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

Electronic Systems Center
DISCLAIMER NOTICE

THIS DOCUMENT IS BEST QUALITY AVAILABLE. THE COPY FURNISHED TO DTIC CONTAINED A SIGNIFICANT NUMBER OF PAGES WHICH DO NOT REPRODUCE LEGIBLY.
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 By
Air Force CALS Test Bed
Wright-Patterson AFB, OH 45433

AFCTB Contact
Gary Lammers
(513) 427-2295

AFCTN Contact
Mel Lammers
(513) 427-2295
DISCLAIMER

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

Available to the public from the
National Technical Information Service
U.S. Department of Commerce
5285 Port Royal Road
Springfield, VA 22161

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

1. Introduction ................................................. 1
   1.1. Background ........................................... 1
   1.2. Purpose ............................................... 2
2. Test Parameters ............................................. 3
3. 1840A Analysis ............................................. 6
   3.1. External Packaging .................................... 6
   3.2. Transmission Envelope ............................... 6
       3.2.1. Tape Formats .................................... 6
       3.2.2. Declaration and Header Fields ................. 6
4. IGES Analysis ............................................... 7
5. SGML Analysis ............................................. 8
6. Raster Analysis ........................................... 9
7. CGM Analysis .............................................. 10
8. Conclusions and Recommendations .......................... 12
   9.1. Tape Catalog ........................................ 13
   9.2. Tape Evaluation Log .................................. 14
   9.3. Tape File Set Validation Log ....................... 16
10. Appendix B - Detailed IGES Analysis ...................... 19
    10.1. File D002Q004 ..................................... 19
        10.1.1. Parser/Verifier Log .......................... 19
        10.1.2. Output Cadkey v5.02 ........................ 23
10.1.3. Output IGESView ......................... 24

10.2. File D002Q005 .......................... 25
    10.2.1. Parser/Verifier Log .................. 25
    10.2.2. Output Cadkey v5.02 ................. 30
    10.2.3. Output IGESView .................... 31

10.3. File D002Q006 .......................... 32
    10.3.1. Parser/Verifier Log .................. 32
    10.3.2. Output Cadkey v5.02 ................. 37
    10.3.3. Output IGESView .................... 38

10.4. File D002Q007 .......................... 39
    10.4.1. Parser/Verifier Log .................. 39
    10.4.2. Output Cadkey v5.02 ................. 44
    10.4.3. Output IGESView .................... 45

11. Appendix C - Detailed SGML Analysis .......... 46
    11.1. Datalogics Parser ..................... 46
    11.2. Validator Parser Log .................. 47

12. Appendix D - Detailed Raster Analysis .......... 50
    12.1. File D003R001 .......................... 50
        12.1.1. Output IGESView .................. 50

13. Appendix E - Detailed CGM Analysis .......... 51
    13.1. File D001C004 .......................... 51
        13.1.1. Parser Log MetaCheck ............. 51
    13.2. File D001C005 .......................... 54
13.2.1. Parser Log MetaCheck .................. 54
13.2.2. Output Harvard Graphics .............. 56

13.3. File D001C006 .......................... 57
  13.3.1. Parser Log MetaCheck ................. 57
  13.3.2. Output Harvard Graphics .............. 59

13.4. File D001C007 .......................... 60
  13.4.1. Parser Log MetaCheck ................. 60
  13.4.2. Output Harvard Graphics .............. 62

13.5. File D001C008 .......................... 63
  13.5.1. Parser Log MetaCheck ................. 63
  13.5.2. Output Harvard Graphics .............. 65
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
AUTOESK AutoCAD 386 R12
AUTOESK 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 exl
McAfee & McAdam Sema Mark-it v2.3
Public Domain sgmls

MIL-R-28002 (Raster)
SUN SparcStation 2
ArborText g4tiff
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 Windows v1.0
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 AFCTRL 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 ex1 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 and 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 imported 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. None 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:
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/ul29/Set009

<table>
<thead>
<tr>
<th>File Name</th>
<th>File Type</th>
<th>Record Format/ Length</th>
<th>Block Length/Total</th>
<th>Selected/ Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>D001</td>
<td>Document Declaration</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002</td>
<td>Document Declaration</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D003</td>
<td>Document Declaration</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001T001</td>
<td>Text</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001G002</td>
<td>DTD</td>
<td>D/00260 02048/000034</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001H003</td>
<td>Output Specification</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001C004</td>
<td>CGM</td>
<td>F/00080 00800/000006</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001C005</td>
<td>CGM</td>
<td>F/00080 00800/000006</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001C006</td>
<td>CGM</td>
<td>F/00080 00800/000002</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001C007</td>
<td>CGM</td>
<td>F/00080 00800/000002</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D001C008</td>
<td>CGM</td>
<td>F/00080 00800/000002</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002T001</td>
<td>Text</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002G002</td>
<td>DTD</td>
<td>D/00260 02048/000034</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002H003</td>
<td>Output Specification</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002Q004</td>
<td>IGES</td>
<td>F/00080 02000/000012</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002Q005</td>
<td>IGES</td>
<td>F/00080 02000/000573</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002Q006</td>
<td>IGES</td>
<td>F/00080 02000/000033</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D002Q007</td>
<td>IGES</td>
<td>F/00080 02000/000042</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D003T001</td>
<td>Text</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D003G002</td>
<td>DTD</td>
<td>D/00260 02048/000034</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D003H003</td>
<td>Output Specification</td>
<td>D/00260 02048/000001</td>
<td></td>
<td>Extracted</td>
</tr>
<tr>
<td>D003R004</td>
<td>Raster</td>
<td>F/00128 02048/000007</td>
<td></td>
<td>Extracted</td>
</tr>
</tbody>
</table>

Catalog Process terminated normally.
9.2 Tape Evaluation Log

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


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

Actual Block Size Found = 2048 Bytes.
Number of data blocks read = 1.

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

EOF1D001 ITDS0100010001000100 93145 93145 000001 CONTROLLER

Label Identifier: EOF1
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: 000001
Implementation Identifier: CONTROLLER

EOF2D0204800260 00

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

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

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

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

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

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

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

Deallocating /dev/rmt0...

Tape Import Process terminated normally.
9.3 Tape File Set Validation Log

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

Standards referenced:

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
dtetrn: 19930525
dlvc: NONE
filcnt: T1, H1, G1, C5
tticls: 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
srcrecid: CALS_IGES_TEST2
srcrelid: NONE
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
dtetrn: 19930525
dlvcnt: NONE
filecnt: T1, H1, G1, Q4
ttlcls: UNCLASSIFIED
doccls: UNCLASSIFIED
doctype: JOB GUIDE
doctl: 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
srcrecid: CALS_RAS_TEST2
srcrelid: NONE
dteisu: 19930126
dstsys: Jeff Fisher, Integration Manager, USAF CALS Test Bed, HQ AFMC (I)/ENCT, Technecenter, 4027 Col. Glenn Highway, Dayton, OH 45431-1601
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 = 1.00000E+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 ***

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

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

<table>
<thead>
<tr>
<th>Weight</th>
<th>Count</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defaulted</td>
<td>2988</td>
<td>(0.3333)</td>
</tr>
</tbody>
</table>

*** 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  = 'ientity.igs'
File creation Date.Time = '930524.103736'
Model change Date.Time = ''
Author                = 'KASSEL'
Department            = 'Air Force CALS Test Network'
Product name from sender = 'ientity.igs'
Destination product name = 'ientity.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 = 1.60000E-02
Minimum line thickness = 2.00000E-03
Granularity = 1.00000E-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 ***

<table>
<thead>
<tr>
<th>Entity</th>
<th>Form</th>
<th>Level</th>
<th>Count</th>
<th>Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>100</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>Circular arc</td>
</tr>
<tr>
<td>102</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>Composite curve</td>
</tr>
<tr>
<td>104</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>Conic arc - ellipse</td>
</tr>
<tr>
<td>104</td>
<td>2</td>
<td>0</td>
<td>1</td>
<td>Conic arc - hyperbola</td>
</tr>
<tr>
<td>104</td>
<td>3</td>
<td>0</td>
<td>1</td>
<td>Conic arc - parabola</td>
</tr>
<tr>
<td>106</td>
<td>11</td>
<td>0</td>
<td>1</td>
<td>Copious data - Piecewise planar, linear string(2D path)</td>
</tr>
<tr>
<td>106</td>
<td>63</td>
<td>0</td>
<td>1</td>
<td>Simple closed planar curve</td>
</tr>
<tr>
<td>110</td>
<td>0</td>
<td>0</td>
<td>27</td>
<td>Line</td>
</tr>
<tr>
<td>112</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>Parametric spline curve</td>
</tr>
<tr>
<td>124</td>
<td>0</td>
<td>0</td>
<td>12</td>
<td>Transformation matrix</td>
</tr>
<tr>
<td>126</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>Rational B-spline curve</td>
</tr>
<tr>
<td>212</td>
<td>0</td>
<td>0</td>
<td>129</td>
<td>General note</td>
</tr>
<tr>
<td>230</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>Sectioned area (Standard Crosshatching)</td>
</tr>
<tr>
<td>308</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>Subfigure definition</td>
</tr>
<tr>
<td>404</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>Drawing</td>
</tr>
<tr>
<td>406</td>
<td>16</td>
<td>0</td>
<td>1</td>
<td>Property - Drawing size</td>
</tr>
<tr>
<td>406</td>
<td>18</td>
<td>0</td>
<td>1</td>
<td>Property - Intercharacter spacing</td>
</tr>
<tr>
<td>408</td>
<td>0</td>
<td>0</td>
<td>8</td>
<td>Single subfigure instance</td>
</tr>
<tr>
<td>410</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>View - Orthographic parallel</td>
</tr>
</tbody>
</table>

*** Entity Count by Level ***

<table>
<thead>
<tr>
<th>Level</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>200</td>
</tr>
</tbody>
</table>

*** 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 ***

<table>
<thead>
<tr>
<th>Weight</th>
<th>Count</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defaulted</td>
<td>200</td>
<td>(0.0020)</td>
</tr>
</tbody>
</table>
*** 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

<table>
<thead>
<tr>
<th>FONT</th>
<th>COUNT</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>127</td>
<td>Default ASCII Style</td>
</tr>
<tr>
<td>1002</td>
<td>2</td>
<td>Symbol Font 2</td>
</tr>
</tbody>
</table>

35
*** 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 ***
10.3.3 Output IGESView
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 = 1.00000E+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 ***

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

40
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 - - - - - - - - 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 ***

<table>
<thead>
<tr>
<th>Weight</th>
<th>Count</th>
<th>Width</th>
</tr>
</thead>
<tbody>
<tr>
<td>Defaulted</td>
<td>73</td>
<td>(0.0040)</td>
</tr>
<tr>
<td>4</td>
<td>207</td>
<td>(0.0160)</td>
</tr>
</tbody>
</table>

*** 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

<table>
<thead>
<tr>
<th>FONT</th>
<th>COUNT</th>
<th>NAME</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>47</td>
<td>Default ASCII Style</td>
</tr>
</tbody>
</table>

*** 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 Cables v5.02
10.4.3 Output IGESView
11. Appendix C - Detailed SGML Analysis

11.1 Datalogics Parser

SGML Document Type Definition Parser
Version 3.36
An SGML System Conforming to
International Standard ISO 8879
Standard Generalized Markup Language

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

DTDO095: Start tag for element 'DATABASE' cannot be omitted if the
        element had declared content (CDATA, RCDATA, EMPTY).
DTDO095: Start tag for element 'MEDIUM' cannot be omitted if the
        element had declared content (CDATA, RCDATA, EMPTY).
DTDO096: The generic ID SHORTTITLE has not been used in any content
        model, inclusion, or as a doctype element.
DTDO096: The generic ID CONTASSURPG has not been used in any content
        model, inclusion, or as a doctype element.
DTDO096: The generic ID REPDOC has not been used in any content
        model, inclusion, or as a doctype element.
DTDO096: The generic ID CFGPGE has not been used in any content
        model, inclusion, or as a doctype element.
DTDO096: The generic ID COVERINDEX has not been used in any content
        model, inclusion, or as a doctype element.
DTDO096: The generic ID STALOC has not been used in any content
        model, inclusion, or as a doctype element.
DTDO096: 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 -->
   ^^^^^^^

-->  

<!-- **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 -->
   ^^^^^^^

-->  

<!-- **Warning**:
   An element with mixed content should permit data characters ("#PCDATA")
   everywhere.
   The element being declared is "NOTICE".
   (;;)PCDATA | fnref | xref | indxflag | verbatim |
   ^^^^^^^

-->  

<!-- **Warning**:
   An element with mixed content should permit data characters ("#PCDATA")
   everywhere.
   The element being declared is "INTERNATLSTD".
   (;;)PCDATA | fnref | xref | indxflag | verbatim |
   ^^^^^^^

-->  

<!-- **Warning**:
   An element with mixed content should permit data characters ("#PCDATA")
   everywhere.
   The element being declared is "HOWTOUSE".
   (;;)PCDATA | fnref | xref | indxflag | verbatim |
   ^^^^^^^

-->  

<!-- **Warning** in "9355-1.sgm", line 1361:
   An element with mixed content should permit data characters ("#PCDATA")

47
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 | idxflag | verbatim |

--> **Warning**:
An element with mixed content should permit data characters ("#PCDATA") everywhere.
The element being declared is "FTNOTE".
((((#PCDATA | ftnref | xref | idxflag | 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 "CFGPGF".

--> **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

========== CALS 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 =============
13.1.2 Output Harvard Graphics
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

============== CALS 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

========= CALS 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

======== CALS 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

============= CALS 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 METADATA 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

SPACING 2

EXPANSION FACTOR 1.5

TEXT COLOR RED