

NOTICE OF
CHANGE

NON-MEASUREMENT
SENSITIVE

MIL-STD-1840A
NOTICE 1
20 December 1988

MILITARY STANDARD
AUTOMATED INTERCHANGE OF TECHNICAL INFORMATION

TO ALL HOLDERS OF MIL-STD-1840A:

1. MAKE THE FOLLOWING PEN AND INK CHANGES:

Page vi, delete "6.4.2. Transfer of raster data . . . 38"

Page vii, delete all material on this page.

Page 2, 2.1.1, SPECIFICATIONS, MILITARY, add "MIL-D-28003, Digital Representation for Communication of Illustration Data: CGM Application Profile" and "MIL-R-28002, Raster Graphics Representation in Binary Format, Requirements For." Remove "FED-STD-1064 - Telecommunications: General Aspects of Group 4 Facsimile" and "FED-STD-1065 - Telecommunications: Facsimile Coding Schemes and Coding Control Functions for Group 4 Facsimile Apparatus."

Page 9, 3.2, CCITT, replace "Committee" with "Comité," "Telegraphique" with "Télégraphique," and "Telephonique" with "Téléphonique."

Page 11, 4.1.1.4, change "FIPS PUB 128" to "MIL-D-28003". Change "FED-STD-1064" to "MIL-R-28002"

Page 15, 5.1.1.2, RECORD 4, change "YYMMDD" to "YYYYMMDD"

Page 16, 5.1.2, add "d. Page image files in raster format."

AMSC N/A

ILSS

Distribution Statement A: Approved for public release; distribution is unlimited.

MIL-STD-1840A
NOTICE 1

Page 17, figure 1, delete the last two lines "srcreldoc: NONE" and "chgdte: 19830606."

Page 19, 5.1.4.3, RECORD 2, line 5, change "record 3" to "record 2."

Page 22, 5.1.4.3, RECORD 2, line 5, change "record 3" to "record 2."

Page 25, 5.1.4.8, change "Record 6" to "Record 3" and change "Record 7" to "Record 4."

Page 26, 5.1.5, Columns 1 and 2, change "from table III" to "as specified in the contract or other form of agreement."

Page 26, 5.1.5, Columns 25 and 26, change "of table III" to "as specified in the contract or other form of agreement."

Page 27, top of page, delete TABLE III.

Page 28, Table IV, last column, change "180 JY" to "180 HY," and "200 KY" to "200 JY."

Page 30, figure 2, CONDITION 5, Sheet 1, change "000" to "0001"

Page 36, 6.4, change "Transfer of textual data." to "Transfer of processable textual data."

Page 38, 6.4.2, Change "The standard form adopted...as specified by FED-STD-1064." to "The transfer of raster data in accordance with MIL-R-28002 includes raster page image files."

Page 40, delete this page (Appendix A is deleted in its entirety).

Page 41, delete this page (Appendix A is deleted in its entirety).

Page 42, delete this page (Appendix A is deleted in its entirety).

Page 43, delete this page (Appendix A is deleted in its entirety).

MIL-STD-1840A
NOTICE 1

The attached insertable replacement pages, listed below, are replacements for the stipulated pages. When the new pages have been entered in the document, insert this notice of change as a cover sheet to the standard.

Replacement Page	Page replaced
11	11
12	12
12.a	New page
13	13
14	Reprinted without change
21	Reprinted without change
22	22
23	23
24	24
24.a	New page

2. RETAIN THIS NOTICE AND INSERT BEFORE TABLE OF CONTENTS.

3. Holders of MIL-STD-1840A will verify that page changes and additions indicated above have been entered. This notice page will be retained as a check sheet. This issuance, together with appended pages, is a separate publication. Each notice is to be retained by the stocking points until the Military Standard is completely revised or canceled.

MIL-STD-1840A
NOTICE 1

Custodians:

Army - CR
Navy - SH
Air Force - 24
DLA - DH

Preparing Activity
OSD-CL
(Project ILSS-0033)

Review activities:

OSD - IR
Army - AM
Air Force - 01, 02
NSA - NS
DCA - DC
NSA - NA
Other - NBS, DOE, GPO, NCS

User activities:

Army - AL, AT, AV, CR, EA, ER, GL, ME, MI, MR, SM, TE, TM
Navy - AS, EC, OS, SA, YD
Air Force - 11, 13, 14, 17, 18, 19, 68, 79, 99

MIL-STD-1840A
NOTICE 1

4. GENERAL REQUIREMENTS

4.1. Document types. This standard covers two types of document delivered in digital form:

- a. Technical Publication
- b. Product Data

4.1.1. Technical publications. Technical publication information covered by this standard consists of text and associated illustrations in digital form. This information shall be organized into file sets. Each requisite file of a set shall be encoded in a format specified by the contract or other form of agreement, and be accompanied by the applicable data file header records (see section 5).

4.1.1.1. Technical Publication File Sets. The file sets which comprise a technical publication document shall be as specified for each of the following forms of delivery:

4.1.1.1.1. Raster Page Image File Set. The file set of a technical publication containing Raster Page Image files shall consist of the following:

- a. A Declaration File
- b. Raster Page Image files (at least one Raster Page Image file per document, mandatory). Each file shall be accompanied by identifying data file header records.

4.1.1.1.2. Page Description Language (PDL) File Set. The file set of a technical publication containing PDL files shall consist of the following:

- a. A Declaration File
- b. PDL files as specified by contract or other form of agreement (at least one PDL per document, mandatory). Each file shall be accompanied by identifying data file header records.

4.1.1.1.3. SGML Conforming File Set. The file set of a technical publication containing SGML Conforming files shall consist of the following:

- a. A Declaration File
- b. SGML coded Text Source files (at least one text source file per document, mandatory). Each file shall be accompanied by identifying data file header records.

MIL-STD-1840A**NOTICE 1**

- c. Illustration Data Files in IGES Format, CGM Format or Raster Format, as specified by contract or other form of agreement. Each file shall be accompanied by identifying data file header records.

4.1.1.1.4. SGML Non-conforming File Set. The file set of a technical publication document containing SGML Non-conforming Files shall consist of the following:

- a. A Declaration File
- b. SGML coded Text Source Files (at least one text file per document, mandatory). Each file shall be accompanied by identifying header records.
- c. Illustration Data Files in IGES Format, CGM Format or Raster Format, as specified by contract or other form of agreement. Each file shall be accompanied by identifying data file header records.
- d. Document Type Definition Data File (one file per document, mandatory). The file shall be accompanied by identifying data file header records.
- e. Non-conforming Output Specification Data File (one file per document, mandatory). The file shall be accompanied by identifying data file header records.

4.1.1.2. Technical Publication File Formats. The format of the technical publication files shall be as follows:

4.1.1.2.1. Declaration File Format. The declaration file shall be in 7-bit ASCII and uniquely identify the delivered document. The declaration file shall be prepared in accordance with the requirements of section 5 of this standard and there shall be one declaration file with each document delivered in digital form. Declaration Files shall only contain the characters permitted by Section 1 of FIPS 1-2.

4.1.1.2.2. Text Source File Format. The text source files shall be ASCII, SGML coded text files tagged in accordance with MIL-M-28001, as specified by the contract or other form of agreement.

4.1.1.2.3. Document Type Definition Data File Format. The document type definition data file shall be in accordance with MIL-M-28001, and shall define the structure and content of the document specified in the contract or other form of agreement.

MIL-STD-1840A
NOTICE 1

4.1.1.2.4. Output Specification Data File Format. The output specification file shall be in accordance with MIL-M-28001, and shall define the style and format of the document specified in the contract or other form of agreement.

4.1.1.2.5. Illustration Data File Format. Each set of text source files for a technical publication shall be supported with an illustration data file for each illustration in the technical publication except where there are multiple instances of the same illustration in different locations of the technical publication. In this situation, a single illustration file may be used to satisfy all of the illustration instances. The illustration data files shall contain digital data encoded in IGES, RASTER, or CGM format. The applicable file encoding formats will be specified by contract or other form of agreement. Each illustration data file shall be accompanied by identifying header records (see section 5).

4.1.1.2.5.1. IGES Illustration Data File Format. IGES Illustration Data Files shall be in accordance with the requirements of MIL-D-28000, and shall be Class I or Class II application subsets as specified by the contract or other form of agreement.

4.1.1.2.5.2. Raster Illustration Data File Format. Raster Illustration Data Files shall be in accordance with the requirements of MIL-R-28002.

4.1.1.2.5.3. CGM Illustration Data File Format. CGM Illustration Data Files shall be in accordance with the requirements of MIL-D-28003.

4.1.1.2.6. PDL Data Files. PDL Data Files shall be as specified in the contract or other form of agreement.

4.1.1.2.7. Grey Scale Illustration Data File Format. Requirement for half-tone illustration will be as specified in the contract or other form of agreement.

4.1.1.2.8. Special Word Data File Format. Special Word Data Files shall be as specified by contract or other form of agreement.

4.1.1.2.9. Raster Page Image File Format. Raster Page Image Files shall be in accordance with the requirements of MIL-R-28002.

4.1.2. Product data. Product data covered by this standard consist of engineering and system support data encoded in IGES or raster format as specified by the contract or other form of agreement. The files of a Product Data document consist of:

MIL-STD-1840A**NOTICE 1**

- a. A declaration file, in 7 bit ASCII, which uniquely identifies the document (one declaration file per document, mandatory).
- b. Engineering drawing data files in IGES or raster format as specified by the contract or other form of agreement, accompanied by identifying header records;
- c. Electrical/electronic application data files in IGES format, accompanied by identifying header records; or
- d. Numerical control manufacturing data files.

(Future revisions of this standard will address product data files in IPC, VHDL, EDIF, and PDES formats.)

4.1.2.1. Declaration files. Declaration files shall be prepared in accordance with the requirements of section 5 of this standard.

4.1.2.2. Engineering drawing data files. The engineering data file representations of engineering drawings shall be only IGES or raster files. The specific form of the transferred files shall be as specified by the contract or other form of agreement.

4.1.2.2.1. IGES engineering drawing data files. IGES engineering drawing data files shall be Class II application data subsets as specified by MIL-D-28000.

4.1.2.2.2. Raster engineering drawing data files. Raster engineering drawing data files shall be as specified by MIL-R-28002.

4.1.2.3. Electrical/electronic application data files. Electrical/electronic application data files shall be Class III application data subsets as specified by MIL-D-28000.

4.1.2.4. Numerical control manufacturing. Numerical control data files shall be Class IV application data subsets as specified by MIL-D-28000.

MIL-STD-1840A

5. DETAILED REQUIREMENTS

5.1. File structure for transfer. This section specifies the structure, content, and order of the digital information that accompanies and describes the content of a group of files that comprise a document to be interchanged. The group of files shall consist of:

- a. one declaration file
- b. at least one data file.

The declaration file shall precede the data files of a document. If more than one document is transferred in a single transaction, all of the declaration files shall be grouped at the beginning of the sequence of files in order to facilitate locating specific documents. The group of files for a specific technical publication or product data document may be in any order, but the group must be contiguous. The document file groups shall follow the declaration files in the same order in which their related declaration files occur.

5.1.1. Declaration file. The declaration file provides information about the identifications, source, destination, classification, etc. of the document and gives a count of the files in the set of files that make up the complete document.

5.1.1.1. Declaration file name. The file name for a declaration file shall be four characters long, with the first character being "D" and the next three characters being the ASCII representation of a number from 001 to 999. For multiple file sets transferred as a group, the numbers begin at 001 and are incremented sequentially for each document being transferred in order to provide each document with a unique declaration file name.

5.1.1.2. Declaration file content. The records specified in this section are required. When circumstances dictate that there is no relevant data to place in a record, the ASCII string "NONE" shall be used. Each record shall have a record identifier as the first characters in the record; the last character in the identifier string shall be a colon and a space character. In the following description of the records, the record identifier that shall be used is found enclosed in parentheses immediately following the record type. (The "Record" number is for the convenience of the reader and is not a part of the record.) The declaration file records are:

RECORD 1. - Source system (srcsys:). A character string containing the name, address, and other information needed to identify the system from which the information originated.

MIL-STD-1840A

TABLE II. <u>Code to identify the content of a file subdivided according to one of three options.</u>		
OPTION	CODE	MEANING
A	W	All text contained in one file
B	FRONT	All text of the front matter is contained in a single file
	BODY	All text of the body matter contained in a single file
	REAR	All text of the rear matter is contained in a single file
C		Front Matter
	COV	- cover or title page
	LEP	- list of effective pages
	WRN	- warning pages
	PRM	- promulgation record
	CHR	- change record
	FOR	- foreword or preface
	TOC	- table of contents lists of
	LOI	- lists of illustrations and tables
	SUM	- safety summary
		Body Matter
	PTn CHn SEn	- Where each "n" represents an identifying part, chapter, and section number for the portion of the body matter contained in the file.
		Rear Matter
	APP-x	- appendix (where "x" is the appendix letter)
	GLS	- glossary
	INX	- index
	FOV	- foldout section

Option A. All Textual material for the document is contained in one data file.

Option B. Textual material for the document is divided according to "front" matter, "body", and "rear" matter.

Option C. Textual material for the front, body, and rear matter is subdivided within the front, body or rear matter.

MIL-STD-1840A
NOTICE 1

5.1.4.4. Raster data file header records. The file header records for the raster data files shall contain the following information:

RECORD 1. - Source system document identifier (srcdocid:). For technical publications the contents of this record shall be identical to record 1 of the text file which references this illustration. For product data files this record is defined in 5.1.5.

RECORD 2. - Destination system document identifier (dstdocid:). A character string containing the destination organization's document number, e.g., the technical publication number, CAGE code. For technical publications this record is identical to header record 2 of the text data file that references this illustration, and to record 7 of the declaration file.

RECORD 3. - Text file identifier (txtfilid:). For illustration data files the contents of record 3 shall be identical to record 3 of the text file which references this illustration. For raster file page images of technical publications, this record shall contain the page number of the page contained in this raster file. For product data enter the character string, NONE.

RECORD 4. - Figure identifier (figid:). For technical publications the figure identifier shall be the figure number with which the figure is referenced, with optional sheet numbers preceded by the string "-S" and with an optional overflow number preceded by a period character. For example, "5" would be the identifier for figure 5, "12-S10.3" would be the identifier for overflow drawing 3 of sheet 10 of figure 12. Foldout figures shall be identified with additional "-F" characters followed by the number of 8.5 x 11 inch sheets that will be needed to produce the foldout. For product data enter the character string, NONE.

RECORD 5. - Source system graphics filename (srcgph:). For technical publication, the string value found with the required attribute "boardno" in the tag "<graphic...>". For product data, enter the character string, NONE.

RECORD 6. - Data file security label (doccls:). Character string stating the security/sensitivity level or other restrictions on the data file.

MIL-STD-1840A
NOTICE 1

RECORD 7. - Raster data type (rtype:). A single numerical character representing the type of raster data contained in the binary values that follow the header records. The character "1" indicates type I raster data as defined in MIL-R-28002. The character "2" indicates type II raster data as defined in MIL-R-28002.

RECORD 8. - Raster image orientation (rorient:). Two, right-justified, three character strings separated by a comma specifying respectively the direction of the progression of successive pels along a line relative to the horizontal and the direction of the progression of successive lines relative to the pel path. Permissible and default pel path and line direction values are listed in MIL-R-28002.

RECORD 9. - Raster image pel count (rpelcnt:). Two, right-justified, six character strings separated by a comma specifying the integer count of pels in the pel path direction, and lines in the line progression direction.

RECORD 10. - Raster image density (rdensty:). One, right-justified, four character string representing the numerical value of the raster image density. Permissible and default image density values are listed in MIL-R-28002.

RECORD 11. - Notes (notes:). Notes shall consist of free form text consistent with the number of characters permitted for records in this file.

5.1.4.5. CGM data file header records. The file header records for the CGM data files shall contain the following information:

RECORD 1. - Source system document identifier (srcdocid:). The contents of this record shall be identical to record 1 of the text file which references this illustration.

RECORD 2. - Destination system document identifier (dstdocid:). A character string containing the destination organization's document number, e.g., the technical publication number, CAGE code. This record is identical to header record 2 of the text data file that references this illustration, and to record 7 of the declaration file.

RECORD 3. - Text file identifier (txtfilid:). The contents of this record shall be identical to record 3 of the text file which references this illustration.

MIL-STD-1840A
NOTICE 1

RECORD 4. - Figure identifier (figid:). The figure identifier shall be the figure number with which the figure is referenced, with optional sheet numbers preceded by the string "-S" and with an optional overflow number preceded by a period character. For example, "5" would be the identifier for figure 5, "12-S10.3" would be the identifier for overflow drawing 3 of sheet 10 of figure 12. Foldout figures shall be identified with additional "-F" characters followed by the number of 8.5 x 11 inch sheets that will be needed to produce the foldout.

RECORD 5. - Source system graphics filename (srcgph:). The string value found with the required attribute "boardno" in the tag "<graphic...>".

RECORD 6. - Data file security label (doccls:). Character string stating the security/sensitivity level or other restrictions on the data file.

RECORD 7. - Notes (notes:). Notes shall consist of free form text consistent with the number of characters permitted for records in this file.

5.1.4.6. PDL file header records. The file header records for a PDL data file shall contain the following information:

RECORD 1. - Source system document identifier (srcdocid:). This is a character string used by the source system to uniquely identify this document, e.g., the technical publication number. This record is identical to Record 2 in the declaration file.

RECORD 2. - Destination system document identifier (dstdocid:). A character string containing the service or agency document number, e.g., the technical publication number. This record is identical to record 7 in the declaration file.

RECORD 3. - Text file identifier (txtfilid:). This record shall contain the code, from table II, identifying the content of this file.

RECORD 4. - Data file security label (doccls:). Character string stating the security/sensitivity level or other restrictions on the data file.

RECORD 5. - Notes (notes:). Notes shall consist of free form text consistent with the number of characters permitted for records in this file.

MIL-STD-1840A**NOTICE 1**

5.1.4.7. Gray scale header records. The file header records for gray scale (half tone) illustration files shall contain the following information:

RECORD 1. - Source system document identifier (srcdocid:). The contents of this record shall be identical to record 1 of the text file which references this illustration.

RECORD 2. - Destination system document identifier (dstdocid:). A character string containing the destination organization's document number, e.g., the technical publication number, CAGE code. This record is identical to header record 2 of the text data file that references this illustration, and to record 7 of the declaration file.)

RECORD 3. - Text file identifier (txtfilid:). The contents of record 3 shall be identical to record 3 of the text file which references this illustration.

RECORD 4. - Figure identifier (figid:). The figure identifier shall be the figure number with which the figure is referenced, with optional sheet numbers preceded by the string "-S" and with an optional overflow number preceded by a period character. For example, "5" would be the identifier for figure 5, "12-S10.3" would be the identifier for overflow drawing 3 of sheet 10 of figure 12. Foldout

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

(See Instructions - Reverse Side)

1. DOCUMENT NUMBER

MIL-STD-1840A/CN1

2. DOCUMENT TITLE

MILITARY STANDARD-AUTOMATED INTERCHANGE OF TECHNICAL INFO

3a. NAME OF SUBMITTING ORGANIZATION

4. TYPE OF ORGANIZATION (Mark one)

☐

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OTHER (Specify):

5. ADDRESS (Street, City, State, ZIP Code)

5. PROBLEM AREAS

a. Paragraph Number and Wording:

b. Recommended Wording:

c. Reason/Rationale for Recommendation:

6. REMARKS

7a. NAME OF SUBMITTER (Last, First, MI) - Optional

b. WORK TELEPHONE NUMBER (Include Area Code) - Optional

c. MAILING ADDRESS (Street, City, State, ZIP Code) - Optional

8. DATE OF SUBMISSION (YYMMDD)

(TO DETACH THIS FORM, CUT ALONG THIS LINE.)

INSTRUCTIONS: In a continuing effort to make our standardization documents better, the DoD provides this form for use in submitting comments and suggestions for improvements. All users of military standardization documents are invited to provide suggestions. This form may be detached, folded along the lines indicated, taped along the loose edge (**DO NOT STAPLE**), and mailed. In block 5, be as specific as possible about particular problem areas such as wording which required interpretation, was too rigid, restrictive, loose, ambiguous, or was incompatible, and give proposed wording changes which would alleviate the problems. Enter in block 6 any remarks not related to a specific paragraph of the document. If block 7 is filled out, an acknowledgement will be mailed to you within 30 days to let you know that your comments were received and are being considered.

NOTE: This form may not be used to request copies of documents, nor to request waivers, deviations, or clarification of specification requirements on current contracts. Comments submitted on this form do not constitute or imply authorization to waive any portion of the referenced document(s) or to amend contractual requirements.

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