PERFORMANCE SPECIFICATION

Digital Point Positioning Data Base (DPPDB)

This specification is approved for use by all Departments and Agencies of the Department of Defense (DoD).

1. SCOPE

1.1 Scope. These specifications define product requirements for DPPDBs produced by the National Imagery and Mapping Agency (NIMA) to support various weapons and mission support systems.

1.2 Purpose. The purpose of this document is to specify the data format and characteristics of DPPDBs for point positioning and other applications.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3 and 4 of this specification. This section does not include documents in other sections of this specification or recommended for additional information or as examples. While every effort has been made to ensure the completeness of this list, document users are cautioned that they must meet all specified requirements documents cited in sections 3 and 4 of this specification, whether or not they are listed.

Address comments (recommendations, additions, deletions) and any pertinent data that may be used to improve this document to: Director, National Imagery and Mapping Agency, ATTN: NIMA Customer Support/COD, Stop P-38, 12310 Sunrise Valley Drive, Reston, Va. 20191-3449, by using the Standardization Document Improvement Proposal (DD Form 1426) appearing at the end of this document or by letter.

AMSC N/A   AREA MCGT

2.2 <u>Government documents</u>.

2.2.1 <u>Specifications, standards, and handbooks</u>. The following specifications, standards, and handbooks form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those listed in the current Department of Defense Index of Specifications and Standards (DODISS) and the supplement thereto, cited in the solicitation (see section 6.2).

STANDARDS

FEDERAL INFORMATION PROCESSING STANDARDS

FIPS PUB 10-4   -   Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions

FIPS PUB 128   -   Computer Graphics Metafile (CGM) [adaptation of American National Standards Institute (ANSI) X.122-1986]

(Copies of Federal Information Processing Standards (FIPS) are available to Department of Defense activities from the Standardization Document Order Desk, 700 Robbins Avenue, Bldg. 4D, Philadelphia, PA 19111-5094. Others must request copies of FIPS from the National Technical Information Services, 5285 Port Royal Road, Springfield, VA 22161-2171.)

DEPARTMENT OF DEFENSE

MIL-STD-2500   -   National Imagery Transmission Format (Version 2.0) for the National Imagery Transmission Format Standard

MIL-STD-188-198   -   Joint Photographic Experts Group (JPEG) Image Compression for the National Imagery Transmission Format Standard

MIL-STD-2301   -   Computer Graphics Metafile (CGM) Implementation Standard for the National Imagery Transmission Format Standard

MIL-STD-2414   -   Bar Coding for Mapping, Charting and Geodesy Products

MIL-STD-188-199   -   Vector Quantization Decompression for the National

		Imagery Transmission Format Standard
MIL-STD-2411	-	Raster Product Format (RPF)
MIL-STD-2411-1	-	Registered Data Values for Raster Product Format
MIL-STD-2411-2	-	Integration of Raster Product Format into the National Imagery Transmission Format

SPECIFICATIONS

   DEPARTMENT OF DEFENSE

MIL-PRF-89038	-	Compressed Arc Digitized Raster Graphics (CADRG)

HANDBOOKS

   DEPARTMENT OF DEFENSE

MIL-HDBK-859	-	Handbook for Digital Point Positioning Data Base (DPPDB)
MIL-HDBK-1300	-	National Imagery Transmission Format Standard Handbook

(Unless otherwise indicated, copies of federal and military specifications, standards, and handbooks are available from the Standardization Document Order Desk, 700 Robbins Avenue, Bldg. 4D, Philadelphia, PA 19111-5094, or via Internet address www.dtic.dla.mil/dtic/..)

   2.2.2 <u>Other Government documents, drawings, and publications</u>. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues are those cited in the solicitation.

   DISA/JIEO Circular 9008-National Imagery Transmission Format Standard Certification Test and Evaluation Program Plan

   (Application for copies of the above item can be obtained from DISA/JITC ATTN: GADB Bldg. 57305 Fort Huachuca, AZ 85613-7020. Also available in softcopy through the World Wide Web, off the DISA ftp server through the ISMC Home Page. The URL is: http://www.itsi.disa.mil/ismc or from the DISA ftp server: ftp://FTP.ITSI.DISA.MIL/pub/library/nitfs_docs/)

   DMA Technical Report (DMA TR) 8350.2 - Department of Defense World Geodetic System, Third Edition, 1 September 1991. (Stock Number DMATR 83502 WGS 84)

Digital Point Positioning Data Base (DPPDB) Classified Annex
- DPPDB Accuracy Evaluations, 23 March 1999

Executive Agent for DOD Information Standards - ASD/C³I
Memorandum, 3 September 1991.

Executive Order 12951 - Release of Imagery Acquired by
Space-Based National Intelligence Reconnaissance Systems, 22
February 1995.

 (Copies of the above publication are available from the National
Imagery and Mapping Agency, ATTN: SES, Stop D-86, 4600 Sangamore
Rd., Bethesda MD 20816-5003.)

 2.3 Order of precedence. In the event of a conflict between
the text of this document and the references cited herein, the
text of this document takes precedence. Nothing in this
document, however, supersedes applicable laws and regulations
unless a specific exemption has been obtained.

 3. REQUIREMENTS

 3.1 First article. When specified (see 6.2), a sample
shall be subject to first article inspection (see 6.3) in
accordance with section 4.2.

 3.2 Overview. DPPDBs are developed by the NIMA over user-
specified areas to provide a capability for deriving accurate
positional data on a quick-response basis for any identifiable
feature within a DPPDB area. This includes geodetic latitude,
geodetic longitude, geodetic elevation, and associated accuracies
of desired points. Targets, navigational points, and launch
sites are examples of such points of interest. The DPPDB is a
"data only" product and the exploitation of the data will be
defined by each user's hardware and software capabilities.

 3.3 Accuracy. DPPDBs will continue to support the
positioning accuracy requirements of the weapon systems listed in
the product specifications for Point Positioning Data Base,
PS/4DA/195. Numerous positioning accuracies are required to
support current weapons systems. Both absolute and relative
(point-to-point) accuracies are required. In addition, the
absolute accuracies are referenced to particular horizontal and
vertical datums. These values may vary per individual DPPDB and
any limitations on usage involving accuracies shall be reflected
in the support data (datums and point separation values) provided
with each DPPDB. For relative accuracy evaluation see the
classified annex (refer to para. 2.2.2).

 3.4 Datum. The horizontal and vertical datums shall be the
World Geodetic System 1984 (WGS-84).

 3.5 Security

3.5.1 Security Classification. These specifications are
UNCLASSIFIED. Domestic DPPDB location identifications are
UNCLASSIFIED. All DPPDBs over foreign areas are classified at
the SECRET level; many have releasability restrictions. DPPDB
final products prepared from classified sources will be
classified accordingly, including foreign and domestic DPPDBs.
Stock Numbers associated with the DPPDB are UNCLASSIFIED.

3.5.2 Releasability. There are currently only two options
for marking release determination. The DPPDB labels will be
marked: SECRET with no releasability, produced with the marking
"US ONLY" (UO), or SECRET/REL dependent upon the country covered.
Further instructions are provided in the classified annex of this
document.

3.6 Product description.

3.6.1 Distribution medium. The distribution medium for
the DPPDB product is a 5-GB 8mm tape cartridge(s) or a 14-GB
Metrum 2150 cartridge(s). The tape shall contain multiple files.
When a single tape will not hold all the files, the files shall
be placed on multiple tapes (volume). The file structure and
content for each file on tape conform to the NITFS, NITF Version
2.0.

3.6.2 Image data. The image data consist of a number of
image models covering a rectangle that is approximately 60 NM on
a side, when near the equator. DPPDBs may be larger or smaller
depending on the dimensions of the geopositioned triangulation
rectangle and the geographic location. Dimensions of a nominal
rectangle are shown in TABLE 1. (The dimensions are based on the
WGS-84 ellipsoid.)

TABLE 1. Width of product rectangles.

Latitude Band (degrees)	Longitude (Product)	Min Lat	Max Lat	Lon Interval at Min Lat (feet/arcsec)	Lon Interval at Max Lat (feet/arcsec)	Nautical Miles at Min Lat	Nautical Miles at Max Lat
0-40	1	0	40	101.5	77.8	60.1	46.1
40-50	1.25	40	50	77.8	65.3	57.6	48.4
50-60	1.5	50	60	65.3	50.9	58.1	45.2
60-65	2	60	65	50.9	43.0	60.3	50.9
65-70	2.25	65	70	43.0	34.8	57.3	46.4
70-75	2.75	70	75	34.8	26.3	56.7	42.9
75-80	3.75	75	80	26.3	17.7	58.5	39.3
80-82	5	80	82	17.7	14.2	52.4	42.0
82-84	6	82	84	14.2	10.6	50.4	37.8
84-86	8	84	86	10.6	7.1	50.4	33.7
86-88	12	86	88	7.1	3.6	50.5	25.3
88	undefined	88					

Each stereo image model is divided into nominally five to ten segment models (a segment model consists of a left and right segment image that provides the imagery for stereo viewing). Each segment model is registered in stereo and oriented nominally with north to the display's right side for viewing purposes. (When viewing the reference graphic, north will be to the display's top side. When an individual segment model is viewed north will be nominally to the display's right side. This is necessary for correct stereo viewing. Other orientations are possible, such as north being on the left when the image is displayed on the user workstation, depending upon the geometry of the sensor at the time of acquisition.) The segment images have been trimmed to provide a segment image overlap of 2000 feet (minimum) within the DPPDB rectangle and 1000 feet between DPPDB segments. A DPPDB will often contain retask imagery, and it will consist of stereo source imagery models segmented into segment models in the same manner as was performed on parent imagery. FIGURE 1 illustrates segmentation in a rectangle.
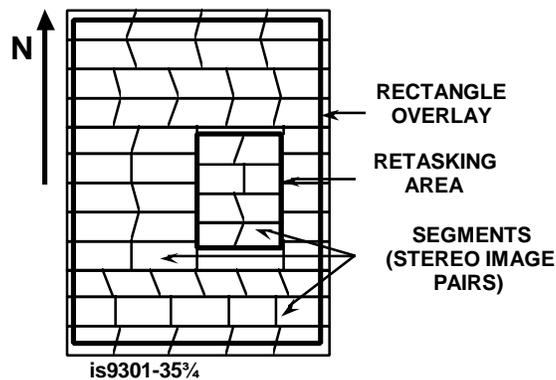
FIGURE 1. Segment models in a rectangle.

Each segment image is bounded by a viewing rectangle and the non-image area of the viewing rectangle is padded with black pixels. The viewing rectangle is then blocked into 1024 x 1024 pixel blocks, compressed using the NITFS 8-bit JPEG Discrete Cosine Transformation (DCT) compression algorithm, and stored after the appropriate NITF image subheader file on the distribution medium. FIGURE 2 shows a representation of two segment images (a stereo pair) bounded by their viewing rectangles. Caution: The segment images shown in Figure 2, include imagery that falls outside the DPPDB image footprints provided in the Master Product Footprint Text File (Table 20). The Master_File footprint is a polygon that defines the area for an image stereo-pair where the DPPDB product accuracy is maintained and parallax is at a minimum. Outside of the polygon, accuracy decreases and parallax is present. To avoid accuracy and parallax problems, the DPPDB user must only collect feature data over the images within this footprint, as the edge of the footprint is reached the analyst must switch to the next stereo-pair. To avoid problems the exploitation system should be capable of superimposing the footprint on the stereo imagery and/or warn

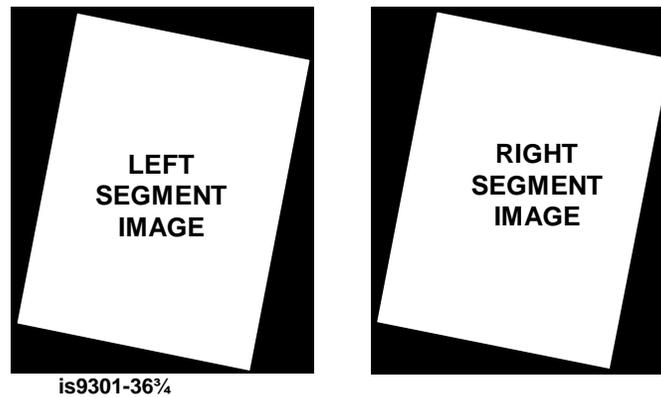the user when an attempt is made to collect data outside the footprint.

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FIGURE 2. <u>Left and right segment images of a segment model bounded by their viewing rectangles.</u>

3.6.3 <u>Image support data</u>. The image support data consist of rational function data, accuracy data, and segment-to-segment shear data, diagnostic points, and adverse area indicators.

3.6.3.1 <u>Rational function data</u>. The rational function data consist of rational function polynomial coefficients and normalization parameters that define the physical relationship between rectified image coordinates and ground coordinates. The image coordinates are in units of pixels. The ground coordinates are latitude and longitude in units of decimal degrees and the geodetic elevation in units of meters. The ground coordinates are referenced to WGS-84 [DMA TR 8350.2, Department of Defense World Geodetic System 1984 (WGS-84)]. If ground coordinates are required in another datum, the NIMA MADTRAN program (Mapping Datum Transformation) or its algorithms should be utilized. Refer to DMA TR 8350.2 for the definition and relationships with local geodetic systems. The rational function polynomial coefficients and normalization parameters shall be stored in the segment image file subheader (see paragraph 3.9.2 and 3.9.5).

3.6.3.2 <u>Rational function polynomial coefficients</u>. The rational function polynomial equations are defined as:

Image_x = F(X,Y,Z) / HF(X,Y,Z)

Image_y = G(X,Y,Z) / HG(X,Y,Z)

where:

Image_x, Image_y are normalized image coordinates:

Image_x = (Image_X - Image_X_Translation) * Image_X_Scale

Image_y = (Image_Y - Image_Y_Translation) * Image_Y_Scale

where:

   Image_X = DPPDB X image coordinate

   Image_Y = DPPDB Y image coordinate

 X, Y, Z are normalized ground coordinates:

   X = (Longitude - Longitude_Translation) * Longitude_Scale

   Y = (Latitude - Latitude_Translation) * Latitude_Scale

   Z = (Elevation - Elevation_Translation) * Elevation_Scale

                F, HF, G, HG are 20-term cubic polynomial
functions of the form:

$$C(X,Y,Z) = C_1 + C_2X + C_3Y + C_4Z + C_5XY + C_6XZ + C_7YZ + C_8X^2$$
$$+ C_9Y^2 + C_{10}Z^2 + C_{11}XYZ + C_{12}X^3 + C_{13}XY^2 + C_{14}XZ^2$$
$$+ C_{15}X^2Y + C_{16}Y^3 + C_{17}YZ^2 + C_{18}X^2Z + C_{19}Y^2Z + C_{20}Z^3$$

3.6.3.3   Accuracy data. DPPDB accuracy data include both
          absolute and relative (point-to-point) accuracy.
          Absolute accuracy expresses the uncertainty of a
          point with respect to a specified datum, in this
          case WGS-84. Absolute accuracy is expressed in
          terms of Circular Error (CE) and Linear Error (LE)
          at the 90 percent probability level. Absolute
          accuracy information includes the absolute accuracy
          for each stereo image pair and an absolute accuracy
          for the entire DPPDB. Relative (point-to-point)
          accuracy expresses the uncertainty between two
          points. Relative accuracy is expressed in terms of
          CEP and LEP at the 50 percent probability level.
          Relative accuracy is provided as a function of
          distance. Relative accuracy information includes
          relative accuracies at various distances within
          each Segment model and relative accuracies at
          various distances for the entire DPPDB. The DPPDB
          relative accuracies can be utilized as segment to
          segment relative accuracies. Under certain
          circumstances, a relative accuracy value may be
          recorded as zero on the product. This may occur in
          the very small or very large distance bins and it
          indicates that there was not enough data points to
          calculate the relative accuracy (not that the error
          is zero). The mensuration error is a function of
          the DPPDB pixel ground sample distance, the user's
          soft copy workstation mensuration capabilities, and
          the number of times a target is measured. The
          datum transformation error is a function of the

specific horizontal and vertical datums. In all
cases, the absolute and relative accuracies DO NOT
include point identification error, point transfer
error and datum transformation error.

The relative point-to-point accuracy for two points separated by
d nautical miles is computed using:

$$CEP = (CEP\text{-}SD_d{}^2 + CEP\text{-}ME_1{}^2 + CEP\text{-}ME_2{}^2)^{1/2}$$

$$LEP = (LEP\text{-}SD_d{}^2 + LEP\text{-}ME_1{}^2 + LEP\text{-}ME_2{}^2)^{1/2}$$

where:

$CE\text{-}SD_d$ = Segment Support Data CEP for distance d.
$CEP\text{-}ME_1$ = Mensuration CEP (50%) for the first point.
$CEP\text{-}ME_2$ = Mensuration CEP (50%) for the second point.
$LE\text{-}SD_d$ = Segment Support Data LEP for distance d.
$LEP\text{-}ME_1$ = Mensuration LEP (50%) for the first point.
$LEP\text{-}ME_2$ = Mensuration LEP (50%) for the second point.

The covariance data, $CE\text{-}SD_d$ and $LE\text{-}SD_d$ and the measurement error
values used to compute $CEP\text{-}ME_1$, $CEP\text{-}ME_2$, $LEP\text{-}ME_1$ and $LEP\text{-}ME_2$ used
for the above computation are defined in Table 38, Segment to
Segment Relative Accuracy Data Definition (page 77)

Both the absolute and relative accuracy computations use
measurement errors that must be computed using the Segment
Mensuration error (1 pixel) from the appropriate segment records
(Table 38). If the users actual measurement error is not 1 pixel,
the table values must be scaled. Since the table values are given
at the 90% probability level, they should also be converted to
the 50% probability level when used to compute point to point
error estimates.

CEP (50%)   = CE (90%) * 0.5486

LEP (50%)   = LE (90%) * 0.4101

The absolute accuracy of a target is computed as:

$$\text{CE(WGS-84)} = \sqrt{CE\_SD^2 + CE\_ME^2}$$

$$\text{CE(Local Datum)} = \sqrt{CE\_SD^2 + CE\_ME^2 + CE\_HD^2}$$

$$\text{LE(WGS-84)} = \sqrt{LE\_SD^2 + LE\_ME^2}$$

$$\text{LE(Local Datum)} = \sqrt{LE\_SD^2 + LE\_ME^2 + LE\_VD^2}$$

where:

CE_SD	=	Segment Support Data CE (90%)
CE_ME	=	Mensuration CE (90%)
CE_HD	=	Horizontal Datum Transformation CE (90%)
LE_SD	=	Segment Support Data LE (90%)
LE_ME	=	Mensuration LE (90%)
LE_VD	=	Vertical Datum Transformation LE (90%)

The absolute and relative accuracy data shall be stored in the master product file header (see paragraph 3.6.1).

    3.6.3.4 Accuracy evaluation. In addition to the segment absolute and relative accuracies, each DPPDB shall have an absolute and relative accuracy evaluation determined for it (see TABLES 2 and 3). These evaluations shall be included in a textual format in the DPPDB master product text subheader (see 3.7.3). The purpose of the accuracy evaluation is to provide a summary of the DPPDB accuracy without the need for the user to review the individual segment accuracies. The evaluation process shall, as a minimum, include the error sources identified in TABLES 2 and 3.

TABLE 2. DPPDB absolute accuracy evaluation.

ABSOLUTE ACCURACY (CE/LE, 90%)		
SOURCE	HORIZONTAL	VERTICAL
	CE 90%	LE 90%
	WGS-84 (2)	WGS-84 (2)
Support Data (1)	xxx.xx m	xxx.xx m
	xxx.xx ft	xxx.xx ft
Mensuration of 1 pixel (1)	xxx.xx m	xxx.xx m
	xxx.xx ft	xxx.xx ft
ABSOLUTE EVALUATION	xxx.xx m	xxx.xx m
	xxx.xx ft	xxx.xx ft

NOTES:
(1) The support data error source includes triangulation, control, and rational function error sources.
(2) See classified annex for "xxx.xx" values.
(3) These values may vary per individual DPPDB.
(4) Summary data should not be used for metric evaluations.
(5) Individual segment accuracies should be used for metric evaluation.
(6) Mensuration Scale factor = meters/pixel or feet/pixel.

TABLE 3. DPPDB relative accuracy evaluation.

RELATIVE (POINT-TO-POINT) ACCURACY (CEP/LEP, 50%): (1)					
0 – 1 NM		1 – 5 NM		5 – 15 NM	
CEP	LEP	CEP	LEP	CEP	LEP
xxx.xx m	xxx.xx m	xxx.xx m	xxx.xx m	xxx.xx m	xxx.xx m
xxx.xx ft	xxx.xx ft	xxx.xx ft	xxx.xx ft	xxx.xx ft	xxx.xx ft

15 – 30 NM		> 30 NM	
CEP	LEP	CEP	LEP
xxx.xx m	xxx.xx m	xxx.xx m	xxx.xx m
xxx.xx ft	xxx.xx ft	xxx.xx ft	xxx.xx ft

NOTES:
(1) See classified annex for "xxx.xx" values.
(2) Summary data should not be used for metric evaluation.
(3) Individual segment accuracies should be used for metric evaluation.

3.6.3.5 Accuracy evaluation exceptions. The DPPDB accuracy evaluation shall also indicate those segments not meeting the absolute and/or relative accuracy requirements of the supported weapon systems. This product limitation shall be placed in the master product file header (see 3.7.1) and the product accuracy limitations text file (see 3.7.4).

3.6.3.6 Segment to segment shear data. Shear data consists of points that are previously measured ground features that are contained within the overlap area between two or more adjacent stereo segments. The ground coordinates for the feature will be slightly different for each stereo segment. The ground coordinate differences are referred to as the shear. The shear data shall be stored in the DPPDB master product data extension segment (see 3.7.4). Shear values are listed in the classified annex.

3.6.3.7 Diagnostic points. Diagnostic points are previously measured ground features. Nominally, one diagnostic point will be provided for each stereo segment. Each diagnostic point includes the ground coordinates and image coordinates. Diagnostic points are provided as stereo segment checkpoints. At the beginning of a stereo mensuration task, the diagnostic point can be measured and compared to the supplied ground coordinates to ensure that the user's exploitation system is operating properly. The diagnostic points shall be stored in a master product file data extension segment (see 3.7.4).

3.6.4 Reference graphic. The assignment area reference graphic is extracted from the appropriate/available source for the rectangle coverage and includes additional coverage outside the rectangle boundaries for orientation. The rectangle vectors are provided as a CGM symbol file in TABLE 13 which can be overlaid over the reference graphic and as a ASCII text file in TABLE 20. The nominal source is a CADRG CD-ROM produced by NIMA consisting of either a JOG (1:250,000), TPC (1:500,000), or ONC (1:1,000,000). The reference graphic is stored on the DPPDB product immediately following the master product file. The reference graphic is extracted from the CADRG media and recorded to the DPPDB media exactly as it is retrieved, without further processing (see 3.8). In other words it is placed on the DPPDB exactly as it is retrieved from the CADRG media. The reference graphic is in NITF 2.0 format as specified in MIL-STD-2411-2 which encapsulates the CADRG frame parameters specified in MIL-PRF-89038. CADRG is for reference purposes only and may not be the most current edition of the chart.

DO NOT USE THE REFERENCE GRAPHIC FOR DERIVING POINT COORDINATES. The horizontal error associated with the reference graphic ranges from .04 to .08 inches at the map scale. This converts to the following absolute horizontal errors (CE 90%):

JOG	830 ft
TPC	3280 ft
ONC	6561 ft

The absolute vertical accuracy (90%) associated with the
reference graphic is within one basic contour interval for the
JOG and TPC, and two basic contour intervals for the ONC.

   3.6.5 Data Organization.   The DPPDB product files are
arranged sequentially on the DPPDB product tape as depicted in
Figure 4. The first file contains a directory of the image files
on the product tape and information that applies to the overall
DPPDB product. The second through NFRMS (NFRMS+1 equals total
number of CADRG Frames in the reference graphic) contain the
reference graphic and each file contains a single CADRG frame. The
remainder of the files, files NFRMS+2 to n, are segment image files
and contains a single segment image. A segment image shall be
either an overview segment image or a full resolution segment
image. An overview segment image is a 1/8x or 1/4x minification of
the full resolution segment image. Each full resolution and 1/8x
overview segment image file also contain the support data and
rational function coefficients for that particular image segment.
A 1/4x overview segment occurs when the R1 RRDS meets the GSD
requirement. After the master product file and CADRG frame files,
the segment image files are grouped in fours and each group
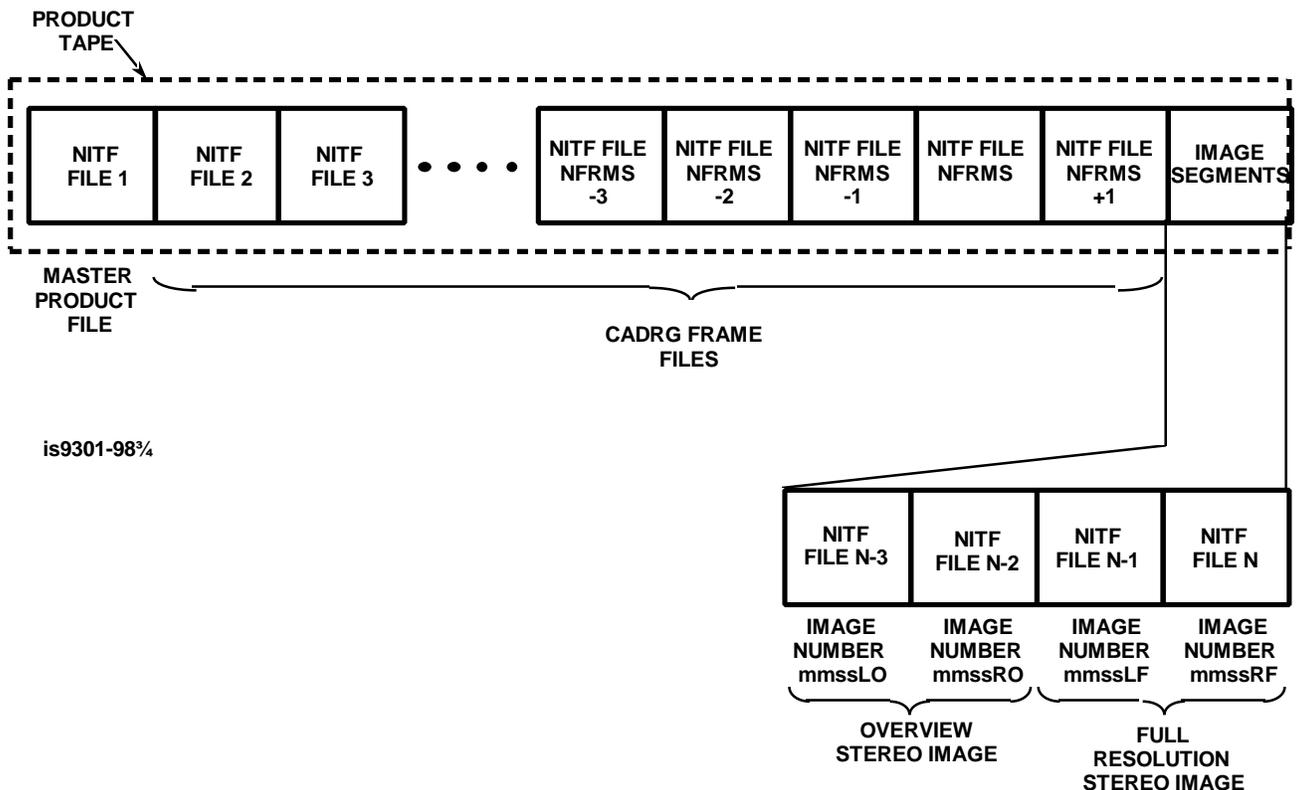comprises both an overview and full resolution segment model.

FIGURE 3. File organization on a DPPDB product tape.

The group of four images can be used to display a stereo overview
of the segment model and/or a stereo view of the full resolution
segment model. Each group of four files are positioned

sequentially on the tape using a left-to-right, top-to-bottom
ordering of the segments within the rectangle in the order the
segments are processed. A single DPPDB may span multiple
distribution media; see 3.6.1. On multiple volume DPPDBs, the
master product file is also provided on each volume. The first
NFRM+1 files (master product file and the CADRG frame files),
are on each all distribution media. Each cassette case, cassette
and master product directory definition contain a media volume
sequence identification number, e.g.. Vol.: 1 of 2. When a DPPDB
is on multiple media, the overview/full resolution image group is
never split between distribution media. The master product
directory, located in the master product file, contains the
location for all the medium and geographic coordinates for each
segment image.

Note: The NITF files are loaded onto the distribution medium
at fixed 32Kbytes boundaries. This means the data is padded so
each NITF file fills exactly a multiple of 32Kbytes. A direct
data dump will result in the operating system directory function
reporting lengths different than recorded in the file length
field of the NITF file.

3.6.6 File specifications. The specifications of the fields
in the NITF files headers and subheaders are provided herein as a
series of two tables. The initial table in the series includes
a mnemonic identifier for each field, the field's name, the field
size, the range of allowed values, and an indication of its
"type" (see 3.6.8). The second table in the series contains a
description of the valid contents of each field and any
constraints on the field's use. The data values used in the NITF
file headers and subheaders, as specified in the tables,
including numbers, shall be represented using the printable NITF
ASCII character set with eight bits (one byte) per character.
All field size specifications given for the header and subheader
fields specify a number of bytes. Fields that may contain any
printable NITF ASCII characters (including punctuation marks) are
indicated as "alphanumeric" in the "value range" column of the
specification. The reader is warned that this is a nonstandard
use of the term alphanumeric. The allowable range of values for
numeric fields typically is indicated in the form N-M, where N
and M are the minimum and maximum values, respectively.

3.6.7 Field structure and default values. The DPPDB
specification uses character counts to delimit header fields, as
opposed to special end-of-field characters or codes or indirect
addressing. These counts are provided in the tables detailing
the header and subheader field specifications. All data in
fields specified "alphanumeric" shall be left-justified and
padded to the right boundary with spaces (NITF ASCII 32,
decimal). All data in numeric fields shall be right-justified
and padded to the left boundary with leading zeroes. The
standard default value is zero for numeric fields and spaces for

alphanumeric fields. A default field designated "blank" or
"blanks" means the same as "spaces". For a few fields, a
different default may be indicated in the field description. In
this case, the field description shall take precedence. All
header and subheader fields contained in a DPPDB product file
shall contain either valid data (i.e., data in accordance with
the restrictions specified for the contents of the field in this
document) or the specified default value.

   3.6.8 Field types. The DPPDB product file headers and
subheaders have three types of fields: Required (R), Optional
(O), and Conditional (C). A Required field shall be present and
shall contain valid data or the default value as specified in the
tables in Section 7. An Optional field shall be present but may
contain either valid data or the default value as specified in
the NITF file. A Conditional field may or may not be present
depending on the value of one or more preceding (required)
fields. If a conditional field is present, it shall contain
valid data. When a field is conditional, its definition in this
document and/or description identifies what conditions and which
preceding field or fields are used to determine whether or not to
include it in the file. For example, in the DPPDB master product
file header, if the Number of Images (NUMI) field contains the
value of 2, the fields LISH001, LI001, LISH002, LI002 will be
present and must be filled with valid data. However, if the NUMI
field contains a zero, the LISH001, LI001, LISH002, LI002 fields
are omitted. TABLES 5 and 6 describe the master product file
header.

   3.6.9 User-defined field specifications. Some of the user-
defined data fields have a SIZE definition which includes a
FORMAT definition. A FORMAT definition contains not only the
size of the field, but also the formatting used for the data.
The designators used are either an "A", "E", "F", or "I" to
indicate alphanumeric, exponential, fixed, or integer,
respectively. The second character shall be an integer (size
indicator) specifying the number of bytes in the field. For an
"E" or "F" data type there shall be a decimal character after the
size indicator, followed by an integer specifying the number of
digits to the right of the decimal.

   3.7 Master product file. The first file on every tape
contains the NITF master product file that includes the product
tape directory for the segment image files, a reference graphic
directory to reference graphic CADRG frames, accuracy data, and
product support data. FIGURE 4 shows the file structure for the
master product file. A detailed description of each of the NITF
components of the master product file (file header, symbol data,
text data and data extension segment data) is given in the
following subparagraphs.

NITF FILE HEADER	IMAGES	SYMBOLS	LABELS	TEXT	DATA EXTENSION SEGMENTS	RESERVED SEGMENTS

XHD
MASTER
  PRODUCT
  DIRECTORY
PRODUCT
  ACCURACY
  DATA
  (ABSOLUTE)
PRODUCT
  ACCURACY
  DATA
  (RELATIVE)
REFERENCE
  GRAPHIC
  DIRECTORY

(EMPTY)

DPPDB
  FOOTPRINT
DPPDB STOCK
  NUMBER
CLASSIFICATION
  (TOP)
CLASSIFICATION
  (BOTTOM)
HANDLING
  INSTRUCTIONS
DOWNGRADING
  INSTRUCTIONS

TEXTUAL
  PRODUCT DATA
  DPPDB
    FOOTPRINT
    VECTORS
  SEGMENT ID
    AND SEGMENT
    VECTORS
  PRODUCT
    ACCURACY
    LIMITATIONS
  PRODUCT
    ADVERSE
    AREAS

PRODUCT VOID
  AREAS
PRODUCT
  ACCURACY
  EVALUATION
  (ABS.)
PRODUCT
  ACCURACY
  EVALUATION
  (REL.)
PRODUCT
  ACCURACY
  EVALUATION
  (SHEAR)
PRODUCT
  GENERAL TEXT

STEREO
  IMAGE
  SEGMENT
  DATA
STEREO
  IMAGE
  SEGMENT
  SHEAR
  POINT
  DATA
STEREO
  IMAGE
  SEGMENT
  DIAGNOSTIC
  POINT
  DATA
SEGMENT TO
  SEGMENT
  RELATIVE
  ACCURACY
  DATA
PRODUCT
  ACCURACY
  DATA
  (SHEAR)
PRODUCT
  SUPPORT
  DATA

LEGEND
■ **NOT USED IN THIS FILE**

NOTE: THE SEGMENT TO SEGMENT
RELATIVE ACCURACY DATA UNDER THE DATA
EXTENSION SEGMENTS IS REPEATED
EACH SEGMENT MODEL ON THE PRODUCT.

NOTE: THE STEREO IMAGE SEGMENT SHEAR
POINT DATA UNDER THE DATA EXTENSION
SEGMENTS IS REPEATED FOR EACH
SEGMENT MODEL ON THE PRODUCT.

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FIGURE 4. <u>Master product file</u>.

3.7.1 <u>Master product file header</u>. The file header in the master product file contains the Extended Header Data (XHDs) controlled tagged extensions for: (1) master directory of the overview and full resolution segment image files located on the DPPDB product tape; (2) absolute product accuracy data; (3) relative product accuracy data and; (4) the reference graphic directory to all CADRG frames. The components of the master product file header are depicted in FIGURE 5. The fields of the master product file header are detailed in TABLES 5 and 6. The fields of the Extended Header Data (XHDs) controlled tagged extensions are detailed in TABLES 7 through 12.
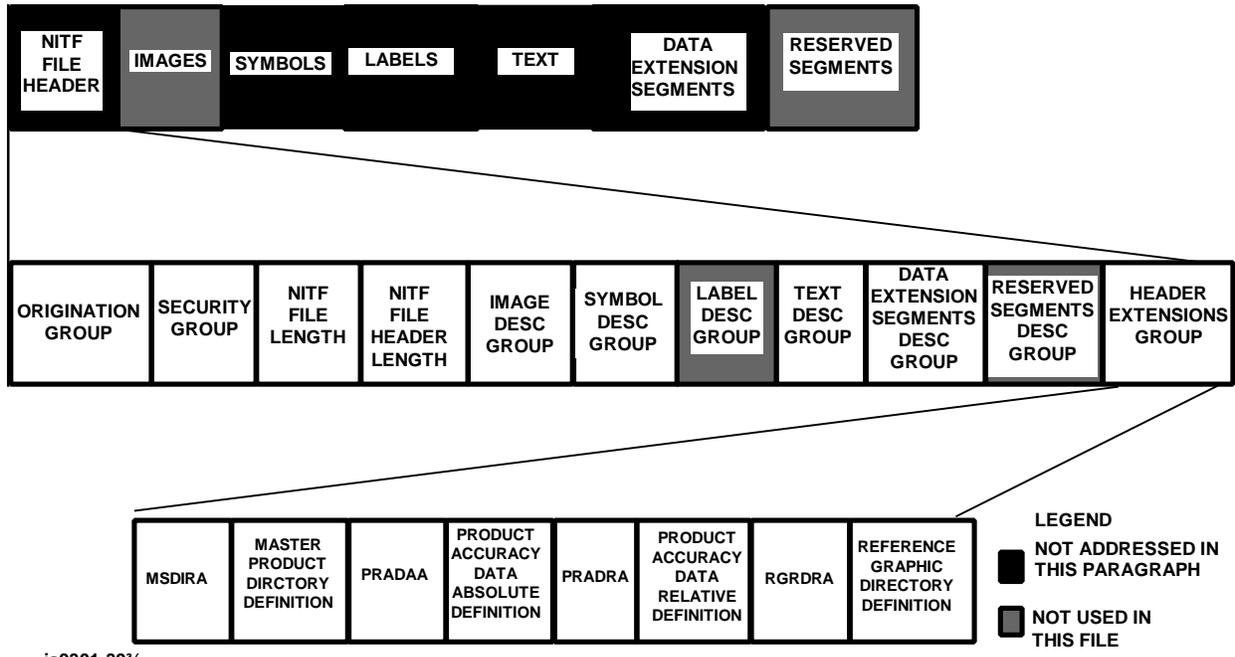
is9301-39¾

FIGURE 5. File header for the master product file.

3.7.2 DPPDB master product symbols subheader. The reference graphic has several overlays with which it is associated; i.e., a footprint (vector graphic) of the DPPDB product rectangle, the product stock number, the classification, the handling instructions, and the classification authority and downgrading instructions. The symbols are stored on the product as Computer Graphic Metafiles (CGM). The symbols are positioned for display using the Row Column coordinate system as described in MIL-STD-2500. The symbols are stored on the product as Computer Graphic Metafiles (CGM). The security label CGM symbols will initially display on the top and bottom of the first (upper left) 512x512 pixels. When the graphic is roamed, the symbols will scroll off the screen. An exploitation system should have the capability to display these labels on the top and bottom of the display device. FIGURE 6 depicts the file components for the symbols. The fields of the DPPDB master product symbols segment subheaders are given in TABLES 13 through 19.
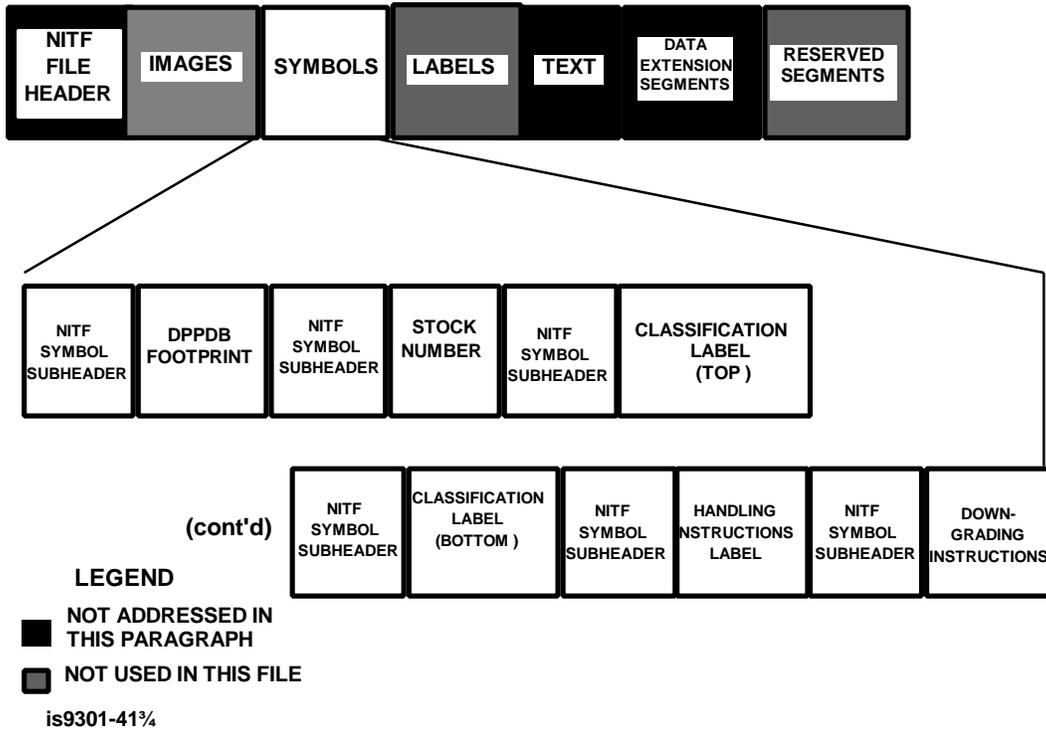
FIGURE 6.   Master product symbols NITF file components.

3.7.3   DPPDB master product text subheader.   The text data field contains DPPDB product data and is depicted in FIGURE 7. This textual data consists of product footprint vectors, segment image IDs and their footprint vectors, product accuracy limitations text, product adverse areas including cloud cover areas, product void areas, and product text.   TABLES 20 through 29 describe the text data fields.
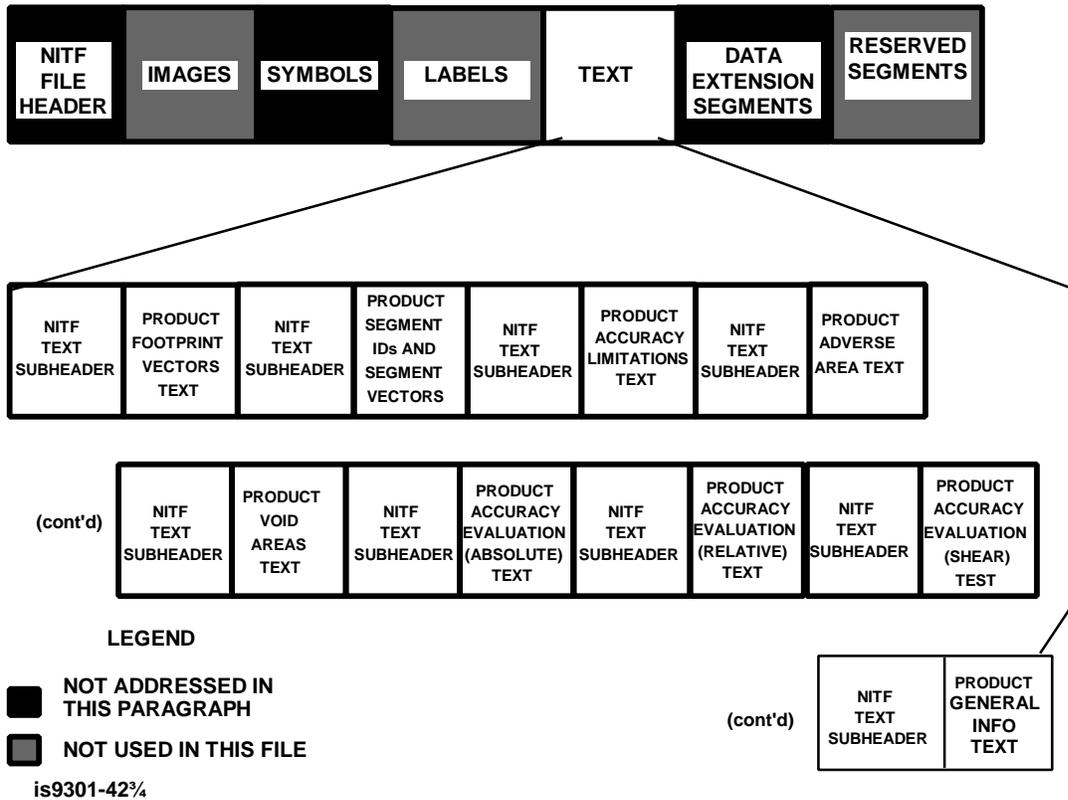
FIGURE 7. Master product text NITF file components.

3.7.4 DPPDB master product data extension segment
subheader. The data extension segment subheader contains six
user-defined files and is depicted in FIGURE 8. The following
are the user-defined files: Stereo image segment data, stereo
image segment shear point data, stereo image segment diagnostic
point data, segment to segment relative accuracy data, product
accuracy data (shear), and product support data. TABLES 30
through 43 describe the data extension subheader fields. The
stereo image segment shear point data is repeated for each
segment model on the product. The segment to segment relative
accuracy data is repeated for each segment model on the product.
The product support data is a grid of geoid separation points
covering the product rectangle. The interval between grid points
is 15 minutes at the equator but varies at higher latitudes.
TABLE 4 defines the geoid separation grid.

TABLE 4. Geoid separation points grid definition

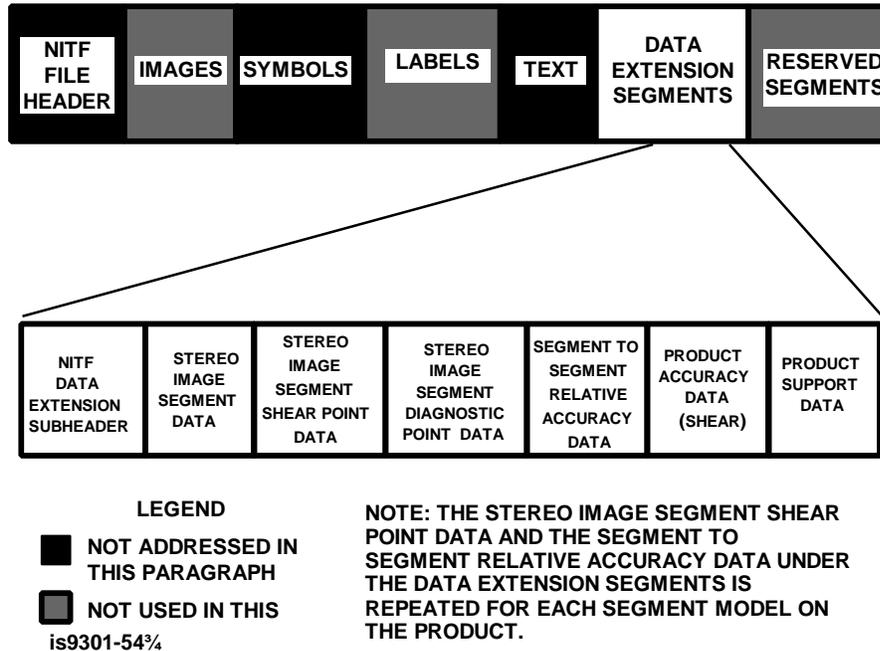| Latitude Band (degrees)	Longitude (Product) Width (degrees)	Lat Inter val (min)	Number of Geoid Pts in Lat (FIXED)	Lon Inter val (min)	Number of Geoid Pts in Lon (FIXED)	Total Number Points	Min Lon Interval (feet)	Max Lon Interval (feet)
0-40	1	15	9	15	9	81	91305	70041
40-50	1.25	15	9	15	10	90	70041	58806
50-60	1.5	15	9	15	11	99	58806	45768
60-65	2	15	9	15	13	117	45768	38694
65-70	2.25	15	9	30	9	81	77388	62642
70-75	2.75	15	9	30	10	90	62642	47412
75-80	3.75	15	9	30	12	108	47412	31814
80-82	5	15	9	45	11	99	47720	38248
82-84	6	15	9	45	13	117	38248	28728
84-86	8	15	9	60	13	117	38303	25562
86-88	12	15	9	90	13	117	38343	19184
88	undefined							

FIGURE 8. DPPDB data extension segment file.

3.8 CADRG reference graphic frame files. The CADRG reference graphic frames occupy files from the second through NFRMS+1 files (where NFRMS equals the number of

CADRG frames composing the reference graphic). The
CADRG frame files are extracted from the (appropriate)
CADRG media and placed onto the DPPDB exactly as it is
retrieved product tape without further processing. The
frame files are explicitly specified in MIL-PRF-89038.
Furthermore, each frame file is encapsulated as a NITF
message as specified in MIL-STD-2411-2. CADRG frame
files employ a very generalized structure to afford the
user flexibility in determining the physical
arrangement of CADRG data within the NITF message.

NOTE: Since the CADRG frame files are extracted from the
(appropriate) CADRG media and recorded to the DPPDB product tape
without further processing, this specification does not contain
the structure to any of the CADRG frame files. The data
structure and field definition for all fields are contained in
MIL-STD-2500, MIL-STD-2411-2, and MIL-PRF-89038.

    3.9 Image files. The NFRMS+2 and following files on each
volume of the product media contain either an overview segment
image or a full resolution segment image and the associated data
for the image. The associated data for the image consists of the
segment image compressed blocks directory, support data, rational
function coefficients, and the display symbols (labels). FIGURE
9 shows the file structure for each overview segment image and
FIGURE 10 depicts the file structure for each full resolution
segment image. The DPPDB product NITF image files are in
conformance with the NITF JPEG multiple block file structure,
FIGURE 11. The image data structure consists of multiple blocks
with one frame per block and one scan per frame. The DPPDB image
data file makes use of both the APP_6 application data segment and
optional APP_7 directory segment, TABLES 44 and 45. The APP_6
segment contains information which is needed by the user's
interpreter but not supported by the ISO/CCITT JPEG format. The
APP_7 allows random access to compressed JPEG data at the restart
interval level. For example, high speed decoding of JPEG
compressed data can be achieved since multiple processors can
operate independently on a different restart interval. If the
APP_7 segment is not used, the whole compressed data stream must
be parsed looking for byte aligned marker codes, i.e. SOI, RST_m,
EOI.

NITF FILE HEADER	IMAGES	SYMBOLS	LABELS	TEXT	DATA EXTENSION SEGMENTS	RESERVED SEGMENTS

OVERVIEW   DPPDB STOCK NUMBER
 SEGMENT   CLASSIFICATION (TOP)
 IMAGE   CLASSIFICATION (BOTTOM)
           HANDLING INSTRUCTIONS
IXSHD   DOWNGRADING
OVERVIEW   INSTRUCTIONS
 SEGMENT   IMAGE MODEL NUMBER
 IMAGE   IMAGE SEGMENT NUMBER
 COMPRESSED
 BLOCKS
 DIRECTORY
SUPPORT DATA
 (IMAGE)
RATIONAL
  FUNCTION
  COEFFICIENTS

LEGEND

▨ NOT USED IN THIS FILE

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FIGURE 9. <u>DPPDB overview segment image file</u>.

NITF FILE HEADER	IMAGES	SYMBOLS	LABELS	TEXT	DATA EXTENSION SEGMENTS	RESERVED SEGMENTS

SEGMENT   DPPDB STOCK NUMBER
IMAGE (FULL   CLASSIFICATION (TOP)
RESOLUTION) CLASSIFICATION (BOTTOM)
           HANDLING INSTRUCTIONS
IXSHD   DOWNGRADING
SEGMENT   INSTRUCTIONS
IMAGE   IMAGE MODEL NUMBER
COMPRESSEDIMAGE SEGMENT NUMBER
 BLOCKS
 DIRECTORY
SUPPORT DATA
 (IMAGE)
RATIONAL
  FUNCTION
  COEFFICIENTS

LEGEND

▨ NOT USED IN THIS FILE

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FIGURE 10. <u>DPPDB full resolution image file</u>.

NITF FILE HEADER	IMAGE SUBHEADER	IMAGE DATA

FIRST IMAGE BLOCK	SECOND IMAGE BLOCK	......	......	LAST IMAGE BLOCK

SOI	APP6	FRAME	EOI	SOI	FRAME	EOI	......	......	SOI	FRAME	EOI

TABLES/MISC	FRAME HEADER	SCAN

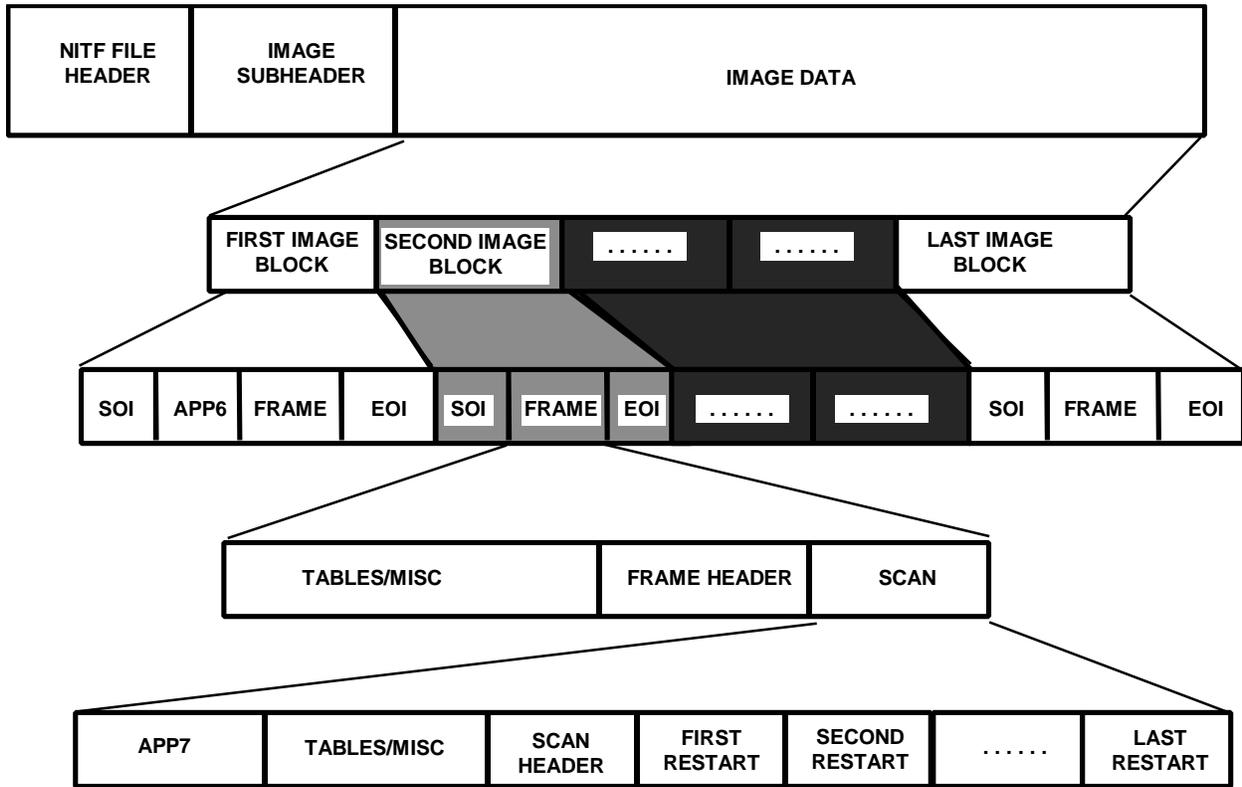| APP7	TABLES/MISC	SCAN HEADER	FIRST RESTART	SECOND RESTART	......	LAST RESTART

FIGURE 11. NITF Image data substructures.

3.9.1 Overview segment image file header. FIGURE 12 depicts the NITF file header for each overview segment image file. The fields of the overview segment image file header are detailed in TABLES 46 through 47.
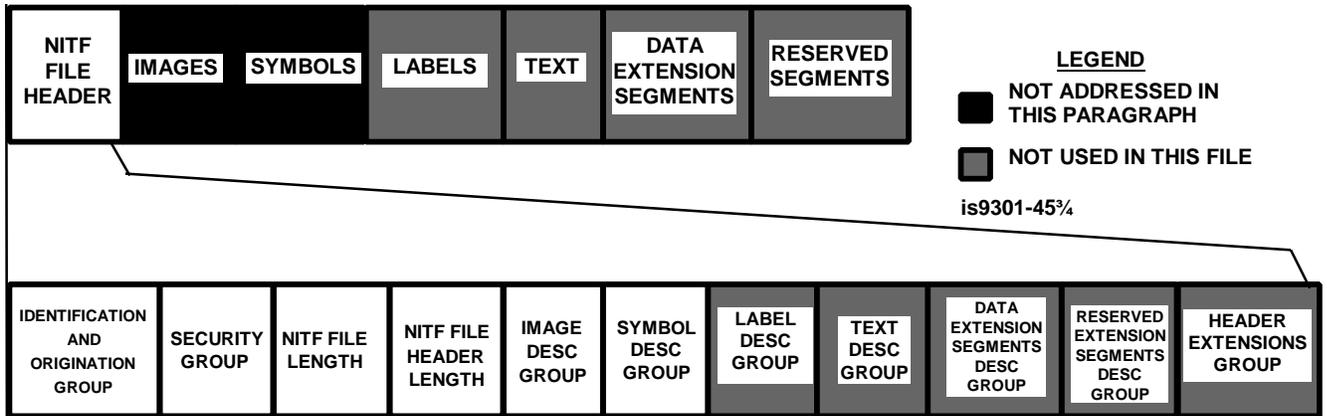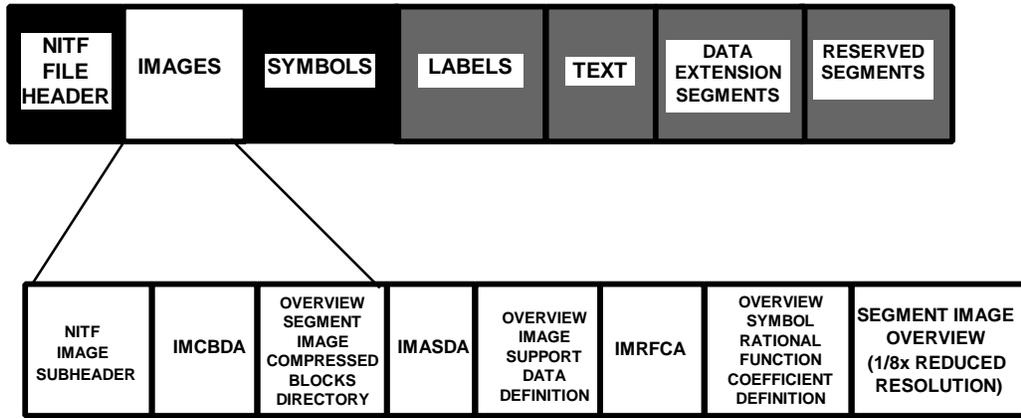
NITF FILE HEADER	IMAGES	SYMBOLS	LABELS	TEXT	DATA EXTENSION SEGMENTS	RESERVED SEGMENTS

LEGEND

■ NOT ADDRESSED IN THIS PARAGRAPH

▩ NOT USED IN THIS FILE

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IDENTIFICATION AND ORIGINATION GROUP	SECURITY GROUP	NITF FILE LENGTH	NITF FILE HEADER LENGTH	IMAGE DESC GROUP	SYMBOL DESC GROUP	LABEL DESC GROUP	TEXT DESC GROUP	DATA EXTENSION SEGMENTS DESC GROUP	RESERVED EXTENSION SEGMENTS DESC GROUP	HEADER EXTENSIONS GROUP

FIGURE 12. <u>NITF file header for each overview segment image file</u>.

3.9.2 <u>Overview segment image subheader</u>. The image subheader components in the NITF image file consist of an NITF image subheader followed by the compressed overview segment image data. The image subheader contains the controlled tagged image extended data for the segment image support data, the rational function coefficients for the segment image, and the compressed block directory for the segment image. The overview segment image is compressed using the sequential, 8-bit, DCT-based JPEG algorithm. The definition of the compression scheme is given in MIL-STD-188-198. FIGURE 13 depicts the NITF image file components. The fields of the NITF image subheader and the image extended data for the overview segment image are detailed in TABLES 48 through 53.

LEGEND

⬛ NOT ADDRESSED IN
THIS PARAGRAPH

⬛ NOT USED IN THIS FILE

NITF FILE HEADER	IMAGES	SYMBOLS	LABELS	TEXT	DATA EXTENSION SEGMENTS	RESERVED SEGMENTS

NITF IMAGE SUBHEADER	IMCBDA	OVERVIEW SEGMENT IMAGE COMPRESSED BLOCKS DIRECTORY	IMASDA	OVERVIEW IMAGE SUPPORT DATA DEFINITION	IMRFCA	OVERVIEW SYMBOL RATIONAL FUNCTION COEFFICIENT DEFINITION	SEGMENT IMAGE OVERVIEW (1/8x REDUCED RESOLUTION)

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FIGURE 13. NITF Image file components.

3.9.3 Overview image symbols subheader. The NITF symbols file component contains symbols (labels) to provide annotation for the overview image segment (see FIGURE 14). The symbols file component consists of a NITF symbols subheader for each of the following symbols: the product stock number, the classification to be displayed at the top and bottom of the image, the handling instructions for the image, the classification authority, the segment image model identifier, and the segment image identifier. The security label symbols will initially display on the top and bottom of the first (upper left) 512x512 pixels. When the imagery is roamed the symbols will scroll off the screen. An exploitation system should have the capability to display these labels on the top and bottom of the display device. The fields of these symbols subheaders are detailed in TABLES 54 through 61.
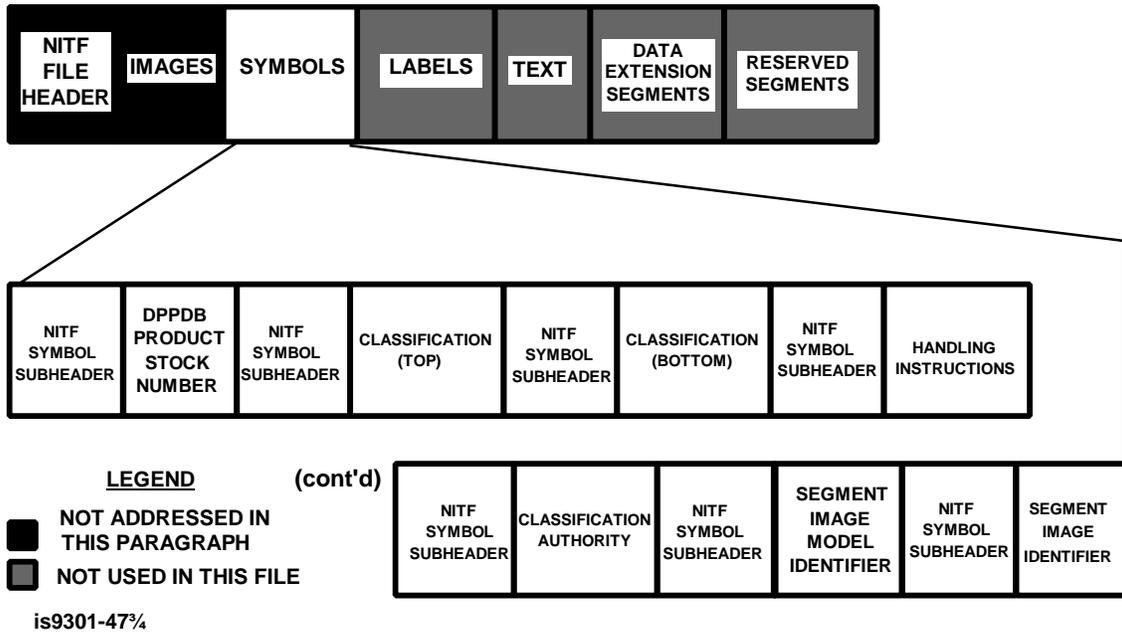
FIGURE 14. NITF symbols file components.

3.9.4 Segment image file header. FIGURE 15 depicts the NITF file header for each full resolution segment image file. The fields of the image file header are detailed in TABLES 62 through 63.
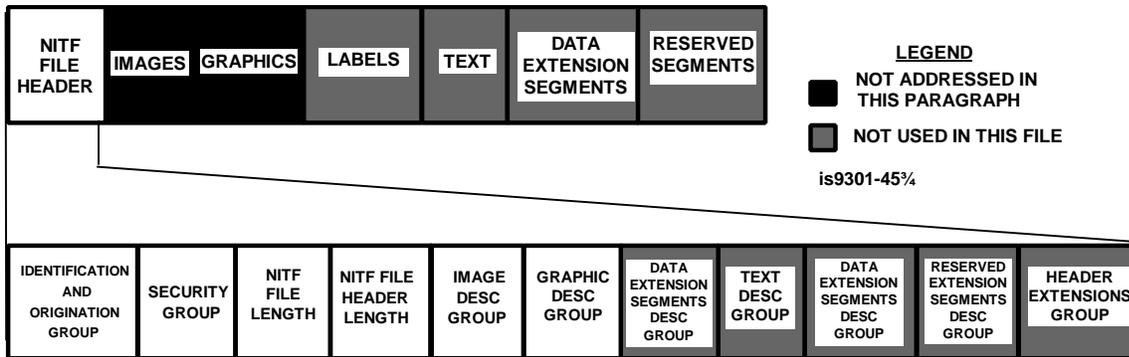

FIGURE 15. Full resolution image NITF file header components.

3.9.5 Segment image subheader. The image subheader components in the NITF image file consist of an NITF image subheader for the full resolution segment image followed by the compressed segment image data. The image subheader contains the controlled tagged image extended data for the segment image metadatasupport data, the rational function coefficients for the segment image, and the compressed block directory for the segment image. The segment image is compressed using the sequential, 8-bit, DCT-based JPEG algorithm. MIL-STD-188-198 includes the definition of the compression scheme.

FIGURE 16 depicts the NITF image file components. The fields of
the NITF image subheader and the image extended extensions for
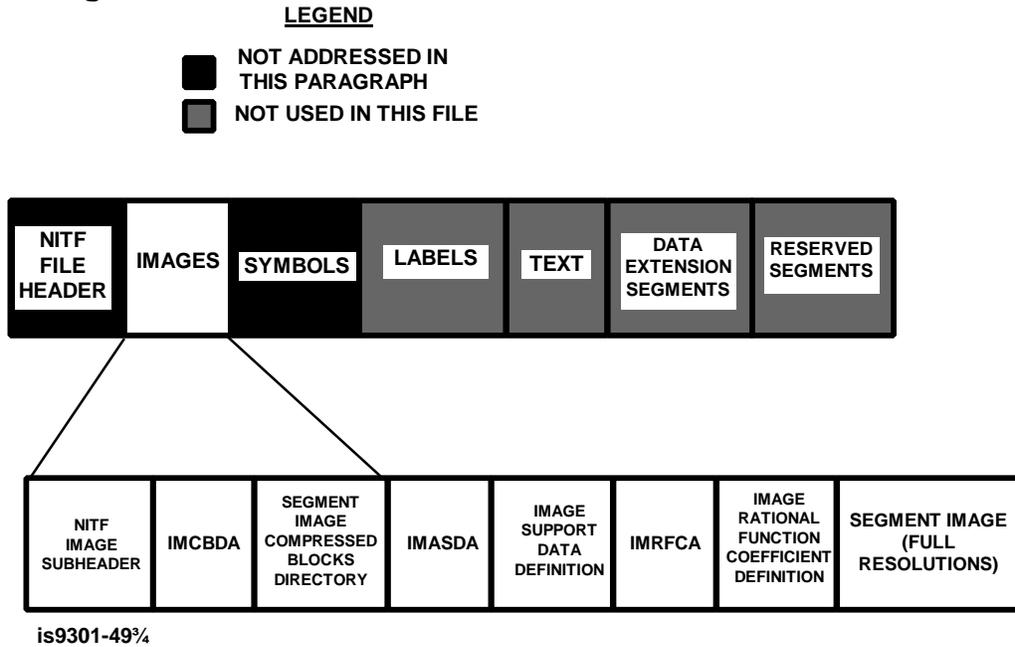the full resolution segment image are detailed in TABLES 64
through 69.

LEGEND

■ NOT ADDRESSED IN
  THIS PARAGRAPH

▣ NOT USED IN THIS FILE

NITF FILE HEADER	IMAGES	SYMBOLS	LABELS	TEXT	DATA EXTENSION SEGMENTS	RESERVED SEGMENTS

NITF IMAGE SUBHEADER	IMCBDA	SEGMENT IMAGE COMPRESSED BLOCKS DIRECTORY	IMASDA	IMAGE SUPPORT DATA DEFINITION	IMRFCA	IMAGE RATIONAL FUNCTION COEFFICIENT DEFINITION	SEGMENT IMAGE (FULL RESOLUTIONS)

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FIGURE 16. <u>Full resolution image subheader NITF file components.</u>

     3.9.6 <u>Segment image symbols subheader</u>. The NITF symbols
file component contains symbols (labels) to provide annotation
for the image (see FIGURE 17). The symbols file component
consists of a NITF symbols subheader for each of the following
symbols: the product stock number, the classification, the
handling instructions for the image, the classification
authority, the segment identifier, and the segment image
identifier. The security label symbols will initially display on
the top and bottom of the first (upper left) 512x512 pixels.
When the imagery is roamed the symbols will scroll off the
screen. An exploitation system should have the capability to
display these labels on the top and bottom of the display device.
The fields of these symbols subheaders are detailed in TABLES 70
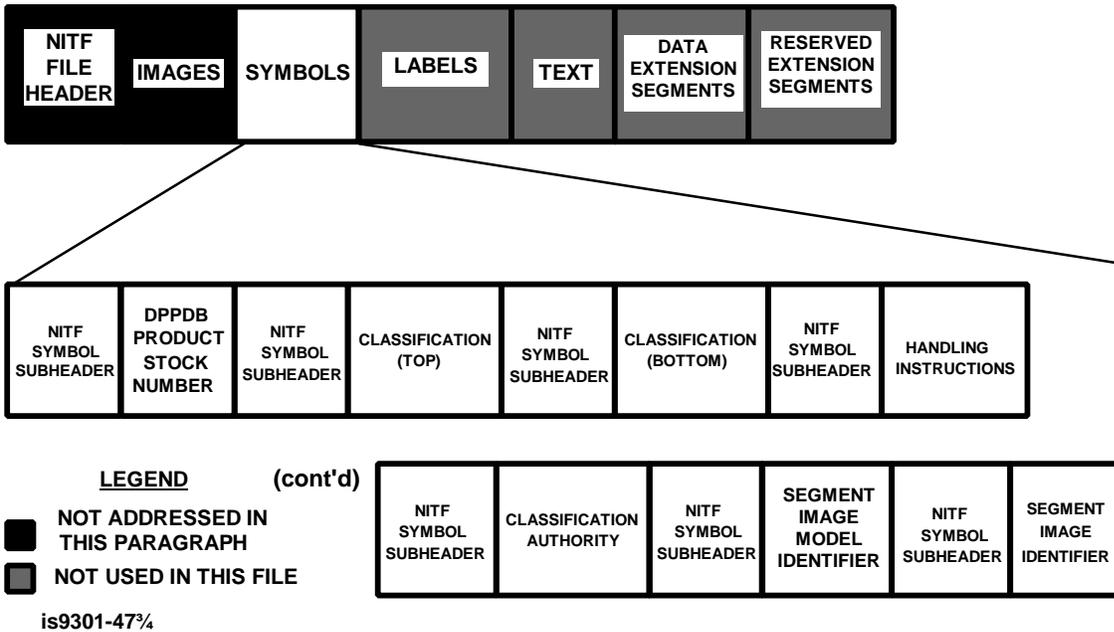through 77.

FIGURE 17. Full resolution symbols NITF file components.

3.10 <u>General packaging</u>. DPPDBs shall be distributed on both 8 mm Exabyte cassettes and Metrum 2150 cassettes. A single DPPDB product may span multiple 8 mm cassettes or 2150 cassettes. A sequential volume number shall be provided to uniquely identify product media. DPPDB products shall be distributed in a cassette case. Each DPPDB cassette case shall be labeled to indicate approximate geographic and country covered, product datum, product creation and source material dates, security caveats and releasability instructions, handling requirements, NIMA stock number, edition number and volume number. The cassette label is limited to a subset of information found on the cassette case because of size considerations. The cassette label contains product classification, releasability and handling instructions, product stock number, volume number and creation date.

3.10.1 <u>Media labeling</u>. DPPDB 8mm and 2150 cassettes and cassette cases will contain labels as presented in Figure 18 through Figure 20.
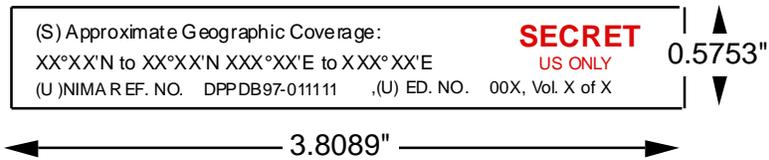
This page is UNCLASSIFIED
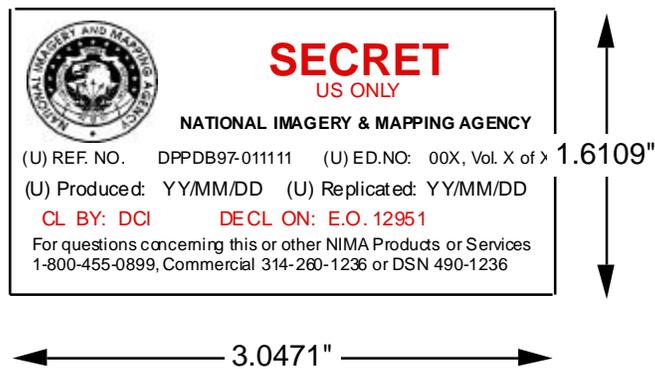
The following are UNCLASSIFIED Samples only.

SECRET
US ONLY

NATIONAL IMAGERY & MAPPING AGENCY

NIMA name, seal & initials protected by 10 U.S.C. §445

(U) Digital Point Positioning Data Base

(S) Country: XANADO   (U) Produced: YY/MM/DD
(U) Datum: WGS84
(U) Source Dates: YY/MM/DD to YY/MM/DD

7644014098765   *001*

(U) NSN: 7644014098765   (U) ED. NO. 001
(U) NIMA REF. NO.   DPPDB97-011111

2.3012"

3.8089"

Tape Case Top Label for DPPDB

FIGURE18. Label on face of cassette case.

(S) Approximate Geographic Coverage: **SECRET**
                                                US ONLY
XX°XX'N to XX°XX'N XXX°XX'E to XXX°XX'E
(U)NIMA REF. NO.   DPPDB97-011111   ,(U) ED. NO.   00X, Vol. X of X

0.5753"

3.8089"

Tape Case Side Label for DPPDB

FIGURE19. Label on end of cassette case.

SECRET
US ONLY

NATIONAL IMAGERY & MAPPING AGENCY

(U) REF. NO.   DPPDB97-011111   (U) ED.NO: 00X, Vol. X of X
(U) Produced: YY/MM/DD   (U) Replicated: YY/MM/DD
CL BY: DCI   DECL ON: E.O. 12951
For questions concerning this or other NIMA Products or Services
1-800-455-0899, Commercial 314-260-1236 or DSN 490-1236

1.6109"

3.0471"

Tape Label for DPPDB

FIGURE 20. Label on face of cassette tape.

This page is UNCLASSIFIED

3.10.2 Shipping. DPPDB may be shipped by U.S. Postal Service registered mail or U.S. Postal Service overnight express. There is no classified courier system requirement.

4. VERIFICATION

4.1 Classification of inspection.   The inspection requirements specified herein are classified as follows:

a. First article inspection (see 4.2).

b. Conformance inspection (see 4.3).

4.2 First article inspection. When a first article inspection is required (see 3.1 and 6.2), it shall be examined for defects specified in 4.3.1 and tested for NITFS compliance as specified in 4.3.2.

4.3 Conformance inspection.

4.3.1 Automated validation software testing. Digital PPDBs shall be inspected for conformance to specifications in accordance with NIMA internal quality control procedures, including the use of automated validation testing software.

4.3.2 NITFS compliance testing. The DPPDB is certified to be NITFS 2.0 compliant. The compliance testing is in accordance with DISA/JIEO Circular 9008, NITFS Certification Test and Program Plan. Certification is provided by the Joint Interoperability Test Command (JITC). Systems that make use of DPPDB products should also establish NITFS compliance certification.

4.4. Configuration Control. The DPPDB is under configuration control as mandated by ASD/C^{3}I memorandum, Executive Agent for DoD Information Standards, 3 September 1991.

5. PACKAGING

5.1 General. For acquisition purposes, the packaging requirements shall be as specified in the contract or order (see 6.2). When actual packaging of material is to be performed by DoD personnel, these personnel need to contact the responsible packaging activity to ascertain requisite packaging requirements. Packaging requirements are maintained by the Inventory Control Point's packaging activity within the Military Department or Defense Agency, or within the Military Department's Systems Command. Packaging data retrieval is available from the managing Military Department's or Defense Agency's automated packaging files, CD-ROM products, or by contracting the responsible packaging activity.

6. NOTES

(This section contains general or explanatory information that may be helpful, but is not mandatory.)

6.1 Intended use. This specification is intended to provide guidelines for the preparation and use of DPPDBs to support various weapons and mission support systems. DPPDBs are military unique because they are used for precision targeting and are a classified product.

The recommended environmental conditions for operation and storage of the DPPDB is 5-45 degrees C and 20%-80% RH. High temperature combined with high humidity may cause a deterioration in the strength of the recorded signal (magnetic remanence) over time.

6.2 Acquisition requirements. Acquisition documents must specify the following:

a. Title, number, and date of this specification.

b. Issue of DODISS to be cited in the solicitation, and if required, the specific issue of individual documents referenced (see 2.1.1 and 2.2).

c. When a first article is required (see 3.1, 4.2, and 6.3).

d. Method of packaging (see 5.1).

6.3 First article. When a first article is required, it will be inspected and approved under appropriate provisions of FAR 52.209. The contracting officer will specify the appropriate type of first article and the number of units to be furnished. The contracting officer will also include specific instructions in acquisition documents regarding arrangements for selection, inspection, and approval of the first article.

6.4 Definitions.

6.4.1 Acronyms.

ASCII	American Standard Code for Information Interchange
ANSI	American National Standards Institute
CADRG	Compressed ARC Digitized Raster Graphics
CD-ROM	Compact Disk - Read Only Memory
CE	Circular Error
CGM	Computer Graphics Metafile
DCT	Discrete Cosine Transform
DES	Data Extension Segments
DISA	Defense Information Systems Agency
DMA	Defense Mapping Agency
DoD	Department of Defense

DODISS   Department of Defense Index of Specifications and
            Standards

FIPS   Federal Information Processing Standardization
FIPSPUB   FIPS Publication

ISO   International Organization for Standardization

JIEO   Joint Interoperability and Engineering
            Organization
JOG   Joint Operations Graphic (1:250,000 scale)
JPEG   Joint Photographic Experts Group

LE   Linear Error
LUTS   Lookup Tables

MIL-HDBK   Military Handbook
MIL-PRF   Military Performance Standard (Specification)
MIL-STD   Military Standard

NIMA   National Imagery and Mapping Agency
NITF   National Imagery Transmission Format
NITFS   NITF Standard
NM   Nautical Miles
NTB   NITF Technical Board

ONC   Operational Navigation Chart (1:1,000,000 scale)

RGB   Red-Green-Blue
RPF   Raster Product Format

TPC   Tactical Pilotage Chart (1:500,000 scale)

WGS   World Geodetic System

6.4.2. <u>Absolute Accuracy</u>. The evaluation of all errors encountered in defining the position of a single feature or point on a geodetic system or point. It is the expression of the uncertainty of a point with respect to a datum (e.g., WGS-84, MSL), expressed in CE/LE at 90% probability.

6.4.3 <u>Adverse Areas</u>. Areas within the DPPDB product rectangle not covered by adequate stereo imagery (e.g., cloud covered areas).

6.4.4 <u>Black pixel</u>. A black pixel is a pixel with zero value.

6.4.5 <u>Circular Error (CE)</u>. An accuracy value representing the stated percentage of probability that any point expressed as a function of two linear components (i.e., horizontal position) will be within a given figure.

6.4.6 Compression. For the purposes of the NITFS, reduction in the number of bits used to represent source image data.

6.4.7 Datum (horizontal). A geodetic datum is uniquely defined by five quantities. Latitude (ϕ), longitude (λ), and geoid height (N) are defined at the datum origin. The adoption of specific values for the geodetic latitude and longitude implies specific deflections of the vertical at the origin. A geodetic azimuth is often cited as a datum parameter, but the azimuth and longitude are precisely related by the Laplace condition. Thus, no need exists to define both. The other two quantities define the reference ellipsoid: the semi-major axis and flattening or the semi-major axis and semi-minor axis. Datum (horizontal) is also called horizontal geodetic datum.

6.4.8 Datum (vertical). Datum (vertical) is a level surface to which elevations are referred. The elevations usually include mean sea level, but may also include mean low water, mean lower low water, or an arbitrary starting elevation(s).

6.4.9 Diagnostic Points. Previously measured ground features for each stereo segment, including the ground coordinates and image coordinates, to allow comparison at the beginning of a stereo mensuration task.

6.4.10 Distance Bins. Distance ranges for which relative accuracy values are provided on the DPPDB. Relative accuracy generally decreases as a function of distance between two points. For a DPPDB, relative accuracy is computed for five different bins. The distance units are nautical miles (NM), and the distance ranges are 0 to 1 NM, 1 to 5 NM, 5 to 15 NM, 15 to 30 NM, and > 30 NM.

6.4.11 DPPDB model. This term is another name for a segment model. A DPPDB model is comprised of the two conjugate segment images derived from the segmentation of the source image model. The images comprising a DPPDB model are stored sequentially in separate files on the DPPDB tape.

6.4.12 Ellipsoid. An ellipsoid is a surface whose plane sections (cross sections) are all ellipses or circles, or the solid enclosed by such a surface. It is used as a mathematical reference surface (datum) that best correlates to the actual shape of the earth to permit a common accurate reference of geographic position coordinates and elevations.

6.4.13 Geoid. The equipotential surface in the gravity field of the earth which coincides with the undisturbed mean sea level extended continuously through the continents. The direction of gravity is perpendicular to the geoid at every point.

6.4.14 <u>Geoid Separation</u>. The distance of the geoid above (positive) or below (negative) the mathematical referenced ellipsoid. Also called geoid height.

6.4.15 <u>Image Segment (also Segment Image)</u>. A single digital image in a DPPDB model (can be the left or the right image of the stereo model).

6.4.16 <u>Linear Error (LE)</u>. An accuracy value representing the stated percentage of probability that any point expressed as a function of one linear component (i.e., elevation) will be within the given figure.

6.4.17 <u>Map</u>. A map is a graphic representation, usually on a plane surface and at an established scale, of natural and artificial features on the surface of a part or the whole of the Earth or other planetary body. The features are positioned relative to a coordinate reference system.

6.4.18 <u>NITF ASCII</u>. A special format defined by the NITF Technical Board (NTB) to provide a common format for all NITF implementations. The format is composed of the following ASCII characters (all numbers are decimal): Line Feed (10), Form Feed (12), Carriage Return (13), and space (32) through tilde (126). This set includes all the alphanumeric characters, as well as all commonly used punctuation characters. All lines within an NITF ASCII file will be separated by carriage return/line feed pairs. NITF ASCII has no standard line length. A complete description of this format is given in MIL-STD-2500.

6.4.19 <u>Overview image</u>. A reduced magnification image of a full resolution image.

6.4.20 <u>Pixel</u>. A pixel is a picture element.

6.4.21 <u>Rectangle</u>. This term refers to the bounding rectangle in geographic coordinates defining a nominal 1° by 1° area of the surface of the earth. A rectangle is 60 x 60 NM which is larger than 1° by 1° everywhere except at the equator. Also called a product rectangle.

6.4.22 <u>Reference graphic</u>. A reference graphic is a rasterized map of the assignment area rectangle with additional map area around the rectangle at a nominal scale of 1:250,000, 1:500,000 or 1:1,000,000. The reference graphic is extracted from a CADRG CD-ROM produced by NIMA.

6.4.23 <u>Relative Accuracy (Point-To-Point)</u>. An evaluation of the random errors in determining the positional orientation of one point or feature with respect to another. Relative accuracy expresses the uncertainty of the measurement of distance between two points after all known errors common to both have been removed. Relative point-to-point accuracy is expressed in terms of circular error probable (CEP) (50%), and linear error probable

(LEP) (50%), and is always a function of distance. Note that relative accuracy is expressed at a probability of 50% while absolute accuracy is expressed at the 90% probability level.

6.4.24 Segment model. This term refers to a stereo subset of a stereo model. A stereo model is nominally portioned (segmented) into a number of segment models.

6.4.25 Shear. The difference in the absolute location of a conjugate point as determined from each of two overlapping DPPDB models. Shear is expressed in terms of latitude, longitude and height.

6.4.26 Shear Points. Previously measured ground features that are contained in the overlap area between two or more adjacent DPPDB models.

6.4.27 Stereo model. This term refers to a digital stereo image of a portion of a rectangle. There are a number of stereo models in a rectangle.

6.4.28 Stereo Pair. The left and right conjugate images which comprise a stereo image model.

6.4.29 Void Areas. An area in the DPPDB product rectangle not covered by DPPDB imagery. Void areas are covered completely by water (i.e., ocean, large lakes).

6.5 Subject term (key word) listing.

Compressed Arc Digitized Raster Graphics
Controlled Imagery
Coordinates
Digital Positioning
Imagery
Mensurated Coordinates
Navigation point
NITFS
Point Positioning
Precise Positioning
Stereo Imagery
Target Materials
WGS 84

6.6 International standardization agreements. This section is not applicable to this standard.

6.7 NIMA Customer Help Desk. For questions concerning this or other NIMA products, services, or specifications, please telephone the NIMA Customer Help Desk at 1-800-455-0899, Commercial 314-260-1236, or DSN 490-1236.

6.8 Y2K Century logic. This product contains date fields in which a year is represented by the last two digits of the

year. NIMA does not plan to update these fields to four digits.
Century logic will be required to properly interpret these dates.
FYI – The first dataset for DPPDB was produced in May 1995.

TABLE 5. Master product file header.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
FHDR	File Type & Version	9	NITF02.00	R
CLEVEL	Compliance Level	2	05	R
STYPE	System Type	4	Reserved (spaces)	O
OSTAID	Originating Station ID	10	NIMA	R
FDT	File Date & Time	14	DDHHMMSSZMONYY	R
FTITLE	File Title	80	D12345678, Master Product File	O
FSCLAS	File Security Classification	1	U, C or S	R
FSCODE	File Code Words	40	Spaces	O
FSCTLH	File Control and Handling	40	Alphanumeric	O
FSREL	File Releasing Instructions	40	Alphanumeric	O
FSCAUT	File Classification Authority	20	Alphanumeric	O
FSCTLN	File Security Control Number	20	Alphanumeric	O
FSDWNG	File Security Downgrade	6	999999 or spaces	O
FSCOP	Message Copy Number	5	00000	O
FSCPYS	Message Number of Copies	5	00000	O
ENCRYP	Encryption	1	0	R
ONAME	Originator's Name	27	NIMA	O
OPHONE	Originator's Phone Number	18	Spaces	O
FL	File Length	12	388-999999999999	R
HL	NITF File Header Length	6	388-276380	R
NUMI	Number of Images	3	000	R

TABLE 5. <u>Master product file header</u> - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
NUMS	Number of Symbols	3	006	R
LSSH001	Length of DPPDB Footprint Symbol Subheader	4	0-7000	C
LS001	Length of DPPDB Footprint Symbol	6	0-999999	C
LSSH002	Length of DPPDB Stock Number Subheader	4	0-7000	C
LS002	Length of DPPDB Stock Number Symbol	6	0-999999	C
LSSH003	Length of Classification Symbol (top of display) Subheader	4	0-7000	C
LS003	Length of Classification (top of display) Symbol	6	0-999999	C
LSSH004	Length of Classification Symbol (bottom of display) Subheader	4	0-7000	C
LS004	Length of Classification (bottom of display) Symbol	6	0-999999	C
LSSH005	Length of Handling Instructions Symbol Subheader	4	0-7000	C
LS005	Length of Handling Instructions Symbol	6	0-999999	C
LSSH006	Length of Classification Authority and Downgrading Instructions Symbol Subheader	4	0-7000	C
LS006	Length of Classification Authority and Downgrading Instructions Symbol	6	0-999999	C
NUML	Number of Labels	3	000	R
NUMT	Number of Text Files	3	009	R
LTSH001	Length of the DPPDB Footprint Vectors Text Subheader	4	0-2000	C

TABLE 5. Master product file header – Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
LT001	Length of Text File	5	0-99999	C
LTSH002	Length of the Segment IDs and the Associated Footprint Vectors Text Subheader	4	0-2000	C
LT002	Length of Text File	5	0-99999	C
LTSH003	Length of the Product Accuracy Limitations Text Subheader	4	0-2000	C
LT003	Length of Text File	5	0-99999	C
LTSH004	Length of the Product Adverse Areas Text Subheader	4	0-2000	C
LT004	Length of Text File	5	0-99999	C
LTSH005	Length of the Product Void Areas Text Subheader	4	0-2000	C
LT005	Length of Text File	5	0-99999	C
LTSH006	Length of the Product Accuracy Evaluation (absolute) Text Subheader	4	0-2000	C
LT006	Length of Text File	5	0-99999	C
LTSH007	Length of the Product Accuracy Evaluation (relative) Text Subheader	4	0-2000	C
LT007	Length of Text File	5	0-99999	C
LTSH008	Length of Product Accuracy Evaluation (shear) Text Subheader	4	0-2000	C
LT08	Length of Text File	5	0-99999	C
LTSH009	Length of General Product Info Text Subheader	4	0-2000	C
LT09	Length of Text File	5	0-99999	C
NUMDES	Number of Data Extension Segments	3	001	R
LDSH001	Length of Data Extension Segment Subheader	4	0-9999	C
LD001	Length of Data Extension Segment Data Field	9	0-999999999	C

TABLE 5. Master product file header - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
NUMRES	Number of Reserved Extension Segments	3	000	R
UDHDL	User-defined Header Data Length	5	00000	R
XHDL	Extended Header Data Length	5	00000-99999	R
XHDOFL	Extended Header Data Overflow Status	3	001	R
CETAG	Unique Extension Type Identifier	6	MSDIRA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Master product directory	R
CETAG	Unique Extension Type Identifier	6	PRADAA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Product Accuracy Data (Absolute)	R
CETAG	Unique Extension Type Identifier	6	PRADRA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Product Accuracy Data (Relative)	R
CETAG	Unique Extension Type Identifier	6	RGRDRA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Reference Graphic Directory	R

* As indicated in CEL field.

TABLE 6. <u>Master product file header field definition</u>.

FIELD	DEFINITION
FHDR	An NITF ASCII character string of the form NITF02.00, which indicates this file is formatted using version 2.0 of the NITF Standard.
CLEVEL	This field shall contain the compliance level 05 and indicates the NITF system compliance level required to interpret fully all components of this file. The certification requirements are established in JIEO Circular 9008, NITFS Certification Test and Evaluation Program Plan.
STYPE	System type or capability. This field is reserved for future use by the NITF standard and shall be filled with spaces (NITF ASCII 32, decimal).
OSTAID	This field shall contain the identification code of the originating station.
FDT	This field shall contain the time (Zulu) of origination of the file in the format DDHHMMSSZMONYY where DD is the day of the month (01-31), HH is the hour, (00-23), MM is the minute (00-59), SS is the second (00-59), the character Z is required, MON is the first three characters of the month; and YY is the last two digits of the year.
FTITLE	This field shall contain the title of the NITF file.
FSCLAS	This field shall contain a valid value representing the classification level of the entire file. Valid values are: S (=Secret), C (=Confidential), and U (=Unclassified).
FSCODE	This field shall contain all spaces to indicate that there are no security compartments associated with the file.
FSCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON: E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply to the file.
FSREL	This field shall contain a valid list of countries and/or groups of countries to which the file is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.

TABLE 6. <u>Master product file header field definition</u>
<u>- Continued.</u>

FIELD	DEFINITION
FSCAUT	This field shall contain a valid identity code of the classification authority for the file. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply that no file classification authority applies.
FSCTLN	This field shall contain a valid security control number associated with the file. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply that no file classification authority applies.
FSDWNG	This field shall contain a valid indicator designating the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
FSCOP	This field shall contain the copy number of the file.
FSCPYS	This field shall contain the total number of copies of the file.
ENCRYP	This field shall contain the value zero (0).
ONAME	This field shall contain a valid name for the organization that originated the file.
OPHONE	This field, if not all spaces, shall contain a valid phone number for the operator who originated the file. If the field is all spaces, it shall mean that no phone number is available for the operator assigned responsibility for origination.
FL	This field shall contain the length in bytes of the entire DPPDB master product file including all headers, subheaders, and data. The value of this field never shall be zero.
HL	This field shall contain a valid length in bytes of the NITF file header. The value of this field never shall be zero.
NUMI	This field shall contain the number zero (0) to indicate that no image is included in the file.

TABLE 6. Master product file header field definition
– Continued.

FIELD	DEFINITION
NUMS	This field shall contain the number six (6) to indicate there are six (6) symbols defined in the file.
LSSH001	This field shall contain a valid length in bytes for the subheader of the symbol in the file; i.e., the DPPDB Footprint Symbol.
LS001	This field shall contain a valid length in bytes for the first symbol.
LSSH002	This field shall contain a valid length in bytes for the subheader of the symbol in the file; i.e., the DPPDB stock number.
LS002	This field shall contain a valid length in bytes for the second symbol.
LSSH003	This field shall contain a valid length in bytes for the subheader of the symbol in the file; i.e., the classification at the top of the display.
LS003	This field shall contain a valid length in bytes for the third symbol.
LSSH004	This field shall contain a valid length in bytes for the subheader of the symbol in the file; i.e., the classification at the bottom of the display.
LS004	This field shall contain a valid length in bytes for the fourth symbol.
LSSH005	This field shall contain a valid length in bytes for the subheader of the symbol in the file; i.e., the handling instructions at the bottom of the display.
LS005	This field shall contain a valid length in bytes for the fifth symbol.
LSSH006	This field shall contain a valid length in bytes for the subheader of the symbol in the file; i.e., the downgrading instructions.
LS006	This field shall contain a valid length in bytes for the sixth symbol.
NUML	This field shall contain the number zero (0) to indicate there are no labels included in the file.
NUMT	This field shall contain the number nine (9) to indicate the number of text items included in the file.
LTSH001	This field shall contain a valid length in bytes for the subheader of the first text item in the file; i.e., the DPPDB footprint vectors.
LT001	This field shall contain a valid length in bytes for the first text item.
LTSH002	This field shall contain a valid length in bytes for the subheader of the second text item in the file; i.e., the segment IDs and the associated footprint vectors defined for the DPPDB footprint.
LT002	This field shall contain a valid length in bytes for the first text item.

TABLE 6. Master product file header field definition
          - Continued.

FIELD	DEFINITION
LTSH003	This field shall contain a valid length in bytes for the first subheader of the third text item in the file; i.e., product accuracy limitations.
LT003	This field shall contain a valid length in bytes for the third text item.
LTSH004	This field shall contain a valid length in bytes for the subheader of the fourth text item in the field i.e., product adverse areas.
LT004	This field shall contain a valid length in bytes for the fourth text item.
LTSH005	This field shall contain a valid length in bytes for the subheader of the fifth text item in the file; i.e., product void areas.
LT005	This field shall contain a valid length in bytes for the fifth text item.
LTSH006	This field shall contain a valid length in bytes for the subheader of the sixth text item in the file; i.e., product accuracy evaluation (absolute).
LT006	This field shall contain a valid length in bytes for the sixth text item.
LTSH007	This field shall contain a valid length in bytes for the subheader of the seventh text item in the file; i.e., product accuracy evaluation (relative).
LT007	This field shall contain a valid length in bytes for the seventh text item.
LTSH008	This field shall contain a valid length in bytes for the subheader of the eighth text item in the file; i.e., product accuracy evaluation (shear).
LT008	This field shall contain a valid length in bytes for the eighth text item.
LTSH009	This field shall contain a valid length in bytes for the subheader of the ninth text item in the file; i.e., product general information.
LT009	This field shall contain a valid length in bytes for the ninth text item.
NUMDES	This field shall contain the value 1 to indicate 1 Data Extension Segment is included in the file.
LDSH001	This field shall contain a valid length in bytes of the subheader for overflow of the user defined header data contained in the file.
LD001	This field shall contain a valid length in bytes of the subheader for overflow of the user defined header data.

TABLE 6.   Master product file header field definition
           - Continued.

FIELD	DEFINITION
NUMRES	This field shall be zero since there are no reserved extension segments defined.
UDHDL	This field shall contain the value of zero since there are no registered tagged record extensions included in this file.
XHDL	This field shall contain a valid length in bytes of the entire XHD field. The length is (3) plus the sum of the lengths of all the controlled tagged record extensions appearing in the XHD field, since they are not separated from one another.
XHDOFL	This field shall be 001 to indicate that the extended header data overflows into the first DES.
	NOTE: THE FOLLOWING THREE FIELD DEFINITIONS APPLY TO EACH OF THE XHDs DEFINED IN THE MASTER PRODUCT FILE HEADER CONTROLLED TAGGED RECORD EXTENSIONS.
CETAG	This field shall contain a valid alphanumeric identifier properly controlled with the NTB.
CEL	This field shall contain the length in bytes of the data contained in CEDATA. The Tagged record's length is 11+ CEL.
CEDATA	This field shall contain data of either binary or character data types defined by and formatted according to user specifications.

TABLE 7. Master product directory definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
PRODID	Product ID	9	D12345678	R
PRODVOL	Product Volume	2	1-99	R
PRODTOTVOLS	Product Total Volume	2	1-99	R
NUMIMFILE	Number of Image Files	3	001-999	R
NOTE: EACH OF THE FOLLOWING FIELDS IS REPEATED NUMIMFILE TIMES FOR EACH IMAGE FILE.				
> SEGIMGID	Segment Image ID	6	1234XY	R
> LONCNTCRD	Longitude Continuous Coordinate System Designator	3	180 or 360	R
> DIMGEOGLO	Display Image Geographic Location	84	ddmmss.hhXdddmmss.hhY (four times)	R
> NBRVERT	Number of Vertices for Segment Image	2	4-12	R
> SIMGEOGLO	Segment Image Geographic Location	21	ddmmss.hhXdddmmss.hhY	C
> VOLNBR	Volume Number	2	1-99	R
> FLOC	File Location	3	2-999	R
> FLEN	File Length	10	388-9999999999	R

TABLE 8. Master product directory fields.

FIELD	DEFINITION
PRODID	This field shall contain the DPPDB product ID contained on the subsequent media volume.
PRODVOL	This field shall contain the volume number of this media. A DPPDB product is made up of 1-N volumes sequentially numbered.
PRODTOTVOLS	This field shall contain the total number of volumes required for this DPPDB product.
NUMIMFILE	This field shall contain the total number of image files contained on this product.
	NOTE: EACH OF THE FOLLOWING FIELDS IS REPEATED NUMIMFILE TIMES FOR EACH IMAGE FILE.
> SEGIMGID	This field shall contain the segment image ID of the segment image contained in the file and shall be a six-digit alphanumeric of the form 1234XY; where 12 is the stereo model number, 34 is the stereo segment number within the model, X is either L (=Left) or R (=Right) stereo image, and Y is either the O (=Overview) or F (=Full resolution) to identify the type of image.

TABLE 8. Master product directory fields - Continued.

FIELD	DEFINITION
> LONCNTCRD	This field shall contain the longitude continuous coordinate system designator and shall be 180 for a product built in the ±180 degree longitude system or 360 for a product built in the 0 to 360 degree longitude system.
> DIMGEOGL	This field shall contain the valid geographic locations, in terms of corner locations, of the display image containing the segment image. The locations of the four corners of the image data shall be given in image coordinate order: (0,0), (0,MaxCol), (MaxRow, MaxCol), and (MaxRow,0). MaxCol and MaxRow shall be determined from the values contained, respectively, in NCOLS and NROWS as MaxCol = NCOLS - 1 and MaxRow = NROWS - 1. Valid corner locations in geodetic coordinates shall be expressed as latitude and longitude. The format ddmmss.hhX represents degrees, minutes, seconds, and hundredths of second of latitude with X = N or S for north or south, and dddmmss.hhY represents degrees, minutes, seconds, and hundredths of second of longitude with Y=E or W for east or west, respectively.
> NBRVERT	This field shall contain the number of vertices defining the segment image.
> SIMGEOGL	This field shall contain the valid geographic locations, in terms of segment image vertices locations, of the segment image within the display image. The locations of the vertices of the (significant) image data shall be given in image coordinate order beginning at (0,0) and proceeding clockwise within the display image. Valid segment image vertices locations in geodetic coordinates shall be expressed as latitude and longitude. The format ddmmss.hhX represents degrees, minutes, seconds, and hundredths of second of latitude with X = N or S for north or south, and dddmmss.hhY represents degrees, minutes, seconds, and hundredths of second of longitude with Y = E or W for east or west, respectively.
> VOLNBR	This field shall contain the volume number in which the segment image is contained.
> FLOC	This field shall contain the file offset from the beginning of the volume for this segment image file.
> FLEN	This field shall contain the file length for this segment image file.

TABLE 9. Product accuracy data (absolute) definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
PACE	DPPDB Absolute CE (90%)	F8.2	0-100.00 meters	R
PALE	DPPDB Absolute LE (90%)	F8.2	0-100.00 meters	R
PSDCE	DPPDB Support Data CE (90%)	F8.2	0-100.00 meters	R
PSDLE	DPPDB Support Data LE (90%)	F8.2	0-100.00 meters	R
PMCE	DPPDB Mensuration (1 pixel) CE (90%)	F8.2	0-100.00 meters	R
PMLE	DPPDB Mensuration (1 pixel) LE (90%)	F8.2	0-100.00 meters	R

TABLE 10. Product accuracy data (relative) definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
PRCE0-1	DPPDB Relative CEP (0-1 nm) (50%)	F8.2	0-100.00 meters	R
PRLE0-1	DPPDB Relative LEP (0-1 nm) (50%)	F8.2	0-100.00 meters	R
PRCE1-5	DPPDB Relative CEP (1-5 nm) (50%)	F8.2	0-100.00 meters	R
PRLE1-5	DPPDB Relative LEP (1-5 nm) (50%)	F8.2	0-100.00 meters	R
PRCE5-15	DPPDB Relative CEP (5-15 nm) (50%)	F8.2	0-100.00 meters	R
PRLE5-15	DPPDB Relative LEP (5-15 nm) (50%)	F8.2	0-100.00 meters	R
PRCE15-30	DPPDB Relative CEP (15-30 nm) (50%)	F8.2	0-100.00 meters	R
PRLE15-30	DPPDB Relative LEP (15-30 nm) (50%)	F8.2	0-100.00 meters	R
PRCE>30	DPPDB Relative CEP (> 30 nm) (50%)	F8.2	0-100.00 meters	R
PRLE>30	DPPDB Relative LEP (> 30 nm) (50%)	F8.2	0-100.00 meters	R

TABLE 11. <u>Reference graphic directory</u>.

FIELD	Name	SIZE	VALUE RANGE	TYPE
NUMBR	Number of boundary rectangles in image section	A2	1-2	R
NOTE: THE FOLLOWING FIELDS THROUGH NUMFRMS ARE REPEATED NUMBR TIMES FOR EACH BOUNDARY RECTANGLE.				
> BRSEQ	Boundary rectangle sequence number	A2	1-2	R
> PROD	Product type*	A5	CADRG	R
> COMP	Compression ratio of frame files associated with this boundary rectangle*	A5	nnn:1	R
> SCALE	Nominal scale of frames in frame files associated with this boundary rectangle*	A12	Alphanumeric	R
> ZONE	Zone of frames associated with this boundary rectangle*	A1	1-9 A-H, J	R
> NWLAT	Northwest/upper left corner latitude	A10	ddmmss.hhX	R
> NWLON	Northwest/upper left corner longitude	A11	dddmmmsss.hhY	R
> SWLAT	Southwest/lower left corner latitude	A10	ddmmss.hhX	R
> SWLON	Southwest/lower left corner longitude	A11	dddmmss.hhY	R
> NELAT	Northeast/upper right corner latitude	A10	ddmmss.hhX	R
> NELON	Northeast/upper right corner longitude	A11	dddmmss.hhY	R
> SELAT	Southeast/lower right corner latitude	A10	ddmmss.hhX	R
> SELON	Southeast/lower right corner longitude	A11	dddmmss.hhY	R
> NSRES	Pixel scale in north-south direction (nominal)*	F8.2	XXXXX.YY meters	R
> EWRES	Pixel scale in east-west direction (nominal)*	F8.2	XXXXX.YY	R
> LATINT	Latitude interval*	F10.7	XX.YYYYYYY decimal degrees	R
> LONINT	Longitude interval*	f10.7	XX.YYYYYYY decimal degrees	R

*- values extracted from CADRG TOC Boundary Rectangle Record

Table 11. Reference graphic directory - Continued.

FIELD	Name	SIZE	VALUE RANGE	TYPE
> NSFRAM	Number of frames in north-south direction	I4	1-9999	R
> EWFRAM	Number of frames in east-west direction	I4	1-9999	R
> NUMFRMS	Number of frames in this boundary rectangle	I4	1-9999	R
NOTE: THE FOLLOWING FIELDS THROUGH GEOLOC ARE REPEATED NUMFRMS TIMES FOR EACH FRAME WITHIN EACH BOUNDARY RECTANGLE.				
>> FRMLOC	Offset number of NITF file that contain the frame data	2	2-99	R
>> FRMLEN	Length of frame file	10	1-9999999999	R
>> FRMROW	Frame row number within boundary rectangle	I4	1-9999	R
>> FRMCOL	Frame column number within boundary rectangle	I4	1-9999	R
>> FRMNAM	Frame name	A12	ascii	R
>> GEOLOC	Frame SW corner geographic coordinates	A6	ascii	R
NOTE: THE FIELD AGNUMFRMS OCCURS ONLY ONCE.				
AGNUMFRMS	Aggregate number of frames	I4	1-9999	R
NOTE: THE FOLLOWING FIELDS ARE REPEATED AGNUMFRMS TIMES FOR EACH NON-EMPTY FRAME.				
> AGBRSEQ	Boundary rectangle sequence number	I1	1-2	R
> AGFRMLOC	Offset number of NITF file that contains the frame data.	2	2-99	R
> AGFRMLEN	Length of frame in bytes	10	1-9999999999	R
> AGFRMROW	Row number of frame within boundary rectangle	I4	1-9999	R
> AGFRMCOL	Column number of frame within boundary rectangle	I4	1-9999	R
> AGFRMNAM	Frame name	A12	ascii	R
> AGGEOLOC	Geographic frame location*	A6	ascii	R

*-extracted from TOC Frame File Index Record

TABLE 12. Reference graphic directory data definition.

FIELD	DEFINITION
NUMBR	This field shall contain the number of boundary rectangles in the reference graphic directory. Each boundary rectangle defines the periphery of a geographic area containing all possible frames that have a given data type, compression ratio, latitudinal zone and scale.
NOTE: THE FOLLOWING FIELDS THROUGH NUMFRMS ARE REPEATED NUMBR TIMES FOR EACH BOUNDARY RECTANGLE.	
> BRSEQ	This field shall contain the sequential number of this boundary rectangle.
> PROD	This field shall contain the value CADRG because each frame in the reference graphic shall be CADRG. The character string is encoded as specified in MIL-TSD_2411-1, section 5.1.10.
> COMP	This field shall contain the nominal compression ratio for all frames in the boundary rectangle. The compression ratio shall be nnn:1, for example 55:1, 10:1, 12:1, etc.
> SCALE	This field shall contain the nominal scale of all frames in the boundary rectangle. The scale is encoded as specified in MIL-STD-241-1, section 5.1.10, identifying the nominal product scale, i.e. 1:1M, 1:12.5K
> ZONE	This field shall contain the zone of all frames in the boundary rectangle. The zone is encoded as specifies in MIL-STD-2411-1 section 5.1.3.
> NWLAT	This field shall contain the northwest corner latitude of the boundary rectangle. The format ddmmss.hhX represents dd degrees, mm minutes, ss seconds, hh decimal seconds of latitude with X = N or S.
> NWLON	This field shall contain the northwest corner longitude of the boundary rectangle. The format dddmmss.hhX represents ddd degrees, mm minutes, ss seconds, hh decimal seconds of latitude with X = E or W.
> SWLAT	This field shall contain the southwest corner latitude of the boundary rectangle. The format ddmmss.hhX represents dd degrees, mm minutes, ss seconds, hh decimal seconds of latitude with X = N or S.

TABLE 12.   Reference graphic directory data definition
- Continued.

FIELD	DEFINITION
> SWLON	This field shall contain the southwest corner longitude of the boundary rectangle. The format dddmmss.hhX represents ddd degrees, mm minutes, ss seconds, hh decimal seconds of latitude with X = E or W.
> NELAT	This field shall contain the northeast corner latitude of the boundary rectangle. The format ddmmss.hhX represents dd degrees, mm minutes, ss seconds and hh decimal seconds with X = N or S.
> NELON	This field shall contain the northeast corner longitude of the boundary rectangle. The format dddmmss.hhX represents ddd degrees, mm minutes ss seconds and hh decimal seconds with X = E or W
> SELAT	This field shall contain the southeast corner latitude of the boundary rectangle. The format ddmmss.hhX represents dd minutes, mm minutes, ss seconds and hh decimal seconds with X = N or S.
> SELON	This field shall contain the southeast corner longitude of the boundary rectangle. The format dddmmss.hhX represents ddd degrees, mm minutes, ss seconds and hh decimal seconds with X = E or W.
> NSRES	This field shall contain the resolution in the north-south or vertical direction for all output pixels in the frames associated with this boundary rectangle, measured in meters
> EWRES	This field shall contain the resolution in the east-west or vertical direction for all output pixels in the frames associated with this boundary rectangle, measured in meters
> LATINT	This field shall contain the latitude or vertical interval between adjacent decompressed pixels in the frames in this boundary rectangle, measured in decimal degrees.
> LONINT	This field shall contain the longitude or horizontal interval between adjacent decompressed pixels in the frames in this boundary rectangle, measured in decimal degrees.
> NSFRAM	This field shall contain the number of frames in the north-south or up-down direction comprising the virtual geographic matrix of frames that are contained within this boundary rectangle.

TABLE 12. Reference graphic directory data definition
– Continued.

FIELD	DEFINITION
> EWFRAM	This field shall contain the number of frames in the east-west or left-right direction comprising the virtual geographic matrix of frames that are contained within this boundary rectangle.
> NUMFRMS	This frame shall contain the total number of frames that comprise this boundary rectangle.
NOTE: THE FOLLOWING FIELDS THROUGH GEOLOC ARE REPEATED NUMFRMS TIMES FOR EACH FRAME WITHIN EACH BOUNDARY RECTANGLE.	
>> FRMLOC	This field shall contain the offset for this frame within the frame file data set from the beginning of the tape expressed in number of files. The value of the field can be from the second file to the last frame file on the tape. In the event that the frame does not exist the value zero (0) will be substituted for the frame location.
>> FRMLEN	This field shall contain the length of the frame file in bytes. In the event the frame does not exist the value zero (0) will be substituted
>> FRMROW	This field shall contain the row number of this frame within the bounding rectangle. Row 0 is in the southwest corner of the boundary rectangle and increases in the north or vertical direction
>> FRMCOL	This field shall contain the column of this frame within the boundary rectangle. Column 0 is the southwest corner of the boundary rectangle.
>> FRMNAM	This field shall contain the name of this frame. The frame file name shall be encoded as defined in MIL-STD-2411 section 4.5.4.4. In the event that the frame does not exist the word EMPTY will be substituted for the frame name.

Table 12. <u>Reference graphic directory data definition</u>
- Continued.

FIELD	DEFINITION
>> GEOLOC	This field shall contain the frame sw corner geographic coordinate. The geographic location is encoded as specified in DMA TM 8358.1, section 5-4.
NOTE: THE FIELD AGNUMFRMS OCCURS ONLY ONCE.	
AGNUMFRMS	This field shall contain the total number of frames that comprise the Reference Graphic. This value shall represent the number of frame files on the DPPDB tape. Any frame areas that are empty will not be included in this frame count.
NOTE: THE FOLLOWING FIELDS ARE REPEATED AGNUMFRMS TIMES FOR EACH NON-EMPTY FRAME.	
> AGBRSEQ	This field shall contain the boundary rectangle sequence number to which this frame belongs.
> AGFRMLOC	This field shall contain the offset for this frame within the frame file data set from the beginning of the tape expressed in number of files.
> AGFRMLEN	This field shall contain the length of this frame file in bytes
> AGFRMROW	This field shall contain the row number for this frame. Row 0 is referenced to the southwest corner of the boundary rectangle.
> AGFRMCOL	This field shall contain the Column number for this frame Column 0 is referenced to the southwest corner of the boundary rectangle.
> AGFRMNAM	This field shall contain the name of this frame. The name is encoded as described in MIL-STD-2411 paragraph 4.5.4.4.
> AGGEOLOC	This field shall contain the geographic location of the southwest corner of this frame. The geographic location is encoded as specified in DMA TM 8358.1, section 5-4

TABLE 13. <u>Master product DPPDB footprint symbol file subheader.</u>

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0002REF	R
SNAME	Symbol Name	20	DPPDB Footprint	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Alphanumeric	O
SSREL	Symbol Releasing Instructions	40	Alphanumeric	O
SSCAUT	Symbol Classification Authority	20	Alphanumeric	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0000	R
NPIXPL	Number of Pixels Per Line	4	0000	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	100	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 14. Master product stock number label symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0003REF	R
SNAME	Symbol Name	20	DPPDB Stock Number	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0000	R
NPIXPL	Number of Pixels Per Line	4	0000	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	200	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 15.   Master product classification (top display) label
symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0004REF	R
SNAME	Symbol Name	20	Class-Top Image	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0000	R
NPIXPL	Number of Pixels Per Line	4	0000	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	300	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 16. Master product classification (bottom display)
label symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0005REF	R
SNAME	Symbol Name	20	Class-Bottom Image	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0000	R
NPIXPL	Number of Pixels Per Line	4	0000	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	400	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 17. Master product handling instructions label symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0006REF	R
SNAME	Symbol Name	20	Handling Instruct	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0000	R
NPIXPL	Number of Pixels Per Line	4	0000	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	500	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 18.   Master product classification authority and
downgrade instructions label symbol file
subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0007REF	R
SNAME	Symbol Name	20	Class Auth	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0000	R
NPIXPL	Number of Pixels Per Line	4	0000	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	600	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 19. Master product symbol file subheader fields definition.

FIELD	DEFINITION
SY	This field shall contain the characters SY to identify the subheader as a symbol subheader.
SID	This field shall contain a valid alphanumeric number identifier in the format 1234REF, where: 1234 is the number identifying the item in this file and REF indicates the item is contained in the Master Product file.
SNAME	This field shall contain the alphanumeric name for the symbol.
SSCLAS	This field shall contain a valid value of U (= Unclassified) representing the classification level of the symbol.
SSCODE	This field shall contain all spaces to indicate that no codewords apply to this symbol.
SSCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON: E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply to the file.
SSREL	This field shall contain a valid list of countries and/or groups of countries to which the file is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.
SSCAUT	This field shall contain a valid identity code of the classification authority for the file. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply no file classification authority applies.
SSCTLN	This field shall contain all spaces to indicate that no symbol security control number applies.

TABLE 19. Master product symbol file subheader fields
definition - Continued.

FIELD	DEFINITION
SSDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
ENCRYP	This field shall contain the value zero (0) to indicate the file is not encrypted.
STYPE	This field shall contain the letter C to indicate the symbol is defined in a Computer Graphics Metafile (CGM). The CGM format for the NITFS is defined in MIL-STD-2301.
NLIPS	This field shall contain zero (0).
NPIXPL	This field shall contain zero (0).
NWDTH	This field shall contain zero (0).
NBPP	This field shall contain zero (0).
SDLVL	This field shall contain a valid value that indicates the graphic display level of the symbol relative to other displayed file components in a composite display. The valid values are 001 to 999.
SALVL	This field shall contain a value of zero (0) to indicate these textual symbols are unattached.
SLOC	The location of a symbol is specified by specifying the location of a point bearing a particular relationship to the symbol. The point is defined in MIL-STD-2301. Therefore, this field shall contain zero (0).
SLOC2	This field shall contain zero (0).
SCOLOR	This field shall contain a space character.
SNUM	This field shall contain zero (0).
SROT	This field shall contain zero (0).
NELUT	This field shall contain zero (0).
SXSHDL	This field shall contain the value zero (0). A value of zero (0) shall mean that no controlled tagged record extensions are included in the image subheader.

TABLE 20.   Master product footprint vectors text file
subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0008REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product footprint vectors text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: Product footprint vectors NITF ASCII free-form text
follows immediately after the subheader. This text describes
the product vector footprint (geographic coordinates).

TABLE 21.   Master product segment image IDs and footprint
vectors text file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0009REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product segment image IDs and vectors text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O

TABLE 21.   Master product segment image IDs and footprint
vectors text file subheader - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: Product segment image IDs and vectors NITF ASCII text
follows immediately after the subheader.

TABLE 22.   Master product accuracy limitations text file
subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0010REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product accuracy limitations text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O

TABLE 22. Master product accuracy limitations text file subheader - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: Product accuracy limitation NITF ASCII free-form text follows immediately after the subheader.

TABLE 23. Master product adverse areas text file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0011REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product adverse areas text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: DPPDB product adverse areas NITF ASCII free-form text follows immediately after the subheader.

TABLE 24. Master product void areas text file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0012REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product void areas text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: Product void areas NITF ASCII free-form text follows immediately after the subheader.

TABLE 25. Master product accuracy evaluation (absolute) text file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0013REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product accuracy evaluation (absolute) text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O

TABLE 25. Master product accuracy evaluation (absolute)
text file subheader - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: Product accuracy evaluation (absolute) NITF ASCII free-form text follows immediately after the subheader.

TABLE 26. Master product accuracy evaluation (relative)
text file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0014REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product accuracy evaluation (relative) text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: Product accuracy evaluation (relative) NITF ASCII free-form text follows immediately after the subheader.

TABLE 27. <u>Master product accuracy evaluation (shear)
text file subheader</u>.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0015REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product accuracy evaluation (shear) text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: DPPDB product to product shear in NITF ASCII follows
immediately after the subheader.

TABLE 28. Master product general information text file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
TE	Message Part Type	2	TE	R
TEXTID	Text ID	10	0016REF	R
TXTDT	Text Date & Time	14	DDHHMMSSZMONYY	R
TXTITL	Text Title	80	Product general information text	O
TSCLAS	Text Security Classification	1	U, C or S	R
TSCODE	Text Codewords	40	Alphanumeric	O
TSCTLH	Text Control and Handling	40	Alphanumeric	O
TSREL	Text Releasing Instructions	40	Alphanumeric	O
TSCAUT	Text Classification Authority	20	Alphanumeric	O
TSCTLN	Text Security Control Number	20	Alphanumeric	O
TSDWNG	Text Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
TXTFMT	Text Format	3	STA	R
TXSHDL	Extended Subheader Data Length	5	00000	R

Note: DPPDB Product general information in NITF ASCII follows immediately after the subheader.

TABLE 29. Master product text files subheader fields.

FIELD	DEFINITION
TE	This field shall contain the characters TE to identify the subheader as a text subheader.
TEXTID	This field shall contain a valid alphanumeric number identifier in the format 1234REF, where: 1234 is the number identifying the item in this file and REF indicates the item is contained in the Master Product file.
TXTDT	This field shall contain the time (Zulu) of origination of the text in the format DDHHMMSSZMONYY where DD is the day of the month (01-31), HH is the hour, (00-23), MM is the minute (00-59), SS is the second (00-59), the character Z is required, MON is the first three characters of the month, and YY is the last two digits of the year.
TXTITL	This field shall contain the title of the text item.
TSCLAS	This field shall contain a valid value representing the classification level of the text item. Valid values are: S (=Secret) C (=Confidential) and U (= Unclassified).
TSCODE	This field shall contain all spaces to indicator that there are no security compartments associated with the text item.
TSCTLH	This field shall contain valid security handling instructions associated with the text item. A valid value is "CL BY:DCI, DECL ON:E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply.
TSREL	This field shall contain a valid list of countries and/or groups of countries to which the text item is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.

TABLE 29.   Master product text files subheader fields
– Continued.

FIELD	DEFINITION
TSCAUT	This field shall contain a valid identity code of the classification authority for the text item. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply that no label classification authority applies.
TSCTLN	This field shall contain a valid security control number associated with the text item. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply that no text security control number applies.
TSDWNG	This field shall contain a valid indicator designating the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no security downgrade condition applies to this symbol.
ENCRYP	This field shall contain the value zero (0) to indicate the file is not encrypted.
TXTFMT	This field shall contain a valid three character code of STA to indicate NITF ASCII is the format to be used to display/print the text.
TXSHDL	This field shall contain the value of zero (0) to indicate that no controlled tagged record extensions are included in the image subheader.

TABLE 30. Data extension subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
DE	File Part Type	2	DE	R
DESTAG	Unique DES type identifier	25	Controlled Extensions	R
DESVER	Version of the data field definition	2	01	R
DESCLAS	File Security Classification	1	U, C or S	R
DESCODE	File Code words	40	Spaces	O
DESCTLH	File Control and Handling	40	Alphanumeric	O
DESREL	File Releasing Instructions	40	Alphanumeric	O
DESCAUT	File Classification Authority	20	Alphanumeric	O
DESCTLN	File Security Control Number	20	Alphanumeric	O
DESDWNG	File Security Downgrade	6	999999 or spaces	O
DESOFLW	Overflowed type	6	XHD	C
DESITEM	Data Item Overflow	3	000	C
DESSHL	Length of user-defined subheader fields	4	0000	R
CETAG	Unique Extension Type Identifier	6	SISDDA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Stereo Image Segment Data	R
NOTE: THE CONTROLLED TAG SEGSPA IS REPEATED FOR EVERY SEGMENT MODEL ON THE PRODUCT.				
CETAG	Unique Extension Type Identifier	6	SEGSPA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Stereo Image Segment Shear Point Data	R
CETAG	Unique Extension Type Identifier	6	SSDPDA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Stereo Image Segment Diagnostic Point Data	R
NOTE: THE CONTROLLED TAG PTPRAA IS REPEATED FOR EVERY SEGMENT MODEL ON THE PRODUCT.				
CETAG	Unique Extension Type Identifier	6	PTPRAA	R
CEL	Length of CEDATA Field	5	1-99999	R
CEDATA	User-defined Data	*	Segment to Segment Relative Accuracy Data	R

TABLE 30. Data extension subheader – Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
CETAG	Unique Extension Type Identifier	6	PPRSDA	R
CEL	Length of CEDATA Field	5	1–99999	R
CEDATA	User-defined Data	*	Product Accuracy (shear) Data	R
CETAG	Unique Extension Type Identifier	6	PSUPDA	R
CEL	Length of CEDATA Field	5	1–99999	R
CEDATA	User-defined Data	*	Product Support Data	R

Note: Segment model data, shear point data, diagnostic point data, segment to segment relative accuracy data, product accuracy (shear) data, and product support data follows immediately after subheader. The stereo image segment shear point data is repeated for each segment on the product. The segment to segment relative accuracy data is repeated for each segment on the product.

TABLE 31. Data extension subheader fields.

FIELD	DEFINITION
DE	This field shall contain "DE" to identify the subheader as a data extension.
DESTAG	This field shall contain "Controlled Extensions" to indicate that controlled extensions overflow into this data extension segment.
DESVER	This field shall contain the alphanumeric version number of the use of the tag. The version number is assigned by the NTB as part of the registration process.
DESCLAS	This field shall contain a valid value representing the classification level of the entire file. Valid values are: S (=Secret) C (=Confidential) and U (=Unclassified).
DESCODE	This field shall contain all spaces to indicate that there are no security compartments associated with the file.
DESCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON: E.O.12951". If this field is all spaces, it shall imply no file control and handling instructions apply to the file.
DESREL	This field shall contain a valid list of countries and/or groups of countries to which the file is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.

TABLE 31. Data Extension subheader fields - Continued.

FIELD	DEFINITION
DESCAUT	This field shall contain a valid identity code of the classification authority for the file. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply no file classification authority applies.
DESCTLN	This field shall contain a valid security control number associated with the file. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply no file classification authority applies.
DESDWNG	This field shall contain a valid indicator designating the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E. O. 12951. If this field is all spaces, it shall imply no file security downgrade condition applies.
DESOFLW	This field contains XHD to indicate the tagged record extension contained in the segment would have appeared within the XHD field of the NITF header, but there was insufficient space there.
DESITEM	This field is zero (0) since DESOFLW is XHD.
DESSHL	This field is zero (0) since DESTAG is a controlled extension that has no additional subheader fields.
NOTE: THE FIELDS CETAG, CEL, AND CEDATA ARE REPEATED FOR EACH CONTROLLED TAG. THE CONTROLLED TAGS SEGSPA AND PTPRAA ARE REPEATED FOR EACH SEGMENT MODEL ON THE PRODUCT.	
CETAG	This field shall contain a valid alphanumeric identifier properly controlled with the NTB.
CEL	This field shall contain the length in bytes of the data contained in CEDATA. The Tagged record's length is 11+ CEL.
CEDATA	This field shall contain data of either binary or character data types defined by and formatted according to user specifications.

TABLE 32. Segment model data definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
NOTE: ALL FIELDS IN TABLE 32 ARE REPEATED FOR EACH SEGMENT MODEL.				
> SISEGID	Segment Model ID	A4	1234	R
> SNACE	Segment Absolute CE (90%)	F8.2	0-100.00 meters	R
> SNALE	Segment Absolute LE (90%)	F8.2	0-100.00 meters	R
> SNMCE	Segment Mensuration (1 pixel) CE (90%)	F8.2	0-100.00 meters	R
> SNMLE	Segment Mensuration (1 pixel) LE (90%)	F8.2	0-100.00 meters	R
> EXACERF	Exceeds Absolute CE Rqmt Flag	A1	Alphanumeric (Y/N)	R
> EXALERF	Exceeds Absolute LE Rqmt Flag	A1	Alphanumeric (Y/N)	R
> SNRCE0-1	Segment Relative CEP (0-1 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE0-1	Segment Relative LEP (0-1 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE1-5	Segment Relative CEP (1-5 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE1-5	Segment Relative LEP (1-5 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE5-15	Segment Relative CEP (5-15 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE5-15	Segment Relative LEP (5-15 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE15-30	Segment Relative CEP (15-30 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE15-30	Segment Relative LEP (15-30 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE>30	Segment Relative CEP (> 30 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE>30	Segment Relative LEP (> 30 nm) (50%)	F8.2	0-100.00 meters	R
> EXRCE0-1	Exceeds Relative CEP (0-1 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE0-1	Exceeds Relative LEP (0-1 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R

TABLE 32. Segment model data definition - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
> EXRCE1-5	Exceeds Relative CEP (1-5 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE1-5	Exceeds Relative LEP (1-5 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRCE5-15	Exceeds Relative CEP (5-15 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE5-15	Exceeds Relative LEP (5-15 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRCE15-30	Exceeds Relative CEP (15-30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE15-30	Exceeds Relative LEP (15-30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRCE>30	Exceeds Relative CEP (> 30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE>30	Exceeds Relative LEP (> 30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R

NOTE: A relative accuracy value of zero indicates that data points did not exist during the creation of the DPPDB to calculate the relative accuracy. It does not indicate an error of zero.

TABLE 33. Segment model data field definition.

FIELD	DEFINITION
NOTE: ALL FIELDS IN TABLE 33 ARE REPEATED FOR EACH SEGMENT MODEL.	
SISEGID	The 12 represents the model number and 34 represents the segment model number within the model.

TABLE 34. Segment model shear point data definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
SISEGID	Segment Model ID	I4	1234	R
NBRSP	Number of Shear Points	I2	0-20	R
NOTE: THE FIELDS LATSS, LONSS, ELVSS, NBRASS, ASSID, LATASS, LONASS, ELVASS, LATSHR, LONSHR, AND ELVSHR ARE REPEATED NBRSP TIMES FOR EACH SHEAR POINT.				
> LATSS	Latitude for Stereo Segment	A10	ddmmss.hhX	C
> LONSS	Longitude for Stereo Segment	A11	dddmmss.hhY	C
> ELVSS	Elevation for Stereo Segment	F9.2	±10000.00 meters	C
> NBRASS	Number of Adjacent Stereo Segments	I1	1-3	C
NOTE: THE FIELDS ASSID, LATASS, LONASS, ELVASS, LATSHR, LONSHR, AND ELVSHR ARE REPEATED NBRASS TIMES FOR EACH ADJACENT STEREO SEGMENT TO THIS SHEAR POINT.				
>> ASSID	Adjacent Stereo Segment ID	I4	1234	C
>> LATASS	Latitude for Adjacent Stereo Segment	A10	ddmmss.hhX	C
>> LONASS	Longitude for Adjacent Stereo Segment	A11	dddmmss.hhY	C
>> ELVASS	Elevation for Adjacent Stereo Segment	F9.2	±10000.00 meters	C
>> LATSHR	Latitude Shear	F8.2	±100.00 meters	C
>> LONSHR	Longitude Shear	F8.2	±100.00 meters	C
>> ELVSHR	Elevation Shear	F8.2	±100.00 meters	C

TABLE 35. <u>Segment model shear point data fields</u>.

FIELD	DEFINITION
SISEGID	The 12 represents the model number and 34 represents the segment model number within the model.
NBRSP	This field contains the number of shear points contained within the segment model (SISEGID).
NOTE: THE FIELDS LATSS, LONSS, ELVSS, NBRASS, ASSID, LATASS, LONASS, ELVASS, LATSHR, LONSHR, AND ELVSHR ARE REPEATED NBRSP TIMES FOR EACH SHEAR POINT.	
> LATSS	The format ddmmss.hhX represents degrees, minutes, seconds, and hundredths of seconds of latitude with X = N or S for north or south, respectively.
> LONSS	The format dddmmssY represents degrees, minutes, seconds, and hundredths of seconds of longitude with Y = E or W for east or west, respectively.
> ELVSS	The elevation of the shear point in meters.
> NBRASS	This field contains the number of adjacent stereo segments for this shear point.
NOTE: THE FIELDS ASSID, LATASS, LONASS, ELVASS, LATSHR, LONSHR, AND ELVSHR ARE REPEATED NBRASS TIMES FOR EACH ADJACENT STEREO SEGMENT TO THIS SHEAR POINT.	
>> ASSID	The 12 represents the model number and 34 represents the segment model number for the adjacent stereo segment.
>> LATASS	The format ddmmss.hhX represents degrees, minutes, seconds, and hundredths of seconds of latitude with X = N or S for north or south, respectively.
>> LONASS	The format dddmmssY represents degrees, minutes, seconds, and hundredths of seconds of longitude with Y = E or W for east or west, respectively.
>> ELVSS	The elevation of the shear point in the adjacent stereo equipment in meters.
>> LATSHR	This field contains the latitude shear between the two points.
>> LONSHR	This field contains the longitude shear between the two points.
>> ELVSHR	This field contains the elevation shear between the two points.

TABLE 36. <u>Segment model diagnostic point data definition.</u>

FIELD	NAME	SIZE	VALUE RANGE	TYPE
NOTE: FIELDS SISEGID and NBRDP REPEAT FOR EACH SEGMENT MODEL.				
> SISEGID	Segment Model ID	A4	1234	R
> NBRDP	Number of Diagnostic Points	I2	0-99	R
NOTE: FIELDS LATDP, LONDP, ELVDP, XICLDP, YICLDP, XICRDP, AND YICRDP REPEAT NBRDP TIMES AS A GROUP FOR EACH DIAGNOSTIC POINT.				
>> LATDP	Latitude of Diagnostic Point	A10	ddmmss.hhX	C
>> LONDP	Longitude of Diagnostic Point	A11	dddmmss.hhY	C
>> ELVDP	Elevation of Diagnostic Point	F9.2	±10000.00 meters	C
>> XICLDP	X Image Coordinate of Left Image Segment	F11.2	±100000.00 pixels	C
>> YICLDP	Y Image Coordinate of Left Image Segment	F11.2	±100000.00 pixels	C
>> XICRDP	X Image Coordinate of Right Image Segment	F11.2	±100000.00 pixels	C
>> YICRDP	Y Image Coordinate of Right Image Segment	F11.2	±100000.00 pixels	C

TABLE 37. <u>Segment model diagnostic point data field definition</u>.

FIELD	DEFINITION
NOTE: FIELDS SISEGID and NBRDP REPEAT FOR EACH SEGMENT MODEL.	
> SISEGID	The 12 represents the model number and 34 represents the segment model number within the model.
> NBRDP	This field shall contain the number of diagnostic points in this segment model.
NOTE: FIELDS LATDP, LONDP, ELVDP, XICLDP, YICLDP, XICRDP, and YICRDP REPEAT NBRDP TIMES AS A GROUP FOR EACH DIAGNOSTIC POINT.	
> LATDP	The format ddmmss.hhX represents degrees, minutes, seconds, and hundredths of seconds of latitude with X = N or S for north or south, respectively.
> LONDP	The format dddmmssY represents degrees, minutes, seconds, and hundredths of seconds of longitude with Y = E or W for east or west, respectively.

TABLE 38. Segment to segment relative accuracy data definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
SISEGID	Segment Model ID	A4	1234	R
SNACE	Segment Absolute CE (90%)	F8.2	0-100.00 meters	R
SNALE	Segment Absolute LE (90%)	F8.2	0-100.00 meters	R
SNMCE	Segment Mensuration (1 pixel) CE (90%)	F8.2	0-100.00 meters	R
SNMLE	Segment Mensuration (1 pixel) LE (90%)	F8.2	0-100.00 meters	R
EXACERF	Exceeds Absolute CE Rqmt Flag. Y means the accuracy of this DPPDB data exceeds the accuracy requirement for its intended use.	A1	Alphanumeric (Y/N)	R
EXALERF	Exceeds Absolute LE Rqmt Flag. Y means the accuracy of this DPPDB data exceeds the accuracy requirement for its intended use.	A1	Alphanumeric (Y/N)	R
NBRSEG	Number of remaining segments relative accuracy	I3	0-999	R
NOTE: THE FOLLOWING FIELDS ARE REPEATED NBRSEG TIMES AS A GROUP FOR EACH REMAINING SEGMENT.				
> RASEGID	Stereo image segment ID	A4	1234	R
> SNRCE0-1	Segment Relative CEP (0-1 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE0-1	Segment Relative LEP (0-1 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE1-5	Segment Relative CEP (1-5 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE1-5	Segment Relative LEP (1-5 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE5-15	Segment Relative CEP (5-15 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE5-15	Segment Relative LEP (5-15 nm) (50%)	F8.2	0-100.00 meters	R

TABLE 38. <u>Segment to segment relative accuracy data definition</u> - Continued.

> SNRCE15-30	Segment Relative CEP (15-30 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE15-30	Segment Relative LEP (15-30 nm) (50%)	F8.2	0-100.00 meters	R
> SNRCE>30	Segment Relative CEP (> 30 nm) (50%)	F8.2	0-100.00 meters	R
> SNRLE>30	Segment Relative LEP (> 30 nm) (50%)	F8.2	0-100.00 meters	R
> EXRCE0-1	Exceeds Relative CEP (0-1 nm) Requirement Flag. Y means the accuracy of this DPPDB data exceeds the accuracy requirement for its intended use.	A1	Alphanumeric (Y/N)	R
> EXRLE0-1	Exceeds Relative LEP (0-1 nm) Requirement Flag. Y means the accuracy of this DPPDB data exceeds the accuracy requirement for its intended use.	A1	Alphanumeric (Y/N)	R

TABLE 38. <u>Segment to segment relative accuracy data definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
> EXRCE1-5	Exceeds Relative CEP (1-5 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE1-5	Exceeds Relative LEP (1-5 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRCE5-15	Exceeds Relative CEP (5-15 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE5-15	Exceeds Relative LEP (5-15 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRCE15-30	Exceeds Relative CEP (15-30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE15-30	Exceeds Relative LEP (15-30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRCE>30	Exceeds Relative CEP (> 30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R
> EXRLE>30	Exceeds Relative LEP (> 30 nm) Requirement Flag	A1	Alphanumeric (Y/N)	R

NOTE: A relative accuracy value of zero indicates that data points did not exist during the creation of the DPPDB to calculate the relative accuracy. It does not indicate an error of zero.

TABLE 39. Segment to segment relative accuracy data field
definition.

FIELD	DEFINITION
SISEGID	The 12 represents the model number and 34 represents the segment model number within the model. NOTE: The fields describe the relative image accuracy. The relative accuracy is repeated for SISEGID to all other segment models in the DPPDB including itself.
NBRSEG	This field is the remaining segment models to be reported. For the first group, this field equals the total number of segment models. It is decremented by 1 for each succeeding group
RASEGID	This field represents the segment model that the SISEGID segment is being compared with to get the relative accuracy being reported. The 12 represents the model number and 34 the stereo segment number within the model.
EXACERF EXALERF EXRCE0-1 EXRLE0-1 EXRCE1-5 EXRLE1-5 EXRCE5-15 EXRLE5-15 EXRCE15-30 EXRLE15-30 EXRCE>30 EXRLE>30	The fields which are requirement flags for the accuracy circular and linear error, provide an immediate assessment of the DPPDB's match to the accuracies required by the intended targeting system. Y means the accuracy values are better than the accuracies required. N means the accuracies are not sufficient for the capabilities of the intended targeting system. This information is derived from classified annex.

Table 40. Product accuracy (shear) data definition

FIELD	NAME	Format	VALUE RANGE	TYPE
PRODID	Product ID	A9	D12345678	R
NBRPSP	Number of product shear points	I3	0-450	R
NOTE: THE FOLLOWING FIELDS ARE REPEATED NBRPSP TIMES AS A GROUP FOR EACH PRODUCT SHEAR POINT.				
> LATPSP	Latitude for point	A10	ddmmss.hhX	C
> LONGPSP	Longitude for point	A11	dddmmss.hhX	C
> ELEVPSP	Elevation for point	F9.2	+/- 10000.00 m	C
> NBRAPR	Number of adjacent products	I1	1-3	C
NOTE: THE FOLLOWING FIELDS ARE REPEATED NBRAPR TIMES AS A GROUP FOR EACH ADJACENT DPPDB PRODUCT.				
>> APROID	Adjacent product ID	A9	D12345678	C
>> ALATPSP	Latitude for adjacent point	A10	ddmmss.hhX	C
>> ALONGPSP	Longitude for adjacent point	A11	dddmmss.hhX	C
>> AELEVPSP	Elevation for adjacent point	F9.2	+/- 10000.00 m	C
>> LATSHR	Latitude shear	F8.2	+/- 100.00 m	C
>> LONGSHR	Longitude shear	F8.2	+/- 100.00 meters	C
>> ELEVSHR	Elevation shear	F8.2	+/- 100.00 meters	C

TABLE 41. Product accuracy (shear) data fields

FIELD	DEFINITION
PRODID	This field shall contain the DPPDB product ID.
NBRPSP	This field shall contain the number of shear points for this product (PRODID).
NOTE: THE FOLLOWING FIELDS ARE REPEATED NBRPSP TIMES AS A GROUP FOR EACH PRODUCT SHEAR POINT.	
> LATPSP	This field shall contain the latitude of the shear point as ddmmss.hhX, degrees, minutes, and seconds; X= N(orth) or S(outh).
> LONGPSP	This field shall contain the longitude of the shear point as dddmmss.hhX, degrees, minutes, and seconds; X= E(ast) or W(est).
> ELEVPSP	This field shall contain the elevation of the shear point in meters.
> NBRAPR	This field shall contain the number of adjacent DPPDB products.

TABLE 41. <u>Product accuracy (shear) data fields</u> - Continued.

FIELD	DEFINITION
NOTE: THE FOLLOWING FIELDS ARE REPEATED NBRAPR TIMES AS A GROUP FOR EACH ADJACENT DPPDB PRODUCT.	
>> APROID	This field shall contain the DPPDB product ID of the adjacent DPPDB.
>> ALATPSP	This field shall contain the latitude of the shear point as ddmmss.hhX, and is as previously defined
>> ALONGPSP	This field shall contain the longitude of the shear point as dddmmss.hhX, and is as previously defined
>> AELEVPSP	This field shall contain the elevation of the shear point in meters
>> LATSHR (1)	This field shall contain the shear between the latitude points
>> LONGSHR (1)	This field shall contain the shear between the longitude points
>> ELEVSHR (1)	This field shall contain the shear between the elevation points

NOTES: (1) See classified annex for product shear quality.

TABLE 42. <u>Product support data definition</u>.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
HDS	Horiz. Datum Specifier	A16	WGS 84	R
VDS	Vertical Datum Specifier	A16	WGS 84	R
NBRGSP	Number of Geoid Separation Points	I3	16-117	R
NOTE: THE FIELDS LATGS, LONGS, AND GEOSEP ARE REPEATED NBRGSP TIMES AS A GROUP FOR EACH GEOID SEPARATION POINT.				
> LATGS	Latitude of Geoid Separation	A10	ddmmss.hhX	C
> LONGS	Longitude of Geoid Separation	A11	dddmmss.hhY	C
> GEOSEP	Geoid Separation	F7.1	±1000.0 meters	C

TABLE 43. Product support data field definition.

FIELD	DEFINITION
HDS	This field shall contain WGS 84 indicating the horizontal datum used.
VDS	This field shall contain WGS 84 indicating the vertical datum used.
NBRGSP	This field shall contain the number of geoid separation points defined for the rectangle. The geoid separation points form a rectangular grid. The first grid point is the southwest corner of the grid. The points are then ordered west to east, and then south to north. The last grid point is the northeast corner of the grid. The fields LATGS and LONGS contain a valid geographic location of a geoid separation point.
NOTE: THE FIELDS LATGS, LONGS, AND GEOSEP ARE REPEATED NBRGSP TIMES AS A GROUP FOR EACH GEOID SEPARATION POINT.	
> LATGS	The format ddmmss.hhX represents degrees, minutes, seconds, and hundredths of seconds of latitude with X = N or S for north or south, respectively.
> LONGS	The format dddmmss.hhY represents degrees, minutes, seconds, and hundredths of seconds of longitude with Y=E or W for east or west, respectively.
> GEOSEP	The field shall contain the geoid separation for the geoid separation point.

TABLE 44. APP$_6$ application data segment.

Offset	Field Value	Field Name	Length (by)	Comments
0	oxFFE6	APP$_6$	2	NITF application data marker
2	25	L$_p$	2	Segment length (2+length of application data)
4	0x4E49 ox5446 0x00	Identifier	5	Zero terminated string; "NITF"
9	0x0200	Version	2	Version number. Current version is 2.0

11	0-x42	IMODE	1	Image Format. Three values are defined:
				   'B' - IMODE=B
				   'P' - IMODE=P
				   'S' - IMODE=S

12	1-9999	H	2	Number of image blocks per row
14	1-9999	V	2	Number of image blocks per column

16	0	Image Color	1	Original image color representation:
				   0 - monochrome
				   1 - RGB

17	8	Image Bits	1	Original image sample precision
18	0	Image Class	1	Image data class: 0 - general purpose

TABLE 44. APP$_6$ application data segment - Continued.

Offset	Field Value	Field Name	Length (by)	Comments
19	1	JPEG Process	1	JPEG coding process: 1 - Baseline sequential DCT, Huffman coding, 8-bit sample precision 2 - extended sequential DCT, Huffman coding, 12-bit sample precision
20	0	Quality	1	Image default quantization tables used. Values 1-5 select a specific table. The value 0 indicates no defaults and all quantization tables must be present in the JPEG stream

21	0	Stream Color	1	Compressed color representation
				    0 - monochrome
				    1 - RGB
				    2 - YCbCr601

22	8	Stream Bits	1	Compressed image sample precision
23	1	Horizontal Filtering	1	This field specifies the filtering used: 1 - Centered samples
24	1	Vertical Filtering	1	This field specifies the filtering used: 1 - Centered samples
25	0	Flags	2	Reserved for future use

TABLE 45. NITF APP$_7$ directory segments.

Offset	Field Value	Field Name	length (by)	Comments
0	oxFFE$_7$	APP$_7$	2	NITF directory segment marker
2	4N+5	L$_p$	2	Segment length (2+length of application data). N must be less than 65536.
4	ox52	directory type	1	'R' for restart interval directory
5		N	2	Number of directory entries. Note 0 is not allowed. Maximum value of N(16382) maximizes L$_p$ at 65533
7		1st Offset	4	Offset to first element in this directory (restart interval)
11		2nd offset	4	Offset to second element in this directory
4N+3		Last offset	4	Offset to last element in directory

TABLE 46. Overview segment image file header definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
FHDR	File Type & Version	9	NITF02.00	R
CLEVEL	Compliance Level	2	02-06	R
STYPE	System Type	4	Spaces	O
OSTAID	Originating Station ID	10	NIMA	R
FDT	File Date & Time	14	DDHHMMSSZMONYY	R
FTITLE	File Title	80	DPPDB Overview Segment Image 1234XY	O
FSCLAS	File Security Classification	1	U, C or S	R
FSCODE	File Codewords	40	Spaces	O
FSCTLH	File Control and Handling	40	Alphanumeric	O
FSREL	File Releasing Instructions	40	Alphanumeric	O
FSCAUT	File Classification Authority	20	Alphanumeric	O
FSCTLN	File Security Control #	20	Alphanumeric	O
FSDWNG	File Security Downgrade	6	999999 or spaces	O
FSCOP	Message Copy Number	5	00000	O
FSCPYS	Message Number of Copies	5	00000	O
ENCRYP	Encryption	1	0	R
ONAME	Originator's Name	27	NIMA	O
OPHONE	Originator's Phone Number	18	Spaces	O
FL	File Length	12	388-999999999999	R
HL	NITF File Header Length	6	388-276380	R
NUMI	Number of Images	3	001	R
LISH001	Length of segment image overview, image overview, Image Subheader	6	0-111000	C
LI001	Length of segment image overview	10	0-9999999999	C
NUMS	Number of Symbols	3	007	R
LSSH001	Length of segment image, Image Subheader	4	0-7000	C
LS001	Length of DPPDB stock number text Symbol	6	0-999999	C
LSSH002	Length of classification (top display) text Symbol Subheader	4	0-7000	C
LS002	Length of classification text Symbol	6	0-999999	C
LSSH003	Length of classification (bottom display) text Symbol Subheader	4	0-7000	C

TABLE 46. Overview segment image file header definition
- Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
LS003	Length of classification text Symbol	6	0-999999	C
LSSH004	Length of handling instructions text Symbol Subheader	4	0-7000	C
LS004	Length of handling instructions text label Symbol	6	0-999999	C
LSSH005	Length of classification authority and downgrading instructions text Symbol Subheader	4	0-7000	C
LS005	Length of classification authority and downgrading instructions text Symbol	6	0-999999	C
LSSH006	Length of model ID text Symbol Subheader	4	0-7000	C
LS006	Length of model ID text Symbol	6	0-999999	C
LSSH007	Length of image number Symbol Subheader	4	0-7000	C
LS007	Length of image number text label Symbol	6	0-999999	C
NUML	Number of Labels	3	000	R
NUMT	Number of Text Files	3	000	R
NUMDES	Number of Data Extension Segments	3	000	R
NUMRES	Number of Reserved Extension Segments	3	000	R
UDHDL	User-Defined Header Data Length	5	00000	R
XHDL	Extended Header Data Length	5	00000	R

* As indicated in REL field.

TABLE 47. Overview segment image file header fields.

FIELD	DEFINITION
FHDR	An NITF ASCII character string of the form NITF 02.00, which indicates this file is formatted using version 2.0 of the NITF standard.
CLEVEL	This field shall contain a compliance level from 02 to 06 and indicates the NITF system compliance level required to interpret fully all components of this file. The certification requirements are established in JIEO Circular 9008, NITFS Certification Test and Evaluation Program Plan and are based on the size of the image.
STYPE	System type or capability. This field is reserved for future use by the NITF standard and shall be filled with spaces (NITF ASCII 32, decimal).
OSTAID	This field shall contain the identification code of the originating station.
FDT	This field shall contain the time (Zulu) of origination of the file in the format DDHHMMSSZMONYY where DD is the day of the month (01-31), HH is the hour, (00-23), MM is the minute (00-59), SS is the second (00-59), the character Z is required, MON is the first three characters of the month; and YY is the last two digits of the year.
FTITLE	This field shall contain the title of the NITF file. The title shall contain the segment image ID contained in the file and shall be a six-digit alphanumeric of the form 1234XY; where 12 is the stereo model number, 34 is the stereo segment number within the model, X is either the L (=Left) or R (=Right) stereo image, and Y is either O (=Overview) or F (=Full resolution) to identify the type of image. Stereo models shall be numbered consecutively, beginning with the northwest corner of the DPPDB area. The numbering shall then be continued from west to east and north to south for each stereo model in the DPPDB rectangle coverage. Each stereo model is divided into smaller stereo segments and these segments are then numbered consecutively, beginning with one on the west side of each model.
FSCLAS	This field shall contain a valid value representing the classification level of the entire file. Valid values are: S (=Secret) C (=Confidential) and U (=Unclassified).
FSCODE	This field shall contain all spaces to indicate that no codewords apply to the file.
FSCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON:E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply to the file.

TABLE 47. Overview segment image file header fields - Continued.

FIELD	DEFINITION
FSREL	This field shall contain a valid list of countries and/or groups of countries to which the file is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.
FSCAUT	This field shall contain a valid identity code of the classification authority for the file. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply no file classification authority applies.
FSCTLN	This field shall contain a valid security control number associated with the file. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply no file classification authority applies.
FSDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
FSCOP	This field shall contain the copy number of the file.
FSCPYS	This field shall contain the total number of copies of the file.
ENCRYP	This field shall contain the value zero (0) to indicate the file is not encrypted.
ONAME	This field shall contain a valid name for the organization that originated the file.
OPHONE	This field, if not all spaces, shall contain a valid phone number for the operator who originated the file. If the field is all spaces, it shall mean that no phone number is available for the operator assigned responsibility for origination.
FL	This field shall contain the length in bytes of the entire DPPDB overview or full resolution segment image file including all headers, subheaders, and data. The value of this field never shall be zero (0).
HL	This field shall contain a valid length in bytes of the NITF file header. The value of this field never shall be zero (0).

TABLE 47. Overview segment image file header fields -
Continued.

FIELD	DEFINITION
NUMI	This field shall contain the number one (1) to indicate a single image in the file, either an overview segment image or full resolution segment image.
LISH001	This field shall contain a valid length in bytes for the subheader of the image in the file.
LI001	This field shall contain a valid length in bytes of the image.
NUMS	This field shall contain the number seven (7) to indicate the number of separate symbols included in the file.
LSSH001	This field shall contain a valid length in bytes for the subheader of the first symbol in the file; i.e., the DPPDB stock number.
LS001	This field shall contain a valid length in bytes for the first symbol.
LSSH002	This field shall contain a valid length in bytes for the subheader of the second symbol in the file; i.e., the classification at the top of the display.
LS002	This field shall contain a valid length in bytes for the second symbol.
LSSH003	This field shall contain a valid length in bytes for the subheader of the third symbol in the file; i.e., the classification at the bottom of the display.
LS003	This field shall contain a valid length in bytes for the third symbol.
LSSH004	This field shall contain a valid length in bytes for the subheader of the fourth symbol in the file; i.e., the handling instructions at the bottom of the display.
LS004	This field shall contain a valid length in bytes for the fourth symbol.
LSSH005	This field shall contain a valid length in bytes for the subheader of the fifth symbol in the file; i.e., the classification authority and downgrading instructions at the bottom right of the display.
LS005	This field shall contain a valid length in bytes for the fifth symbol.
LSSH006	This field shall contain a valid length in bytes for the subheader of the sixth symbol in the file; i.e., the model number of the form 12; where 12 represents the model number within the product (rectangle) and displays at the top left of the display.
LS006	This field shall contain a valid length in bytes for the sixth symbol.

TABLE 47. Overview segment image file header fields - Continued.

FIELD	DEFINITION
LSSH007	This field shall contain a valid length in bytes for the subheader of the seventh symbol in the file; i.e., the image number of the form 34X; where 34 represents the stereo segment number within the stereo model and X represents the L (=Left) or R (=Right) image of the stereo pair (segment) and displays at the top left of the display.
LS007	This field shall contain a valid length in bytes for the seventh symbol.
NUML	This field shall contain the number zero (0) to indicate that there are no labels defined in the file.
NUMT	This field shall contain the number zero (0) to indicate there are no text items included in the file.
NUMDES	This field shall be zero (0) since there are no data extension segments included in the file.
NUMRES	This field shall be zero (0) since there are no reserved extension segments is defined.
UDHDL	This field shall contain the value zero (0) to indicate that there are no UDHDs included in this file.
XHDL	This field shall contain the value of zero (0) since there are no controlled tagged record extensions included in this file.

TABLE 48. Overview segment image subheader definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
IM	File Part Type	2	IM	R
IID	Image ID	10	1234XY	R
IDATIM	Image Date & Time	14	DDHHMMSSZMONYY	O
TGTID	Target ID	17	Spaces	O
ITITLE	Image Title	80	DPPDB Image 1234XY	O
ISCLAS	Image Security Classification	1	U, C or S	R
ISCODE	Image Codewords	40	Spaces	O
ISCTLH	Image Control and Handling	40	Alphanumeric	O
ISREL	Image Releasing Instructions	40	Alphanumeric	O
ISCAUT	Image Classification Authority	20	Alphanumeric	O
ISCTLN	Image Security Control Number	20	Alphanumeric	O
ISDWNG	Image Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R
ISORCE	Image Source	42	NIMA	O
NROWS	Number of Significant Rows of pixels in the Image	8	0-99999999	R
NCOLS	Number of Significant Columns of pixels in the Image	8	0-99999999	R
PVTYPE	Pixel Value Type	3	INT	R
IREP	Image Representation	8	MONO	R
ICAT	Image Class	8	VIS	R
ABPP	Actual Bits-Per-Pixel Per Band	2	08	O
PJUST	Pixel Justification	1	R	R
ICORDS	Image Coordinate System	1	G	R
IGEOLO	Image Geographic Location	60	ddmmssXdddmmssY (four times)	C
NICOM	Number of Image Comments	1	0	R

TABLE 48. <u>Overview segment image subheader definition</u>
- Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
IC	Image Compression	2	C3	R
COMRAT	Compression Rate Code	4	00.0	C
NBANDS	Number of Bands	1	1	R
IREPBAND1	1st Band Representation	2	Spaces	R
ISUBCAT1	1st Band Significance for Image	6	Spaces	R
IFC1	1st Band Image Filter Condition	1	N	R
IMFLT1	1st Band Standard Image Filter Code	3	Spaces	R
NLUTS1	1st Band Number of LUTS	1	0	R
ISYNC	Image Sync Code	1	0	R
IMODE	Image Mode	1	B	R
NBPR	Number of Blocks Per Row	4	1-9999	R
NBPC	Number of Blocks Per Column	4	1-9999	R
NPPBH	Number of Pixels Per Block Horizontal	4	1024	R
NPPBV	Number of Pixels Per Block Vertical	4	1024	R
NBPP	Number of Bits Per Pixel Per Band	2	08	R
IDLVL	Display Level	3	001	R
IALVL	Attachment Level	3	000	R
ILOC	Image Location	10	0000000000	R
IMAG	Image Magnification	4	/8	R
UDIDL	User Defined Image Data Length	5	00000	R
IXSHDL	Extended Subheader Data Length	5	00000-99999	R
IXSOFL	Extended Subheader Overflow	3	000	R
CETAG	Unique extension type identifier	6	IMCBDA	R
CEL	Length of CEDATA field	5	1-99999	R

TABLE 48. <u>Overview segment image subheader definition</u>
<u> - Continued</u>.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
CEDATA	User-defined data	*	Segment Image Compressed Blocks Directory	R
CETAG	Unique extension type identifier	6	IMASDA	R
CEL	Length of CEDATA field	5	1-99999	R
CEDATA	User defined data	*	Segment Image Support Data	R
CETAG	Unique extension type identifier	6	IMRFCA	R
CEL	Length of CEDATA field	5	1-99999	R
CEDATA	User defined data	*	Segment Image Rational Function Coefficients	R

Note: The segment image compressed blocks directory, segment image support data, segment image rational function coefficients. and the compressed overview segment image shall follow immediately after the subheader file.

TABLE 49. Overview segment image subheader field definition

FIELD	DEFINITION
IM	This field shall contain the characters IM to identify the subheaders as an image subheader.
IID	This field shall contain the image ID contained in the file and shall be a six-digit alphanumeric of the form 1234XY; where 12 is the stereo model number, 34 is the stereo segment number within the model, X is either the L (=Left) or R (=Right) stereo image to identify the stereo segment image, and Y is either O (=Overview) or F (=Full resolution) to identify the type of image. Stereo models shall be numbered consecutively, beginning with the northwest corner of the DPPDB area. The numbering shall then be continued from west to east and north to south for each stereo model in the DPPDB rectangle coverage. Each stereo model is divided into smaller stereo images and these segments are then numbered consecutively, beginning with one on the west side of each model.
IDATIM	This field shall contain the time (Zulu) of acquisition of the image in the format DDHHMMSSZMONYY, where: DD is the day of the month (01-31); HH is the hour (00-23); MM is the minute (00-59); SS is the second (00-59); the character Z is required; MON is the first three characters of the month; and YY is the last two digits of the year.
TGTID	This field shall contain the identification of the primary target in the format, BBBBBBBBBBFFFFFCC, consisting of ten characters of BE (Basic Encyclopedia) identifier followed by five characters of functional category code followed by the two character country code as specified in FIPS PUB 10-3.
ITITLE	This field shall contain the title of the image. The title shall contain the image ID as described in Image ID (IID) field.
ISCLAS	This field shall contain a valid value representing the classification level of the image. Valid values are: S (=Secret) C (=Confidential) and U (=Unclassified).
ISCODE	This field shall contain all spaces to indicate that no codewords apply to the image.
ISCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON: E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply to the file.

TABLE 49. <u>Overview segment image subheader field definition</u>
- Continued.

FIELD	DEFINITION
ISREL	This field shall contain NF (NOFORN) or a valid list of countries and/or groups of countries to which the image is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.
ISCAUT	This field shall contain a valid identity code of the classification authority for the image. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply that no image classification authority applies.
ISCTLN	This field shall contain a valid security control number associated with the image. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply that no image security control number applies.
ISDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating the downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
ENCRYP	This field shall contain the value zero (0) to indicate the file is not encrypted.
ISORCE	This field shall contain a description of the source of the image. Valid data is alphanumeric text.
NROWS	This field shall contain the total number of rows of significant pixels in the image. All rows indexed 0 through NROWS - 1 of the image contain "significant" data.
NCOLS	This field shall contain the total number of columns of significant pixels in the image. All rows indexed 0 through NCOLS - 1 of the image contain "significant" data.
PVTYPE	This field shall contain the indicator INT for integer to indicate the type of computer representation used for the value for each pixel for each band in the image.

TABLE 49. Overview segment image subheader field definition - Continued.

FIELD	DEFINITION
IREP	This field shall contain a valid indicator of MONO to indicate the general kind of image represented by the data. This field should be used in conjunction with the ICAT, ISUBCATnn and IREPBANDnn fields to interpret the significance of each band in the image.
ICAT	This field shall contain a valid indicator of VIS to indicate the specific category of visible imagery. This field should be used in conjunction with the IREP, ISUBCATnn, and IREPBANDnn fields to interpret the significance of each band in the image.
ABPP	This field shall contain the number eight (8).
PJUST	This field shall be set to R as per JIEO Circular 9008.
ICORDS	This field shall contain a valid code of G=Geodetic (Geographic), indicating the geo-referenced coordinate system for the image.
IGEOLO	This field shall contain a valid geographic location, in terms of corner locations, of the image in the coordinate system specified in the ICORDS field. The locations of the four corners of the (significant) image data shall be given in image coordinate order: (0,0), (0,MaxCol), (MaxRow, MaxCol), and (MaxRow,0). MaxCol and MaxRow shall be determined from the values contained, respectively, in NCOLS and NROWS as MaxCol = NCOLS - 1 and MaxRow = NROWS - 1. Valid corner locations in geodetic coordinates shall be expressed as latitude and longitude. The format ddmmssX represents degrees, minutes, and seconds of latitude with X = N or S for north or south, and dddmmssY represents degrees, minutes, and seconds of longitude with Y=E or W for east or west, respectively.
NICOM	This field shall contain the number zero (0) to indicate there are no free text image comments.
IC	This field shall contain the code C3 to mean JPEG indicating the form of compression used in representing the image data. The definitions of the compression scheme associated with code C3 is given MIL-STD-188-198.

TABLE 49. <u>Overview segment image subheader field definition</u>
– Continued.

FIELD	DEFINITION
COMRAT	This field shall contain a code indicating the compression rate for the image. This field is used to identify the default quantization table(s) used by the JPEG compression algorithm. In this case, the format of this field is XX.Y, where XX is the image data type (00=general purpose, 01 through 99 are reserved by the NITF standard) and Y represents the quality level 0 through 5. Explanation of these codes can be found in MIL-STD-188-198. Note: This code is a default and is not used. The DQT (Define Quantization Table) marker (see JPEG header in MIL-STD-188-198) is present in the JPEG header of each block and the Quantization Table specification is present.
NBANDS	This field shall contain the number one (1) to indicate there is one band comprising the image. This field and the IREP field are interrelated and independent of the IMODE field. The corresponding values for (IREP, NBANDS) are (MONO, 1).
IREBAND1	This field shall contain all spaces.
ISUBCAT1	This field shall contain all spaces.
IFC1	This field shall contain the value N (to mean none). Other values are reserved for future use.
IMFLT1	This field is reserved for future use. It shall be filled with spaces.
NLUTS1	This field shall contain the number zero (0) to indicate there are no look-up tables associated with the 1st band of the image.
ISYNC	This field shall contain "0" for JPEG compression. (JPEG has its own internal mechanism for resynchronization.)
IMODE	This field shall contain an indicator B to indicate the image bands are interleaved by block. This means that within each block the bands follow one another., [(block1, band1), (block1, band2),.... (block1, bandN)], [(block2, band1), (block2, band1), ... (block2, bandN)], ... [(blockM, band1), (blockM, band2), ... (blockM, bandN)].
NBPR	This field shall contain the number of image blocks in a row of blocks in the horizontal direction.
NBPC	This field shall contain the number of image blocks in a column of blocks in the vertical direction.
NPPBH	This field shall contain the number of pixels horizontally in each block of the image.
NPPBV	This field shall contain the number of pixels vertically in each block of the image.

TABLE 49. <u>Overview segment image subheader field definition</u> – Continued.

FIELD	DEFINITION
NBPP	This field shall contain the number eight to indicate the number of storage bits used for the value from each component of a pixel vector.
IDLVL	This field shall contain the value 001 to indicate the graphic display level of the image relative to other displayed file components in a composite display. The meaning of display level is fully discussed in MIL-STD-2500.
IALVL	This field shall contain the value 000 to indicate the attachment level of this image. The meaning of attachment level is fully discussed in MIL-STD-2500.
ILOC	This field shall contain the value of zero (0) for the row and column offsets to indicate the image location is not offset. This field contain the image location represented as rrrrrccccc, where rrrrr and ccccc are the row and column offset from the ILOC value of the item to which the image is attached.
IMAG	This field shall contain the magnification value of /8 indicating the overview segment image has a magnification factor of 1/8 relative to the original full resolution segment image.
UDIDL	This field shall contain the value of zero to indicate that no registered tagged record extensions are included in the image subheader.
IXSHDL	This field shall contain the length in bytes of the entire IXSHD field. The length is (3) plus the sum of the lengths of all the controlled tagged record extensions appearing in the IXSHD field, since they are not separated from one another.
IXSOFL	This field shall be 000 to indicate that there is no field overflow into a DES.
	THE FOLLOWING THREE FIELD DEFINITIONS APPLIES TO ALL CONTROLLED TAGGED RECORD EXTENSIONS.
CETAG	This field shall contain a valid alphanumeric identifier properly controlled with the NTB.
CEL	This field shall contain the length in bytes of the data contained in CEDATA. The tagged record's length is 11 + CEL.
CEDATA	This field shall contain data of either binary or character data types defined by and formatted according to user specification.

TABLE 50.   Overview segment image compressed blocks directory definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
NOTE: THE FOLLOWING FIELDS SHALL BE REPEATED FOR EACH JPEG BLOCK IN THE IMAGE.				
> BOFF	Block Offset	10	0-9999999999	R
> BLEN	Block Length	7	1-9999999	R

TABLE 51.   Overview segment image compressed blocks directory field definition.

FIELD	DEFINITION
	NOTE: THE FOLLOWING FIELDS SHALL BE REPEATED FOR EACH JPEG BLOCK IN THE IMAGE.
> BOFF	This field shall contain the offset from the beginning of the image data to the beginning of the data for this block expressed in bytes.
> BLEN	This field shall contain the length of the compressed block expressed in total number of bytes.

TABLE 52. Overview segment image support data definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
LONTR	Longitude Translation	E22.15	±180 degrees	R
LATTR	Latitude Translation	E22.15	±90 degrees	R
ELVTR	Elevation Translation	E22.15	±10000 meters	R
LONSC	Longitude Scale	E22.15	0-100	R
LATSC	Latitude Scale	E22.15	0-100	R
ELVSC	Elevation Scale	E22.15	0-100	R
XITR	X Image Translation	E22.15	±100000 pixels	R
YITR	Y Image Translation	E22.15	±100000 pixels	R
XISC	X Image Scale	E22.15	0-100	R
YISC	Y Image Scale	E22.15	0-100	R
DELEV	Display Elevation	E22.15	(-1000)-10000 meters	R

TABLE 53.   Overview segment image rational function coefficients definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
XINC1	X Image Numerator Coefficient 1	E22.15	±10	R
XINC2	X Image Numerator Coefficient 2	E22.15	±10	R
XINC3	X Image Numerator Coefficient 3	E22.15	±10	R

TABLE 53. <u>Overview segment image rational function coefficients definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
XINC4	X Image Numerator Coefficient 4	E22.15	±10	R
XINC5	X Image Numerator Coefficient 5	E22.15	±10	R
XINC6	X Image Numerator Coefficient 6	E22.15	±10	R
XINC7	X Image Numerator Coefficient 7	E22.15	±10	R
XINC8	X Image Numerator Coefficient 8	E22.15	±10	R
XINC9	X Image Numerator Coefficient 9	E22.15	±10	R
XINC10	X Image Numerator Coefficient 10	E22.15	±10	R
XINC11	X Image Numerator Coefficient 11	E22.15	±10	R
XINC12	X Image Numerator Coefficient 12	E22.15	±10	R
XINC13	X Image Numerator Coefficient 13	E22.15	±10	R
XINC14	X Image Numerator Coefficient 14	E22.15	±10	R
XINC15	X Image Numerator Coefficient 15	E22.15	±10	R
XINC16	X Image Numerator Coefficient 16	E22.15	±10	R
XINC17	X Image Numerator Coefficient 17	E22.15	±10	R
XINC18	X Image Numerator Coefficient 18	E22.15	±10	R
XINC19	X Image Numerator Coefficient 19	E22.15	±10	R
XINC20	X Image Numerator Coefficient 20	E22.15	±10	R
XIDC1	X Image Denominator Coefficient 1	E22.15	±10	R
XIDC2	X Image Denominator Coefficient 2	E22.15	±10	R
XIDC3	X Image Denominator Coefficient 3	E22.15	±10	R
XIDC4	X Image Denominator Coefficient 4	E22.15	±10	R
XIDC5	X Image Denominator Coefficient 5	E22.15	±10	R

TABLE 53. <u>Overview segment image rational function
coefficients definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
XIDC6	X Image Denominator Coefficient 6	E22.15	± 10	R
XIDC7	X Image Denominator Coefficient 7	E22.15	± 10	R
XIDC8	X Image Denominator Coefficient 8	E22.15	± 10	R
XIDC9	X Image Denominator Coefficient 9	E22.15	± 10	R
XIDC10	X Image Denominator Coefficient 10	E22.15	± 10	R
XIDC11	X Image Denominator Coefficient 11	E22.15	± 10	R
XIDC12	X Image Denominator Coefficient 12	E22.15	± 10	R
XIDC13	X Image Denominator Coefficient 13	E22.15	± 10	R
XIDC14	X Image Denominator Coefficient 14	E22.15	± 10	R
XIDC15	X Image Denominator Coefficient 15	E22.15	± 10	R
XIDC16	X Image Denominator Coefficient 16	E22.15	± 10	R
XIDC17	X Image Denominator Coefficient 17	E22.15	± 10	R
XIDC18	X Image Denominator Coefficient 18	E22.15	± 10	R
XIDC19	X Image Denominator Coefficient 19	E22.15	± 10	R
XIDC20	X Image Denominator Coefficient 20	E22.15	± 10	R
YINC1	Y Image Numerator Coefficient 1	E22.15	± 10	R
YINC2	Y Image Numerator Coefficient 2	E22.15	± 10	R
YINC3	Y Image Numerator Coefficient 3	E22.15	± 10	R
YINC4	Y Image Numerator Coefficient 4	E22.15	± 10	R
YINC5	Y Image Numerator Coefficient 5	E22.15	± 10	R
YINC6	Y Image Numerator Coefficient 6	E22.15	± 10	R
YINC7	Y Image Numerator Coefficient 7	E22.15	± 10	R

TABLE 53. <u>Overview segment image rational function coefficients definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
YINC8	Y Image Numerator Coefficient 8	E22.15	±10	R
YINC9	Y Image Numerator Coefficient 9	E22.15	±10	R
YINC10	Y Image Numerator Coefficient 10	E22.15	±10	R
YINC11	Y Image Numerator Coefficient 11	E22.15	±10	R
YINC12	Y Image Numerator Coefficient 12	E22.15	±10	R
YINC13	Y Image Numerator Coefficient 13	E22.15	±10	R
YINC14	Y Image Numerator Coefficient 14	E22.15	±10	R
YINC15	Y Image Numerator Coefficient 15	E22.15	±10	R
YINC16	Y Image Numerator Coefficient 16	E22.15	±10	R
YINC17	Y Image Numerator Coefficient 17	E22.15	±10	R
YINC18	Y Image Numerator Coefficient 18	E22.15	±10	R
YINC19	Y Image Numerator Coefficient 19	E22.15	±10	R
YINC20	Y Image Numerator Coefficient 20	E22.15	±10	R
YIDC1	Y Image Denominator Coefficient 1	E22.15	±10	R
YIDC2	Y Image Denominator Coefficient 2	E22.15	±10	R
YIDC3	Y Image Denominator Coefficient 3	E22.15	±10	R
YIDC4	Y Image Denominator Coefficient 4	E22.15	±10	R
YIDC5	Y Image Denominator Coefficient 5	E22.15	±10	R
YIDC6	Y Image Denominator Coefficient 6	E22.15	±10	R
YIDC7	Y Image Denominator Coefficient 7	E22.15	±10	R
YIDC8	Y Image Denominator Coefficient 8	E22.15	±10	R

TABLE 53. <u>Overview segment image rational function coefficients definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
YIDC9	Y Image Denominator Coefficient 9	E22.15	±10	R
YIDC10	Y Image Denominator Coefficient 10	E22.15	±10	R
YIDC11	Y Image Denominator Coefficient 11	E22.15	±10	R
YIDC12	Y Image Denominator Coefficient 12	E22.15	±10	R
YIDC13	Y Image Denominator Coefficient 13	E22.15	±10	R
YIDC14	Y Image Denominator Coefficient 14	E22.15	±10	R
YIDC15	Y Image Denominator Coefficient 15	E22.15	±10	R
YIDC16	Y Image Denominator Coefficient 16	E22.15	±10	R
YIDC17	Y Image Denominator Coefficient 17	E22.15	±10	R
YIDC18	Y Image Denominator Coefficient 18	E22.15	±10	R
YIDC19	Y Image Denominator Coefficient 19	E22.15	±10	R
YIDC20	Y Image Denominator Coefficient 20	E22.15	±10	R

TABLE 54. Overview segment image stock number symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0001OIM	R
SNAME	Symbol Name	20	DPPDB Stock Number	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	200	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	space character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 55. <u>Overview segment image classification (top of display) symbol file subheader.</u>

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0002OIM	R
SNAME	Symbol Name	20	Class-Top Image	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	300	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 56.   Overview segment image classification (bottom of display) symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0003OIM	R
SNAME	Symbol Name	20	Class-Bottom Image	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	400	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 57.   Overview segment image handling instructions symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0004OIM	R
SNAME	Symbol Name	20	Handling Instruct	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	500	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 58. Overview segment image classification authority symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0005OIM	R
SNAME	Symbol Name	20	Class Auth	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	600	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 59. Overview segment image model number symbol file
            subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0006OIM	R
SNAME	Symbol Name	20	Model number	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	700	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 60. Overview segment image number identifier symbol
file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0007SIM	R
SNAME	Symbol Name	20	Segment Image ID	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	800	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

.

Note: The CGM commands immediately follow the symbol subheader.

TABLE 61. <u>Overview segment image symbol file subheader</u>
<u>field definition</u>.

FIELD	DEFINITION
SY	This field shall contain the characters SY to identify the subheader as a symbol subheader.
SID	This field shall contain a valid alphanumeric number identifier in the format 1234OIM, where: 1234 is the number identifying the item in this file and OIM indicates the item is contained in the Overview segment Image file.
SNAME	This field shall contain the alphanumeric name for the symbol.
SSCLAS	This field shall contain a valid value of U (= Unclassified) representing the classification level of the symbol.
SSCODE	This field shall contain all spaces to indicate that no codewords apply to this symbol.
SSCTLH	This field shall contain all spaces to indicate that no file control and handling instructions apply to this symbol.
SSREL	This field shall contain all spaces to indicate that no symbol release instructions apply.
SSCAUT	This field shall contain all spaces to indicate that no symbol classification authority applies.
SSCTLN	This field shall contain all spaces to indicate that no symbol security control number applies.
SSDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
ENCRYP	This field shall contain the value zero (0) to indicate the file is not encrypted.

TABLE 61. Overview segment image symbol file subheader
field definition - Continued.

FIELD	DEFINITION
STYPE	This field shall contain the letter C to indicate the symbol is defined in a Computer Graphics Metafile (CGM). The CGM format for the NITFS is defined in MIL-STD-2301.
NLIPS	This field shall contain zero (0).
NPIXPL	This field shall contain zero (0).
NWDTH	This field shall contain zero (0).
NBPP	This field shall contain zero (0).
SDLVL	This field shall contain a valid value that indicates the graphic display level of the symbol relative to other displayed file components in a composite display. The valid values are 001 to 999.
SALVL	This field shall contain a value of zero (0) to indicate these textual symbols are attached to the display device.
SLOC	The location of a symbol is specified by specifying the location of a point bearing a particular relationship to the symbol. The point is defined in MIL-STD-2301. This field shall contain zero (0).
SLOC2	This field shall contain zero (0).
SCOLOR	This field shall contain a space character.
SNUM	This field shall contain zero (0).
SROT	This field shall contain zero (0).
NELUT	This field shall contain zero (0).
SXSHDL	This field shall contain the value zero (0). A value of zero (0) shall mean that no controlled tagged record extensions are included in the image subheader.

TABLE 62. Segment image full resolution file header definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
FHDR	File Type & Version	9	NITF02.00	R
CLEVEL	Compliance Level	2	02-06	R
STYPE	System Type	4	Spaces	O
OSTAID	Originating Station ID	10	NIMA	R
FDT	File Date & Time	14	DDHHMMSSZMONYY	R
FTITLE	File Title	80	DPPDB Segment Image 1234XY	O
FSCLAS	File Security Classification	1	U, C or S	R
FSCODE	File Codewords	40	Spaces	O
FSCTLH	File Control and Handling	40	Alphanumeric	O
FSREL	File Releasing Instructions	40	Alphanumeric	O

TABLE 62. <u>Segment image full resolution file header definition</u> - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
FSCAUT	File Classification Authority	20	Alphanumeric	O
FSCTLN	File Security Control Number	20	Alphanumeric	O
FSDWNG	File Security Downgrade	6	999999 or spaces	O
FSCOP	Message Copy Number	5	00000	O
FSCPYS	Message Number of Copies	5	00000	O
ENCRYP	Encryption	1	0	R
ONAME	Originator's Name	27	NIMA	O
OPHONE	Originator's Phone Number	18	Spaces	O
FL	File Length	12	388-999999999999	R
HL	NITF File Header Length	6	388-276380	R
NUMI	Number of Images	3	001	R
LISH001	Length of segment image, Image Subheader	6	0-111000	C
LI001	Length of segment image	10	0-9999999999	C
NUMS	Number of Symbols	3	007	R
LSSH001	Length of DPPDB stock number text Symbol Subheader	4	0-7000	C
LS001	Length of DPPDB stock number text Symbol	6	0-999999	C
LSSH002	Length of classification (top display) text Symbol Subheader	4	0-7000	C
LS002	Length of classification text Symbol	6	0-999999	C
LSSH003	Length of classification (bottom display) text Symbol Subheader	4	0-7000	C
LS003	Length of classification text Symbol	6	0-999999	C
LSSH004	Length of handling instructions text Symbol Subheader	4	0-7000	C
LS004	Length of handling instructions text Symbol	6	0-999999	C
LSSH005	Length of classification authority and downgrading instructions text Symbol Subheader	4	0-7000	C
LS005	Length of classification authority and downgrading instructions text Symbol	6	0-999999	C

TABLE 62. <u>Segment image full resolution file header definition</u> - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
LSSH006	Length of model ID text Symbol Subheader	4	0-7000	C
LS006	Length of model ID text Symbol	6	0-999999	C
LSSH007	Length of image number text Symbol Subheader	4	0-7000	C
LS007	Length of image number text Symbol	6	0-999999	C
NUML	Number of Labels	3	000	R
NUMT	Number of Text Files	3	000	R
NUMDES	Number of Data Extension Segments	3	000	R
NUMRES	Number of Reserved Extension Segments	3	000	R
UDHDL	User Defined Header Data Length	5	00000	R
XHDL	Extended Header Data Length	5	00000	R

* As indicated in REL field.

TABLE 63. Segment image file header fields.

FIELD	DEFINITION
FHDR	An NITF ASCII character string of the form NITF 02.00, which indicates this file is formatted using version 2.0 of the NITF Standard.
CLEVEL	This field shall contain a compliance level from 02 to 06 and indicates the NITF system compliance level required to interpret fully all components of this file. The certification requirements are established in JIEO Circular 9008, NITFS Certification Test and Evaluation Program Plan and are based on the size of the image.
STYPE	System type or capability. This field is reserved for future use by the NITF standard and shall be filled with spaces (NITF ASCII 32, decimal).
OSTAID	This field shall contain the identification code of the originating station.
FDT	This field shall contain the time (Zulu) of origination of the file in the format DDHHMMSSZMONYY where DD is the day of the month (01-31), HH is the hour, (00-23), MM is the minute (00-59), SS is the second (00-59), the character Z is required, MON is the first three characters of the month; and YY is the last two digits of the year.
FTITLE	This field shall contain the title of the NITF file. The title shall contain the segment image ID contained in the file and shall be a six-digit alphanumeric of the form 1234XY; where 12 is the stereo model number, 34 is the stereo segment number within the model, X is either the L (=Left) or R (=Right) stereo image, and Y is either O (=Overview) or F (=Full resolution) to identify the type of image. Stereo models shall be numbered consecutively, beginning with the northwest corner of the DPPDB area. The numbering shall then be continued from west to east and north to south for each stereo model in the DPPDB rectangle coverage. Each stereo model is divided into smaller stereo segments and these segments are then numbered consecutively, beginning with one on the west side of each model.
FSCLAS	This field shall contain a valid value representing the classification level of the entire file. Valid values are: S (=Secret) C (=Confidential) and U (=Unclassified).
FSCODE	This field shall contain all spaces to indicate that no codewords apply to the file.
FSCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON:E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply to the file.

TABLE 63. Segment image file header fields - Continued.

FIELD	DEFINITION
FSREL	This field shall contain a valid list of countries and/or groups of countries to which the file is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.
FSCAUT	This field shall contain a valid identity code of the classification authority for the file. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply that no file classification authority applies.
FSCTLN	This field shall contain a valid security control number associated with the file. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply no file classification authority applies.
FSDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
FSCOP	This field shall contain the copy number of the file.
FSCPYS	This field shall contain the total number of copies of the file.
ENCRYP	This field shall contain the value zero to indicate the file is not encrypted.
ONAME	This field shall contain a valid name for the operator who originated the file. If the field is all spaces, it shall mean that no operator is assigned responsibility for origination.
OPHONE	This field, if not all spaces, shall contain a valid phone number for the operator who originated the file. If the field is all spaces, it shall mean that no phone number is available for the operator assigned responsibility for origination.
FL	This field shall contain the length in bytes of the entire DPPDB segment image file including all headers, subheaders, and data. The value of this field never shall be zero (0).
HL	This field shall contain a valid length in bytes of the NITF file header. The value of this field never shall be zero (0).
NUMI	This field shall contain the number one to indicate a segment image is included in the file.

TABLE 63. Segment image file header fields - Continued.

FIELD	DEFINITION
LISH001	This field shall contain a valid length in bytes for the subheader of the image in the file; i.e., a DPPDB digital image.
LI001	This field shall contain a valid length in bytes of the image.
NUMS	This field shall contain the number seven (7) to indicate the number of symbols defined in the file.
LSSH001	This field shall contain a valid length in bytes for the subheader of the first symbol in the file; i.e., the DPPDB stock number.
LS001	This field shall contain a valid length in bytes for the first symbol.
LSSH002	This field shall contain a valid length in bytes for the subheader of the second symbol in the file; i.e., the classification at the top of the display.
LS002	This field shall contain a valid length in bytes for the second symbol.
LSSH003	This field shall contain a valid length in bytes for the subheader of the third symbol in the file; i.e., the classification at the bottom of the display.
LS003	This field shall contain a valid length in bytes for the third symbol.
LSSH004	This field shall contain a valid length in bytes for the subheader of the fourth symbol in the file; i.e., the handling instructions.
LS004	This field shall contain a valid length in bytes for the fourth symbol.
LSSH005	This field shall contain a valid length in bytes for the subheader of the fifth symbol in the file; i.e., the classification authority and downgrading instructions.
LS005	This field shall contain a valid length in bytes for the fifth symbol.
LSSH006	This field shall contain a valid length in bytes for the subheader of the sixth symbol in the file; i.e., the model number of the form 12; where 12 represents the model number within the product (rectangle).
LS006	This field shall contain a valid length in bytes for the sixth symbol.
LSSH007	This field shall contain a valid length in bytes for the subheader of the seventh symbol in the file; i.e., the image number of the form 34X; where 34 represents the stereo segment number within the stereo model and X represents the L (=Left) or R (=Right) image of the stereo pair (segment).
LS007	This field shall contain a valid length in bytes for the seventh symbol.

TABLE 63. Segment image file header fields - Continued.

FIELD	DEFINITION
NUML	This field shall contain the number zero (0) to indicated there are no labels included in the file.
NUMT	This field shall contain the number zero (0) to indicate there are no text items included in the file.
UDHDL	This field shall contain the value zero (0) to indicate that there are no UDHDs included in this file.
XHDL	This field shall contain the value of zero since there are no controlled tagged record extensions included in this file.

TABLE 64. Segment image subheader definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
IM	File Part Type	2	IM	R
IID	Image ID	10	1234XY	R
IDATIM	Image Date & Time	14	DDHHMMSSZMONYY	O
TGTID	Target ID	17	Spaces	O
ITITLE	Image Title	80	DPPDB Image 1234XY	O
ISCLAS	Image Security Classification	1	U, C or S	R
ISCODE	Image Codewords	40	Spaces	O
ISCTLH	Image Control and Handling	40	Alphanumeric	O
ISREL	Image Releasing Instructions	40	Alphanumeric	O
ISCAUT	Image Classification Authority	20	Alphanumeric	O
ISCTLN	Image Security Control Number	20	Alphanumeric	O
ISDWNG	Image Security Downgrade	6	999999 or spaces	O
ENCRYP	Encryption	1	0	R

TABLE 64. Segment image subheader definition - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
ISORCE	Image Source	42	NIMA	O
NROWS	Number of Significant Rows of pixels in the Image	8	0-99999999	R
NCOLS	Number of Significant Columns of pixels in the Image	8	0-99999999	R
PVTYPE	Pixel Value Type	3	Alphanumeric	R
IREP	Image Representation	8	MONO	R
ICAT	Image Class	8	VIS	R
ABPP	Actual Bits-Per-Pixel Per Band	2	08	O
PJUST	Pixel Justification	1	R	R
ICORDS	Image Coordinate System	1	G	R
IGEOLO	Image Geographic Location	60	ddmmssXdddmmssY (four times)	C
NICOM	Number of Image Comments	1	0	R
IC	Image Compression	2	C3	R
COMRAT	Compression Rate Code	4	00.0	C
NBANDS	Number of Bands	1	1	R
IREPBAND1	1st Band Representation	2	Spaces	R
ISUBCAT1	1st Band Significance for Image	6	Spaces	R
IFC1	1st Band Image Filter Condition	1	N	R
IMFLT1	1st Band Standard Image Filter Code	3	Spaces	R
NLUTS1	1st Band Number of LUTS	1	0	R
ISYNC	Image Sync Code	1	0	R
IMODE	Image Mode	1	B	R
NBPR	Number of Blocks Per Row	4	1-9999	R
NBPC	Number of Blocks Per Column	4	1-9999	R
NPPBH	Number of Pixels Per Block Horizontal	4	1024	R
NPPBV	Number of Pixels Per Block Vertical	4	1024	R

TABLE 64. Segment image subheader definition - Continued.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
NBPP	Number of Bits Per Pixel Per Band	2	08	R
IDLVL	Display Level	3	001	R
IALVL	Attachment Level	3	000	R
ILOC	Image Location	10	0000000000	R
IMAG	Image Magnification	4	1.0	R
UDIDL	User Defined Image Data Length	5	00000	R
IXSHDL	Extended Subheader Data Length	5	00000-99999	R
IXSOFL	Extended Overflow Status	3	000	R
CETAG	Unique extension type identifier	6	IMCBDA	R
CEL	Length of CEDATA field	5	1-99999	R
CEDATA	User-defined data	*	Segment Image Compressed Blocks Directory	R
CETAG	Unique extension type identifier	6	IMASDA	R
CEL	Length of CEDATA field	5	1-99999	R
CEDATA	User-defined data	*	Segment Image Support Data	R
CETAG	Unique extension type identifier	6	IMRFCA	R
CEL	Length of CEDATA field	5	1-99999	R
CEDATA	User-defined data	*	Segment Image Rational Function Coefficients	R

Note: The segment image compressed blocks directory, segment image support data, segment image rational function coefficients, and the compressed segment image shall follow immediately after the subheader file.

TABLE 65. Segment image subheader field definition.

FIELD	DEFINITION
IM	This field shall contain the characters "IM" to identify the subheaders as an image subheader.
IID	This field shall contain the segment image ID contained in the file and shall be a six-digit alphanumeric of the form 1234XY; where 12 is the stereo model number, 34 is the stereo segment number within the model, X is either the L (=Left) or R (=Right) stereo image to identify the stereo segment image in the stereo segment, and Y is either O (=Overview) or F (=Full resolution) to identify the type of image. Stereo models shall be numbered consecutively, beginning with the northwest corner of the DPPDB area. The numbering shall then be continued from west to east and north to south for each stereo model in the DPPDB rectangle coverage. Each stereo model is divided into smaller stereo segments and these segments are then numbered consecutively, beginning with one on the west side of each model.
IDATIM	This field shall contain the time (Zulu) of acquisition of the image in the format DDHHMMSSZMONYY, where: DD is the day of the month (01-31); HH is the hour (00-23); MM is the minute (00-59); SS is the second (00-59); the character Z is required; MON is the first three characters of the month; and YY is the last two digits of the year.
TGTID	This field shall contain the identification of the primary target in the format, BBBBBBBBBBFFFFFCC, consisting of ten characters of BE (Basic Encyclopedia) identifier followed by five characters of functional category code followed by the two character country code as specified in FIPS PUB 10-3.
ITITLE	This field shall contain the title of the image. The title shall contain the image ID as described in Image ID (IID) field.
ISCLAS	This field shall contain a valid value representing the classification level of the image. Valid values are: S (=Secret) C (=Confidential) and U (=Unclassified).
ISCODE	This field shall contain all spaces to indicate that no codewords apply to the image.
ISCTLH	This field shall contain a valid indicator of the security handling instructions associated with the file. A valid value is "CL BY:DCI, DECL ON:E.O.12951". If this field is all spaces, it shall imply that no file control and handling instructions apply to the file.

TABLE 65. <u>Segment image subheader field definition</u> - Continued.

FIELD	DEFINITION
ISREL	This field shall contain a valid list of countries and/or groups of countries to which the image is authorized for release. Valid items are listed in Appendix A, Releasability Codes section of this document. If this field is the code "XX", it shall imply that no file release instructions apply.
ISCAUT	This field shall contain a valid identity code of the classification authority for the image. The code shall be in accordance with the regulations governing the appropriate security channel(s). A valid code is "DCI". If this field is all spaces, it shall imply that no image classification authority applies.
ISCTLN	This field shall contain a valid security control number associated with the image. The format of the security control number shall be in accordance with the regulations governing the appropriate security channel(s). If this field is all spaces, it shall imply that no image security control number applies.
ISDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
ENCRYP	This field shall contain the value zero to indicate the file is not encrypted.
ISORCE	This field shall contain a description of the source of the image. Valid data is alphanumeric text.
NROWS	This field shall contain the total number of rows of significant pixels in the image. All rows indexed 0 through NROWS - 1 of the image contain "significant" data.
NCOLS	This field shall contain the total number of columns of significant pixels in the image. All rows indexed 0 through NCOLS - 1 of the image contain "significant" data.
PVTYPE	This field shall contain the indicator INT for integer to indicate the type of computer representation used for the value for each pixel for each band in the image.
IREP	This field shall contain a valid indicator of MONO to indicate the general kind of image represented by the data. This field should be used in conjunction with the ICAT, ISUBCATnn and IREPBANDnn fields to interpret the significance of each band in the image.

TABLE 65. Segment image subheader field definition - Continued.

FIELD	DEFINITION
ICAT	This field shall contain a valid indicator of VIS to indicate the specific category of visible imagery. This field should be used in conjunction with the IREP, ISUBCATnn, and IREPBANDnn fields to interpret the significance of each band in the image.
ABPP	This field shall contain the number eight (8).
PJUST	This field shall be set to R as per JIEO Circular 9008.
ICORDS	This field shall contain a valid code of G=Geodetic (Geographic), indicating the geo-referenced coordinate system for the image.
IGEOLO	This field shall contain a valid geographic location, in terms of corner locations, of the image in the coordinate system specified in the ICORDS field. The locations of the four corners of the (significant) image data shall be given in image coordinate order: (0,0), (0,MaxCol), (MaxRow, MaxCol), (MaxRow,0). MaxCol and MaxRow shall be determined from the values contained, respectively in NCOLS and NROWS as MaxCol = NCOLS - 1 and MaxRow = NROWS - 1. Valid corner locations in geodetic coordinates shall be expressed as latitude and longitude. The format ddmmssX represents degrees, minutes, and seconds of latitude with X = N or S for north or south, and dddmmssY represents degrees, minutes, and seconds of longitude with Y=E or W for east or west, respectively.
NICOM	This field shall contain the number zero (0) to indicate there are no free text image comments.
IC	This field shall contain the code C3 to mean JPEG indicating the form of compression used in representing the image data. The definitions of the compression scheme associated with code C3 is given MIL-STD-188.
COMRAT	This field shall contain a code indicating the compression rate for the image. This field is used to identify the default quantization table(s) used by the JPEG compression algorithm. In this case, the format of this field is XX.Y where XX is the image data type (00=general purpose, 01 through 99 are reserved by the NITF standard) and Y represents the quality level 0 through 5. Explanation of these codes can be found in MIL-STD-188-198. Note: This code is a default and is not used. The DQT (Define Quantization Table) marker (see JPEG header in MIL-STD-188) is present in the JPEG header of each block and the Quantization Table specification is present.
NBANDS	This field shall contain the number one (1) to indicate there is one band comprising the image. This field and the IREP field are interrelated and independent of the IMODE field. The corresponding values for (IREP, NBANDS) are (MONO, 1),
IREBAND1	This field shall contain all spaces.

TABLE 65. Segment image subheader field definition - Continued.

FIELD	DEFINITION
ISUBCAT1	This field shall contain all spaces.
IFC1	This field shall contain the value N (to mean none). Other values are reserved for future use.
IMFLT1	This field is reserved for future use. It shall be filled with spaces.
NLUTS1	This field shall contain the number zero (0) to indicate there are no look-up tables associated with the 1st band of the image.
ISYNC	This field shall contain "0" for JPEG compression. (JPEG has its own internal mechanism for resynchronization.)
IMODE	This field shall contain an indicator B to indicate the image bands are interleaved by block. This means that within each block the bands follow one another., [(block1, band1), (block1, band2),.... (block1, bandN)], [(block2, band1), (block2, band1), ... (block2, bandN)], ... [(blockM, band1), (blockM, band2), ... (blockM, bandN)].
NBPR	This field shall contain the number of image blocks in a row of blocks in the horizontal direction.
NBPC	This field shall contain the number of image blocks in a column of blocks in the vertical direction.
NPPBH	This field shall contain the number of pixels horizontally in each block of the image.
NPPBV	This field shall contain the number of pixels vertically in each block of the image.
NBPP	This field shall contain the number eight to indicate the number of storage bits used for the value from each component of a pixel vector.
IDLVL	This field shall contain the value 001 to indicate the graphic display level of the image relative to other displayed file components in a composite display. The meaning of display level is fully discussed in MIL-STD-2500.
IALVL	This field shall contain the value 000 to indicate the attachment level of this image. The meaning of attachment level is fully discussed in MIL-STD-2500.
ILOC	This fields shall contain the value of zero (0) for the row and column offsets to indicate the image location is not offset. This field contain the image location represented as rrrrccccc, where rrrr and ccccc are the row and column offset from the ILOC value of the item to which the image is attached.
IMAG	This field shall contain the magnification of 1.0, indicating no magnification or reduction factor of the segment image relative to the original segment image.

TABLE 65. Segment image subheader field definition - Continued.

FIELD	DEFINITION
UDIDL	This field shall contain the value of zero to indicate that no registered tagged record extensions are included in the image subheader.
IXSHDL	This field shall contain the length in bytes of the entire IXSHD field. The length is (3) plus the sum of the lengths of all the controlled tagged record extensions appearing in the IXSHD field, since they are not separated from one another.
IXSOFL	This field shall be 000 to indicate that there is no field overflow into a DES
	Note: The following three field definitions apply to all controlled tagged record extensions.
CETAG	This field shall contain a valid alphanumeric identifier properly controlled with the NTB.
CEL	This field shall contain the length in bytes of the data contained in CEDATA. The Tagged record's length is 11 + CEL.
CEDATA	This field shall contain data of either binary or character data types defined by and formatted according to user specification.

TABLE 66. Segment image compressed blocks directory definition.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
NOTE: THE FOLLOWING FIELDS SHALL BE REPEATED FOR EACH JPEG BLOCK IN THE IMAGE.				
> BOFF	Block Offset	10	0-9999999999	R
> BLEN	Block Length	7	1-9999999	R

TABLE 67. Segment image compressed blocks directory field definition.

FIELD	DEFINITION
	NOTE: THE FOLLOWING FIELDS SHALL BE REPEATED FOR EACH JPEG BLOCK IN THE IMAGE.
> BOFF	This field shall contain the offset from the beginning of the image data to the beginning of the data for this block expressed in bytes.
> BLEN	This field shall contain the length of the compressed block expressed in total number of bytes.

TABLE 68. Segment image support data definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
LONTR	Longitude Translation	E22.15	±180 degrees	R
LATTR	Latitude Translation	E22.15	±90 degrees	R
ELVTR	Elevation Translation	E22.15	±10000 meters	R
LONSC	Longitude Scale	E22.15	0-100	R
LATSC	Latitude Scale	E22.15	0-100	R
ELVSC	Elevation Scale	E22.15	0-100	R
XITR	X Image Translation	E22.15	±100000 pixels	R
YITR	Y Image Translation	E22.15	±100000 pixels	R
XISC	X Image Scale	E22.15	0-100	R
YISC	Y Image Scale	E22.15	0-100	R
DELEV	Display Elevation	E22.15	(-1000)-10000 meters	R

TABLE 69. Segment image rational function coefficients definition.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
XINC1	X Image Numerator Coefficient 1	E22.15	±10	R
XINC2	X Image Numerator Coefficient 2	E22.15	±10	R
XINC3	X Image Numerator Coefficient 3	E22.15	±10	R

TABLE 69. <u>Segment image rational function coefficients</u>
<u>definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
XINC4	X Image Numerator Coefficient 4	E22.15	±10	R
XINC5	X Image Numerator Coefficient 5	E22.15	±10	R
XINC6	X Image Numerator Coefficient 6	E22.15	±10	R
XINC7	X Image Numerator Coefficient 7	E22.15	±10	R
XINC8	X Image Numerator Coefficient 8	E22.15	±10	R
XINC9	X Image Numerator Coefficient 9	E22.15	±10	R
XINC10	X Image Numerator Coefficient 10	E22.15	±10	R
XINC11	X Image Numerator Coefficient 11	E22.15	±10	R
XINC12	X Image Numerator Coefficient 12	E22.15	±10	R
XINC13	X Image Numerator Coefficient 13	E22.15	±10	R
XINC14	X Image Numerator Coefficient 14	E22.15	±10	R
XINC15	X Image Numerator Coefficient 15	E22.15	±10	R
XINC16	X Image Numerator Coefficient 16	E22.15	±10	R
XINC17	X Image Numerator Coefficient 17	E22.15	±10	R
XINC18	X Image Numerator Coefficient 18	E22.15	±10	R
XINC19	X Image Numerator Coefficient 19	E22.15	±10	R
XINC20	X Image Numerator Coefficient 20	E22.15	±10	R
XIDC1	X Image Denominator Coefficient 1	E22.15	±10	R
XIDC2	X Image Denominator Coefficient 2	E22.15	±10	R
XIDC3	X Image Denominator Coefficient 3	E22.15	±10	R
XIDC4	X Image Denominator Coefficient 4	E22.15	±10	R
XIDC5	X Image Denominator Coefficient 5	E22.15	±10	R

TABLE 69. Segment image rational function coefficients
definition - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
XIDC6	X Image Denominator Coefficient 6	E22.15	± 10	R
XIDC7	X Image Denominator Coefficient 7	E22.15	± 10	R
XIDC8	X Image Denominator Coefficient 8	E22.15	± 10	R
XIDC9	X Image Denominator Coefficient 9	E22.15	± 10	R
XIDC10	X Image Denominator Coefficient 10	E22.15	± 10	R
XIDC11	X Image Denominator Coefficient 11	E22.15	± 10	R
XIDC12	X Image Denominator Coefficient 12	E22.15	± 10	R
XIDC13	X Image Denominator Coefficient 13	E22.15	± 10	R
XIDC14	X Image Denominator Coefficient 14	E22.15	± 10	R
XIDC15	X Image Denominator Coefficient 15	E22.15	± 10	R
XIDC16	X Image Denominator Coefficient 16	E22.15	± 10	R
XIDC17	X Image Denominator Coefficient 17	E22.15	± 10	R
XIDC18	X Image Denominator Coefficient 18	E22.15	± 10	R
XIDC19	X Image Denominator Coefficient 19	E22.15	± 10	R
XIDC20	X Image Denominator Coefficient 20	E22.15	± 10	R
YINC1	Y Image Numerator Coefficient 1	E22.15	± 10	R
YINC2	Y Image Numerator Coefficient 2	E22.15	± 10	R
YINC3	Y Image Numerator Coefficient 3	E22.15	± 10	R
YINC4	Y Image Numerator Coefficient 4	E22.15	± 10	R
YINC5	Y Image Numerator Coefficient 5	E22.15	± 10	R
YINC6	Y Image Numerator Coefficient 6	E22.15	± 10	R
YINC7	Y Image Numerator Coefficient 7	E22.15	± 10	R

TABLE 69. <u>Segment image rational function coefficients</u>
<u>definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
YINC8	Y Image Numerator Coefficient 8	E22.15	±10	R
YINC9	Y Image Numerator Coefficient 9	E22.15	±10	R
YINC10	Y Image Numerator Coefficient 10	E22.15	±10	R
YINC11	Y Image Numerator Coefficient 11	E22.15	±10	R
YINC12	Y Image Numerator Coefficient 12	E22.15	±10	R
YINC13	Y Image Numerator Coefficient 13	E22.15	±10	R
YINC14	Y Image Numerator Coefficient 14	E22.15	±10	R
YINC15	Y Image Numerator Coefficient 15	E22.15	±10	R
YINC16	Y Image Numerator Coefficient 16	E22.15	±10	R
YINC17	Y Image Numerator Coefficient 17	E22.15	±10	R
YINC18	Y Image Numerator Coefficient 18	E22.15	±10	R
YINC19	Y Image Numerator Coefficient 19	E22.15	±10	R
YINC20	Y Image Numerator Coefficient 20	E22.15	±10	R
YIDC1	Y Image Denominator Coefficient 1	E22.15	±10	R
YIDC2	Y Image Denominator Coefficient 2	E22.15	±10	R
YIDC3	Y Image Denominator Coefficient 3	E22.15	±10	R
YIDC4	Y Image Denominator Coefficient 4	E22.15	±10	R
YIDC5	Y Image Denominator Coefficient 5	E22.15	±10	R
YIDC6	Y Image Denominator Coefficient 6	E22.15	±10	R
YIDC7	Y Image Denominator Coefficient 7	E22.15	±10	R
YIDC8	Y Image Denominator Coefficient 8	E22.15	±10	R

TABLE 69. <u>Segment image rational function coefficients definition</u> - Continued.

FIELD	NAME	FORMAT	VALUE RANGE	TYPE
YIDC9	Y Image Denominator Coefficient 9	E22.15	±10	R
YIDC10	Y Image Denominator Coefficient 10	E22.15	±10	R
YIDC11	Y Image Denominator Coefficient 11	E22.15	±10	R
YIDC12	Y Image Denominator Coefficient 12	E22.15	±10	R
YIDC13	Y Image Denominator Coefficient 13	E22.15	±10	R
YIDC14	Y Image Denominator Coefficient 14	E22.15	±10	R
YIDC15	Y Image Denominator Coefficient 15	E22.15	±10	R
YIDC16	Y Image Denominator Coefficient 16	E22.15	±10	R
YIDC17	Y Image Denominator Coefficient 17	E22.15	±10	R
YIDC18	Y Image Denominator Coefficient 18	E22.15	±10	R
YIDC19	Y Image Denominator Coefficient 19	E22.15	±10	R
YIDC20	Y Image Denominator Coefficient 20	E22.15	±10	R

TABLE 70. Segment image stock number symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0001SIM	R
SNAME	Symbol Name	20	DPPDB Stock Number	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	200	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 71.   Segment image classification (top of display)
symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0002SIM	R
SNAME	Symbol Name	20	Class-Top Image	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	300	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 72. Segment image classification (bottom of display)
symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0003SIM	R
SNAME	Symbol Name	20	Class-Bottom Image	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	400	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 73. Segment image handling instructions symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0004SIM	R
SNAME	Symbol Name	20	Handling Instruct	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	500	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 74. Segment image classification authority symbol file
subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0005SIM	R
SNAME	Symbol Name	20	Class Auth	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	600	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 75. Segment image model number symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0006SIM	R
SNAME	Symbol Name	20	Model Number	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	700	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

Note: The CGM commands immediately follow the symbol subheader.

TABLE 76. Segment image number identifier symbol file subheader.

FIELD	NAME	SIZE	VALUE RANGE	TYPE
SY	Message Part Type	2	SY	R
SID	Symbol ID	10	0007SIM	R
SNAME	Symbol Name	20	Segment Image Number	O
SSCLAS	Symbol Security Classification	1	U	R
SSCODE	Symbol Codewords	40	Spaces	O
SSCTLH	Symbol Control and Handling	40	Spaces	O
SSREL	Symbol Releasing Instructions	40	Spaces	O
SSCAUT	Symbol Classification Authority	20	Spaces	O
SSCTLN	Symbol Security Control Number	20	Spaces	O
SSDWNG	Symbol Security Downgrade	6	Spaces	O
ENCRYP	Encryption	1	0	R
STYPE	Symbol Type	1	C	R
NLIPS	Number of Lines Per Symbol	4	0	R
NPIXPL	Number of Pixels Per Line	4	0	R
NWDTH	Line Width	4	0000	R
NBPP	Number of Bits Per Pixel	1	0	R
SDLVL	Display Level	3	800	R
SALVL	Attachment Level	3	000	R
SLOC	Symbol Location	10	0000000000	R
SLOC2	Second Symbol Location	10	0000000000	O
SCOLOR	Symbol Color	1	Space Character	R
SNUM	Symbol Number	6	000000	O
SROT	Symbol Rotation	3	000	R
NELUT	Number of LUT Entries	3	000	R
SXSHDL	Extended Subheader Data Length	5	00000	R

The CGM commands immediately follow the symbol subheader.

TABLE 77. Segment image symbol file subheader field definition.

FIELD	DEFINITION
SY	This field shall contain the characters SY to identify the subheader as a symbol subheader.
SID	This field shall contain a valid alphanumeric number identifier in the format 1234SIM, where: 1234 is the number identifying the item in this file and SIM indicates the item is contained in the Segment Image file.
SNAME	This field shall contain the alphanumeric name for the symbol.
SSCLAS	This field shall contain a valid value of U (= Unclassified) representing the classification level of the symbol.
SSCODE	This field shall contain all spaces to indicate that no codewords apply to this symbol.
SSCTLH	This field shall contain all spaces to indicate that no file control and handling instructions apply to this symbol.
SSREL	This field shall contain all spaces to indicate that no symbol release instructions apply.
SSCAUT	This field shall contain all spaces that no symbol classification authority applies.
SSCTLN	This field shall contain all spaces to indicate that no symbol security control number applies.
SSDWNG	This field shall contain a valid indicator that designates the point in time at which a declassification or downgrading action is to take place. The valid value is the code "999999" indicating downgrading on E.O. 12951. If this field is all spaces, it shall imply that no file security downgrade condition applies.
ENCRYP	This field shall contain the value zero (0) to indicate the file is not encrypted.
STYPE	This field shall contain the letter C to indicate the symbol is defined in a Computer Graphics Metafile (CGM). The CGM format for the NITFS is defined in MIL-STD-2301.
NLIPS	This field shall contain zero (0).
NPIXPL	This field shall contain zero (0).
NWDTH	This field shall contain zero (0).
NBPP	This field shall contain zero (0).
SDLVL	This field shall contain a valid value that indicates the graphic display level of the symbol relative to other displayed file components in a composite display. The valid values are 001 to 999.
SALVL	This field shall contain a value of zero (0) to indicate these textual symbols are attached to the display device.

TABLE 77. <u>Segment image symbol file subheader field
definition</u> - Continued.

FIELD	DEFINITION
SLOC	The location of a symbol is specified by specifying the location of a point bearing a particular relationship to the symbol. The point is defined in MIL-STD-2301. This field shall contain zero (0).
SLOC2	This field shall contain zero (0).
SCOLOR	This field shall contain a space character.
SNUM	This field shall contain zero (0).
SROT	This field shall contain zero (0).
NELUT	This field shall contain zero (0).
SXSHDL	This field shall contain the value zero (0). A value of zero (0) shall mean that no controlled tagged record extensions are included in the image subheader.

APPENDIX A

RELEASABILITY CODES

A.1 SCOPE

A.1.1 Scope. This Appendix defines requirements for releasability codes for DPPDBs. This Appendix is a mandatory part of the specification, an is intended for compliance.

A.2 APPLICABLE DOCUMENTS

(This section is not applicable to this appendix.)

A.3 RELEASABILITY CODES

A.3.1 Releasability codes. Refer to classified annex for information regarding releasability codes for DPPDB data.

APPENDIX B

LIST OF FIGURES

B.1 SCOPE

B.1.1 Scope. This Appendix is not a mandatory part of the specification. The information contained herein is intended for guidance only.

B.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

B.3 LIST OF FIGURES

B.3.1 List of Figures. The following is a list of figures shown within the preceding DPPDB specification and the corresponding page location.

APPENDIX C

LIST OF TABLES

C.1 SCOPE

C.1.1 Scope. This Appendix is not a mandatory part of the
specification. The information contained herein is intended
for guidance only.

C.2 APPLICABLE DOCUMENTS

   This section is not applicable to this appendix.

C.3 LIST OF TABLES

C.3.1 List of Tables. The following is a list of tables shown
within the preceding DPPDB specification and the corresponding
page location.

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DISA - DC2

STANDARDIZATION DOCUMENT IMPROVEMENT PROPOSAL

I RECOMMEND A CHANGE:	1. DOCUMENT NUMBER MIL-PRF-89034	2. DOCUMENT DATE *(YYMMDD)* 990323

3. DOCUMENT TITLE
Digital Point Positioning Data Base (DPPDB)

4. NATURE OF CHANGE (Identify paragraph number and include proposed rewrite, if possible. Attach extra sheets as needed.)

5. REASON FOR RECOMMENDATION

6. SUBMITTER

a. NAME *(Last, First, Middle Initial)*	b. ORGANIZATION	
c. ADDRESS *(Include Zip Code)*	d. TELEPHONE *(Include Area Code)* (1) Commercial (2) *AUTOVON* *(If applicable)*	**7. DATE SUBMITTED** *(YYMMDD)*

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