AFCTN Test Report 93-066

AFCTB-ID 93-026

CALS TEST NETWORK

Technical Publication Transfer

Using:

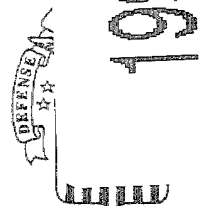## Northrop Corporation's Data

MIL-D-28000A (IGES)
MIL-M-28001A (SGML)
MIL-R-28002A (Raster)
MIL-D-28003 (CGM)

Quick Short Test Report

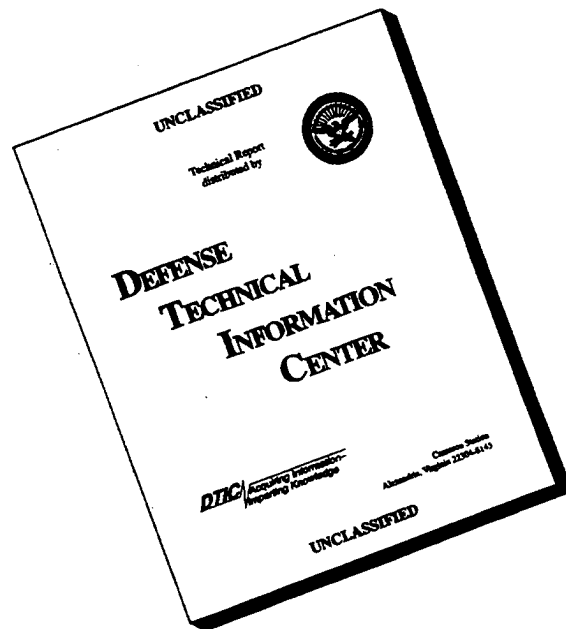## 26 March 1993

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Prepared for

Electronic Systems Center

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Quick Short Test Report

26 March 1993

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

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Contents

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 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 test 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 to 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 develope 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 Northrop Corporation's interpretation and use of the CALS standards in transferring technical publications data. Northrop 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 93-026

**Date of
Evaluation:**   26 March 1993

Evaluators:

George Elwood
Air Force CALS Test Bed
Det 2 HQ ESC/ENCP
4027 Colonel Glenn Hwy
Suite 300
Dayton OH 45431-1672

**Data
Originator:**

John Kent
Northrop Corporation
B-2 Division M/S L591/GK
8900 East Washington Blvd
Pico Rivera CA 90660
(310) 948-0624

**Data
Description:**

Technical Manual Test
3 Document Declaration files
3 Document Type Definitions (DTDs)
4 Initial Graphics Exchange Specification
          (IGES) files
3 Text files
2 Raster files
6 Computer Graphics Metafile (CGM) files

**Data
Source System:**

IGES

HARDWARE
          Unknown
SOFTWARE
          Unknown

Text/Standard Generalized Markup Language (SGML)

HARDWARE
Unknown
SOFTWARE
Unknown

Raster

HARDWARE
Unknown
SOFTWARE
Unknown

CGM

HARDWARE
Unknown
SOFTWARE
Unknown

Evaluation Tools Used:

MIL-STD-1840A (TAPE)
SUN 3/280
AFCTN *Tapetool v1.2.8 UNIX*

MIL-D-28000 (IGES)
Sun SparcStation 2
ArborText *iges2draw*
IGES Data Analysis
(IDA) *Parser/Verifier v92*
IDA *IGESView v3.05*

MIL-M-28001 (SGML)
Cheetah Gold 486
Datalogics *ParserStation v3.36*
Exoterica *XGMLNormalizer v1.2e3.2*
McAfee & McAdam *Sema Mark-it v2.3*

MIL-R-28002 (Raster)
    SUN SparcStation 2
        ArborText *g42tiff*
        AFCTN *validg4*
        AFCTN *calstb.475*
        IDA *IGESView v3.0*
        Island Graphics *IslandPaint v3.0*

MIL-D-28003 (CGM)
    SUN SparcStation 2
        ArborText *cgm2draw*
        Island Graphics *IslandDraw v3.0*
    Cheetah Gold 486
        Advance Technology Center
            (ATC) *MetaView R 1.12*
        ATC *MetaCheck R 2.05*
        Software Publishing Corporation
            (SPC) *Harvard Graphics v3.05*
        Inset Systems *HiJaak v1.0 Windows*
        Micrografx *Designer v3.1*

**Standards
Tested:**
        MIL-STD-1840A
        MIL-D-28000A
        MIL-M-28001A
        MIL-R-28002A
        MIL-D-28003

3. 1840A Analysis

3.1 External Packaging

The tape arrived at the Air Force CALS Test Bed (AFCTB)
enclosed in a box in accordance with ASTM D 3951. The exte-
rior of the box was not marked with the magnetic tape
warning label, as required by MIL-STD-1840A, para. 5.3.1.3.
When the commercial packing slip was removed, the magnetic
warning was found.

The tape was enclosed in a barrier bag as required by
MIL-STD-1840A, para. 5.3.1.2. Inspection of the tape reel
showed the label indicating the recording density, as re-
quired by MIL-STD-1840A, para. 5.3.1. Enclosed in the box
was a packing list showing all files recorded on the tape.

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 v1.2.8* utility.
No errors were encountered while evaluating the contents of
the tape labels.

The tape was run through TI's version of *Tapetool* with no
reported errors.

The tape was read using XSoft's *CAPS read1840A* without a
reported error.

3.2.2 Declaration and Header Fields

No error was reported in the Document Declaration file or data file headers.

This portion of the tape meets the CALS MIL-STD-1840A requirements.

4. IGES Analysis

The tape contained four IGES files. These files were evaluated using IDA's *Parser/Verifier* for CALS Class I. This utility reported that these files meet the CALS MIL-D-28000A specification. A few basic IGES errors were note. The logs for this procedure is located in the Appendix to this report.

The AFCTB has several tools for viewing IGES 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 converted using ArborText's *iges2draw* utility. All files converted without a reported error. When the resulting files were read into Island Graphics' *Island Draw*, file D002Q004 and Q005 did not display correctly. These images were off screen to the left. The remaining files were handled without a problem.

The files were read into IDA's *IGESView* without a reported problem. All files displayed and printed without a noted problem.

The files were read into ITI's *IGESWorks* without a reported problem. All files displayed and printed without a noted error.

The IGES files meet the CALS MIL-D-28000A, Class I specification.

5. SGML Analysis

The tape contained three DTDs and three Text files. The DTD's were noted as being the same with the exception of graphic calls. All of the graphic references were inserted into one file which was used for all operations. For error logs see QSTR 93-025.

The AFCTB has several parser available for evaluating submitted DTD and TEXT files. These tools are not used to generate a pass/fail but to report how commercially available software can handle the files. 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 unless specified in the report. Changes to DTD or Text files required by each system are not documented in the report.

The Text and DTD files from the tape were evaluated using Datalogics' *ParseStation*. They had reported warnings.

The Text and DTD files from this document were tested using the Exoterica *XGMLNormalizer* parser. No errors were reported by this program.

The Text and DTD files from these documents were evaluated using a new parser from Exoterica. This program reported several warnings. These were the same entities reported by Datalogics parser.

The Text and DTD files from the tape were evaluated using McAfee & McAdam' *Sema Mark-it* parser. No errors were reported by this program.

The Text and DTD files from the tape were evaluated using the Public Domain *sgmls* parser. No errors were reported from this program.

The files meet the CALS MIL-M-28001A specification.

6. Raster Analysis

The tape contained one type I and one type II Raster files. The AFCTB currently has no capability to read type II files. This file was sent to the AFCTN Raster expert for evaluation.

The type I Raster file was evaluated using the AFCTN *validg4* utility which reported the file as valid. The file was read into the AFCTN *calstb.475* viewer with no problems.

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 file was read into IDA's *IGESView* with no reported errors. The file was displayed and printed.

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

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

7. CGM Analysis

This tape contained six CGM files. The files were evaluated at the AFCTB and by the AFCTN CGM expert at LLNL. Three of the files (1Q006, 1Q007, 1Q008) were evaluated in QSTR 93-025 and are not addressed here.

The files were evaluated using ATC's *MetaCheck* with CALS options. This utility reported that the files meet the CALS MIL-D-28003 specification.

The files were evaluated using the AFCTN beta *validcgm* utility. This program reported some errors in all files.

The AFCTB has several tools for viewing CGM 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 and indication
of CALS capability. All operations were performed using the
default settings.

The files were viewed on screen using ATC's *MetaView*. The
version available in the AFCTB is not the most current and
had problems displaying the font correctly. Errors were
generated by the two files which had text in them.

The files were converted using ArborText's *cgm2draw* utility
with no reported errors. The resulting files were read into
Island Graphics' *IslandDraw*, displayed and printed. With
the exception of some font problems and an extra line in
files C104 and C105, the images appeared to be complete.
The ArborText utility strips the color from the files, so
the images display in black and white.

The files were imported directly into Island Graphics' *Is-
landDraw* with no reported errors. Problems were noted with
font and some lines in file C104. File C105 had sever
problems with all text and graphics being placed in the
lower left corner. The images displayed in color.

When the files were read using Inset Systems' *HiJaak for
Windows*, only C104 could be read. The remaining files
caused a general protection error.

When the Micrografx *Designer* was used to import the files,
nothing was displayed.

The files were reported as meeting the CALS MIL-D-28003
specification.

8. Conclusions and Recommendations

In summary, the MIL-STD-1840A tape from Northrop Corporation was correct. No errors were reported in tape or CALS headers.

The IGES files meet the CALS MIL-D-28000A specification.

The SGML files and DTD meet the CALS MIL-M-28001A specification.

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

The Type II Raster file was not evaluated.

The CGM files meet the CALS MIL-D-28003 specification.

The tape and the files evaluated 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 Number 8

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 Mar 26 09:24:13 1993
MIL-STD-1840A File Catalog
File Set Directory: /cals/tapetool8/Set076

Page: 1

File Name	File Type	Record Format/ Length	Block Length/Total	Selected/ Extracted
D001	Document Declaration	D/00260	02048/000001	Extracted
D002	Document Declaration	D/00260	02048/000001	Extracted
D003	Document Declaration	D/00260	02048/000001	Extracted
D001T001	Text	D/00260	02048/000001	Extracted
D001G002	DTD	D/00260	02048/000034	Extracted
D001H003	Output Specification	D/00260	02048/000001	Extracted
D001C004	CGM	F/00080	00800/000004	Extracted

<<<<< PART OF LOG RMEOVED HERE >>>>>

D002T001	Text	D/00260	02048/000001	Extracted
D002G002	DTD	D/00260	02048/000034	Extracted
D002H003	Output Specification	D/00260	02048/000001	Extracted
D002Q004	IGES	F/00080	02000/000016	Extracted
D002Q005	IGES	F/00080	02000/000499	Extracted
D002Q006	IGES	F/00080	02000/000025	Extracted
D002Q007	IGES	F/00080	02000/000047	Extracted
D003T001	Text	D/00260	02048/000001	Extracted
D003G002	DTD	D/00260	02048/000034	Extracted
D003H003	Output Specification	D/00260	02048/000001	Extracted
D003R004	Raster	F/00128	02048/000016	Extracted
D003R005	Raster	F/00128	02048/000008	Extracted

Catalog Process terminated normally.

9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release Numb
   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 Mar 26 09:23:32 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01   CONTROLLER

   Label Identifier: VOL1
   Volume Identifier: ITDS01
   Volume Accessibility:
   Owner Identifier:
   Label Standard Version: 4

HDR1D001   ITDS0100010001000100 93073 93073 000000   CONTROLLE

   Label Identifier: HDR1
   File Identifier: D001
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0001
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 93073
   Expiration Date: 93073
   File Accessibility:
   Block Count: 000000
   Implementation Identifier: CONTROLLER

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.

  Number of data blocks read = 1.

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

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

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

HDR1D003R005   ITDS0100010024000100 93073 93073 000000 CONTROLLE

   Label Identifier: HDR1
   File Identifier: D003R005
   File Set Identifier: ITDS01
   File Section Number: 0001
   File Sequence Number: 0024
   Generation Number: 0001
   Generation Version Number: 00
   Creation Date: 93073
   Expiration Date: 93073
   File Accessibility:
   Block Count: 000000
   Implementation Identifier: CONTROLLER

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 = 8.

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

EOF1D003R005   ITDS0100010024000100 93073 93073 000008 CONTROLLE

   Label Identifier: EOF1

File Identifier: D003R005
File Set Identifier: ITDS01
File Section Number: 0001
File Sequence Number: 0024
Generation Number: 0001
Generation Version Number: 00
Creation Date: 93073
Expiration Date: 93073
File Accessibility:
Block Count: 000008
Implementation Identifier: CONTROLLER

EOF2F0204800128   00

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

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

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

########### End of Volume ITDS01 #############

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

Deallocating /dev/rmt0...

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

9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release
  8
  Standards referenced:
    MIL-STD-1840A (1987) - Automated Interchange of Technical Informati

Fri Mar 26 09:24:14 1993
MIL-STD-1840A File Set Evaluation Log
File Set: Set076

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

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Di
srcdocid: CALS_CGM_TEST1
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (
dstdocid: STPRO25.6
dstrelid: NONE
dtetrn: 19930314
dlvacc: NONE
filcnt: T1, H1, G1, C6
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: graphics test

Found file: D001T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: CALS_CGM_TEST1
dstdocid: STPRO25.6
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D001T001_HDR
Saving Text Data File: D001T001_TXT

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

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.

No errors were encountered in Document D001.

Found file: D002
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Di
srcdocid: CALS_IGES_TEST1
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (
dstdocid: STPRO25.8
dstrelid: NONE
dtetrn: 19930314
dlvacc: NONE
filcnt: T1, H1, G1, Q4
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: graphics test

Found file: D002T001
Extracting Text Header Records...
Evaluating Text Header Records...

srcdocid: CALS_IGES_TEST1
dstdocid: STPRO25.8
txtfilid: W
doccls: UNCLASSIFIED
notes: NONE

Saving Text Header File: D002T001_HDR
Saving Text Data File: D002T001_TXT

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

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.

No errors were encountered in Document D002.

Found file: D003
Extracting Document Declaration Header Records...
Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Di
srcdocid: CALS_RAS_TEST1
srcrelid: NONE
chglvl: ORIGINAL
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (
dstdocid: STPRO25.10
dstrelid: NONE
dtetrn: 19930314
dlvacc: NONE
filcnt: T1, H1, G1, R2
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: graphics test

Found file: D003T001
Extracting Text Header Records...
Evaluating Text Header Records...

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

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.

No errors were encountered in Document D003.
No errors were encountered in this File Set.

MIL-STD-1840A File Set Evaluation Complete.

10. Appendix B - Detailed Raster Analysis

10.1 File D001R004

10.1.1 Output g42tiff/IslandPaint

U.S. ARMY MATERIEL COMMAND U.S. ARMY MISSILE COMMAND REDSTONE ARSENAL, ALABAMA			PARTS LIST			PL 10677287				
						CODE IDENTIFICATION NO. 18876				

TITLE OSCILLATOR,VOLTAGE CONTROLLED-COHO-A3A13 — USAMICOM ECP 63343 — DATE 16 NOV 70 — REV − — SHEET 3 OF

FIND NO.	PART OR IDENTIFICATION NO.	DRAWING OR SPECIFICATION NO.	NOMENCLATURE	QUANTITY	PL	MI	EFFECTIVITY		ZONE•	NOTES OR REMARKS
							FROM	TO		
	10181751-207	10181751	RESISTOR							
	10181751-208	10181751	RESISTOR							
	10181751-209	10181751	RESISTOR							
	10181751-210	10181751	RESISTOR							
	10181751-211	10181751	RESISTOR							
	10181751-212	10181751	RESISTOR							
	10181751-213	10181751	RESISTOR							
	10181751-214	10181751	RESISTOR							
	10181751-215	10181751	RESISTOR							
2	10181752-261	10181752	RESISTOR	1						
3	10181752-357	10181752	RESISTOR	1						
4	10181751-147	10181751	RESISTOR	2						
5	10180306-239	10180306	RESISTOR	2						
6	10181751-133	10181751	RESISTOR	1						
7	10181751-166	10181751	RESISTOR	1						
8	10180328-418	10180328	RESISTOR	1						
9	10181752-283	10181752	RESISTOR	1						
10	10181752-298	10181752	RESISTOR	1						
11	10181752-306	10181752	RESISTOR	1						
12	10181752-297	10181752	RESISTOR	1						
13	10181752-289	10181752	RESISTOR	1						
14	10181752-271	10181752	RESISTOR	1						
15	10181752-310	10181752	RESISTOR	1						
16	10181751-55	10181751	RESISTOR	1						1
	10181751-1	10181751	RESISTOR							
	10181751-2	10181751	RESISTOR							
	10181751-3	10181751	RESISTOR							
	10181751-4	10181751	RESISTOR							
	10181751-5	10181751	RESISTOR							
	10181751-6	10181751	RESISTOR							

SSA FORM 1000, AUG. 1963 — •OPTIONAL

10.1.2 Output IGESView

U.S. ARMY MATERIEL COMMAND U.S. ARMY MISSILE COMMAND REDSTONE ARSENAL, ALABAMA					PARTS LIST			PL 10677287 CODE IDENTIFICATION NO. 18876			
TITLE OSCILLATOR,VOLTAGE CONTROLLED-COHO-A3A13			USAMICOM RCP 63343		DATE 16 NOV 70 REV —			SHEET 3 OF			
FIND NO.	PART OR IDENTIFICATION NO.	DRAWING OR SPECIFICATION NO.	NOMENCLATURE		QUANTITY	PL	MI	EFFECTIVITY FROM	TO	ZONE	NOTES OR REMARKS
	10181751-207	10181751	RESISTOR								
	10181751-208	10181751	RESISTOR								
	10181751-209	10181751	RESISTOR								
	10181751-210	10181751	RESISTOR								
	10181751-211	10181751	RESISTOR								
	10181751-212	10181751	RESISTOR								
	10181751-213	10181751	RESISTOR								
	10181751-214	10181751	RESISTOR								
	10181751-215	10181751	RESISTOR								
2	10181752-261	10181752	RESISTOR		1						
3	10181752-357	10181752	RESISTOR		1						
4	10181751-147	10181751	RESISTOR		2						
5	10180306-239	10180306	RESISTOR		2						
6	10181751-133	10181751	RESISTOR		1						
7	10181751-166	10181751	RESISTOR		1						
8	10180328-418	10180328	RESISTOR		1						
9	10181752-283	10181752	RESISTOR		1						
10	10181752-298	10181752	RESISTOR		1						
11	10181752-306	10181752	RESISTOR		1						
12	10181752-297	10181752	RESISTOR		1						
13	10181752-289	10181752	RESISTOR		1						
14	10181752-271	10181752	RESISTOR		1						
15	10181752-310	10181752	RESISTOR		1						
16	10181751-55	10181751	RESISTOR		1						1
	10181751-1	10181751	RESISTOR								
	10181751-2	10181751	RESISTOR								
	10181751-3	10181751	RESISTOR								
	10181751-4	10181751	RESISTOR								
	10181751-5	10181751	RESISTOR								
	10181751-6	10181751	RESISTOR								

11. Appendix C - Detailed CGM Analysis

11.1 File D001C004

11.1.1 Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/26/93    Time:  09:05:50


Metafile Examined     : i:\9326\c104.cgm

Pictures Examined     : All
Elements Examined     : All
Bytes     Examined    : All


======================= Trace Report ========================

Tracing not selected.

============== CGM Conformance Violation Report ==============

No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ============

No profile discrepancies detected.

================ Conformance Summary Report ================

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/26/93    Time:  09:05:52

Name of CGM under test: i:\9326\c104.cgm
Encoding              : Binary

Pictures Examined     : All
Elements Examined     : All
Bytes     Examined    : All

BEGIN METAFILE string : "AFCTN-01Id"
METAFILE DESCRIPTION  : "AFCTN-01Id, 91-10-03, MIL-D-28003/BASIC-1"
```

Picture 1 starts at octet offset 158; string contains: "All Graphical
Primitive Elements"

Conformance Summary : This file conforms to the CGM specification.
                        This file meets the CALS CGM Profile (MIL-D-28003).
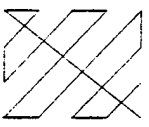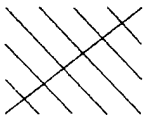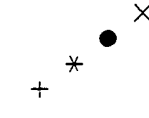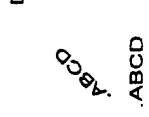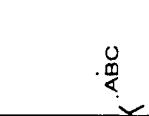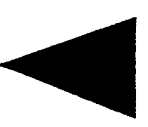
Summary of Testing Performed and Errors Found:

      1 Pictures Tested
   213 Elements Tested
 2528 Octets Tested

```
===================================
|     No Errors Were Detected     |
===================================
```
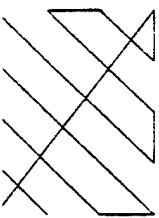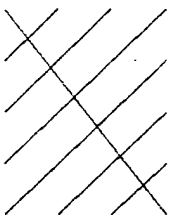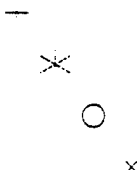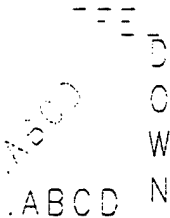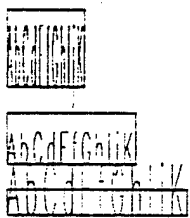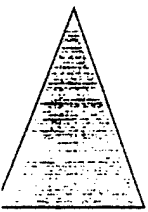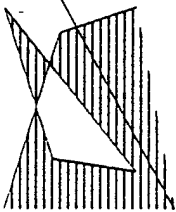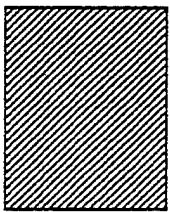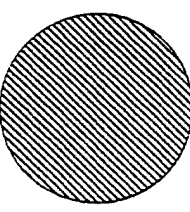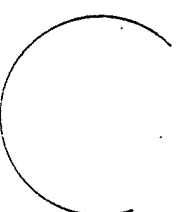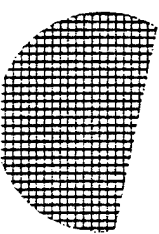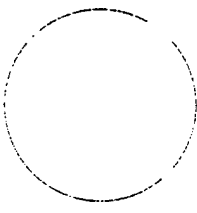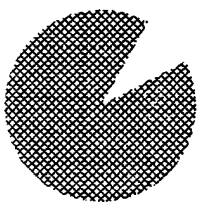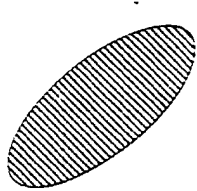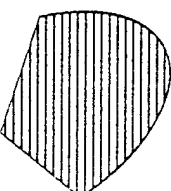
================= End of Conformance Report ==================
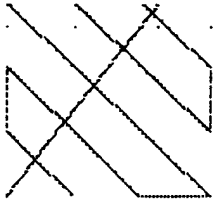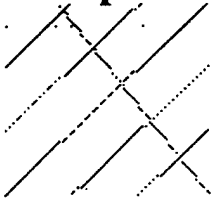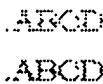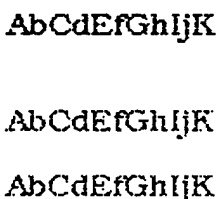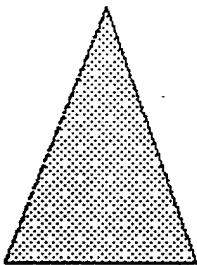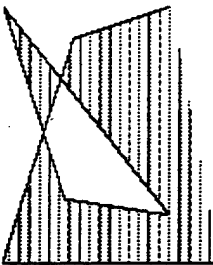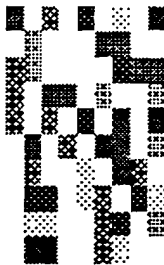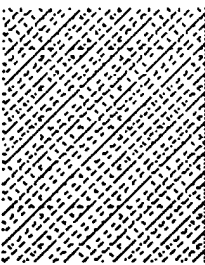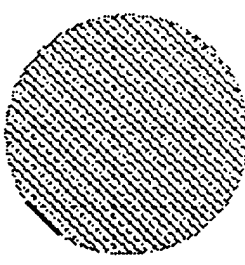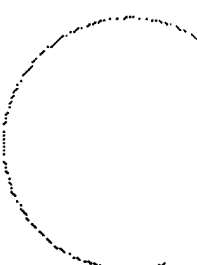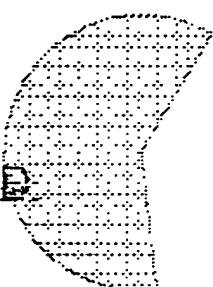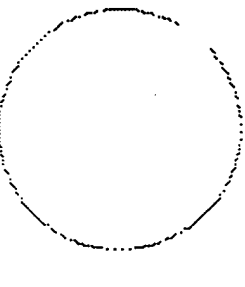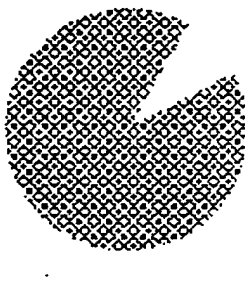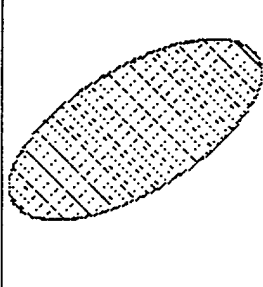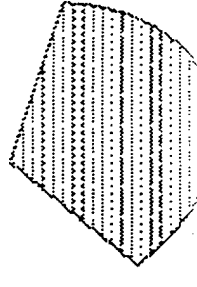
11.1.2 Output HiJaak for Windows

11.1.3 Output cgm2draw/IslandDraw

) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
) POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 POINT
4) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTICAL ARC CLOSE

LINE TYPE

CALS TEST NETWORK
MIL-D-28003
Computer Graphics Metafile
File: CTN-01Id, Draft 91-10-03

11.1.4 Output IslandDraw

				AbCdEfGhIjK	
			ABCD	AbCdEfGhIjK	
			ABCD	AbCdEfGhIjK	
POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 POINT
4) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTICAL ARC CLOSE

LINE TYPE	CALS TEST NETWORK
	MIL-D-28003
	Computer Graphics Metafile
	File: CTN-01ld, Draft 91-10-03

11.2 File D001C005

11.2.1 Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/26/93     Time:  09:06:02

Metafile Examined    : i:\9326\c105.cgm

Pictures Examined    : All
Elements Examined    : All
Bytes    Examined    : All


======================= Trace Report =========================

Tracing not selected.

============= CGM Conformance Violation Report ==============

No Errors Detected

========== CALS CGM Profile (MIL-D-28003) Report ============

No profile discrepancies detected.

================ Conformance Summary Report =================

MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/26/93     Time:  09:06:05

Name of CGM under test: i:\9326\c105.cgm
Encoding               : Binary

Pictures Examined    : All
Elements Examined    : All
Bytes    Examined    : All

BEGIN METAFILE string : "AFCTN-01Rd"
METAFILE DESCRIPTION  : "AFCTN-01Rd, 91-10-03, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 162; string contains: "All Graphical
Primitive Elements"
```

Conformance Summary : This file conforms to the CGM specification.
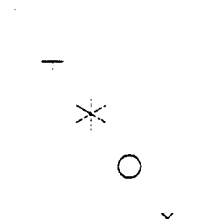This file meets the CALS CGM Profile (MIL-D-28003).
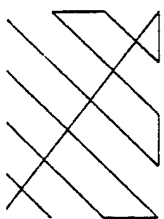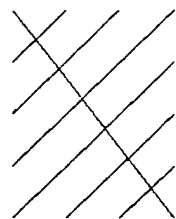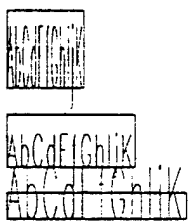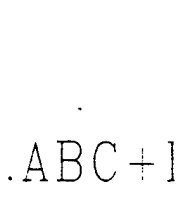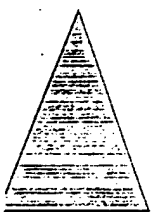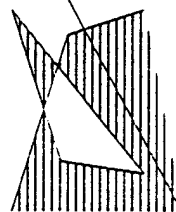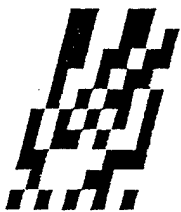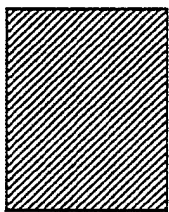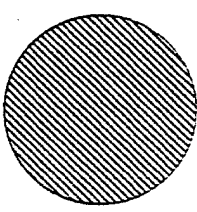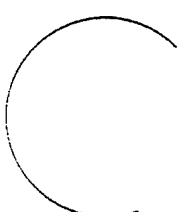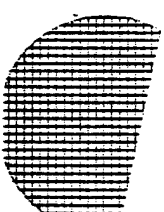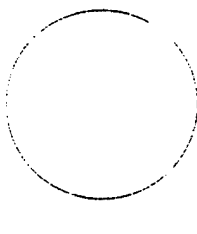
Summary of Testing Performed and Errors Found:

```
      1 Pictures Tested
    213 Elements Tested
   3252 Octets Tested
```

```
===================================
|    No Errors Were Detected     |
===================================
```
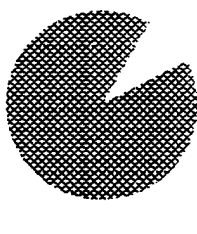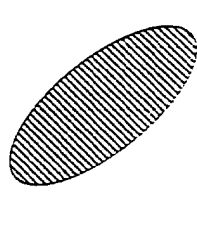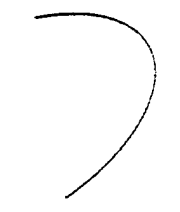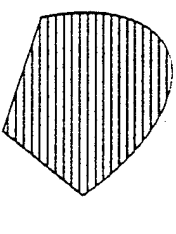
================ End of Conformance Report ==================

11.2.2 Output cgm2draw/IslandDraw

) POLYLINE	(2) DISJOINT POLYLINE	(3) POLYMARKER	(4) TEXT	(5) RESTRICTED TEXT	(6) APPEND TEXT
) POLYGON	(8) POLYGON SET	(9) CELL ARRAY	(11) RECTANGLE	(12) CIRCLE	(13) CIRCULAR ARC 3 PC
4) CIRCULAR ARC 3 POINT CLOSE	(15) CIRCULAR ARC CENTRE	(16) CIRCULAR ARC CENTRE CLOSE	(17) ELLIPSE	(18) ELLIPTICAL ARC	(19) ELLIPTIC ARC CLOS

LINE TYPE	CALS TEST NETWORK
	MIL-D-28003
	Computer Graphics Metafile
	File: CTN-01Rd. 91-10-03

11.2.3 Output IslandDraw

(8) POLYGON SET	(9) CELL ARRAY	

(7) CIRCLE
\RC 3 POINT

(14) ELLIPSE
ARC POINT
CLOSE
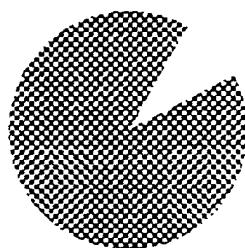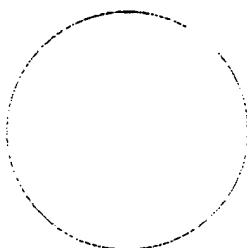
(15) CIRCULAR
ARC CENTRE

(16) CIRCULAR
ARC CENTRE
CLOSE

S TEST NETWORK
LINE TYPE
28003
Computer Graphics Metafile
91-10-03
CONTROL   (2) POLYLINE   (3) POLYMARKER

11.3   File D001C009

11.3.1   Parser Log MetaCheck

```
MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/26/93     Time:  09:06:15


Metafile Examined    : i:\9326\c109.cgm


Pictures Examined    : All
Elements Examined    : All
Bytes    Examined    : All


====================== Trace Report =========================


Tracing not selected.


============== CGM Conformance Violation Report ==============


No Errors Detected


========== CALS CGM Profile (MIL-D-28003) Report ============


No profile discrepancies detected.


================= Conformance Summary Report =================


MetaCheck Version 2.05 -- CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 03/26/93     Time:  09:06:17


Name of CGM under test: i:\9326\c109.cgm
Encoding               : Binary


Pictures Examined    : All
Elements Examined    : All
Bytes    Examined    : All


BEGIN METAFILE string : "text.cgm"
METAFILE DESCRIPTION  : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"


Picture 1 starts at octet offset 178; string contains: "Picture 1"


Conformance Summary  :  This file conforms to the CGM specification.
```

This file meets the CALS CGM Profile (MIL-D-28003).

Summary of Testing Performed and Errors Found:

      1 Pictures Tested
     67 Elements Tested
   896 Octets Tested

```
===================================
|    No Errors Were Detected    |
===================================
```

================ End of Conformance Report =================

11.3.2 Output cgm2draw/IslandDraw

CENTER TEXT

RIGHT TEXT

ABCD
EFG
HIJK
LMOP
QRST
UVW
XYZ

BOLD 45

DOWN TEXT

TXET PU

TEXT .12

BOLD .15

S P A C I N G   2

EXPANSION FACTOR 1.5

TEXT COLOR RED

11.3.3 Output IslandDraw

RIGHT TEXT

ABCD
EFG
HIJK
LMOP
QRST
UVW
XYZ

DOWN TEXTTEXT

BOLD 45

TEXT .12

BOLD .15

SPACING 2

EXPANSION FACTOR 1.5

TEXT COLOR RED