisted of one to four Raster files, and one drawing.

The files were read into the AFCTN *xrastb.sun4* viewing utility. No problems were noted.

The files were read into Carberry's *CADLeaf* software without a reported error. The images were displayed and printed.

The files were read using IDA's *CALSView* without a reported error.

The files were read into IDA's *IGESView* and *IGESView for Windows* without a reported error.

The files were read into Inset Systems' *HiJaak for Windows* without a reported error.

The files were read using InterCAP's *X-Change* without a reported error.

The files were imported into Expert Graphics' *RxHighlight* and displayed without a reported error.

The Raster files included on the second tape meet the CALS MIL-R-28002A specification.

5. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were included in this evaluation.

6. SGML Analysis

No Standard Generalized Markup Language (SGML) files were included in this evaluation.

7. CGM Analysis

No Computer Graphics Metafiles (CGMs) were included in this evaluation.

8. Conclusions and Recommendations

8.1 Tape One

The first tape from Lockheed Aeronautical Systems Company
was not correctly written. The tape had errors which
prevented the commercial tape utilities from reading it.
The AFCTB *Tapetool* reported many errors in the physical
structure and CALS headers. No Document Declaration files
were written to the tape. This portion of the tape does not
meet the CALS MIL-STD-1840A requirements.

The errors with the Raster images were serious. The con-
struction of the Raster files appeared to be flawed re-
sulting with unusable files. The data files did not start
at the correct location, this prevented all software prod-
ucts from reading and displaying the files. The Raster
files on the first tape do not meet the CALS MIL-R-28002A
specification.

The first tape submitted by Lockheed Aeronautical Systems
Company does not meet the CALS MIL-STD-1840A requirements.

8.2 Tape Two

The structure and CALS headers of the second tape had no
valid reported errors or warning. This portion of the tape
meets the CALS MIL-STD-1840A requirements.

The Raster files meet the CALS MIL-R-28002A specification.

The second tape submitted by Lockheed Aeronautical Systems
Company meets the CALS MIL-STD-1840A requirements.

9.   Appendix A - Tapetool Report Logs

9.1   Tape One

9.1.1   Tape Catalog

CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (C)

```
  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information
    ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII
```

Wed Aug 3 11:31:18 1994

MIL-STD-1840A File Catalog

File Set Directory: /cals/u1210/Set055

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Selected
D002	Document Declaration	D/00260	02048/000001	Selected
D003	Document Declaration	D/00260	02048/000001	Selected

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D029	Document Declaration	D/00260	02048/000001	Selected
D001R001	Raster	F/00128	02048/000086	Extracted
D001R002	Raster	F/00128	02048/000091	Extracted
D002R001	Raster	F/00128	02048/000034	Extracted
D002R002	Raster	F/00128	02048/000054	Extracted

<<<<< PART OF LOG FILE REMOVED HERE >>>>>

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D028R001	Raster	F/00128	02048/000101	Extracted
D029R001	Raster	F/00128	02048/000042	Extracted

Catalog Process terminated normally.

9.1.2 Tape Evaluation Log

CALS Test Network Tape Evaluation - Version 1.2; Release 10 (C)
  Standards referenced:
    ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Wed Aug 3 11:26:08 1994

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1L00801   3

  Label Identifier: VOL1
  Volume Identifier: L00801
  Volume Accessibility:
  Owner Identifier:
  Label Standard Version: 3

*** NOTE (ANSI X3.27; 8.3.1.8) - The Label Standard Version
    should be 4 to represent the current level of ANSI X3.27.

HDR1D001   L0080100010001000100 94027 95027 000000EDCARS

  Label Identifier: HDR1
  File Identifier: D001
  File Set Identifier: L00801
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 94027
  Expiration Date: 95027
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: EDCARS

HDR2D0204800260   00

   Label Identifier: HDR2
   Recording Format: D
   Block Length: 02048
   Record Length: 00260
   Offset Length: 00

************ Tape Mark ***************

   Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
      Record Control Word contained an invalid record length.
      Record Control Word string =>
*** NOTE - Remainder of file will be skipped.

   Number of data blocks read = 1.

************ Tape Mark ***************

EOF1D001   L0080100010001000100 94027 95027 000001EDCARS

   Label Identifier: EOF1
   File Identifier: D001
   File Set Identifier: L00801
   File Section Number: 0001
   File Sequence Number: 0001
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 94027
   Expiration Date: 95027
   File Accessibility:
   Block Count: 000001
   Implementation Identifier: EDCARS

EOF2D0204800260   00

   Label Identifier: EOF2
   Recording Format: D
   Block Length: 02048
   Record Length: 00260
   Offset Length: 00

************ Tape Mark ***************

              <<<<< PART OF LOG FILE REMOVED HERE >>>>>

HDR1D029   L0080100010029000100 94027 95027 000000EDCARS

  Label Identifier: HDR1
  File Identifier: D029
  File Set Identifier: L00801
  File Section Number: 0001
  File Sequence Number: 0029
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 94027
  Expiration Date: 95027
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: EDCARS

HDR2D0204800260   00

  Label Identifier: HDR2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00
*********** Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

*** I/O ERROR - Invalid Record Control Word encountered.
   Record Control Word contained an invalid record length.
   Record Control Word string =>   ·
*** NOTE - Remainder of file will be skipped.

  Number of data blocks read = 1.
*********** Tape Mark ***************

EOF1D029   L0080100010029000100 94027 95027 000001EDCARS

  Label Identifier: EOF1
  File Identifier: D029
  File Set Identifier: L00801
  File Section Number: 0001
  File Sequence Number: 0029
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 94027
  Expiration Date: 95027
  File Accessibility:
  Block Count: 000001
  Implementation Identifier: EDCARS

EOF2D0204800260   00

  Label Identifier: EOF2
  Recording Format: D
  Block Length: 02048
  Record Length: 00260
  Offset Length: 00

************ Tape Mark ***************

HDR1D001R001   L0080100010030000100 94027 95027 000000EDCARS

  Label Identifier: HDR1
  File Identifier: D001R001
  File Set Identifier: L00801
  File Section Number: 0001
  File Sequence Number: 0030
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 94027
  Expiration Date: 95027
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: EDCARS

HDR2F0204800128   00

  Label Identifier: HDR2
  Recording Format: F
  Block Length: 02048
  Record Length: 00128
  Offset Length: 00

************ Tape Mark ***************

  Actual Block Size Found = 2048 Bytes.

  Number of data blocks read = 86.

************ Tape Mark ***************

EOF1D001R001   L0080100010030000100 94027 95027 000086EDCARS

  Label Identifier: EOF1
  File Identifier: D001R001
  File Set Identifier: L00801
  File Section Number: 0001
  File Sequence Number: 0030

Generation Number: 0001
Generation Version Number: 00
Creation Date: 94027
Expiration Date: 95027
File Accessibility:
Block Count: 000086
Implementation Identifier: EDCARS

EOF2F0204800128   00

Label Identifier: EOF2
Recording Format: F
Block Length: 02048
Record Length: 00128
Offset Length: 00

************ Tape Mark ***************

                     <<<<< *PART OF LOG FILE REMOVED HERE* >>>>>

************ Tape Mark ***************

************ Tape Mark ***************

############ End of Volume L00801 #############

############ End Of Tape File Set #############

Deallocating /dev/rmt0...

Tape Import Process terminated with 30 error(s), 0 warning(s),
and 29 note(s).

9.1.3 Tape File Set Validation Log

CALS Test Network File Set Evaluation - Version 1.2; Release 10 (C)

  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Wed Aug 3 11:31:19 1994

MIL-STD-1840A File Set Evaluation Log

File Set: Set055

Found file: D001
Extracting Document Declaration Header Records...
*** ERROR (MIL-STD-1840A; 5.1) - Invalid number of header records.
    Expected = 15; Records read = 0
    from /cals/u1210/Set055/D001/D001_HDR.

*** I/O ERROR - MIL-STD-1840A Document Declaration Header Records
    could not be extracted from
    /cals/u1210/Set055/D001/D001_HDR

Found file: D002
Extracting Document Declaration Header Records...
*** ERROR (MIL-STD-1840A; 5.1) - Invalid number of header records.
    Expected = 15; Records read = 0
    from /cals/u1210/Set055/D002/D002_HDR.

*** I/O ERROR - MIL-STD-1840A Document Declaration Header Records
    could not be extracted from
    /cals/u1210/Set055/D002/D002_HDR

Found file: D003
Extracting Document Declaration Header Records...
*** ERROR (MIL-STD-1840A; 5.1) - Invalid number of header records.
    Expected = 15; Records read = 0
    from /cals/u1210/Set055/D003/D003_HDR.

*** I/O ERROR - MIL-STD-1840A Document Declaration Header Records
    could not be extracted from
    /cals/u1210/Set055/D003/D003_HDR

                    <<<<< PART OF LOG FILE REMOVED HERE >>>>>

Found file: D029
Extracting Document Declaration Header Records...
*** ERROR (MIL-STD-1840A; 5.1) - Invalid number of header records.
    Expected = 15; Records read = 0
    from /cals/u1210/Set055/D029/D029_HDR.

*** I/O ERROR - MIL-STD-1840A Document Declaration Header Records
    could not be extracted from
    /cals/u1210/Set055/D029/D029_HDR

A grand total of 29 error(s), 0 warning(s), and 0 note(s) were
encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

9.1.4 Other Tape Reading Logs

/cals/caps/Bin/read1840A: --- Read declaration file 'D001   ' ---
/cals/caps/Bin/read1840A: file error: expected 'srcdocid...', saw '94106/
1840Aread.log'

9.2 Tape Two

9.2.1 Tape Catalog

CALS Test Network Catalog Evaluation - Version 1.2; Release 10 (C)

  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Information
    ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                        for Information Interchange
    ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Aug 5 13:49:14 1994
MIL-STD-1840A File Catalog
File Set Directory: /cals/u1210/Set056

                                                              Page: 1

```
                                      Record
                                      Format/   Block     Selected/
File Name              File Type      Length  Length/Total Extracted
----------------------------------------------------------------------
D001                   Document Declaration   D/00256 02048/000001  Extracted
*** NOTE (MIL-STD-1840A; 5.2.1.3) - Unexpected maximum variable record size
    encountered. Header => 256, Expected => 260
*** NOTE (ANSI X3.27; 8.5.2.6) - Record Length for Recording Format Type D
    shall be the maximum length of a Measured Data Unit (MDU).
*** NOTE (ANSI X3.27; 7.2.3) - A variable length record shall be contained
    in an MDU. An MDU consists of a four byte Record Control Word (RCW)
    followed immediately by the variable record.
*** NOTE (ANSI X3.4) - A Record Control Word shall consist of four characters
    that express the sum of the lengths of the RCW and the variable record.

                <<<<< PART OF LOG FILE REMOVED HERE >>>>>

D029                   Document Declaration   D/00256 02048/000001  Extracted
*** NOTE (MIL-STD-1840A; 5.2.1.3) - Unexpected maximum variable record size
    encountered. Header => 256, Expected => 260
D001R001               Raster                 F/00128 02048/000086  Extracted

                <<<<< PART OF LOG FILE REMOVED HERE >>>>>

D029R001               Raster                 F/00128 02048/000042  Extracted

Catalog Process terminated with 0 error(s), 0 warning(s), and 32 note(s).
```

9.2.2 Tape Evaluation Log

CALS Test Network Tape Evaluation - Version 1.2; Release 10 (C)
   Standards referenced:
      ANSI X3.27 (1987) - File Structure and labeling of Magnetic Tapes
                          for Information Interchange
      ANSI X3.4 (1986) - Coded Character Sets - 7 Bit ASCII

Fri Aug 5 13:44:07 1994

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1L00801   3

  Label Identifier: VOL1
  Volume Identifier: L00801
  Volume Accessibility:
  Owner Identifier:
  Label Standard Version: 3

*** NOTE (ANSI X3.27; 8.3.1.8) - The Label Standard Version
    should be 4 to represent the current level of ANSI X3.27.

HDR1D001   L00801000100010001000100 94027 95027 000000EDCARS

  Label Identifier: HDR1
  File Identifier: D001
  File Set Identifier: L00801
  File Section Number: 0001
  File Sequence Number: 0001
  Generation Number: 0001
  Generation Version Number: 00
  Creation Date: 94027
  Expiration Date: 95027
  File Accessibility:
  Block Count: 000000
  Implementation Identifier: EDCARS

                    <<<<< PART OF LOG FILE REMOVED HERE >>>>>

Tape Import Process terminated with 0 error(s), 0 warning(s),
and 1 note(s).

9.2.3   Tape File Set Validation Log

CALS Test Network File Set Evaluation - Version 1.2; Release 10 (C)

   Standards referenced:
     MIL-STD-1840A (1987) - Automated Interchange of Technical Information

Fri Aug 5 13:49:15 1994

MIL-STD-1840A File Set Evaluation Log

File Set: Set056

Found file: D001
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: LASC
srcdocid: 3338432   98897   LG 00020002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Value contains leading spaces.
*** NOTE - Correction made in new Document Declaration Header File.
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19921104
dstsys: EDCARS, WR-ALC/TILCA
dstdocid: 3338432   98897   LG 00020002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Value contains leading spaces.
*** NOTE - Correction made in new Document Declaration Header File.
dstrelid: NONE
dtetrn: 19940127
dlvacc: F33657-90-C-0071-P00013-BL2
filcnt: R2
ttlcls: Unclass
doccls: Unclass
doctyp: INSTL DWG
docttl: WAVEGUIDE INSTLLATION LPCR-130-2 RADAR

2 error(s), 0 warning(s), and 2 note(s) were encountered
in Document Declaration File D001.

Found file: D001R001
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: 3338432   98897   LG   00010002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new Raster Header File.

dstdocid: 3338432   98897   LG   00010002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new Raster Header File.

txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: Unclass
rtype: 1
rorient: 090,270
rpelcnt: 006848,008800
rdensty: 0200
notes: NONE

2 error(s), 0 warning(s), and 2 note(s) were encountered
 in Raster File D001R001.
Saving Raster Header File: D001R001_HDR
Saving Raster Data File: D001R001_GR4

Found file: D001R002
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: 3338432   98897   LG   00020002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new Raster Header File.
dstdocid: 3338432   98897   LG   00020002LMGEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new Raster Header File.
txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: Unclass
rtype: 1
rorient: 090,270
rpelcnt: 006848,008800
rdensty: 0200
notes: NONE

2 error(s), 0 warning(s), and 2 note(s) were encountered
 in Raster File D001R002.
Saving Raster Header File: D001R002_HDR
Saving Raster Data File: D001R002_GR4

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

A total of 6 error(s), 0 warning(s), and 6 note(s) were
encountered in Document D001.

<<<<< *PART OF LOG FILE REMOVED HERE* >>>>>

Found file: D029
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: LASC
srcdocid: 697183   98897 G   LG   00010001UMGEHN
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Value contains leading spaces.
*** NOTE - Correction made in new Document Declaration Header File.
srcrelid: NONE
chglvl: G,1,19600208
dteisu: 19920814
dstsys: EDCARS, WR-ALC/TILCA
dstdocid: 697183   98897 G   LG   00010001UMGEHN
*** ERROR (MIL-STD-1840A; 5.1.1.2) - Value contains leading spaces.
*** NOTE - Correction made in new Document Declaration Header File.
dstrelid: NONE
dtetrn: 19940127
dlvacc: F33657-90-C-0071-P00013-BL2
filcnt: R1
ttlcls: Unclass
doccls: Unclass
doctyp: DETAIL DWG
docttl: ACTUATOR, LINEAR- 4.0 INCH STROKE, 28 VDC

2 error(s), 0 warning(s), and 2 note(s) were encountered
in Document Declaration File D029.

Found file: D029R001
Extracting Raster Header Records...
Evaluating Raster Header Records...

srcdocid: 697183   98897 G   LG   00010001UMGEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new Raster Header File.

dstdocid: 697183   98897 G   LG   00010001UMGEHN
*** ERROR (MIL-STD-1840A; 5.1.4) - Value contains leading spaces.
*** NOTE - Correction made in new Raster Header File.

txtfilid: NONE
figid: NONE
srcgph: NONE
doccls: Unclass
rtype: 1
rorient: 090,270
rpelcnt: 006848,008800
rdensty: 0200
notes: NONE

2 error(s), 0 warning(s), and 2 note(s) were encountered
 in Raster File D029R001.
Saving Raster Header File: D029R001_HDR
Saving Raster Data File: D029R001_GR4

Evaluating numbering scheme...
No errors were encountered during numbering scheme evaluation.
Numbering scheme evaluation complete.

Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

A total of 4 error(s), 0 warning(s), and 4 note(s) were
encountered in Document D029.

A grand total of 218 error(s), 0 warning(s), and 218 note(s) were
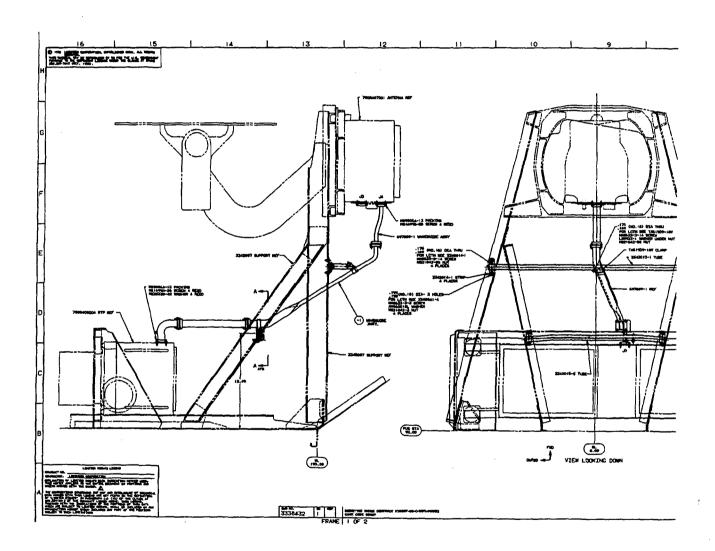encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

9.2.4   Other Tape Reading Logs

```
/cals/caps/Bin/read1840A: --- Read declaration file 'D001     ' ---
/cals/caps/Bin/read1840A: --- Read declaration file 'D002     ' ---

                    <<<<< PART OF LOG FILE REMOVED HERE >>>>>

/cals/caps/Bin/read1840A: --- Read declaration file 'D019     ' ---
/cals/caps/Bin/read1840A: --- Read declaration file 'D020     ' ---
/cals/caps/Bin/read1840A: maximum number of documents (20) exceeded.
```

10. Appendix B - Detailed Raster Analysis
10.1 File D001R001

10.2 File D001R002