



AFCTN Test Report 94-042

AFCTB-ID
93-071



Technical Publication Transfer

Using:



Rockwell International's Data



MIL-R-28002A (Raster)

Quick Short Test Report

19960822 052

12 July 1993



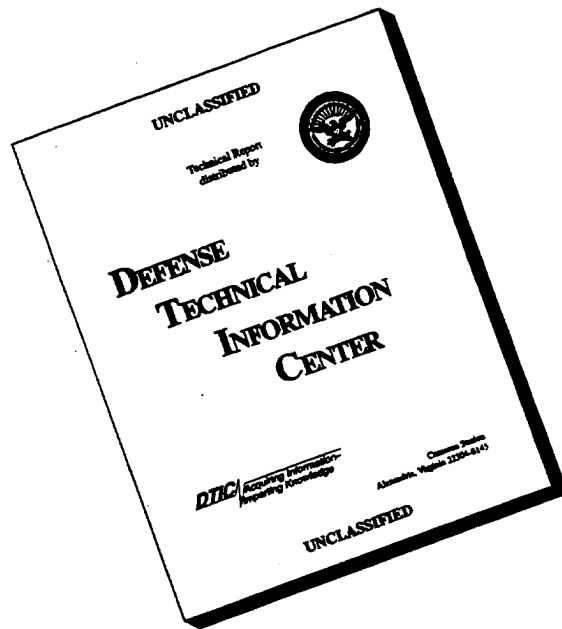
Prepared for
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Using:
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MIL-R-28002A (Raster)

Quick Short Test Report

12 July 1993

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1. Introduction

1.1 Background

The Department of Defense (DoD) Air Force Continuous Acquisition and Life-cycle Support (CALs) Test Network (AFCTN) is conducting tests of the military standard for the Automated Interchange of Technical Information, MIL-STD-1840A, and its companion suite of military specifications. The AFCTN is a DoD sponsored confederation of voluntary participants from industry and government managed by the Electronic Systems Center (ESC).

The primary objective of the AFCTN is to evaluate the effectiveness of the CALs standards for technical data interchange 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 technical 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 interpretations of the standards, to increase the base of participation in the CALs initiative, and respond to the many requests for help that come from participants. Participants take part voluntarily, benefit by receiving an evaluation 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 Rockwell International's interpretation and use of the CALS standards in transferring technical Raster data. Rockwell 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.

2. Test Parameters

Test Plan: AFCTB 93-071

Date of Evaluation: 12 July 1993

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

Data Originator: John Armsby
Rockwell International
Tactical Systems Division
1800 Satellite Blvd
Duluth GA 30136
(404) 476-6300

Data Description: Technical Manual Test
1 Document Declaration file
1 Raster file

Data Source System: 1840

| | |
|-----------------|---------|
| HARDWARE | Unknown |
| SOFTWARE | Unknown |

Raster

| | |
|-----------------|---------|
| HARDWARE | Unknown |
| SOFTWARE | Unknown |

Evaluation Tools Used:

MIL-STD-1840A (TAPE)

SUN 3/280

AFCTN Tapetool v1.2.10 UNIX

XSoft CAPS/CALS v40.4

PC 486/50

AFCTN Tapetool v1.2.10 DOS

MIL-R-28002 (Raster)

SUN SparcStation 2

Carberry CADLeaf Plus v3.1

AFCTN validg4

AFCTN calstb.475

IGES Data Analysis (IDA) IGESView v3.0

PC 486/50

AFCTN validg4

IDA IGESView Windows

Inset Systems HiJaak Window v1.0

Standards

Tested:

MIL-STD-1840A

MIL-R-28002A

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB) enclosed in a commercial mailing bag. The exterior of the bag was not 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. Inspection of the tape reel showed a label indicating the recording density, as required by MIL-STD-1840A, para. 5.3.1.

3.2 Transmission Envelope

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

3.2.1 Tape Formats

The tape was run through the AFCTN *Tapetool v1.2.10* utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read using the XSoft *CAPS read1840A* utility without any reported errors.

The physical structure of the tape meets the CALS MIL-STD-1840A requirements.

3.2.2 Declaration and Header Fields

One error was found in the Document Declaration file. The *dstsys* record contained the value "NONE" which is not correct. MIL-STD-1840A requires a value other than "NONE" for this record. The value should have been "AFCTB" or some variation of this value.

dstsys: NONE

*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid value for 'dstsys:'.

*** NOTE (MIL-STD-1840A; 5.1.1.2) - The value for Destination
System cannot be 'NONE'.

No errors were reported in the Raster header file.

The Document Declaration file in this tape does not meet the
CALs MIL-STD-1840A requirements.

4. IGES Analysis

No Initial Graphics Exchange Specification (IGES) files were
included on this tape.

5. SGML Analysis

No Standard Generalized Markup Language (SGML) files were
included on this tape.

6. Raster Analysis

The tape contained one Raster file. This file was evalu-
ated using the AFCTN *validg4* utility. This program reported
that the file meets the CALs MIL-R-28002A specification.

The file was read into the AFCTN *calstb.475* viewing utility.
No problems were noted.

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 Raster file was read into Carberry's *CADLeaf* software
without a reported error. The images were displayed but not
printed due to file size and network limitation.

The file was read into IDA's *IGESView* and *IGESView for Windows* without a reported error and printed.

The file was read into Inset Systems' *HiJaak for Windows* and printed without a reported error.

The Raster file was converted using Rosetta Technologies' *Prepare* without a reported error. The resulting file was read into Rosetta Technologies' *Preview*, displayed and printed.

The Raster file meets the CALS MIL-R-28002A specification.

7. CGM Analysis

No Computer Graphics Metafile (CGM) files were included on this tape.

8. Conclusions and Recommendations

The physical structure of the tape from Rockwell International meets the CALS MIL-STD-1840A requirements.

The Raster file meets the CALS MIL-R-28002A specification.

Because of the error in the Declaration file, the tape does not meet the CALS MIL-STD-1840A requirements.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force 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

Mon Jul 12 12:00:44 1993

MIL-STD-1840A File Catalog

File Set Directory: /cals/u1210/Set002

Page: 1

| File Name | File Type | Record | | Selected/ Extracted |
|-----------|----------------------|-------------------|-----------------------|------------------------|
| | | Format/ Length | Block Length/Total | |
| D001 | Document Declaration | D/00260 | 02048/000001 | Extracted |
| D001R001 | Raster | F/00128 | 02048/000041 | Extracted |

Catalog Process terminated normally.

9.2 Tape Evaluation Log

Air Force 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

Mon Jul 12 12:00:41 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1CALS01

4

Label Identifier: VOL1
Volume Identifier: CALS01
Volume Accessibility:
Owner Identifier:
Label Standard Version: 4

HDR1D001 CALS0100010001000000 93182 00000 000000

Label Identifier: HDR1
File Identifier: D001
File Set Identifier: CALS01
File Section Number: 0001
File Sequence Number: 0001
Generation Number: 0000
Generation Version Number: 00
Creation Date: 93182
Expiration Date: 00000
File Accessibility:
Block Count: 000000
Implementation Identifier:

HDR2D0204800260

00

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

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

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 = 41.

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

EOF1D001R001 CALS0100010002000000 93182 00000 000041

Label Identifier: EOF1
File Identifier: D001R001
File Set Identifier: CALS01
File Section Number: 0001
File Sequence Number: 0002
Generation Number: 0000
Generation Version Number: 00
Creation Date: 93182
Expiration Date: 00000
File Accessibility:
Block Count: 000041
Implementation Identifier:

EOF2F0204800128 00

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

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

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

End of Volume CALS01

End Of Tape File Set

Deallocating /dev/rmt0...

Tape Import Process terminated normally.

9.3 Tape File Set Validation Log

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

Standards referenced:

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

Mon Jul 12 12:00:45 1993

MIL-STD-1840A File Set Evaluation Log

File Set: Set002

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: ROCKWELL INTERNATIONAL TACTICAL SYSTEMS DIVISION, DULUTH GA. 30136

srcdocid: NONE

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19930701

dstsys: NONE

*** ERROR (MIL-STD-1840A; 5.1.1.2) - Invalid value for 'dstsys:'.

*** NOTE (MIL-STD-1840A; 5.1.1.2) - The value for Destination

System cannot be 'NONE'.

dstdocid: NONE

dstrelid: NONE

dtetrn: 19930701

dlvacc: NONE

filcnt: R1

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: Product Data

docttl: NONE

1 error(s), 0 warning(s), and 1 note(s) were encountered
in Document Declaration File D001.

Found file: D001R001

Extracting Raster Header Records...

Evaluating Raster Header Records...

srcdocid: 1234567891011121314151617181920

dstdocid: AGM-130

txtfilid: NONE

figid: NONE

srcgph: NONE
doccls: UNCLASSIFIED
rtype: 1
rorient: 090,270
rpelcnt: 004468,006860
rdensty: 0200
notes: NONE

Saving Raster Header File: D001R001_HDR
Saving Raster Data File: D001R001_GR4

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

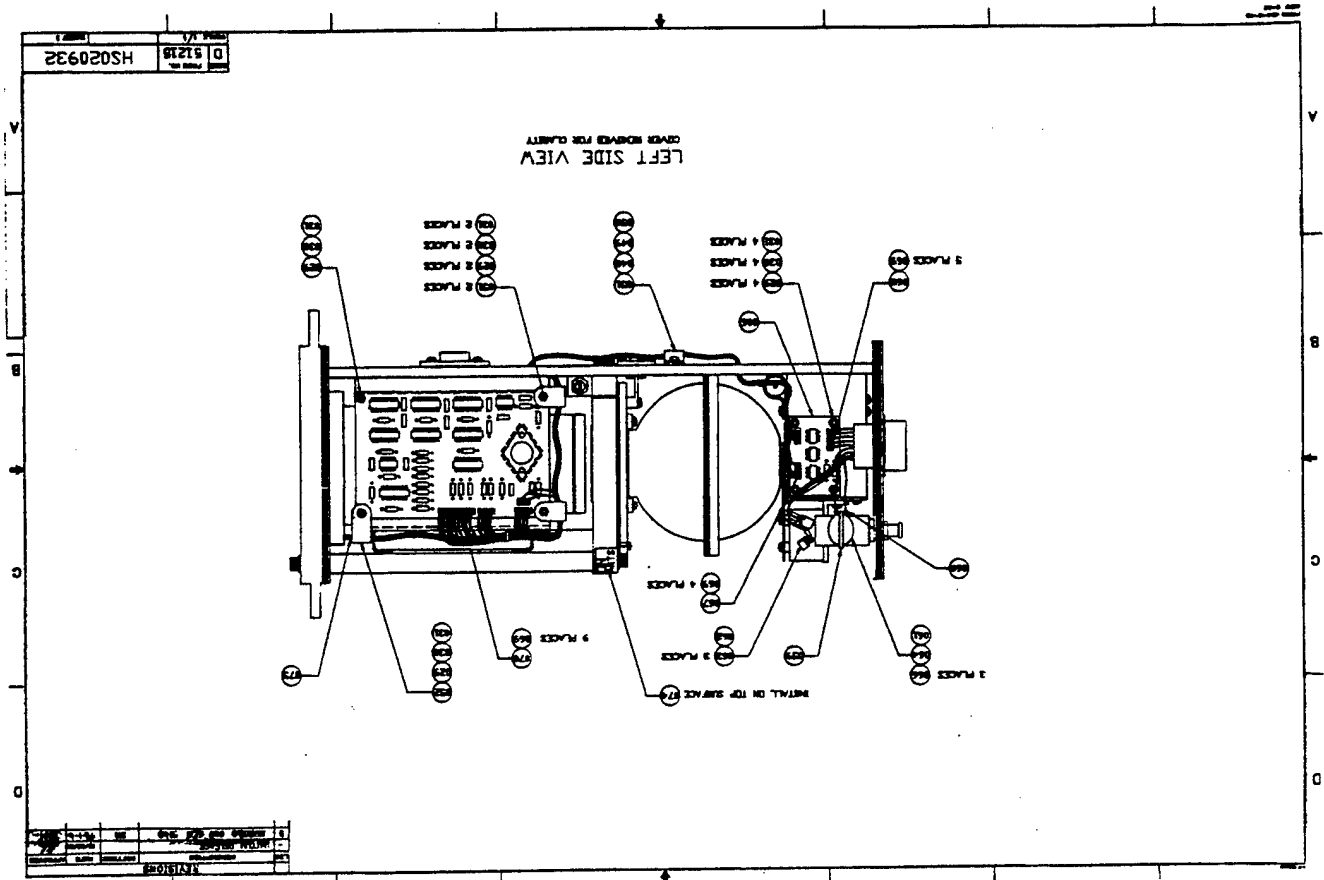
Checking file count...
No errors were encountered during file count verification.
File Count verification complete.

A total of 1 error(s), 0 warning(s), and 1 note(s) were
encountered in Document D001.

A grand total of 1 error(s), 0 warning(s), and 1 note(s) were
encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

10.1.2 Output IGESView



10.1.3 Output Preview

