



CALS TEST NETWORK

AFCTN Test Report 94-007

AFCTB-ID
93-055

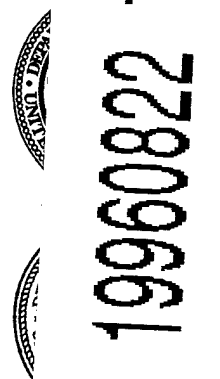


Technical Publication Transfer

Using:



Northrop Corporation's Data

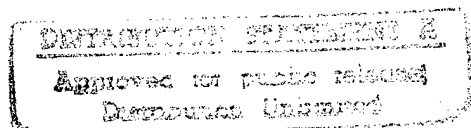


- MIL-D-28000A (IGES)
- MIL-M-28001A (SGML)
- MIL-R-28002A (Raster)
- MIL-D-28003 (CGM)

Quick Short Test Report



03 June 1993



Prepared for

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Electronic Systems Center

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Quick Short Test Report

03 June 1993

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

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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 Northrop Corporation's interpretation and use of the CALS standards, in transferring technical publication 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 93-055

Date of Evaluation: 3 June 1993

Evaluator: 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 P Kent
Northrop Corporation
B-2 Division, M/S L591/UB
8900 East Washington Blvd
Pico Rivera CA 90660
(310) 942-3030

Data Description: Technical Manual Test
3 Document Declaration files
3 Document Type Definition (DTD)
4 Initial Graphics Exchange Standard (IGES) files
3 Text files
1 Raster file
5 Computer Graphics Metafile (CGM) files

Data Source System: 1840

HARDWARE

Unknown

SOFTWARE

Unknown

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

XSoft CAPS/CALS v40.4

Texas Instruments (TI) Tapetool v1.0.1

PC 486/50

AFCTN Tapetool v1.2.9 DOS

MIL-D-28000 (IGES)

Sun SparcStation 2

ArborText iges2draw

Carberry CADLeaf Plus v3.1

IGES Data Analysis (IDA) Parser/Verifier v92

IDA IGESView v3.05

International TechneGroup Incorporated
(ITI) IGES/Works v1.3

Rosetta Technologies Preview v3.2

PC 486/50

AUTODESK AutoCAD 386 R12

AUTODESK Micro Engineering Solutions
(MES) CheckMark v1.0

Cadkey Cadkey v5.02

IDA IGESView Windows

MIL-M-28001 (SGML)

PC 486/50

Datalogics *ParserStation v3.36*
Exoterica *XGMLNormalizer v1.2e3.2*
Exoterica *Validator v2.0 ex1*
McAfee & McAdam *Sema Mark-it v2.3*
Public Domain *sgmls*

MIL-R-28002 (Raster)

SUN SparcStation 2

ArborText *g42tiff*
Carberry *CADLeaf Plus v3.1*
AFCTN *validg4*
AFCTN *calstb.475*
IDA *IGESView v3.0*
Island Graphics *IslandPaint v3.0*

PC 486/50

IDA *IGESView Windows*
Inset Systems *HiJaak v2.1*
Inset Systems *HiJaak Window v1.0*
Corel *Ventura Publisher*

MIL-D-28003 (CGM)

SUN SparcStation 2

ArborText *cgm2draw*
Island Graphics *IslandDraw v3.0*
Carberry *CADLeaf Plus v3.1*

PC 486/50

Software Publishing Corporation
(SPC) *Harvard Graphics v3.05*
Inset Systems *HiJaak v2.1*
Inset Systems *HiJaak v1.0 Windows*
Micrografx *Designer v3.1*
Micrografx *Charisma v2.1*
Corel *Ventura Publisher*

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 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. Inspection of the tape reel showed the label indicating the recording density, as required 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 v1.2.9* utility. No errors were encountered while evaluating the contents of the tape labels.

The tape was read using XSoft's *CAPS read1840A* utility without any reported errors. The tape was read using TI's *Tapetool v1.0.1*.

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

3.2.2 Declaration and Header Fields

No errors were reported in the Document Declaration file and 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* and *verifier* set for CALS Class I. This utility reported that all files meet the CALS MIL-D-28000A specification. Some warnings were generated on basic IGES entities.

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 with no reported errors. The resulting files were read into Island Graphics' *IslandDraw* and displayed. The images were partly displayed on the left side of the screen. A switch had to be set in order to display the files correctly. The error was trace of a negative X value for the start point of the files.

The files were read using AUTODESK's *AutoCAD R12* with translator version 5.1. The resulting files were displayed and no problems were noted.

The files were converted using Cadkey's *ig2c* utility. The resulting files were read into *Cadkey*, displayed and printed. Some errors were noted in file D002Q006 in the B-splines, which Cadkey does not support.

The files were read into Carberry's *CADLeaf* software without a reported error. File D002Q006 displayed with one set of letters incorrect. The letters should have been aligned vertically when in fact they displayed horizontally.

The files were read using IDA's *IGESView* and *IGESView for Windows*. No problems were noted.

The IGES files were converted using Rosetta Technologies' *Prepare* without a reported error. The resulting files were read into *Preview* and displayed.

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

5. SGML Analysis

The tape contained three DTD and Text files. The DTD files were found to be the same except for the graphic references. All of these references were placed in one DTD which was used for all parsing operations.

The AFCTB has several parsers 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* with no reported errors.

The Text and DTD files from this document were evaluated using the Exoterica *Validator exl* parser with no reported errors and some warnings. See the Appendix for the log.

The Text and DTD files from this document were tested using Exoterica's *XGMLNormalizer* parser with no reported errors.

The Text and DTD files from the tape were evaluated using McAfee & McAdam's *Sema Mark-it* parser with no reported errors.

The Text and DTD files from the tape were evaluated using the Public Domain *sgmls* parser with no reported errors.

The SGML files on this tape meet the CALS MIL-D-28001A specification.

6. Raster Analysis

The tape contained one Raster file. This file was evaluated using the AFCTN *validg4* utility. This program reported that the file met the CALS MIL-R-28002A specifications.

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 file was converted using ArborText's *g42tiff* utility without a reported error. The resulting file was read into Island Graphics' *IslandPaint* and displayed.

The Raster file was read into Carberry's *CADLeaf* software without a reported error. The image was displayed and printed.

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

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

The file was converted using Inset Systems' *HiJaak for DOS* into an IMG format without a reported error. The resulting file was read into Corel's *Ventura Publisher*, displayed and printed.

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

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

7. CGM Analysis

The tape contained five CGM files. The files were evaluated using a software available within the AFCTB with CALS options. This utility reported that all five files meet the CALS MIL-D-28002A specification.

The CGM files were evaluated using the beta AFCTN *validcgm* utility with some reported errors.

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 an indication of CALS capability. All operations were performed using the default settings.

The CGM files were converted using ArborText's *cgm2draw* utility without a reported error. The resulting files were read into Island Graphics' *IslandDraw* and displayed. Text overflow was noted on file D001C004.

The files were viewed using a software available within the AFCTB. The files containing text had reported errors, and font problems were visible on the screen.

The files were read into Carberry's *CADLeaf* software and displayed. File D001C004 had some text overflow noted. File D001C007 had defined line thickness noted. Images were displayed in color.

An attempt to read the files into Inset Systems' *HiJaak for Windows* did not succeed. The software reported a general system fault and dropped back one level.

The files were imported directly into Island Graphics' *IslandDraw* without a reported error. File D001C004 had text overflow noted and the elliptical arc, both open and closed, were noted as being in error.

An attempt to import into the Micrografx *Designer* resulted in no error messages but nothing displayed.

According to Michael Harrison of Micrografx, "Micrografx is aware of the problems associated with reading these files and is working on a solution to be implemented in a future release of our products."

The files were imported into SPC's *Harvard Graphics 3.05* with all files except D001C008 reporting errors. The errors were line style, adjustment of points, non-CGM entities, and not translated entities. Non of the imported images were usable.

An attempt to imported the files into Corel's *Ventura Publisher* failed for files D001C004 and D001C008. These files were reported as being in an incorrect format. The three files that did import were not usable.

The CGM files were reported as meeting the CALS MIL-D-28003 specification, but the commercial software available in the AFCTB could not display any of the file correctly.

8. Conclusions and Recommendations

The physical tape structure and data requirements meet the CALS MIL-STD-1840A requirements.

The IGES files on the tape meet the CALS MIL-D-28000A specification for Class I files.

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

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

The CGM files on the tape meet the CALS MIL-D-28003 specification. However, the files could not be displayed correctly on any commercial software available in the AFCTB.

The tape meets the CALS MIL-STD-1840A requirements as defined above.

9. Appendix A - Tapetool Report Logs

9.1 Tape Catalog

Air Force CALS Test Network Catalog Evaluation - Version 1.2; Release 9 (O)

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 Jun 2 13:58:01 1993

MIL-STD-1840A File Catalog

File Set Directory: /cals/u129/Set009

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	00800/000006	Extracted
D001C005	CGM	F/00080	00800/000002	Extracted
D001C006	CGM	F/00080	00800/000002	Extracted
D001C007	CGM	F/00080	00800/000002	Extracted
D001C008	CGM	F/00080	00800/000002	Extracted
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	02000/000012	Extracted
D002Q005	IGES	F/00080	02000/000573	Extracted
D002Q006	IGES	F/00080	02000/000033	Extracted
D002Q007	IGES	F/00080	02000/000042	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	02048/000007	Extracted

Catalog Process terminated normally.

9.2 Tape Evaluation Log

Air Force CALS Test Network Tape Evaluation - Version 1.2; Release 9 (0)

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 Jun 2 13:57:17 1993

ANSI Tape Import Log

Allocating tape drive /dev/rmt0...

/dev/rmt0 allocated.

VOL1ITDS01 CONTROLLER

4

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

HDR1D001 ITDS0100010001000100 93145 93145 000000 CONTROLLER

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: 93145
Expiration Date: 93145
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

9.3 Tape File Set Validation Log

Air Force CALS Test Network File Set Evaluation - Version 1.2; Release 9 (O)

Standards referenced:

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

Wed Jun 2 13:58:01 1993

MIL-STD-1840A File Set Evaluation Log

File Set: Set009

Found file: D001

Extracting Document Declaration Header Records...

Evaluating Document Declaration Header Records...

srcsys: John P. Kent, ITDS Chief Engineer, Northrop Corporation, B-2 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: CALS_CGM_TEST2

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19930126

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,
TechneCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.7

dstrelid: NONE

dtetrm: 19930525

dlvacc: NONE

filcnt: T1, H1, G1, C5

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: JOB GUIDE

docttl: graphics test

<<<< 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 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: CALS_IGES_TEST2

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19930126

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,
TechneCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.9

dstrelid: NONE

dtetrm: 19930525

dlvacc: NONE

filcnt: T1, H1, G1, Q4

ttlcls: UNCLASSIFIED

doccls: UNCLASSIFIED

doctyp: JOB GUIDE

docttl: graphics test

<<<< 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 Division, L591/GK
E. Washington Blvd., Pico Rivera, CA 90660-3765 (310) 948-0624

srcdocid: CALS_RAS_TEST2

srcrelid: NONE

chglvl: ORIGINAL

dteisu: 19930126

dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT,
TechneCenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601

dstdocid: STPRO25.11
dstrelid: NONE
dtetrn: 19930525
dlvacc: NONE
filcnt: T1, H1, G1, R1
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctyp: JOB GUIDE
docttl: graphics test

<<<< 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 IGES Analysis

10.1 File D002Q004

10.1.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***  
***      MARCH 1992      ***  
***  IGES Data Analysis  ***  
***    (708) 449-3430    ***
```

Input file is /novell/9355/q204.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is June 3, 1993 8:17 AM

*** File and Product Name Information ***

```
File name from sender      = 'apple2d.igs'  
File creation Date.Time   = '930524.103711'  
Model change Date.Time    = ''  
Author                    = 'tom'  
Department                = 'GRAPHICS'  
Product name from sender  = 'apple2d.igs'  
Destination product name  = 'apple2d.igs'
```

*** Parameter Delimiters ***

```
Delimiter = ','  
Terminator = ';' 
```

*** Originating System Data ***

```
System ID          = 'ITDS CONVERTER: GEF_IGES'  
Preprocessor version = '1.0'  
Specification version = 6 (IGES 4.0)
```

*** Precision levels ***

```
Integer bits = 32  
Floating point - Exponent = 38  Mantissa = 6  
Double precision - Exponent = 308  Mantissa = 15
```

*** Global Model Data ***

Model scale = 1.0000E+00
 Unit flag = 1
 Units = 'IN'
 Line weights = 3
 Maximum line thickness = 1.000000E-02
 Minimum line thickness = 3.333333E-03
 Granularity = 1.000000E-03
 Maximum coordinate = 2.954101E+00

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	41
	Blanked	0
Independence:	Independent	39
	Physically Subordinate	0
	Logically Subordinate	2
	Totally Subordinate	0
Entity use:	Geometry	39
	Annotation	2
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	41
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
106	11	0	24	Copious data - Piecewise planar, linear string(2D path)
106	63	0	8	Simple closed planar curve
110	0	0	6	Line
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	41

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled	41
-----------	----

*** Line Fonts Used in Data ***

100 102 104 106 108 110 112 114

-	-	-	-	-	-	-	-	Undefined	-	-	-	32	-	6	-
Solid	-	-	-	-	-	-	-	Dashed	-	-	-	-	-	-	-
Phantom	-	-	-	-	-	-	-	Center-line	-	-	-	-	-	-	-
-	Dotted	-	-	-	-	-	-	User defined	-	-	-	-	-	-	-

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

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	31	(0.0033)
2	10	(0.0067)

*** Colors Used in Data ***

Defaulted	3
Red	8
Green	30

***** ENTITY ANALYSIS *****

*** Entity type: 106

*** Entity type: 110

-- 6 lines averaging 1.362447E-01 units --

*** Entity type: 404

Drawing at D 5 contains 1 views.
Drawing at D 5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D 1 is 1.000000E+00.
Orthographic View entity at D 1 has 0 clipping planes specified.
XMIN = Not Set XMAX = Not Set
YMIN = Not Set YMAX = Not Set
ZMIN = Not Set ZMAX = Not Set

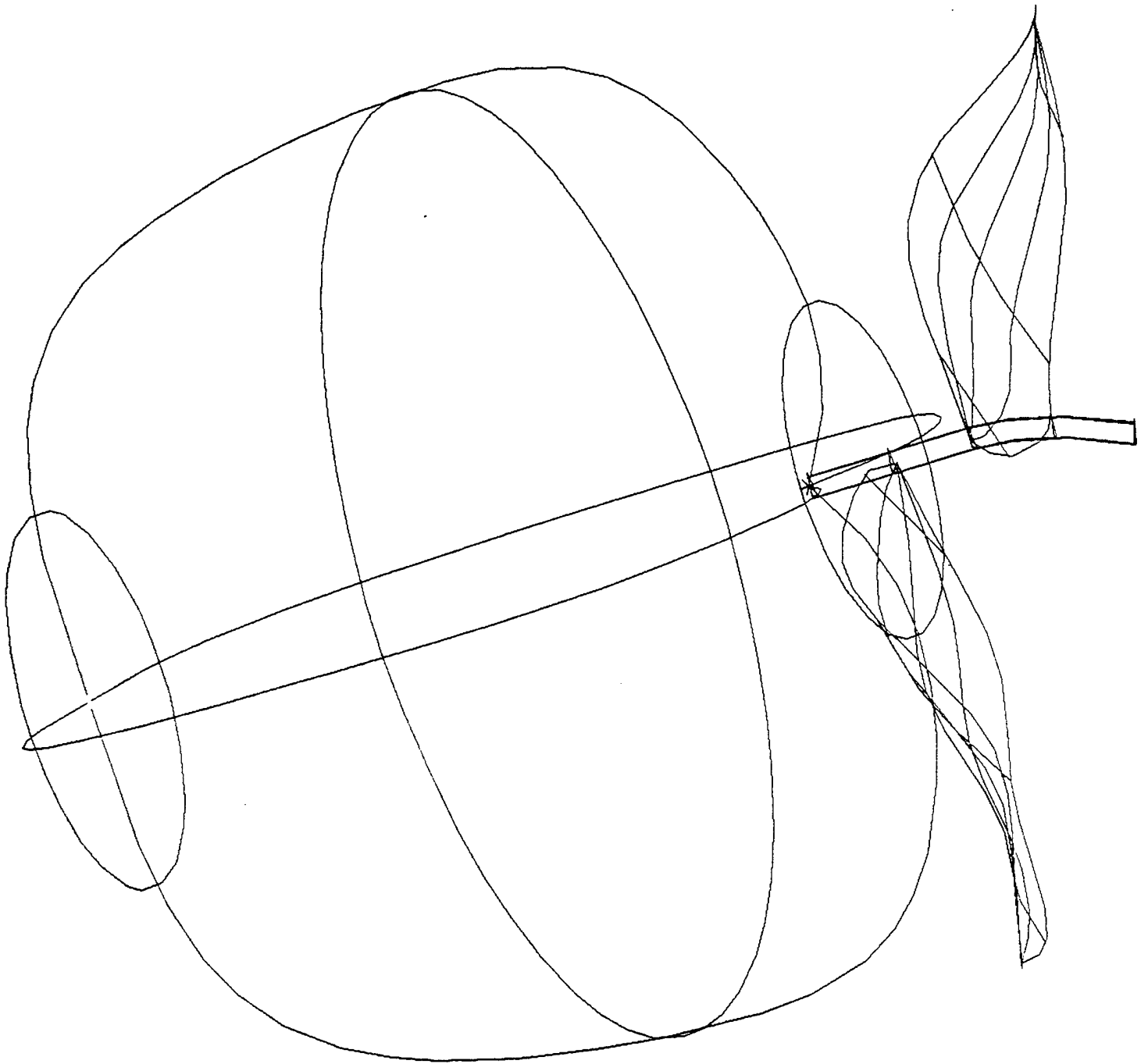
*** Message Summary ***

*** Error Summary ***

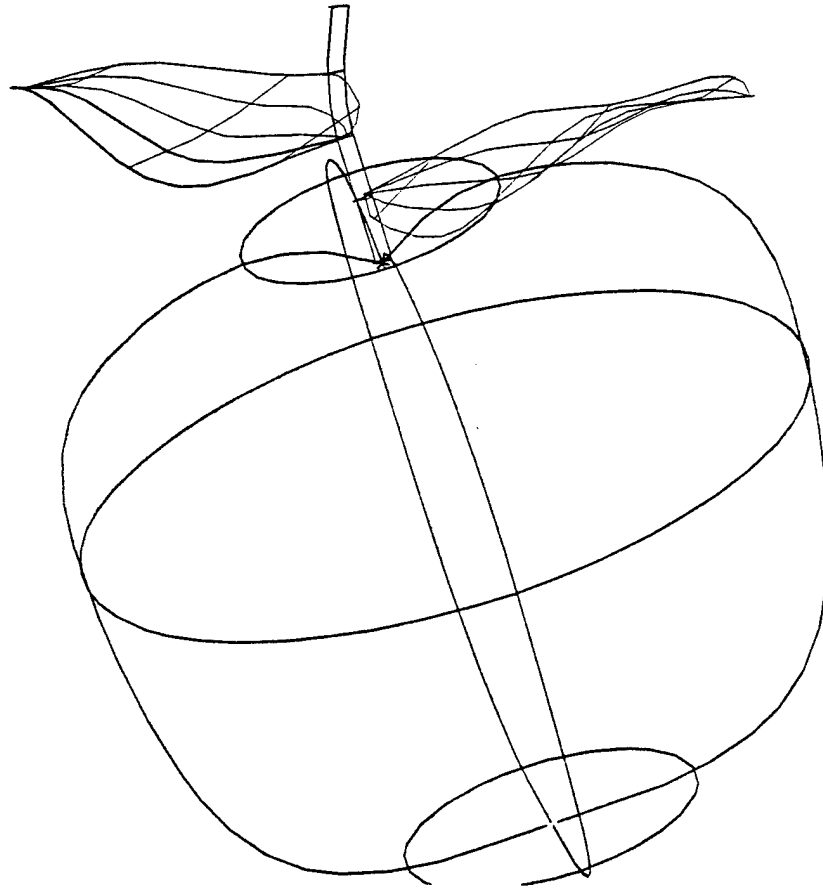
0 fatal errors
0 severe errors
0 errors
0 warnings
0 cautions
0 nitpicks
0 notes

*** End of Analysis of /novell/9355/q204.igs ***

10.1.2 Output Cadkey v5.02



10.1.3 Output IGESView



10.2 File D002Q005

10.2.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***
***      MARCH 1992      ***
***  IGES Data Analysis  ***
***      (708) 449-3430  ***
```

Input file is /novell/9355/q205.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92) .

Today is June 3, 1993 8:17 AM

*** File and Product Name Information ***

```
File name from sender      = 'classic2d.igs'
File creation Date.Time    = '930524.103727'
Model change Date.Time     = ''
Author                     = 'Boardhead'
Department                  = 'WINDY'
Product name from sender   = 'classic2d.igs'
Destination product name   = 'classic2d.igs'
```

*** Parameter Delimiters ***

```
Delimiter = ','
Terminator = ';'

```

*** Originating System Data ***

```
System ID          = 'ITDS CONVERTER: GEF_IGES'
Preprocessor version = '1.0'
Specification version = 6 (IGES 4.0)
```

*** Precision levels ***

```
Integer bits = 32
Floating point - Exponent = 38  Mantissa = 6
Double precision - Exponent = 308  Mantissa = 15
```

*** Global Model Data ***

```
Model scale          = 1.0000E+00
Unit flag            = 2
```

Units = 'MM'
 Line weights = 3
 Maximum line thickness = 1.000000E+00
 Minimum line thickness = 3.333333E-01
 Granularity = 1.000000E-03
 Maximum coordinate = 8.782127E+02

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	2988
	Blanked	0
Independence:	Independent	2986
	Physically Subordinate	0
	Logically Subordinate	2
	Totally Subordinate	0
Entity use:	Geometry	2518
	Annotation	470
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	2988
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
100	0	0	242	Circular arc
104	1	0	15	Conic arc - ellipse
106	11	0	123	Copious data - Piecewise planar, linear string(2D path)
106	63	0	82	Simple closed planar curve
110	0	0	2024	Line
112	0	0	16	Parametric spline curve
124	0	0	15	Transformation matrix
212	0	0	468	General note
404	0	0	1	Drawing

406	16	0	1	Property - Drawing size
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	2988

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled 2988

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
237	-	15	205	-	1765	16	-	Solid
4	-	-	-	-	97	-	-	Dashed
1	-	-	-	-	145	-	-	Phantom
-	-	-	-	-	17	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	15	-	-	-	Undefined
-	-	-	-	-	-	-	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom

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

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	2988	(0.3333)

*** Colors Used in Data ***

Defaulted	18
Red	965
Green	8
Blue	106

Yellow 1765
Magenta 65
White 61

***** ENTITY ANALYSIS *****

*** Entity type: 100

*** Entity type: 104

WARNING 2265: Start point off conic by 8.961375E-03 at D 381.
WARNING 2039: End point off conic by 2.300953E-02 at D 381.

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

*** Entity type: 106

*** Entity type: 110

-- 2024 lines averaging 1.694140E+01 units --

*** Entity type: 112

*** Entity type: 124

15 transformation matrices, 15 non-zero translations.
NOTE 2341: 15 matrices contain translation information.

*** Entity type: 212

468 text strings in data file.
Average text aspect ratio in file is 1.0159167.
Minimum text aspect ratio in file is 0.7623555.
Maximum text aspect ratio in file is 1.1000000.

FONTS USED IN FILE

FONT	COUNT	NAME
1	468	Default ASCII Style

*** Entity type: 404

Drawing at D 5 contains 1 views.

Drawing at D 5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D 1 is 1.000000E+00.

Orthographic View entity at D 1 has 0 clipping planes specified.

XMIN = Not Set XMAX = Not Set

YMIN = Not Set YMAX = Not Set

ZMIN = Not Set ZMAX = Not Set

*** Message Summary ***

2015: 18 Mathematically incorrect definitions.

*** Error Summary ***

0 fatal errors

0 severe errors

0 errors

18 warnings

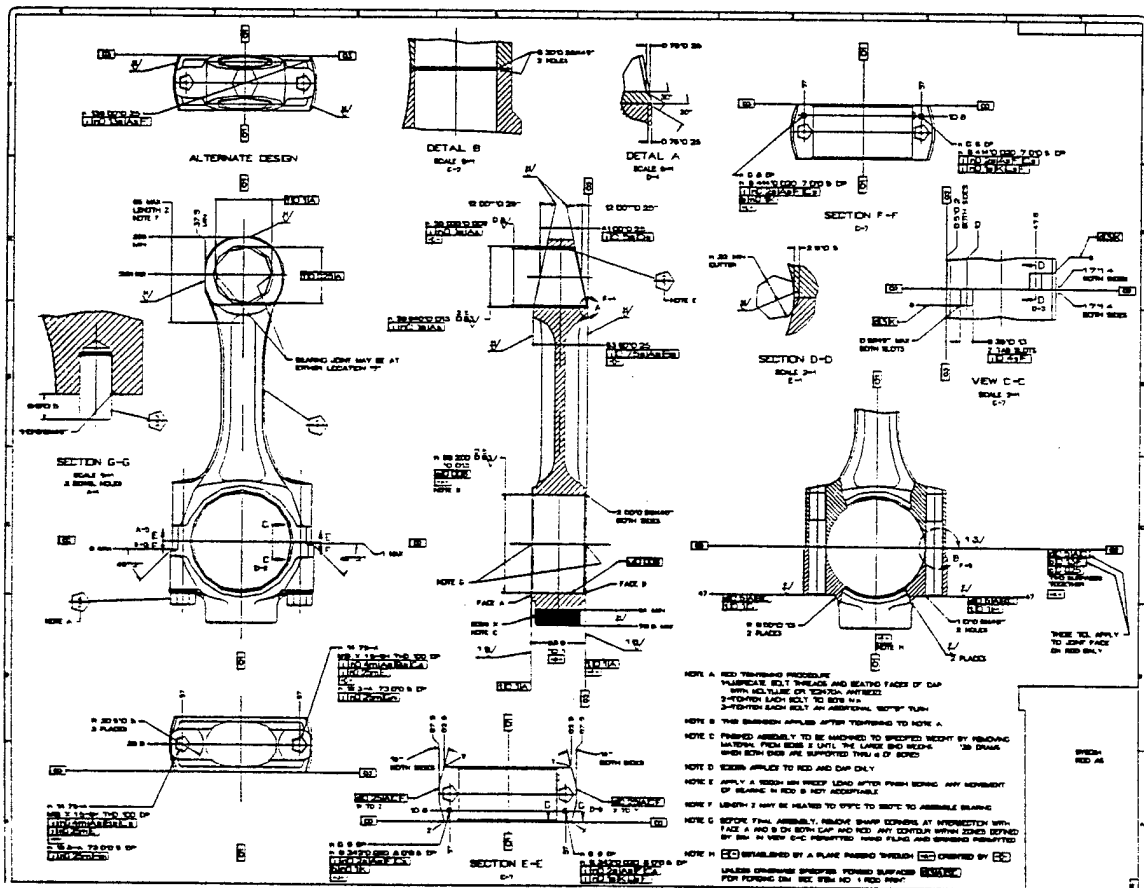
0 cautions

0 nitpicks

1 notes

*** End of Analysis of /novell/9355/q205.igs ***

10.2.3 Output IGESView



10.3 File D002Q006

10.3.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***  
***      MARCH 1992      ***  
*** IGES Data Analysis ***  
***      (708) 449-3430      ***
```

Input file is /novell/9355/q206.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is June 3, 1993 8:17 AM

*** File and Product Name Information ***

```
File name from sender      = 'identity.igs'  
File creation Date.Time   = '930524.103736'  
Model change Date.Time    = ''  
Author                    = 'KASSEL'  
Department                = 'Air Force CALS Test Network'  
Product name from sender  = 'identity.igs'  
Destination product name  = 'identity.igs'
```

*** Parameter Delimiters ***

```
Delimiter = ','  
Terminator = ';' 
```

*** Originating System Data ***

```
System ID          = 'ITDS CONVERTER: GEF_IGES'  
Preprocessor version = '1.0'  
Specification version = 6 (IGES 4.0)
```

*** Precision levels ***

```
Integer bits = 32  
Floating point - Exponent = 38  Mantissa = 6  
Double precision - Exponent = 308  Mantissa = 15
```

*** Global Model Data ***

```
Model scale          = 1.0000E+00  
Unit flag           = 1
```

Units = 'IN'
 Line weights = 8
 Maximum line thickness = 1.600000E-02
 Minimum line thickness = 2.000000E-03
 Granularity = 1.000000E-03
 Maximum coordinate = 1.690002E+01

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	200
	Blanked	0
Independence:	Independent	185
	Physically Subordinate	12
	Logically Subordinate	3
	Totally Subordinate	0
Entity use:	Geometry	67
	Annotation	132
	Definition	1
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	200
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	----	-----	-----	-----
100	0	0	3	Circular arc
102	0	0	1	Composite curve
104	1	0	2	Conic arc - ellipse
104	2	0	1	Conic arc - hyperbola
104	3	0	1	Conic arc - parabola
106	11	0	1	Copious data - Piecewise planar, linear string(2D path)
106	63	0	1	Simple closed planar curve
110	0	0	27	Line
112	0	0	2	Parametric spline curve

124	0	0	12	Transformation matrix
126	0	0	6	Rational B-spline curve
212	0	0	129	General note
230	0	0	1	Sectioned area (Standard Crosshatching)
308	0	0	1	Subfigure definition
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size
406	18	0	1	Property - Intercharacter spacing
408	0	0	8	Single subfigure instance
410	0	0	1	View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	200

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled	200
-----------	-----

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114	
-	-	-	-	-	-	-	-	Undefined
3	1	4	2	-	27	2	-	Solid
-	-	-	-	-	-	-	-	Dashed
-	-	-	-	-	-	-	-	Phantom
-	-	-	-	-	-	-	-	Center-line
-	-	-	-	-	-	-	-	Dotted
-	-	-	-	-	-	-	-	User defined
116	118	120	122	124	125	126	128	
-	-	-	-	12	-	-	-	Undefined
-	-	-	-	-	-	6	-	Solid

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

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	200	(0.0020)

*** Colors Used in Data ***

Defaulted 25
Red 175

***** ENTITY ANALYSIS *****

*** Entity type: 100

*** Entity type: 102

*** Entity type: 104

WARNING 2265: Start point off conic by 2.666563E-03 at D 23.

WARNING 2265: Start point off conic by 1.456414E-03 at D 27.

*** Entity type: 106

*** Entity type: 110

-- 27 lines averaging 7.155336E+00 units --

*** Entity type: 112

*** Entity type: 124

12 transformation matrices, 4 non-zero translations.

NOTE 2341: 4 matrices contain translation information.

*** Entity type: 126

*** Entity type: 212

129 text strings in data file.
Average text aspect ratio in file is 0.9982937.
Minimum text aspect ratio in file is 0.7978667.
Maximum text aspect ratio in file is 1.4857143.

FONTS USED IN FILE

FONT	COUNT	NAME
1	127	Default ASCII Style
1002	2	Symbol Font 2

*** Entity type: 230

*** Entity type: 308

Subfigure name at D 19: 'subfig0'.
Number of included entities = 6.

*** Entity type: 404

Drawing at D 5 contains 1 views.
Drawing at D 5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 408

Subfigure instance at D	363	references	subfigure at D	19.
Subfigure instance at D	373	references	subfigure at D	19.
Subfigure instance at D	377	references	subfigure at D	19.
Subfigure instance at D	381	references	subfigure at D	19.
Subfigure instance at D	385	references	subfigure at D	19.
Subfigure instance at D	389	references	subfigure at D	19.
Subfigure instance at D	393	references	subfigure at D	19.
Subfigure instance at D	397	references	subfigure at D	19.

*** Entity type: 410

Scale of view at D 1 is 1.000000E+00.
Orthographic View entity at D 1 has 0 clipping planes specified.
XMIN = Not Set XMAX = Not Set
YMIN = Not Set YMAX = Not Set
ZMIN = Not Set ZMAX = Not Set

*** Message Summary ***







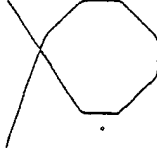

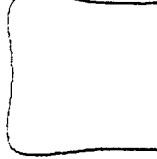
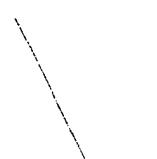


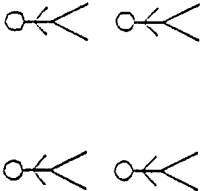
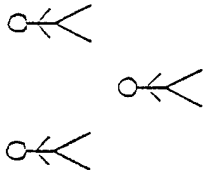
2015: 2 Mathematically incorrect definitions.

*** Error Summary ***


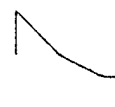







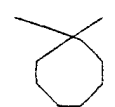

















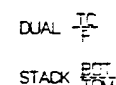

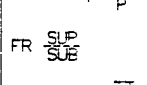



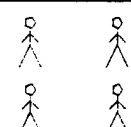
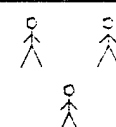
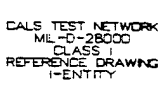
0 fatal errors
0 severe errors
0 errors
2 warnings
0 cautions
0 nitpicks
1 notes

*** End of Analysis of /novell/9355/q206.igs ***

10.3.2 Output Cadkey v5.02

 CIRCULAR ARC (100)	 COMPOSITE CURVE (102)	 CONIC ARC - GENERAL (104 FORM 0)	 CUBIC ARC - FLIPSE (104 FORM 1)	 CUBIC ARC - HYPERBOLIC (104 FORM 2)
 LINE (110)	 PARAMETRIC SPLINE CURVE (112)	 TRANSFORMATION MATRIX 0=1 (124 FORM 0)	 RATIONAL B-SPLINE CURVE (126 FORM 0)	 RATIONAL B-SPLINE CURVE (126 FORM 1)
 RATIONAL B-SPLINE CURVE HYPERBOLIC ARC (126 FORM 5)	<p>SIMPLE</p> <p>SIMPLE</p> <p>GENERAL NOTE - SIMPLE (212 FORM 0)</p>	<p>DUAL STACK</p> <p>NOTE - DUAL STACK (212 FORM 1)</p>	<p>IN FIELD</p> <p>NOTE - INDETERMINED FORM CURVE (212 FORM 2)</p>	<p>SUPER</p> <p>NOTE - SUPERSCRIPT (212 FORM 3)</p>
<p>M STACK CENTER</p> <p>NOTE - MULTI STACK CENT JUST (212 FORM 7)</p>	<p>M STACK RIGHT</p> <p>NOTE - MULTI STACK RIGHT JUST (212 FORM 8)</p>	<p>FRAC STATION</p> <p>NOTE - SIMPLE FRACTION (212 FORM 100)</p>	<p>DUAL - P STACK BUILT TUM</p> <p>NOTE - DUAL STACK FRACTION (212 FORM 101)</p>	<p>IN FIELD FR ACTION</p> <p>NOTE - FURTHER FRACTION (212 FORM 102)</p>
 SINGLE SUBFIGURE INSTANCE (408)	 RECTANGULAR SUBFIGURE INSTANCE (412)	 CIRCULAR SUBFIGURE INSTANCE (414)		

10.3.3 Output IGESView

 CIRCULAR ARC (100)	 COMPOSITE CURVE (102)	 CONIC ARC - GENERAL (104 FORM D)	 CONIC ARC - ELLIPSE (104 FORM 1)	 CONIC ARC - HYPERBOLA (104 FORM 2)	 CONIC ARC - PARABOLA (104 FORM 3)	 LINEAR PLANAR CURVE (106 FORM 1)	 SIMPLE CLOSED AREA (106 FORM 6)
 LINE (110)	 PARAMETRIC SPLINE CURVE (112)	 TRANSFORMATION MATRIX D(1) (104 FORM D)	 RATIONAL B-SPLINE CURVE (122 FORM C)	 RATIONAL B-SPLINE CURVE LINE (122 FORM 1)	 RATIONAL B-SPLINE CURVE CIRCULAR ARC (122 FORM 2)	 RATIONAL B-SPLINE CURVE ELLIPTICAL ARC (122 FORM 3)	 RATIONAL B-SPLINE CURVE PARABOLIC ARC (122 FORM 4)
 RATIONAL B-SPLINE CURVE HYPERBOLIC ARC (122 FORM 5)	 GENERAL NOTE - SIMPLE (212 FORM D)	 DUAL STACK NOTE - DUAL STACK (212 FORM 1)	 IM→DEC NOTE - MEDIUM FONT CHANGE (212 FORM 2)	 S ^{SUPER} NOTE - SUPERSCRIPT (212 FORM 3)	 S _{SUB} NOTE - SUBSCRIPT (212 FORM 4)	 S ^{SUPER} SUB NOTE - SUPER/SUB SCRIPT (212 FORM 5)	 M STACK LEFT NOTE - MULTI STACK LEFT JUST (212 FORM 6)
 M STACK CENTER NOTE - MULTI STACK CENT JUST (212 FORM 7)	 M STACK RIGHT NOTE - MULTI STACK RIGHT JUST (212 FORM 8)	 FRAC TION NOTE - SIMPLE FRACTION (212 FORM 10)	 DUAL STACK FRACTION NOTE - DUAL STACK FRACTION (212 FORM 11)	 IM BED = FR ACTION NOTE - FONT/DOUBLE FRACTION (212 FORM 12)	 FR SUP SUB BO TT OM NOTE - SUPER/SUB FRACTION (212 FORM 13)	 SECTIONED AREA (230)	 INTER-CHARACTER SPACING (406 FORM 16)
 SINGLE SUBFIGURE INSTANCE (406)	 RECTANGULAR SUBFIGURE INSTANCE (412)	 CIRCULAR SUBFIGURE INSTANCE (414)					 CAL TEST NETWORK MIL-STD-28000 CLASS I REFERENCE DRAWING I-ENTITY

10.4 File D002Q007

10.4.1 Parser/Verifier Log

```
*** IGES DATA FILE ANALYSIS ***  
***      MARCH 1992      ***  
***   IGES Data Analysis   ***  
***   (708) 449-3430      ***
```

Input file is /novell/9355/q207.igs

Checking conformance to CALS Class I (MIL-D-28000A 2/10/92)

Today is June 3, 1993 8:17 AM

*** File and Product Name Information ***

```
File name from sender      = 'lgtable.igs'  
File creation Date.Time   = '930524.103738'  
Model change Date.Time    = ''  
Author                    = 'FARRELL'  
Department                = 'Air Force CALS Test Network'  
Product name from sender  = 'lgtable.igs'  
Destination product name = 'lgtable.igs'
```

*** Parameter Delimiters ***

```
Delimiter = ','  
Terminator = ';' 
```

*** Originating System Data ***

```
System ID          = 'ITDS CONVERTER: GEF_IGES'  
Preprocessor version = '1.0'  
Specification version = 6 (IGES 4.0)
```

*** Precision levels ***

```
Integer bits =      32  
Floating point - Exponent =      38  Mantissa =      6  
Double precision - Exponent =     308  Mantissa =     15
```

*** Global Model Data ***

```
Model scale          = 1.0000E+00  
Unit flag            = 1
```

Units = 'IN'
 Line weights = 25
 Maximum line thickness = 1.000000E-01
 Minimum line thickness = 4.000000E-03
 Granularity = 1.000000E-03
 Maximum coordinate = 9.391507E+00

Drafting standard applicable to original data is not specified.

*** Status Flag Summary ***

Blank status:	Visible	280
	Blanked	0
Independence:	Independent	267
	Physically Subordinate	11
	Logically Subordinate	2
	Totally Subordinate	0
Entity use:	Geometry	226
	Annotation	54
	Definition	0
	Other	0
	Logical/Positional	0
	2D parametric	0
	Not Specified	0
Hierarchy:	Structure DE applies	0
	Subordinate DE applies	280
	Hierarchy property applies	0
	Not Specified	0

*** Entity Occurrence Counts ***

Entity	Form	Level	Count	Type
-----	----	-----	-----	----
100	0	0	85	Circular arc
102	0	0	2	Composite curve
104	1	0	5	Conic arc - ellipse
110	0	0	116	Line
112	0	0	12	Parametric spline curve
124	0	0	5	Transformation matrix
212	0	0	47	General note
230	0	0	5	Sectioned area (Standard Crosshatching)
404	0	0	1	Drawing
406	16	0	1	Property - Drawing size

410 0 0 1 View - Orthographic parallel

*** Entity Count by Level ***

Level	Count
0	280

*** Labeling Information ***

0% of the entities are labeled.

Unlabeled 280

*** Line Fonts Used in Data ***

100	102	104	106	108	110	112	114								
-	-	-	-	-	-	-	-	Undefined	85	2	5	-	-	107	12
Solid	-	-	-	-	-	9	-	-	Dashed						
-	-	-	-	-	-	-	-	-	Phantom						
-	-	-	-	-	-	-	-	-	Center-line						
-	-	-	-	-	-	-	-	-	Dotted						
-	-	-	-	-	-	-	-	-	User defined						
116	118	120	122	124	125	126	128								
-	-	-	-	5	-	-	-	Undefined							

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

*** Line Widths Used in Data ***

Weight	Count	Width
Defaulted	73	(0.0040)
4	207	(0.0160)

*** Colors Used in Data ***

Defaulted	196
Blue	22
Cyan	62

***** ENTITY ANALYSIS *****

*** Entity type: 100

*** Entity type: 102

*** Entity type: 104

WARNING 2265: Start point off conic by 7.999625E-03 at D 73.
WARNING 2265: Start point off conic by 1.788987E-02 at D 81.
WARNING 2039: End point off conic by 1.581491E-03 at D 81.
WARNING 2265: Start point off conic by 1.594810E-02 at D 141.
WARNING 2265: Start point off conic by 3.114898E-02 at D 191.

*** Entity type: 110

-- 116 lines averaging 5.326830E-01 units --

*** Entity type: 112

*** Entity type: 124

5 transformation matrices, 5 non-zero translations.
NOTE 2341: 5 matrices contain translation information.

*** Entity type: 212

47 text strings in data file.
Average text aspect ratio in file is 0.7899129.
Minimum text aspect ratio in file is 0.7580039.
Maximum text aspect ratio in file is 1.0525425.

FONTS USED IN FILE

FONT	COUNT	NAME
1	47	Default ASCII Style

*** Entity type: 230

*** Entity type: 404

Drawing at D 5 contains 1 views.
Drawing at D 5 contains 0 annotation entities.

*** Entity type: 406

*** Entity type: 410

Scale of view at D 1 is 1.000000E+00.
Orthographic View entity at D 1 has 0 clipping planes specified.
XMIN = Not Set XMAX = Not Set
YMIN = Not Set YMAX = Not Set
ZMIN = Not Set ZMAX = Not Set

*** Message Summary ***

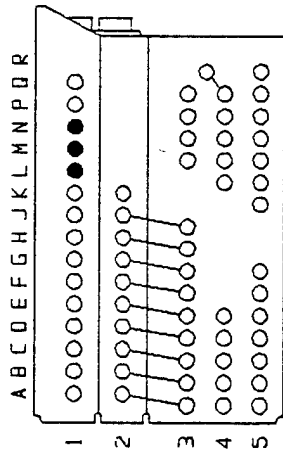
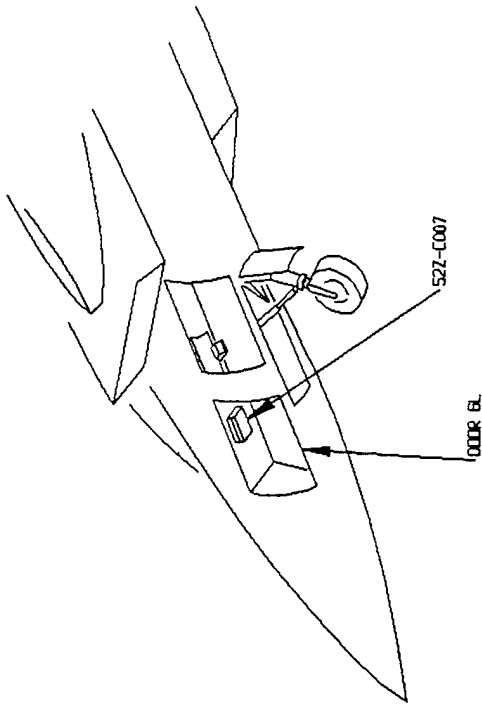
2015: 5 Mathematically incorrect definitions.

*** Error Summary ***

0 fatal errors
0 severe errors
0 errors
5 warnings
0 cautions
0 nitpicks
1 notes

*** End of Analysis of /novell/9355/q207.igs ***

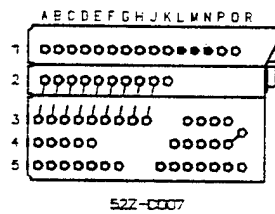
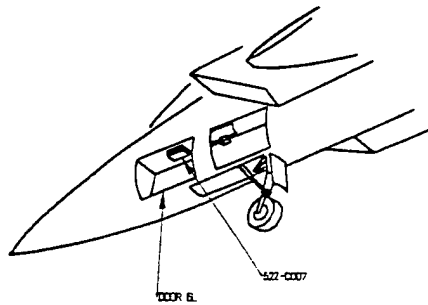
10.4.2 Output Cadkey v5.02



52Z-C007

REF DES	ZONE	NO MENCLATURE	ELIS
41CB033	L1	R M LG MOW PWR	ESS 28VDC
41CB034	M1	L M LG MOW PWR	ESS 28VDC
42CB005	N1	LOG GR POS TND	ESS 28VDC

10.4.3 Output IGESView



522-C007		ESSENTIAL CIRCUIT BREAKER PANEL NO 1		(24-30-12)	
REF DES	ZONE	NOMENCLATURE		BUS	
4100000	L1	R M.C. NOW PWP	28VDC	ESS 28VDC	
4100004	M1	L M.C. NOW PWP	28VDC	ESS 28VDC	
4200000	N1	LDC GR POS NO	28VDC	ESS 28VDC	

11. Appendix C - Detailed SGML Analysis

11.1 Datalogics Parser

SGML Document Type Definition Parser
Version 3.36
Copyright (c) Datalogics 1988, 1989, 1990, 1991
An SGML System Conforming to
International Standard ISO 8879
Standard Generalized Markup Language

Log file: '9355.LOG'
SDO File: 'ctnddecl.sdo'
Namecase General is yes.
Namecase Entity is no.
Parsing DTD file: '9355.dtd'

DTD0095: Start tag for element 'DATABASE' cannot be omitted if the
element had declared content (CDATA, RCDATA, EMPTY).
DTD0095: Start tag for element 'MEDIUM' cannot be omitted if the
element had declared content (CDATA, RCDATA, EMPTY).
DTD0096: The generic ID SHORTTITLE has not been used in any content
model, inclusion, or as a doctype element.
DTD0096: The generic ID CONTASSURPG has not been used in any content
model, inclusion, or as a doctype element.
DTD0096: The generic ID REFDOC has not been used in any content
model, inclusion, or as a doctype element.
DTD0096: The generic ID CFGPGE has not been used in any content
model, inclusion, or as a doctype element.
DTD0096: The generic ID COVERINDEX has not been used in any content
model, inclusion, or as a doctype element.
DTD0096: The generic ID STALOC has not been used in any content
model, inclusion, or as a doctype element.
DTD0096: The generic ID TESTCODE has not been used in any content
model, inclusion, or as a doctype element.

This DTD conforms to the ISO 8879 standard

DTO file '9355.DTO' created

closing statistics:
Capacity points: 72200
Bytes of DTO file string space: 12765
SGML descriptor blocks: 7138

Document Type Definition is compliant and parsed normally.

Program status code: 0.

11.2 Validator Parser Log

```
<!-- Entity has no name, system id or public id in formal file -->.
<!-- **Warning** in "9355-1.sgm", line 517:
  An EMPTY element must have a start tag and must not have an end tag.
  Therefore, it is inappropriate to specify an omissible start tag or an
  inomissible end tag in its declaration.
  The element is "DATABASE".
  <!ELEMENT database      - -      EMPTY      >
                                ^^^^^
-->
<!-- **Warning** in "9355-1.sgm", line 599:
  An EMPTY element must have a start tag and must not have an end tag.
  Therefore, it is inappropriate to specify an omissible start tag or an
  inomissible end tag in its declaration.
  The element is "MEDIUM".
  <!ELEMENT medium      - -      EMPTY>
                                ^^^^^
-->
<!-- **Warning**:
  An element with mixed content should permit data characters ("#PCDATA")
  everywhere.
  The element being declared is "NOTICE".
  (((#PCDATA | ftnref | xref | indxflag | verbatim |
    ^^^^^
-->
<!-- **Warning**:
  An element with mixed content should permit data characters ("#PCDATA")
  everywhere.
  The element being declared is "INTERNATLSTD".
  (((#PCDATA | ftnref | xref | indxflag | verbatim |
    ^^^^^
-->
<!-- **Warning**:
  An element with mixed content should permit data characters ("#PCDATA")
  everywhere.
  The element being declared is "HOWTOUSE".
  (((#PCDATA | ftnref | xref | indxflag | verbatim |
    ^^^^^
-->
<!-- **Warning** in "9355-1.sgm", line 1361:
  An element with mixed content should permit data characters ("#PCDATA")
```

```
everywhere.
The element being declared is "CALLOUT".
<!ELEMENT callout          - -          (#PCDATA | graphic)          >
                                     /\
-->
<!-- **Warning**:
An element with mixed content should permit data characters ("#PCDATA")
everywhere.
The element being declared is "ENTRY".
(((#PCDATA | ftnref | xref | indxflag | verbatim |
      ^^^^^^^
-->
<!-- **Warning**:
An element with mixed content should permit data characters ("#PCDATA")
everywhere.
The element being declared is "FTNOTE".
(((#PCDATA | ftnref | xref | indxflag | verbatim |
      ^^^^^^^
-->
<!-- **Warning** in "9355-1.sgm", line 1612:
An element is not allowed in the document instance because it does not
appear in any accessible content model or it is completely excluded.
The element is "CFGPGGE".

-->
<!-- **Warning** in "9355-1.sgm", line 1612:
An element is not allowed in the document instance because it does not
appear in any accessible content model or it is completely excluded.
The element is "CONTASSURPG".

-->
<!-- **Warning** in "9355-1.sgm", line 1612:
An element is not allowed in the document instance because it does not
appear in any accessible content model or it is completely excluded.
The element is "COVERINDEX".

-->
<!-- **Warning** in "9355-1.sgm", line 1612:
An element is not allowed in the document instance because it does not
appear in any accessible content model or it is completely excluded.
The element is "ENTRYTBL".

-->
<!-- **Warning** in "9355-1.sgm", line 1612:
An element is not allowed in the document instance because it does not
appear in any accessible content model or it is completely excluded.
The element is "REFDOC".
```

```
-->
<!-- **Warning** in "9355-1.sgm", line 1612:
  An element is not allowed in the document instance because it does not
  appear in any accessible content model or it is completely excluded.
  The element is "SHORTTITLE".

-->
<!-- **Warning** in "9355-1.sgm", line 1612:
  An element is not allowed in the document instance because it does not
  appear in any accessible content model or it is completely excluded.
  The element is "STALOC".

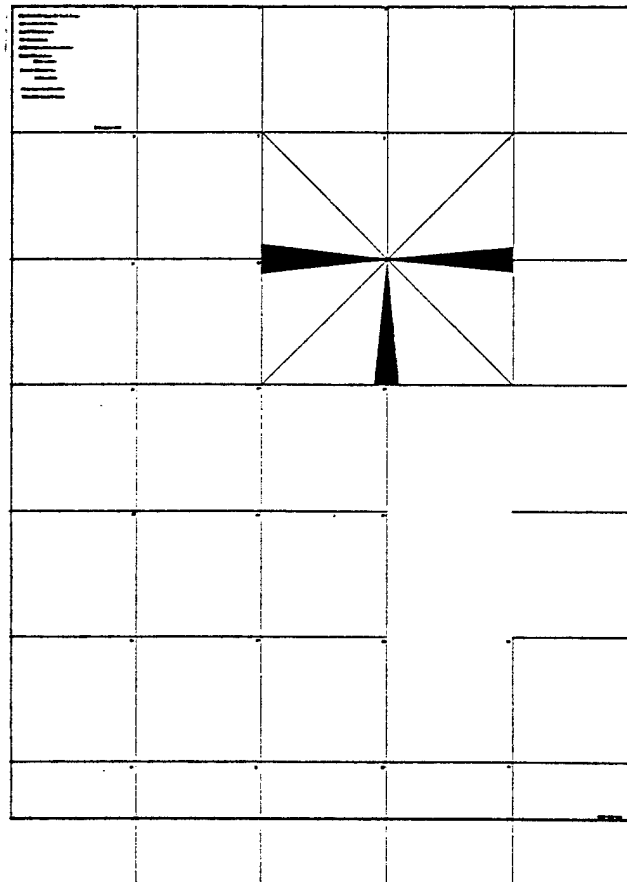
-->
<!-- **Warning** in "9355-1.sgm", line 1612:
  An element is not allowed in the document instance because it does not
  appear in any accessible content model or it is completely excluded.
  The element is "TESTCODE".

-->
<!-- 16 warnings reported. -->
```

12. Appendix D - Detailed Raster Analysis

12.1 File D003R001

12.1.1 Output IGESView



13. Appendix E - Detailed CGM Analysis

13.1 File D001C004

13.1.1 Parser Log

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:09:46

Metafile Examined : i:\9355\c104.cgm

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

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

Tracing not selected.

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

No Errors Detected

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

No profile discrepancies detected.

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

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:09:49

Name of CGM under test: i:\9355\c104.cgm

Encoding : Binary

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

BEGIN METAFILE string : "allreal.cgm"

METAFILE DESCRIPTION : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 202; 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
272 Elements Tested
3980 Octets Tested

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

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

13.2 File D001C005

13.2.1 Parser Log

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:12

Metafile Examined : i:\9355\c105.cgm

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

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

Tracing not selected.

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

No Errors Detected

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

No profile discrepancies detected.

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

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:14

Name of CGM under test: i:\9355\c105.cgm
Encoding : Binary

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

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

Picture 1 starts at octet offset 154; string contains: "Picture 1"

Conformance Summary : This file conforms to the CGM specification.

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

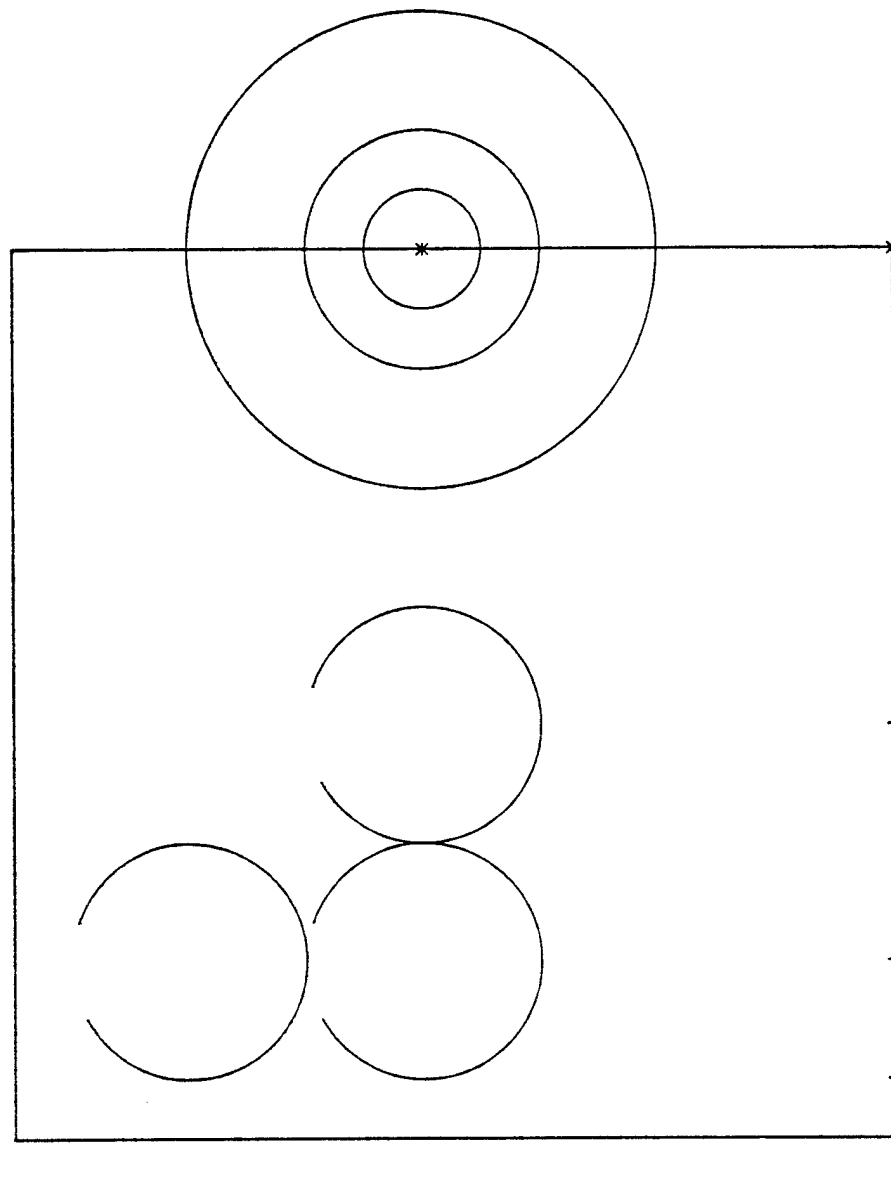
Summary of Testing Performed and Errors Found:

1 Pictures Tested
62 Elements Tested
942 Octets Tested

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

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

13.2.2 Output Harvard Graphics



13.3 File D001C006

13.3.1 Parser Log

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:23

Metafile Examined : i:\9355\c106.cgm

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

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

Tracing not selected.

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

No Errors Detected

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

No profile discrepancies detected.

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

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:24

Name of CGM under test: i:\9355\c106.cgm

Encoding : Binary

Pictures Examined : All

Elements Examined : All

Bytes Examined : All

BEGIN METAFILE string : "fills.cgm"

METAFILE DESCRIPTION : "NORTHROP B2 ITDS GEF, MIL-D-28003/BASIC-1"

Picture 1 starts at octet offset 154; string contains: "Picture 1"

Conformance Summary : This file conforms to the CGM specification.

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

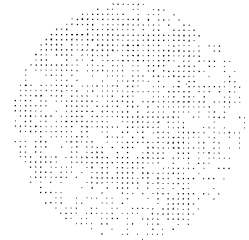
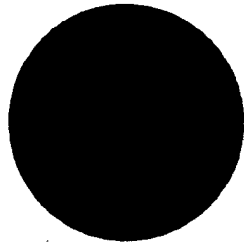
Summary of Testing Performed and Errors Found:

1 Pictures Tested
56 Elements Tested
856 Octets Tested

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

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

13.3.2 Output Harvard Graphics



13.4 File D001C007

13.4.1 Parser Log

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:34

Metafile Examined : i:\9355\c107.cgm

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

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

Tracing not selected.

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

No Errors Detected

=====
CAL S CGM Profile (MIL-D-28003) Report
=====

No profile discrepancies detected.

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

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:36

Name of CGM under test: i:\9355\c107.cgm
Encoding : Binary

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

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

Picture 1 starts at octet offset 130; string contains: "Picture 1"

Private values encountered in CGM

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
71 Elements Tested
664 Octets Tested

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

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

13.4.2 Output Harvard Graphics

13.5 File D001C008

13.5.1 Parser Log

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:47

Metafile Examined : i:\9355\c108.cgm

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

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

Tracing not selected.

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

No Errors Detected

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

No profile discrepancies detected.

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

CGM/MIL-D-28003 Conformance Analyzer
Copyright 1988-91 CGM Technology Software
Execution Date: 06/03/93 Time: 08:10:49

Name of CGM under test: i:\9355\c108.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
902 Octets Tested

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

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

13.5.2 Output Harvard Graphics

~~RIGHT~~

BOLD 45

RIGHT CENTER DOWN TEXT

TEXT .12
BOLD .15

SPACING 2

EXPANSION FACTOR 1.5

TEXT COLOR RED