

METRIC

MIL-PRF-89049/10A

15 December 2005

SUPERSEDING

MIL-PRF-89049/10

24 November 1998

PERFORMANCE SPECIFICATION SHEET
TACTICAL OCEAN DATA LEVEL 0 (TOD0)

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

1. SCOPE

1.1 Scope. This specification sheet defines the content and format for the U.S. National Geospatial-Intelligence Agency (NGA) Tactical Ocean Data Level 0 (TOD0) product. References to the TOD0 specification in this document assume use of both the general specification (MIL-PRF-89049A, dated 15 December 2005) and this specification sheet.

1.2 Purpose. The TOD0 is a vector-based digital product that portrays Naval Operating Areas (OPAREAS), Ranges, and Naval Exercise Areas (NAVEX) in a format suitable for computerized navigation. TOD0 is designed to be used in conjunction with the Digital Nautical Chart (DNC) for complete navigation information. The TOD0 also functions as a general purpose global database designed to support Geographic Information System (GIS) applications. This specification sheet provides a description of the content, accuracy, data format, and design of the TOD0 database. In addition, it portrays strategic information to support naval operations.

2. APPLICABLE DOCUMENTS

2.1 General. The documents listed in this section are specified in sections 3, 4, or 5 of this specification. This section does not include documents cited 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 of documents cited in sections 3, 4, or 5 of this specification whether or not they are listed.

2.2 Government documents.

Comments, suggestions or questions on this document should be addressed to the National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or emailed to ncgis-mail@nga.mil. Since contact information can change, you may want to verify the currency of this address information using the ASSIST Online database at <http://assist.daps.dla.mil/>.

MIL-PRF-89049/10A

2.2.1 Specifications, standards, and handbooks. 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 cited in the solicitation or contract.

DEPARTMENT OF DEFENSE STANDARDS

MIL-STD-2407

Vector Product Format, 28 June 1996
Change Notice 1, 22 October 1999

DEPARTMENT OF DEFENSE SPECIFICATIONS

MIL-PRF-89049

-

General Performance Specification
Vector Product Format (VPF)
Products

MIL-PRF-89023

-

Digital Nautical Chart

(Copies of these documents are available online at <http://assist.daps.dla.mil/quicksearch/> or from the Standardization Document Order Desk, 700 Robbins Avenue, Building 4D, Philadelphia, PA 19111-5094.)

2.2.2 Other government documents. The following other Government documents, drawings, and publications form a part of this document to the extent specified herein. Unless otherwise specified, the issues of these documents are those cited in the solicitation or contract.

PRODUCT SPECIFICATIONS

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

PS/2DA/010

-

Product Specifications for Naval
Operating Area (OPAREA) Charts

(Copies of the above publication are available from the National Geospatial-Intelligence Agency, National Center for Geospatial Intelligence Standards (NCGIS), Mail Stop P-106, 12310 Sunrise Valley Drive, Reston, VA 20191-3449, or request can be e-mailed to ncgis-mail@nga.mil.)

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 subjected to first article inspection in accordance with Section 4.2.

3.2 Accuracy.

3.2.1 Absolute horizontal accuracy. The absolute horizontal accuracy requirement for TOD0 is 250 meters circular error at 90 percent probability.

3.2.2 Absolute vertical accuracy. No vertical accuracy requirement exists for this product.

MIL-PRF-89049/10A

3.2.3 Relative accuracy. NGA does not have a formal relative accuracy objective defined for this product.

3.3 Datum.

3.3.1 Horizontal datum. The horizontal datum shall be referenced to WGS84. If the source map/chart sheets are not referenced to WGS84, then they will be converted from their original horizontal datum to WGS84.

3.3.2 Vertical datum. The Hydrographic Features on the TODO are referenced to a vertical datum based on low water tide level and is called the Sounding Datum or Hydrographic Datum. The specific low water datum used depends on the type of tide in the area or on the number and magnitude of high and low tides in one tidal cycle. Hydrographic datums used in the TODO will be specified in the Geographic Reference Table (grt) for each library.

3.4 Coordinate System. TODO Data Libraries shall implement a decimal degree geographic coordinate system. The horizontal coordinate resolution for geographic coordinates shall be 0.02 arc-seconds or 0.000005 decimal degrees.

3.5 Continuity. All TODO data are subject to the portrayal criteria specified in section 3.14.

a. The TODO is based on the feature content of Naval Operating Area (OPAREA) Charts, Range Charts and Naval Exercise Area (NAVEX) Charts produced by NGA. It will, however, contain only the information that is not covered by the Digital Nautical Chart (DNC). The TODO must be used in conjunction with the appropriate DNC library coverage in the same area to ensure complete coverage for surface navigation.

b. MIL-PRF-89049A and this performance specification sheet contain the database design and the feature content for a thematically layered, relationally structured set of databases to support electronic chart display systems.

3.6 Thematic layer organization. The TODO database is organized into multiple data libraries containing thematic layers. Each thematic layer is stored as a single coverage. The TODO data libraries contain two reference coverages and up to four thematic layers, two of which correspond to the same coverages in the DNC. Table 1 lists the thematic coverages defined for the TODO product.

TABLE 1. Thematic layers for the TODO library.

VPF Structure Level	TODO library thematic layers	Coverage name
Data Libraries	Library Reference	libref
	Tile Reference	tileref
	Aeronautical	aer
	Data Quality	dq
	Earth Cover	ecr
	Maritime	mar

MIL-PRF-89049/10A

3.7 Dimensions. The minimum size of features collected from source materials shall be in conformance with the portrayal criteria from MIL-PRF-89023 and the attribute values provided in the TOD0 data dictionary, Appendix C. Features may be captured as points, lines, areas, or text.

3.8 Feature and attribute coding scheme. TOD0 implements the 8 April 2002 version of the NIMA Profile of FACC which is based on the Digital Geospatial Information Exchange Standard (DIGEST) Part 4, Feature and Attribute Coding Catalogue (FACC) to define features, attributes, and values. See Appendix D for a listing of the FACC feature codes and attribute codes allowable for TOD0 thematic files.

3.9 Units of measure. Units of measurement in this specification are generally given in the metric system. With very few exceptions, units of measurement for the TOD0 will employ the metric system. Units of measure and increments for attributes shall be in accordance with the FACC.

3.10 TOD0 directory organization.

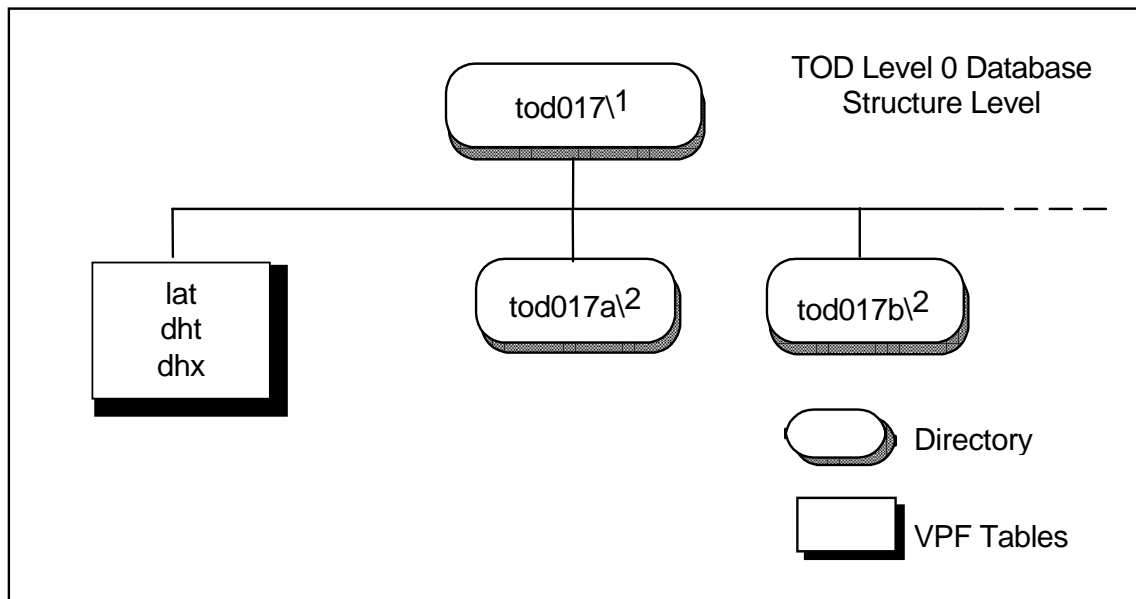
3.10.1 Databases. TOD0 consists of a number of individual databases, geographically coincident with the corresponding DNC databases. Each CD-ROM shall contain a single database directory and at least one data library. Each data library contains a mix of reference coverages and thematic coverages.

3.11 VPF structure levels, tables, and files. The following sections identify VPF structure information specific to TOD0. General database, library, and coverage level tables are defined in MIL-PRF-89049A. The TOD0 specific content information for the database and library level metadata tables is described in Appendix B of this specification sheet. The record layout and content of the TOD0 tables and files are described in Appendix C of this specification sheet.

3.11.1 Database directory files.

a. The TOD0 product shall contain a number of database directories, each of which has its own unique database directory files and is contained on exactly one CD-ROM disc. The database name is represented as a directory name and shall be in lower case letters. The appropriate database directory shall be present on each CD-ROM at the root level. A representation of the tables and files appearing at the TOD0 database level is depicted in Figure 1.

MIL-PRF-89049/10A



¹ This is a representative directory name for a TOD0 database.

² These are representative directory names for TOD0 libraries.

FIGURE 1. TOD database directory.

b. As described in MIL-PRF-89049A, section 3.16.1 and Appendix B therein, the database directory contains three required metadata tables. The required tables include the Library Attribute Table (lat), Database Header Table (dht), and Database Header Table variable length index (dhx) (see Table 2). Appendix B in this specification sheet defines the TOD0 implementation of the database level metadata tables.

TABLE 2. TOD0 database table and file names and description.

Table or File Description	Table or File Name
TOD0 database directory	tod017 ¹
Library Attribute Table	lat
Database Header Table	dht
Database Header Table variable length index	dhx
TOD0 library directories	tod017a ²

¹This is a representative directory name for a TOD0 database.

²This is a representative directory name for a TOD0 library.

MIL-PRF-89049/10A

3.11.2 Database and library naming conventions.

a. The database name is represented as a directory name and shall be represented in six lower case letters. The first four characters are 'tod0' and the last two characters represent the disc number. The discs are numbered geographically, not sequentially, and match the Minimum Bounding Rectangle (MBR) of the underlying DNC database. Hence, tod003 may be produced after tod004 if the data comprising the tod003 geographic area is issued on a later disc.

b. TODO library names shall be represented in eight lower case characters. The first six characters are the TODO database name. The seventh and eighth characters can be used for single or double alphabetic characters beginning with 'a' used to uniquely identify each data library contained in a TODO database.

3.11.3 Library directory files. The contents of each TODO library are stored in a directory, whose name shall be no more than eight lower case alphanumeric characters in length. The entire contents of one or more TODO libraries shall be contained in a dataset. The size of the dataset shall not exceed the maximum size limit allowable for the exchange medium (i.e., CD-ROM). A representation of the tables and files present in a TODO library is provided in MIL-PRF-89049A, Figure 4. TODO will not implement a reference library, as defined in MIL-PRF-89049A.

3.11.3.1 Library metadata. The library metadata tables and their content are described in MIL-PRF-89049A, section 3.16.2.1. Appendix B in this specification sheet defines the TODO implementation of the library level metadata tables.

3.11.3.2 Library reference coverages. Each tiled TODO data library shall contain the Tile Reference Coverage (tileref) and Library Reference Coverage (libref). The tileref coverage shall be implemented as defined in MIL-PRF-89049A, Appendix D. The optional text feature table shall not be implemented in TODO.

The libref coverage shall be implemented as defined by Appendix C in this specification sheet.

3.11.3.3 Use of TODO in conjunction with DNC. The TODO data library is to be used in conjunction with the appropriate DNC library that contains the same coverage area. All DNC CDs will contain a BROWSE library, which is used to support overview displays at a global scale. Because BROWSE is already part of DNC, TODO will not contain a BROWSE Library.

3.11.4 Coverage directory files.

3.11.4.1 Coverage metadata. The coverage metadata tables and their content are described in MIL-PRF-89049A, section 3.16.3.1. Product specific information for TODO is provided in Appendix C of this specification sheet.

3.11.4.2. Data coverages. There are up to three possible data coverage directories present in any TODO data library. Within a library, coverage directories shall not be included if data does not exist for that coverage within the library's geographic area. The contents of each TODO data coverage are stored in a directory whose name shall be represented in lower

MIL-PRF-89049/10A

case letters with a three character name representative of the thematic layer name (i.e., aer for Aeronautical, ecr for Earth Cover). In addition, each TOD0 library can contain a data quality (dq) coverage. The dq coverage contains information about the accuracy of the source(s) that were used to produce TOD0.

3.11.4.3 Coverage topology. The topology level of each coverage is specified in the coverage attribute table (cat) within each library, see MIL-PRF-89049A, section 3.16.2.1 and Appendix D. Topology is not supported between coverages. The cat for each library is tailored based on the coverages actually present. See Appendix B of this specification sheet for the definition of the TOD0 cat containing all possible TOD0 coverages.

3.11.5 Feature class structure level. TOD0 feature classes are shown in Table 3. Only those feature classes containing data shall be present in the coverage. Descriptions of the feature classes, with the exception of those located in the Data Quality (dq) coverage, are found in Appendix C of this specification sheet. For feature class descriptions of data quality features, see MIL-PRF-89049A, Appendix E. TOD0 will implement the optional text feature table in the dq coverage.

TABLE 3. TOD0 thematic coverages and feature classes.

Coverage Name	Feature Classes			
	Point	Line	Area	Text
aer	aerop	dqline	aspa	dqtxt
dq			dqvoida dqarea	
ecr	maritimp	maritiml	maritima	ecrtext
mar				

3.11.5.1 Feature table structure and contents. Feature tables and join tables will be implemented per MIL-PRF-89049A, section 3.16.4.2. In addition to implementing the required feature-to-primitive links using join tables for all line and area feature classes, TOD0 also implements the feature-to-primitive links using join tables for all text feature classes.

3.11.5.2 Related attribute tables.

3.11.5.2.1 Notes related attribute table. Digital marginalia refers to the information that originally appeared in notes, tables, and graphs on the borders of the hardcopy chart sheets. For the TOD0, this information is included in the Notes Related Attribute Table (notes.rat) in each coverage. The notes.rat shall be implemented for all feature tables (except for ecrtext, dqline, dqarea, and dqtxt), when appropriate, in accordance with MIL-PRF-89049A, section 3.16.4.3.1.

3.11.5.2.2 Symbol related attribute table. TOD0 shall not implement the symbol related attribute table (symbol.rat) defined in MIL-PRF-89049A, section 3.16.4.3.

3.11.5.3 Text feature class. A text feature class is composed of a text feature table (*.tft) and a text primitive (txt) table. This primitive table contains information that may be used to replicate text strings found

MIL-PRF-89049/10A

on an original chart or other source for representation on a plot or digital display. All text (both at the feature and primitive level) will be limited to the characters found in the Latin alphabet primary code table, FIGURE 24 of MIL-STD-2407.

3.11.6 Primitive Tables and associated files. VPF uses the primitive tables defined in MIL-STD-2407 to model a feature's location, geometry and topology. See MIL-PRF-89049A, section 3.16.5 for the format to be used for VPF primitive tables in TOD0. All coverages in TOD0 data libraries shall implement 2-dimensional (2D) geometry for the coordinates contained in the primitive tables. All primitive tables contained in the TOD0 data libraries shall use a field type of "C" (2D, short floating point) to store the coordinate data.

3.12 TOD0 tiling scheme. Each TOD0 coverage is divided into a set of tiles using the World Geographic Reference System (GEOREF) described in DMA TM 8358.1. This system divides the surface of the earth into quadrangles, the sides of which are specific arc lengths of longitude and latitude. Each quadrangle is identified by a simple systematic letter code giving positive identification with no risk of ambiguity.

3.12.1 TOD0 tile sizes. In the latitudes from 0-81 degrees, TOD0 is divided into 3° by 3° tiles. In the Polar Regions (latitudes from 81-90 degrees), TOD0 is divided into 4 9° by 90° degree tiles. The lower left (southwestern most) corner of each tile is identified using the GEOREF naming conventions described in MIL-PRF-89049A, section 3.17. This GEOREF identifier is used as the name for the directory containing the primitives contained in that tile.

3.12.2 Cross-tile topology. Cross-tile topology ensures that topology is retained between the primitive tables across the tile boundaries. Topology across the tiles is maintained through the use of a reference tile ID in the edge and connected node primitive tables that establishes a "cross-tile" link over the tile partitions. This enables the database to function as a seamless unit for analysis purposes.

3.13 Distribution medium. The TOD0 will normally be distributed on CD-ROM discs, each of which is a single TOD0 database corresponding to the DNC database over the same geographic area. The format of the CD-ROM discs conforms to ISO Standard 9660. Data may also be distributed via web services (i.e., NGA Gateway), or other media, for example, Digital Versatile Disc (DVD) as required to support customer needs.

3.13.1 Geographic organization. The TOD0 shall be organized on multiple CD-ROM discs based on geographic regions of the world. There is no overlap present on adjoining discs.

3.13.2 Database size. The size of a TOD0 database is dependent on the complexity of the source used to produce the product and the number of particular charts included in the database. A single database will not exist on more than one CD-ROM.

3.14 Cartographic considerations for TOD0 database.

3.14.1. Source. OPAREA Charts, Range Charts and NAVEX Charts are generally used to provide the fundamental source data set.

MIL-PRF-89049/10A

3.14.2. Compilation scale. The compilation scale will vary based on the scale of hardcopy charts which varies depending on latitude and chart coverage.

3.14.3. Minimum polygon size. The minimum polygon size depicted in the TOD0 product will conform to the criteria set forward in Digital Nautical Chart, MIL-PRF-89023.

3.14.4. Limits. Only limits pertaining to naval operations including the three and twelve nautical mile territorial limits will be collected from the applicable Operational Area Manual source charts. It is assumed all other limits will be portrayed in the accompanying DNC library.

3.15 Security.

3.15.1 Classification. TOD0 data shall be classified as follows:

a. Tactical Ocean Data Level 0 (TOD0) databases are normally Unclassified-Limited Distribution or as specified in the contract.

3.16 CD ROM labeling and packaging. General CD-ROM labeling, labeling on the cardboard sleeve, or jewel caseliner/information booklet, as applicable shall be as described in MIL-PRF-89049A. Items specific to TOD0 are shown below.

3.16.1 CD labeling. Labeling of the TOD0 CDs shall be in accordance with the contract instructions.

3.16.1.1 Product specific items.

a. Product Logo: TOD0 CDs shall show the VPF logo.

b. Product Description: Tactical Ocean Data Level 0 (TOD0 TM)

c. Series: TOD0

d. Item: The three digit TOD0 CD number.

e. NGA reference number format is TOD0nnn00, where nnn represents the three digit TOD0 CD number.

3.16.2 Information booklet. Information booklets shall be provided for TOD0 CDs. Labeling of the TOD0 information booklet covers shall be in accordance with contract instructions. When used in conjunction with the jewel case, the front cover of the information booklet also serves as the front cover of the case.

3.16.2.1 Information booklet TOD0 specific items. All information booklet TOD0 specific items are the same as those shown on the CD, see 3.16.1.1.

3.16.2.2 Information booklet text.

a. The interior pages of the information booklet shall contain the following statements. The point of contact information (NGA User's Note) shown below is current as of the date of publication of this specification. See contract for updates (if applicable).

MIL-PRF-89049/10A

Tactical Ocean Data Level 0 (TODO)

The Tactical Ocean Data Level 0 (TODO) provides worldwide databases of nautical information in Vector Product Format (VPF) that are contained on CD-ROM discs. The data content and coverage is intended to closely replicate NGA's Naval Operating Area (OPAREA) Chart, Range Chart, and Naval Exercise Area (NAVEX) Chart series. TODO must be used in conjunction with the Digital Nautical Chart (DNC) to provide feature coverage necessary for surface navigation. The NGA Notice to Mariners (NTM) supports the product with maintenance information also on the NGA Maritime Safety Information Center Web Site. For further information send a request to Headquarters, NGA, ATTN: OGIH.

This TODO was produced under DoD Specification MIL-PRF-89049/10A, dated 15 December 2005.

Users should refer corrections, additions, and comments regarding this or other NGA products to the NGA Operational Help Desk: 1-800-455-0899; commercial 314-263-4864; DSN 693-4864; or write to: Director, National Geospatial-Intelligence Agency, ATTN: ES, Mail Stop L-88, 4600 Sangamore Road, Bethesda, MD 20816-5003.

b. Source information (library, charts, NTM number) shall be shown as illustrated in the following example:

Note: This TODO contains libraries tod003a with OPAREA xxxxx and xxxxx as sources, corrected through Notice to Mariners 10/96, and tod003b with OPAREA xxxxx, xxxxx, xxxxx, and xxxxx as sources, corrected through Notice to Mariners 10/96.

4. VERIFICATION

Verification shall be in accordance with MIL-PRF-89049A, section 4.

5. PACKAGING

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

6. NOTES

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

6.1 Intended use. The TODO database is intended to supplement electronic chart display systems with Limited Distribution information

MIL-PRF-89049/10A

portraying Naval Operating Areas, Ranges, and Exercise areas. The TOD0 is intended for use by military branches of the government.

6.1.1 Analysis limitation. Analytical use of TOD0 data at a scale greater than that of the original cartographic source nautical chart is not recommended.

6.2 Acquisition requirements. See MIL-PRF-89049A, section 6.2.

6.3 Supercession. This specification sheet supersedes MIL-PRF-89049/10, dated 24 November 1998.

6.4 Definitions. Refer to MIL-PRF-89049A for definition of terms used in this specification that are not defined below.

6.4.1 Mean Sea Level (MSL). - The average height of the surface of the sea for all stages of the tide, used as a reference for elevations. (Usually determined by averaging height readings observed hourly over a minimum period of 19 years.)

6.5 Subject term (key word) listing.

DNC
FACC
GEOREF
GIS
NAVEX Chart
OPAREA Chart
Range Chart
Thematic layer
TOD
WGS84

6.6 Changes from previous issue. The margins of this specification sheet are marked with vertical lines to indicate where changes from the previous issue, MIL-PRF-89049/10 were made. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Exceptions to these markings include the following tables and/or sections: char.vdt tables, int.vdt tables, all sections and tables of appendix D. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

6.7 NGA operational help desk. For questions concerning this or other NGA products, services, or specifications, please telephone the NGA Operational Help Desk at 1-800-455-0899; Commercial 314-263-4864; or DSN 693-4864.

MIL-PRF-89049/10A
APPENDIX A

TOD0 DATA DICTIONARY ORGANIZATION

A.1 SCOPE.

A.1.1 Scope. This appendix provides information about the data dictionary organization for the TOD0 product. It is a mandatory part of the specification sheet information contained herein is intended for compliance.

A.2 APPLICABLE DOCUMENTS

The TOD0 must be used in conjunction with the Digital Nautical Chart (DNC) to provide complete coverage of a given area. Refer to MIL-PRF-89023, Digital Nautical Chart, for DNC data dictionary information.

A.3 TOD0 DATA DICTIONARY ORGANIZATION

A.3.1 Data dictionary organization.

a. The data provided in these appendices are organized according to VPF structure levels. The TOD0 database and library tables appear first, as described in MIL-PRF-89049A, Appendixes B and D. The information provided in the database tables applies to the entire database. The TOD0 database contains only data libraries (containing the product data) described in Appendix C of this document.

b. Appendix B in this specification sheet contains information on the database and library level metadata tables for TOD0.

c. Appendix C in this specification sheet contains the data coverages and the library reference coverage. For each coverage there is a series of tables that describe the data in that coverage. Listed for each coverage are the character value description table, integer value description table, feature tables, feature class attribute table, and feature class schema table.

d. Appendix D in this specification sheet contains two consolidated listings of the TOD0 features and attributes along with their respective primitive types for the TOD0 libraries. They are designed as an index to the TOD0 features and attributes. The first is a listing by coverage of the TOD0 feature names and codes, and their associated attribute names and codes. The second is a similar consolidated listing of all the TOD0 features sorted by feature code.

MIL-PRF-89049/10A
APPENDIX B

TODO DATABASE AND LIBRARY VPF TABLE IMPLEMENTATION

B.1 SCOPE

B.1.1 Scope. This appendix defines the TODO implementation of the required database and library level metadata tables. It is a mandatory part of this specification sheet. The information contained herein is intended for compliance.

B.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

B.3 TODO DATABASE AND LIBRARY VPF TABLE CONTENTS

The following sections define the default record content for each of the database and library level metadata tables that require product-specific information. The actual record content of these metadata tables in a TODO dataset shall be tailored to accurately represent the dataset. In certain cases, the structure of a metadata table in TODO differs from the structure of that table as defined in MIL-PRF-89049A. For those metadata tables, the TODO structure is defined in this appendix.

B.3.1 Database-level record layout. The TODO consists of a number of individual databases. Three required VPF tables and files are implemented at the database level. These are the database header table (dht) and corresponding variable-length index (dhx) and the library attribute table(lat). The following sections describe these tables and their default record content for the TODO database.

B.3.1.1 Database header table. This table contains information about the contents of the database and security information. For TODO, the format of the dht is different than the one defined in MIL-PRF-89049A. Table B-1 herein defines the structure and the default record contents for the dht in the TODO databases. TODO does not implement the optional disclaim.doc that can be associated with the dht.

MIL-PRF-89049/10A
APPENDIX B

TABLE B-1. Structure and Record Contents for database header table (dht).

<pre> {Header length}L; Database Header Table;-; id=I,1,P,Row Identifier,-,-,-,: vpf_version=T,10,N,VPF version number,-,-,-,: database_name=T,8,N,Directory name of this database,-,-,-,: database_desc=T,100,N,Description of this database,-,-,-,: media_standard=T,20,N,Media Standard,-,-,-,: originator=T,*N,Producer of this database,-,-,-,: addressee=T,*N,Address of the producer,-,-,-,: media_volumes=T,4,N,Number of Volumes in this database,-,-,-,: seq_numbers=T,*N,The Sequential Number(s) in this database,-,-,-,: num_data_sets=T,4,N,Number of Libraries,-,-,-,: security_class=T,1,N,Security Classification,-,-,-,: downgrading=T,3,N,Downgrading,-,-,-,: downgrade_date=D,1,N,Date of downgrading,-,-,-,: releasability=T,20,N,Releasability restrictions of data,-,-,-,: transmittal_id=T,1,N,Unique Transmittal Identifier,-,-,-,: edition_number=T,10,N,Edition Number of this database,-,-,-,: edition_date=D,1,N,Date of edition,-,-,-,: declassification=T,*N,Declassificaton Note,-,-,-,: class_just=T,*N,Justification for classification,-,-,-,: </pre>
<pre> 1\ 9606\ tod017\¹ Tactical Ocean Data Level 0 database supporting tactical GIS applications.\² ISO 9660\ NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY\ ATTN: NGA/P, Mail Stop D-134, 4600 Sangamore Road, Bethesda, MD 20816- 5003\ 1\ 1\ 1\ \ N/A\ [Null]\ Distribution Limited\ 1\ 1\ 0000000000000000.\ [Null]\ [Null] </pre>

¹This is a representative directory name for a TOD0 database.

²This is a representative description for a TOD0 database.

MIL-PRF-89049/10A

APPENDIX B

B.3.1.2 Library attribute table. This table contains a row for each TODO library that describes the library's name and the minimum bounding rectangle that defines the geographic extent of that library. The format of the lat is defined in MIL-PRF-89049A, Appendix B. There is no TODO-specific default record content for the lat.

B.3.2 Library-level record layout. Each TODO data library shall contain the four required metadata tables and associated narrative tables and indices. These include the library header table (lht), geographic reference table (grt), coverage attribute table (cat), data quality table (dqt), a lineage narrative table (lineage.doc) and variable-length indices (lhx, grx, dqx, lineage.dox). The following sections describe these tables and their default record content for TODO data libraries.

B.3.2.1 TODO library header table. The library header table identifies the data set, sources and security information in the data library. For TODO, the format of the lht is different than the one defined in MIL-PRF-89049A. Table B-2 herein defines the structure and the default record contents for the lht in the TODO libraries.

MIL-PRF-89049/10A

APPENDIX B

TABLE B-2. Structure and Content for TOD0 library header table (lht).

<pre> {Header length}L; Library Header Table;-; id=I,1,P,Row Identifier,-,-,-,: product_type=T,12,N,Product Type,-,-,-,: library_name=T,12,N,Name,-,-,-,: description=T,100,N,Description of the library,-,-,-,: data_struct_code=T,1,N,Data Structure Code,-,-,-,: scale=I,1,N,Scale of the library,-,-,-,: source_series=T,15,N,Series,-,-,-,: source_id=T,30,N,Identifier of the source reference,-,-,-,: source_edition=T,20,N,Edition number of the source,-,-,-,: source_name=T,100,N,Name of library source,-,-,-,: source_date=D,1,N,Source Date,-,-,-,: security_class=T,1,N,Security Classification,-,-,-,: downgrading=T,3,N,Downgrading,-,-,-,: downgrading_date=D,1,N,Date of downgrading,-,-,-,: releasability=T,20,N,Releasability,-,-,-,: declassification=T,*,N,Declassification Note,-,-,-,: class_just=T,*,N,Justification for classification,-,-,-,: 1\ TOD0\ tod017a\ OPAREA, NAVEX and Range data to be used in conjunction with the accompanying DNC17\¹ 8\ (scale of library)\² 2DA\ Various\ Various\ Various\ 000000000000000.\³ \ N/A\ [NULL]\ Distribution Limited\ [Null]\ [Null] </pre>	
--	--

Note: Each line represents the record value for each defined column.

¹This is a representative description for a TOD0 library.

²Insert actual scale of library

³Indicates earliest source date.

MIL-PRF-89049/10A
APPENDIX B

B.3.2.2 Geographic reference table. This table contains the geographic parameters, and projection information about a TOD0 library. The format of the grt is defined in MIL-PRF-89049A, Appendix D. Table B-3 herein defines the default record contents for the grt in a TOD0 data library.

TABLE B-3. Record contents for a TOD0 library geographic reference table (grt).

Column Name	Record Entry
id	1
data_type	GEO
units	DEG
ellipsoid_name	WGS 84
ellipsoid_code	WGE
ellipsoid_detail	A=6378137,B=6356752
vert_datum_name	MEAN SEA LEVEL
vert_datum_code	MSL
vert_units	M
sound_datum_name	N/A
sound_datum_code	N/A
sound_units	M
geo_datum_name	WGS 84
geo_datum_code	WGE
projection_name	DECIMAL DEGREES UNPROJECTED

B.3.2.3 Coverage attribute table. The cat defines the topology level for each coverage in a TOD0 data library. The format of the cat is defined in MIL-PRF-89049A, Appendix D. Table B-4 herein defines the record content of the cat for all coverages in TOD0.

TABLE B-4. Record contents for a TOD0 coverage attribute table (cat).

id	coverage_name ¹	description	level ²
1	libref	Library Reference	3
2	tileref	Tile Reference	3
3	aer	Aeronautical	3
4	dq	Data Quality	3
5	ecr	Earth Cover	0
6	mar	Maritime	3

NOTES:

1. This table depicts all coverages which may be present in a TOD0 library. Presence of these coverages will vary with data availability. If a library does not contain any data for a particular coverage, then the record describing the coverage will not be present.

2. The number in the level column represents the topology level of each coverage.

MIL-PRF-89049/10A
APPENDIX B

B.3.2.4 Data Quality Table The dqt provides information about the quality and accuracy of the data contained in the TOD0 data library. The format of the dqt and the associated lineage.doc is defined in MIL-PRF-89049A, Appendix D. Table B-5 herein defines the default record contents for the dqt in a TOD0 data library. No default contents are specified for the lineage.doc.

TABLE B-5. Record contents for a TOD0 library data quality table (dqt).

Column Name	Record Entry
id	1
vpf_level	LIBRARY
vpf_level_name	tod0xxx
feature_complete	All features in this library are captured from the source materials in accordance with this specification
attrib_complete	All features in this library have valid attribute codes assigned to them in accordance with this specification
logical_consist	All data are topologically correct. No duplicate features are present within a coverage. All data were consistently captured using the rules described in the documentation table associated with this table.
edition_num	1
creation_date	20050820000000.
revision_date	00000000000000.
spec_name	MIL-PRF-89049/10A
spec_date	20050420000000.
earliest_source	19700101000000.
latest_source	00000000000000.
collection_spec	MIL-PRF-89049/10A
abs_horiz_acc	250
abs_horiz_units	METERS
abs_vert_acc	N/A
abs_vert_units	N/A
rel_horiz_acc	N/A
rel_horiz_units	N/A
rel_vert_acc	N/A
rel_vert_units	N/A
comments	Additional descriptions of data lineage are available in the documentation table associated with this data quality table (lineage.doc)

MIL-PRF-89049/10A
APPENDIX C

TOD0 THEMATIC COVERAGES VPF TABLES AND CONTENTS

C.1 SCOPE

C.1.1 Scope. This appendix describes the thematic coverage directory record layout for TOD0 data. It is a mandatory part of this specification sheet. The information contained herein is intended for compliance.

C.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

C.3 TOD0

C.3.1 General. Appendix C contains the data coverages and the libref coverage for TOD0. For each coverage there is a series of tables that describe the data in that coverage. Listed for each coverage is the character value description table, integer value description table, feature tables, feature class attribute table, and feature class schema table.

TABLE C-1. TOD0 data coverages.

Data Quality coverage	(dq)
Aeronautical coverage	(aer)
Earth Cover coverage	(ecr)
Maritime coverage	(mar)

C.3.1.1 Data Quality Coverage. As shown in Table C-1, this appendix details 3 of the 4 data coverages contained in the TOD0 product. The Data Quality coverage is described in MIL-PRF-89049A, Appendix E. The minimum collection area size is 15,625 square meters.

MIL-PRF-89049/10A
APPENDIX C

C.3.2 Aeronautical Coverage.

This coverage contains Aeronautical features of significance to naval operations. This coverage is tiled.

TABLE C-2. Aeronautical Character Value Description Table.

Thematic Layer: Aeronautical
Coverage Name: aer
Feature Table Description: Aeronautical Character Value Description Table
Table Name: char.vdt

<pre>{Header length}L; Aeronautical Character Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,: table=T,12,N,Name of the Feature Table,-,-,-,: attribute=T,6,N,Column Name,-,-,-,: value=T,5,N,Unique Value of Attribute,-,-,-,: description=T,*,N,Description of Value,-,-,-,;;</pre>				
1	aerop.pft	f_code	GA035	NAVAIDS (Aeronautical)
2	aerop.pft	f_code	GA055	Waypoint/Reporting-Calling In Point
3	aerop.pft	chl	UNK	Unknown
4	aerop.pft	mca	UNK	Unknown
5	aerop.pft	nam	UNK	Unknown
6	aspa.aft	f_code	GA005	Airspace
7	aspa.aft	f_code	GA015	Special Use Airspace
8	aspa.aft	nam	UNK	Unknown
9	aspa.aft	sua	UNK	Unknown
10	fca	type	P	Point/Node Feature
11	fca	type	A	Area Feature

MIL-PRF-89049/10A
APPENDIX C

TABLE C-3. Aeronautical Integer Value Description Table.

Thematic Layer: Aeronautical
Coverage Name: aer
Feature Table Description: Aeronautical Integer Value Description Table
Table Name: int.vdt

<pre>{Header length}L; Aeronautical Integer Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,: table=T,12,N,Name of the Feature Table,-,-,-,: attribute=T,3,N,Column Name,-,-,-,: value=S,1,N,Unique Value of Attribute,-,-,-,: description=T,*,N,Description of Value,-,-,-,:;</pre>				
1	aerop.pft	acc	1	Accurate
2	aerop.pft	acc	2	Approximate
3	aerop.pft	lfa	10	Rotating Beacon
4	aerop.pft	lfa	999	Other
5	aerop.pft	mag	-32767	Unknown
6	aerop.pft	nst	0	Unknown
7	aerop.pft	nst	17	Non-Directional Radio Beacon (NDB)
8	aerop.pft	nst	20	VHF Omni Directional Radio Range (VOR)
9	aerop.pft	nst	21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)
10	aerop.pft	nst	22	VHF Omni Directional Radio Range and TACAN (VORTAC)
11	aerop.pft	nst	23	Tactical Air Navigation Equipment (TACAN)
12	aerop.pft	orc	-32767	Unknown
13	aerop.pft	wpt	0	Unknown
14	aerop.pft	wpt	5	Non-essential waypoint
15	aerop.pft	wpt	10	ATC compulsory waypoint
16	aspa.aft	aua	0	Unknown
17	aspa.aft	aua	2	Air Defense Identification Zone (ADIZ)
18	aspa.aft	aua	9	Control Area (CTLZ)
19	aspa.aft	aua	13	Flight Information Region (FIR)
20	aspa.aft	aua	20	Military Operations Area (MOA)
21	aspa.aft	aua	21	Military Terminal Control Area (MTCA)
22	aspa.aft	aua	22	Military Upper Control Area (MUCA)
23	aspa.aft	aua	23	Oceanic Control Area (non-FAA) (OCA)
24	aspa.aft	aua	34	Terminal Control Area (TCA)
25	aspa.aft	aua	36	Special Operations Area (Air)
26	aspa.aft	aua	39	Upper Control Area (UTA)
27	aspa.aft	aua	40	Upper Flight Information Region (UIR)
28	aspa.aft	aua	46	Controlled Airspace
29	aspa.aft	aua	70	Oceanic Control Area (FAA) (OCA)

MIL-PRF-89049/10A
APPENDIX C

TABLE C-3. Aeronautical Integer Value Description Table (continued).

30	aspa.aft	aua	79	Special Use Airspace Exclusions
31	aspa.aft	aua	998	Not Applicable
32	aspa.aft	aul	0	Unknown
33	apsa.aft	aul	2	Prohibited Area
34	aspa.aft	aul	3	Restricted Area
35	aspa.aft	aul	5	Alert Area
36	aspa.aft	aul	6	Warning Area
37	aspa.aft	aur	5	Corridor
38	aspa.aft	aur	998	Not Applicable
39	aspa.aft	icl	0	Unknown
40	aspa.aft	icl	1	Class A
41	aspa.aft	icl	2	Class B
42	aspa.aft	icl	3	Class C
43	aspa.aft	icl	4	Class D
44	aspa.aft	icl	5	Class E
45	aspa.aft	icl	6	Class F
46	aspa.aft	icl	7	Class G
47	aspa.aft	icl	998	Not Applicable

MIL-PRF-89049/10A
APPENDIX C

TABLE C-4. Aeronautical Point Feature Table.

Thematic Layer: Aeronautical
Coverage Name: aer
Feature Table Description: Aeronautical Point Feature Table
Table Name: aerop.pft
Thematic Index ID Number: 1

```
{Header length}L;
Aeronautical Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-;
f_code=T,5,N,FACC Feature Code,char.vdt,f_code1.pti,-,:
acc=S,1,N,Accuracy Category,int.vdt,acc1.pti,-,:
chl=T,5,N,Channel Number,char.vdt,-,-,:
lfa=S,1,N,Light Function Aeronautical,int.vdt,-,-,:
mag=S,1,N,Magnetic Variation,int.vdt,-,-,:
mca=T,5,N,Morse Code Attribute,char.vdt,-,-,:
nam=T,*,N,Name,char.vdt,-,-,:
nst=S,1,N,Navigation System Types,int.vdt,nst1.pti,-,:
orc=S,1,N,Operating Range Category,int.vdt,-,-,:
wpt=S,1,N,Waypoint Description Code,int.vdt,wpt1.pti,-,:
tile_id=S,1,N,Tile Reference ID,-,tile_id.pti,-,:
end_id=I,1,N,Entity Node Primitive ID,-,end1_id.pti,-,;;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		GA035	NAVAIDS (Aeronautical)	
		GA055	Waypoint/Reporting-Calling In Point	
acc	Accuracy Category			
		-32768	Null	GA055
	default	1	Accurate	GA035
		2	Approximate	GA035
chl	Channel Number			
		N/A	Null	GA055
	default	UNK	Unknown	GA035
		Character text string		GA035
lfa	Light Function Aeronautical			
		-32768	Null	GA055
	default	10	Rotating Beacon	GA035
		999	Other	GA035

MIL-PRF-89049/10A
APPENDIX C

TABLE C-4. Aeronautical Point Feature Table (continued).

mag	Magnetic Variation				
	default	-32767	Unknown	GA035,GA055	
		>=-180 and	Actual Value		
		<=180		GA035,GA055	
mca	Morse Code Attribute				
		N/A	Null	GA055	
	default	UNK	Unknown	GA035	
		Character text string		GA035	
nam	Name				
	default	UNK	Unknown	GA035,GA055	
		Character text string		GA035,GA055	
nst	Navigation System Types				
		-32768	Null	GA055	
	default	0	Unknown	GA035	
		17	Non-Directional Radio Beacon (NDB)	GA035	
		20	VHF Omni Directional Radio Range (VOR)	GA035	
		21	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)	GA035	
		22	VHF Omni Directional Radio Range and TACAN (VORTAC)	GA035	
		23	Tactical Air Navigation Equipment (TACAN)	GA035	
	orc	Operating Range Category [nautical miles]			
			-32768	Null	GA055
default		-32767	Unknown	GA035	
		>=1 and	Actual Value		
		<=1000		GA035	
wpt	Waypoint Description Code				
	default	0	Unknown	GA035,GA055	
		5	Non-essential waypoint	GA035,GA055	
		10	ATC compulsory waypoint	GA035,GA055	

MIL-PRF-89049/10A
APPENDIX C

TABLE C-5. Airspace Area Feature Table.

Thematic Layer: Aeronautical
Coverage Name: aer
Feature Table Description: Airspace Area Feature Table
Table Name: aspa.aft
Thematic Index ID Number: 2

```
{Header length}L;
Airspace Area Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code2.ati,-,:
aua=S,1,N,ATS Use Attribute,int.vdt,aua2.ati,-,:
aul=S,1,N,Airspace Use Limitations,int.vdt,aul2.ati,-,:
aur=S,1,N,Airspace Use Routes,int.vdt,-,-,:
icl=S,1,N,ICAO Airspace Classification,int.vdt,icl2.ati,-,:
nam=T,*,N,Name,char.vdt,-,-,:
sua=T,*,N,Special Use Airspace Altitude Limits,char.vdt,-,-,:;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		GA005	Airspace	
		GA015	Special Use Airspace	
aua	ATS Use Attribute			
		0	Unknown	GA005
		2	Air Defense Identification Zone (ADIZ)	GA005
		9	Control Zone (CTLZ)	GA005
		13	Flight Information Region (FIR)	GA005
		20	Military Operations Area (MOA)	GA005
		21	Military Terminal Control Area (MTCA)	GA005
		22	Military Upper Control Area (MUCA)	GA005
		23	Oceanic Control Area (non-FAA) (OCA)	GA005
		34	Terminal Control Area (TCA)	GA005
		36	Special Operations Area (Air)	GA005
		39	Upper Control Area (UTA)	GA005
		40	Upper Flight Information Region (UIR)	GA005

MIL-PRF-89049/10A
APPENDIX C

TABLE C-5. Airspace Area Feature Table (continued).

		46	Controlled Airspace	GA005
		70	Oceanic Control Area (FAA) (OCA)	GA005
		79	Special Use Airspace Exclusions	GA015
		998	Not Applicable	GA005,GA015
aul	Airspace Use Limitations			
		-32768	Null	GA005
		0	Unknown	GA015
		2	Prohibited Area	GA015
		3	Restricted Area	GA015
		5	Alert Area	GA015
		6	Warning Area	GA015
aur	Airspace Use Routes			
		-32768	Null	GA015
		5	Corridor	GA005
		998	Not Applicable	GA005
icl	ICAO Airspace Classification			
		-32768	Null	GA015
		0	Unknown	GA005
		1	Class A	GA005
		2	Class B	GA005
		3	Class C	GA005
		4	Class D	GA005
		5	Class E	GA005
		6	Class F	GA005
		7	Class G	GA005
		998	Not Applicable	GA005
nam	Name			
		UNK	Unknown	GA005,GA015
			Character text string	GA005,GA015
sua	Special Use Airspace Altitude Limits			
		UNK	Unknown	GA005,GA015
			Character text string	GA005,GA015

MIL-PRF-89049/10A
APPENDIX C

TABLE C-6. Aeronautical Feature Class Attribute Table.

Thematic Layer: Aeronautical
Coverage Name: aer
Feature Table Description: Aeronautical Feature Class Attribute Table
Table Name: fca

```
{Header length}L;  
Aeronautical Feature Class Attribute Table;-;  
id=I,1,P,Row Identifier,-,-,-,:  
fclass=T,8,U,Feature Class Name,-,-,-,:  
type=T,1,N,Feature Type,char.vdt,-,-,-,:  
descr=T,*,N,Description,-,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
fclass	Feature Class Name	aerop aspa		
type	Feature Type	P A	Point/Node Feature Area Feature	aerop aspa
descr	Description	Aeronautical Point Feature Airspace Area Feature		aerop aspa

MIL-PRF-89049/10A
APPENDIX C

TABLE C-7. Content and Format for Aeronautical Feature Class Schema Table.

Thematic Layer: Aeronautical
Coverage Name: aer
Feature Table Description: Aeronautical Feature Class Schema Table
Table Name: fcs

{Header length}L; Aeronautical Feature Class Schema Table;-; id=I,1,P,Row Identifier,-,-,-,; feature_class=T,8,N,Name of Feature Class,-,-,-,; table1=T,12,N,First Table,-,-,-,; table1_key=T,16,N,Column Name in First Table,-,-,-,; table2=T,12,N,Second Table,-,-,-,; table2_key=T,16,N,Column Name in Second Table,-,-,-,;;					
1	aerop	aerop.pft	end_id	end	id
2	aerop	end	id	aerop.pft	end_id
3	aerop	aerop.pft	id	aerop.njt	aerop.pft_id
4	aerop	aerop.njt	notes.rat_id	notes.rat	id
5	aerop	notes.rat	id	aerop.njt	notes.rat_id
6	aerop	aerop.njt	aerop.pft_id	aerop.pft	id
7	aspa	aspa.aft	id	aspa.ajt	aspa.aft_id
8	aspa	aspa.ajt	fac_id	fac	id
9	aspa	fac	id	aspa.ajt	fac_id
10	aspa	aspa.ajt	aspa.aft_id	aspa.aft	id
11	aspa	aspa.aft	id	aspa.njt	aspa.aft_id
12	aspa	aspa.njt	notes.rat_id	notes.rat	id
13	aspa	notes.rat	id	aspa.njt	notes.rat_id
14	aspa	aspa.njt	aspa.aft_id	aspa.aft	id

MIL-PRF-89049/10A
APPENDIX C

C.3.3 Earth Cover Coverage.

This coverage contains miscellaneous features of significance to marine navigation. This coverage is tiled.

TABLE C-8. Earth Cover Character Value Description Table.

Thematic Layer: Earth Cover
Coverage Name: ecr
Feature Table Description: Earth Cover Character Value Description Table
Table Name: char.vdt

<pre>{Header length}L; Earth Cover Character Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,: table=T,12,N,Name of the Feature Table,-,-,-,: attribute=T,6,N,Column Name,-,-,-,: value=T,5,N,Unique Value of Attribute,-,-,-,: description=T,*,N,Description of Value,-,-,-,;</pre>				
1	ecrtext.tft	f_code	ZD040	Named Location
2	fca	type	T	Text Feature

MIL-PRF-89049/10A
APPENDIX C

TABLE C-9. Earth Cover Text Feature Table.

Thematic Layer: Earth Cover
Coverage Name: ecr
Feature Table Description: Earth Cover Text Feature Table
Table Name: ecrtxt.tft
Thematic Index ID Number: 1

```
{Header length}L;
Earth Cover Text Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,-,-,:;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code	ZD040	Named Location	

MIL-PRF-89049/10A
APPENDIX C

TABLE C-10. Earth Cover Feature Class Attribute Table.

Thematic Layer: Earth Cover
Coverage Name: ecr
Feature Table Description: Earth Cover Feature Class Attribute Table
Table Name: fca

```
{Header length}L;
Earth Cover Feature Class Attribute Table;-;
id=I,1,P,Row Identifier,-,-,-,:
fclass=T,8,U,Feature Class Name,-,-,-,:
type=T,1,N,Feature Type,char.vdt,-,-,:
descr=T,*,N,Description,-,-,-,:;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
fclass	Feature Class Name			
		ecrtext		
type	Feature Type			
		T	Text Feature	
				ecrtext
descr	Description			
			Earth Cover Text Feature	ecrtext

MIL-PRF-89049/10A
APPENDIX C

TABLE C-11. Content and Format for Earth Cover Feature Class Schema Table.

Thematic Layer: Earth Cover
Coverage Name: ecr
Feature Table Description: Earth Cover Feature Class Schema Table
Table Name: fcs

<pre>{Header length}L; Earth Cover Feature Class Schema Table;-; id=I,1,P,Row Identifier,-,-,-,: feature_class=T,8,N,Name of Feature Class,-,-,-,: table1=T,12,N,First Table,-,-,-,: table1_key=T,16,N,Column Name in First Table,-,-,-,: table2=T,12,N,Second Table,-,-,-,: table2_key=T,16,N,Column Name in Second Table,-,-,-,:;</pre>					
1	ecrtext	ecrtext.tft	id	ecrtext.tjt	ecrtext.tft_id
2	ecrtext	ecrtext.tjt	txt_id	txt	id
3	ecrtext	txt	id	ecrtext.tjt	txt_id
4	ecrtext	ecrtext.tjt	ecrtext.tft_id	ecrtext.tft	id

MIL-PRF-89049/10A
APPENDIX C

C.3.4 Maritime Coverage.

This coverage contains water boundaries and limits of specified areas of significance to naval operations. This coverage is tiled.

TABLE C-12. Maritime Character Value Description Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Character Value Description Table
Table Name: char.vdt

<pre>{Header length}L; Maritime Character Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,: table=T,12,N,Name of the Feature Table,-,-,-,: attribute=T,6,N,Column Name,-,-,-,: value=T,5,N,Unique Value of Attribute,-,-,-,: description=T,*,N,Description of Value,-,-,-,:;</pre>				
1	maritimp.pft	f_code	BG010	US-Current Flow UK-Current Flow/Tidal Stream Direction
2	maritimp.pft	f_code	ZB035	Control Point/Control Station
3	maritimp.pft	nam	UNK	Unknown
4	maritiml.lft	f_code	FC021	Maritime Limit Boundary
5	maritiml.lft	f_code	FC101	Theodolite Line
6	maritiml.lft	f_code	FC102	Range Centerline
7	maritima.aft	f_code	FC031	Maritime Area
8	maritima.aft	f_code	FC036	Restricted Area
9	maritima.aft	f_code	FC170	Safety Fairway
10	maritima.aft	nam	UNK	Unknown
11	maritima.aft	txt	N_A	Not Applicable
12	fca	type	P	Point/Node Feature
13	fca	type	L	Line Feature
14	fca	type	A	Area Feature

MIL-PRF-89049/10A
APPENDIX C

TABLE C-13. Maritime Integer Value Description Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Integer Value Description Table
Table Name: int.vdt

<pre>{Header length}L; Maritime Integer Value Description Table;-; id=I,1,P,Row Identifier,-,-,-,: table=T,12,N,Name of the Feature Table,-,-,-,: attribute=T,3,N,Column Name,-,-,-,: value=S,1,N,Unique Value of Attribute,-,-,-,: description=T,*,N,Description of Value,-,-,-,:;</pre>				
1	maritimp.pft	coe	1	Definite
2	maritimp.pft	coe	2	Doubtful
3	maritimp.pft	coe	3	Reported
4	maritimp.pft	cur	0	Unknown
5	maritimp.pft	cur	5	Ocean Flow
6	maritimp.pft	hs1	0	Unknown/Not Applicable
7	maritimp.pft	hs1	1	Jan
8	maritimp.pft	hs1	2	Feb
9	maritimp.pft	hs1	3	Mar
10	maritimp.pft	hs1	4	Apr
11	maritimp.pft	hs1	5	May
12	maritimp.pft	hs1	6	Jun
13	maritimp.pft	hs1	7	Jul
14	maritimp.pft	hs1	8	Aug
15	maritimp.pft	hs1	9	Sep
16	maritimp.pft	hs1	10	Oct
17	maritimp.pft	hs1	11	Nov
18	maritimp.pft	hs1	12	Dec
19	maritimp.pft	hs2	0	Unknown/Not Applicable
20	maritimp.pft	hs2	1	Jan
21	maritimp.pft	hs2	2	Feb
22	maritimp.pft	hs2	3	Mar
23	maritimp.pft	hs2	4	Apr
24	maritimp.pft	hs2	5	May
25	maritimp.pft	hs2	6	Jun
26	maritimp.pft	hs2	7	Jul
27	maritimp.pft	hs2	8	Aug

MIL-PRF-89049/10A
APPENDIX C

TABLE C-13. Maritime Integer Value Description Table (continued).

28	maritimp.pft	hs2	9	Sep
29	maritimp.pft	hs2	10	Oct
30	maritimp.pft	hs2	11	Nov
31	maritimp.pft	hs2	12	Dec
32	maritimp.pft	sta	0	Unknown
33	maritimp.pft	sta	38	Theodolite Station
34	maritimp.pft	sta	39	Camera Station
35	maritimp.pft	sta	40	RADAR Target
36	maritimp.pft	sta	41	SONAR Target
37	maritimp.pft	sta	42	UQC/WQC Station
38	maritimp.pft	sta	43	UEWS
39	maritimp.pft	sta	44	BOMIS
40	maritimp.pft	sta	45	Transit Hut
41	maritimp.pft	sta	46	FORACS Transducer 77 (FT77)
42	maritimp.pft	sta	47	NMH
43	maritiml.lft	mb1	0	Unknown
44	maritiml.lft	mb1	6	Territorial Waters-Limit of Sovereignty
45	maritiml.lft	mb1	16	Gulf Stream Limits
46	maritiml.lft	mb1	17	Three Nautical Mile Line
47	maritiml.lft	mb1	18	Approximate Bathymetry
48	maritima.aft	cod	1	Limits and Information Known
49	maritima.aft	cod	2	Limits and Information Unknown
50	maritima.aft	mac	0	Unknown
51	maritima.aft	mac	27	Submarine Exercise Area
52	maritima.aft	mac	28	Mine Laying Practice Area
53	maritima.aft	mac	101	Marine Sanctuary
54	maritima.aft	mac	104	Major Navy Operating Area
55	maritima.aft	mac	105	Minor Navy Operating Area
56	maritima.aft	mac	106	ASW Operating Area
57	maritima.aft	mac	107	Submarine Operating Area
58	maritima.aft	mac	108	Submarine Transit Lane (Submerged)
59	maritima.aft	mac	109	Submarine Transit Lane (Surface)
60	maritima.aft	mac	110	Surface Free Lane
61	maritima.aft	mac	114	Sea Test Range
62	maritima.aft	mac	115	Submarine and Gunnery Exercise Area
63	maritima.aft	mac	116	Named Operating Area

MIL-PRF-89049/10A
APPENDIX C

TABLE C-13. Maritime Integer Value Description Table (continued).

64	maritima.aft	mac	140	Exercise Area Limit
65	maritima.aft	mac	141	Unexploded Ordinance
66	maritima.aft	mac	142	Submarine Warning Area
67	maritima.aft	mac	143	Naval Operations Area
68	maritima.aft	mac	144	Inwater Tracking Range
69	maritima.aft	mac	145	FORACS V Limits
70	maritima.aft	mac	146	Missile Test Area
71	maritima.aft	mac	147	Bombing and Strafing Targets Area
72	maritima.aft	mac	148	Drill Minefield
73	maritima.aft	mac	149	Abandoned Drill Minefield
74	maritima.aft	mac	150	Acronym Area - Purple
75	maritima.aft	mac	151	Acronym Area - Brown
76	maritima.aft	mac	152	Acronym Area - Blue
77	maritima.aft	mac	153	Landing Craft Air Cushion (LCAC)
78	maritima.aft	mac	154	Area FOXTROT
79	maritima.aft	mac	155	Submarine Danger Area
80	maritima.aft	mac	156	Surface Ship Safety Lane
81	maritima.aft	mac	157	Atlantic Fleet Weapons Range
82	maritima.aft	mac	158	Naval Defense Sea Area
83	maritima.aft	mac	159	UQC/WQC Test Area
84	maritima.aft	mac	999	Other

MIL-PRF-89049/10A
APPENDIX C

TABLE C-14. Maritime Point Feature Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Point Feature Table
Table Name: maritimp.pft
Thematic Index ID Number: 1

```
{Header length}L;
Maritime Point Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
f_code=T,5,N,FACC Feature Code,char.vdt,f_code1.pti,-,:
coe=S,1,N,Certainty of Existence,int.vdt,-,-,:
crn=F,1,N,Current Rate Minimum,-,-,-,:
crx=F,1,N,Current Rate Maximum,-,-,-,:
cur=S,1,N,Current Type Category,int.vdt,-,-,:
dof=S,1,N,Direction of Flow,-,dof1.pti,-,:
hs1=S,1,N,Current Information (1),int.vdt,-,-,:
hs2=S,1,N,Current Information (2),int.vdt,-,-,:
nam=T,30,N,Name,char.vdt,-,-,:
sta=S,1,N,Station Type Category (Maritime),int.vdt,sta1.pti,-,-,:
tile_id=S,1,N,Tile Reference ID,-,tile_id.pti,-,:
end_id=I,1,N,Entity Node Reference ID,-,end1_id.pti,-,;:
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		BG010	US-Current Flow /Tidal Stream	UK-Current Flow
		ZB035	Control Point/Control Station	
coe	Certainty of Existence			
		-32768	Null	ZB035
	default	1	Definite	BG010
		2	Doubtful	BG010
		3	Reported	BG010
crn	Current Rate Minimum			
		NaN	Null	ZB035
	default	-32767.0	Unknown	BG010
		0.1 to 1000.0	Actual value to the nearest .1 knot	BG010

MIL-PRF-89049/10A
APPENDIX C

TABLE C-14. Maritime Point Feature Table (continued).

crx	Current Rate Maximum			
		NaN	Null	ZB035
	default	-32767.0	Unknown	BG010
		0.1 to 1000.0	Actual value to the nearest .1 knot	BG010
cur	Current Type Category			
		-32768	Null	ZB035
	default	0	Unknown	BG010
		5	Ocean Flow	BG010
dof	Direction of Flow			
		-32768	Null	ZB035
	default	0	Unknown	BG010
		1 to 360	Actual value (degrees)	BG010
hs1	Current Information (1)			
		-32768	Null	ZB035
	default	0	Unknown/Not Applicable	BG010
		1	Jan	BG010
		2	Feb	BG010
		3	Mar	BG010
		4	Apr	BG010
		5	May	BG010
		6	Jun	BG010
		7	Jul	BG010
		8	Aug	BG010
		9	Sep	BG010
		10	Oct	BG010
		11	Nov	BG010
		12	Dec	BG010
hs2	Current Information (2)			
		-32768	Null	ZB035
	default	0	Unknown/Not Applicable	BG010
		1	Jan	BG010
		2	Feb	BG010
		3	Mar	BG010
		4	Apr	BG010
		5	May	BG010
		6	Jun	BG010
		7	Jul	BG010
		8	Aug	BG010
		9	Sep	BG010
		10	Oct	BG010
		11	Nov	BG010
		12	Dec	BG010

MIL-PRF-89049/10A
APPENDIX C

TABLE C-14. Maritime Point Feature Table (continued).

nam	Name			
		N/A	Null	ZB035
	default	UNK	Unknown	BG010
		text string (e.g., "Gulf Stream")		BG010
sta	Station Type	Category (Maritime)		
		-32768	Null	BG010
	default	0	Unknown	ZB035
		38	Theodolite Station	ZB035
		39	Camera Station	ZB035
		40	RADAR Target	ZB035
		41	SONAR Target	ZB035
		42	UQC/WQC Station	ZB035
		43	UEWS	ZB035
		44	BOMIS	ZB035
		45	Transit Hut	ZB035
		46	FORACS Transducer 77 (FT77)	ZB035
		47	NMH	ZB035

MIL-PRF-89049/10A
APPENDIX C

TABLE C-15. Maritime Line Feature Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Line Feature Table
Table Name: maritiml.lft
Thematic Index ID Number: 2

```
{Header length}L;  
Maritime Line Feature Table;-;  
id=I,1,P,Row Identifier,-,-,-,;  
f_code=T,5,N,FACC Feature Code,char.vdt,f_code2.lti,-,;  
mbl=S,1,N,Maritime Boundary Limit,int.vdt,mbl2.lti,-,;;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		FC021	Maritime Limit Boundary	
		FC101	Theodolite Line	
		FC102	Range Centerline	
mbl	Maritime Boundary Limit			
		-32768	Null	FC101,FC102
	default	0	Unknown	FC021
		6	Territorial Waters-Limit of Sovereignty	FC021
		16	Gulf Stream Limits	FC021
		17	Three Nautical Mile Line	FC021
		18	Approximate Bathymetry	FC021

MIL-PRF-89049/10A
APPENDIX C

TABLE C-16. Maritime Area Feature Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Area Feature Table
Table Name: maritima.aft
Thematic Index ID Number: 3

```
{Header length}L;  
Maritime Area Feature Table;-;  
id=I,1,P,Row Identifier,-,-,-,;  
f_code=T,5,N,FACC Feature Code,char.vdt,f_code3.ati,-,;  
cod=S,1,N,Certainty of Delineation,int.vdt,cod3.ati,-,;  
mac=S,1,N,Maritime Area Category,int.vdt,mac3.ati,-,;  
nam=T,*,N,Name,char.vdt,-,-,;  
txt=T,*,N,Text Attribute,char.vdt,-,-,;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
f_code	FACC Feature Code			
		FC031	Maritime Area	
		FC036	Restricted Area	
		FC170	Safety Fairway	
cod	Certainty of Delineation			
	default	1	Limits and Information Known	FC031,FC036,FC170
		2	Limits and Information Unknown	FC031,FC036,FC170
mac	Maritime Area Category			
		-32768	Null	FC036,FC170
	default	0	Unknown	FC031
		27	Submarine Exercise Area	FC031
		28	Mine Laying Practice Area	FC031
		101	Marine Sanctuary	FC031
		104	Major Navy Operating Area	FC031
		105	Minor Navy Operating Area	FC031
		106	ASW Operating Area	FC031
		107	Submarine Operating Area	FC031
		108	Submarine Transit Lane (Submerged)	FC031

MIL-PRF-89049/10A
APPENDIX C

TABLE C-16. Maritime Area Feature Table (continued).

	109	Submarine Transit Lane (Surface)	FC031
	110	Surface Free Lane	FC031
	114	Sea Test Range	FC031
	115	Submarine and Gunnery Exercise Area	FC031
	116	Named Operating Area	FC031
	140	Exercise Area Limit	FC031
	141	Unexploded Ordinance	FC031
	142	Submarine Warning Area	FC031
	143	Naval Operations Area	FC031
	144	Inwater Tracking Range	FC031
	145	FORACS V Limits	FC031
	146	Missile Test Area	FC031
	147	Bombing and Strafing Targets Area	FC031
	148	Drill Minefield	FC031
	149	Abandoned Drill Minefield	FC031
	150	Acronym Area - Purple	FC031
	151	Acronym Area - Brown	FC031
	152	Acronym Area - Blue	FC031
	153	Landing Craft Air Cushion (LCAC)	FC031
	154	Area FOXTROT	FC031
	155	Submarine Danger Area	FC031
	156	Surface Ship Safety Lane	FC031
	157	Atlantic Fleet Weapons Range	FC031
	158	Naval Defense Sea Area	FC031
	159	UQC/WQC Test Area	FC031
	999	Other	FC031
nam	Name		
	default	UNK	Unknown
			FC031,FC036, FC170
		Character text string	FC031,FC036, FC170
txt	Text Attribute		
	default	N_A	Not Applicable
			FC031,FC036, FC170
		Character text string	FC031,FC036, FC170

MIL-PRF-89049/10A
APPENDIX C

TABLE C-17. Maritime Feature Class Attribute Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Feature Class Attribute Table
Table Name: fca

```
{Header length}L;  
Maritime Feature Class Attribute Table;-;  
id=I,1,P,Row Identifier,-,-,-,;  
fclass=T,8,U,Feature Class Name,-,-,-,;  
type=T,1,N,Feature Type,char.vdt,-,-,-,;  
descr=T,*,N,Description,-,-,-,;;
```

Column	Description	Value	Value Meaning	Applicable f_code for Each Attribute Value
id	Row Identifier		Sequential beginning with 1	
fclass	Feature Class Name	maritima		
type	Feature Type	A	Area Feature	maritima
		L	Line Feature	maritiml
		P	Point/Node Feature	maritimp
descr	Description	Maritime Area Feature		maritima
		Maritime Line Feature		maritiml
		Maritime Point Feature		maritimp

MIL-PRF-89049/10A
APPENDIX C

TABLE C-18. Content and Format for Maritime Feature Class Schema Table.

Thematic Layer: Maritime
Coverage Name: mar
Feature Table Description: Maritime Feature Class Schema Table
Table Name: fcs

{Header length}L; Maritime Feature Class Schema Table;-; id=I,1,P,Row Identifier,-,-,-,; feature_class=T,8,N,Name of Feature Class,-,-,-,; table1=T,12,N,First Table,-,-,-,; table1_key=T,16,N,Column Name in First Table,-,-,-,; table2=T,12,N,Second Table,-,-,-,; table2_key=T,16,N,Column Name in Second Table,-,-,-,;					
1	maritimp	maritimp.pft	end_id	end	id
2	maritimp	end	id	maritimp.pft	end_id
3	maritimp	maritimp.pft	id	maritimp.njt	maritimp.pft_id
4	maritimp	maritimp.njt	notes.rat_id	notes.rat	id
5	maritimp	notes.rat	id	maritimp.njt	notes.rat_id
6	maritimp	maritimp.njt	maritimp.pft_id	maritimp.pft	id
7	maritiml	maritiml.lft	id	maritiml.ljt	maritiml.lft_id
8	maritiml	maritiml.ljt	edg_id	edg	id
9	maritiml	edg	id	maritiml.ljt	edg_id
10	maritiml	maritiml.ljt	maritiml.lft_id	maritiml.lft	id
11	maritiml	maritiml.lft	id	maritiml.njt	maritiml.lft_id
12	maritiml	maritiml.njt	notes.rat_id	notes.rat	id
13	maritiml	notes.rat	id	maritiml.njt	notes.rat_id
14	maritiml	maritiml.njt	maritiml.lft_id	maritiml.lft	id
15	maritima	maritima.aft	id	maritima.ajt	maritima.aft_id
16	maritima	maritima.ajt	fac_id	fac	id
17	maritima	fac	id	maritima.ajt	fac_id
18	maritima	maritima.ajt	maritima.aft_id	maritima.aft	id
19	maritima	maritima.aft	id	maritima.njt	maritima.aft_id
20	maritima	maritima.njt	notes.rat_id	notes.rat	id
21	maritima	notes.rat	id	maritima.njt	notes.rat_id
22	maritima	maritima.njt	maritima.aft_id	maritima.aft	id

MIL-PRF-89049/10A
APPENDIX C

C.3.5 Library Reference Coverage.

This coverage contains a representation of the TOD0 library boundaries for use in determining a reference position (see section 3.11.3.2). This coverage is untiled.

TABLE C-19. Library Reference Area Feature Table.

Thematic Layer: Library Reference
Coverage Name: libref
Feature Table Description: Library Reference Area Feature Table
Table Name: libref.aft
Thematic Index ID Number: 1

```
{Header length}L;
Library Reference Area Feature Table;-;
id=I,1,P,Row Identifier,-,-,-,:
library_name=T,8,N,Library Name,-,-,-,:
fac_id=I,1,N,Face Primitive ID,-,-,-,;;
```

TABLE C-20. Content and Format for Library Reference Feature Class Schema Table.

Thematic Layer: Library Reference
Coverage Name: libref
Feature Table Description: Library Reference Feature Class Schema Table
Table Name: fcs

```
{Header length}L;
Library Reference Feature Class Schema Table;-;
id=I,1,P,Row Identifier,-,-,-,:
feature_class=T,8,N,Name of Feature Class,-,-,-,:
table1=T,12,N,First Table,-,-,-,:
table1_key=T,16,N,Column Name in First Table,-,-,-,:
table2=T,12,N,Second Table,-,-,-,:
table2_key=T,16,N,Column Name in Second Table,-,-,-,;;
```

1	libref	libref.aft	fac_id	fac	id
2	libref	fac	libref.aft_id	libref.aft	id

MIL-PRF-89049/10A
APPENDIX D

TOD0 FEATURE AND ATTRIBUTE GLOSSARY

D.1 SCOPE

D.1.1 Scope. This appendix contains the feature and attribute content for TOD0 data. It is a mandatory part of this specification sheet. The information contained herein is intended for compliance.

D.2 APPLICABLE DOCUMENTS

This section is not applicable to this appendix.

D.3 FEATURE CODES BY COVERAGE AND FEATURE TYPE

D.3.1 TOD0 feature and attribute data dictionary organization.

a. This appendix provides two tables detailing the location and types of features and attributes found in the TOD0 data dictionary. For a coverage there is a series of tables that describe the data in that coverage.

b. The first table is an index list sorted by coverage of the feature names and codes, their associated attribute names and codes, and table types.

c. The second table is a similar consolidated index sorted by feature code, of the feature names and codes, their associated attribute names and codes, their associated coverages and primitive feature table type.

d. In addition, this appendix contains the definitions of the feature codes and the attributes that are contained in TOD0.

MIL-PRF-89049/10A

APPENDIX D

Table D-1 TOD0 FACC Feature and Attribute Codes Sorted by Coverage

Feature	Attribute	Attribute Value	END	CND	EDG	FAC	TXT
<i>aer Aeronautical</i>							
GA005 Airspace							
	aua	ATS Use Attribute					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Air Defense Identification Zone (ADIZ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		009 Control Zone (CTLZ)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		013 Flight Information Region (FIR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		020 Military Operations Area (MOA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		021 Military Terminal Control Area (MTCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		022 Military Upper Control Area (MUCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		023 Oceanic Control Area (non-FAA) (OCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		034 Terminal Control Area (TCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		036 Special Operations Area (Air)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		039 Upper Control Area (UTA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		040 Upper Flight Information Region (UIR)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		046 Controlled Airspace	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		070 Oceanic Control Area (FAA) (OCA)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		998 Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	aur	Airspace Use Routes					
		005 Corridor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		998 Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	icl	ICAO Airspace Classification					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		001 Class A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Class B	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		003 Class C	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		004 Class D	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		005 Class E	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		006 Class F	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		007 Class G	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		998 Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	sua	Special Use Airspace Altitude Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GA015 Special Use Airspace							
	aua	ATS Use Attribute					
		079 Special Use Airspace Exclusions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		998 Not Applicable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	aul	Airspace Use Limitations					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Prohibited Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		003 Restricted Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		005 Alert Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		006 Warning Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-1 TOD0 FACC Feature and Attribute Codes Sorted by Coverage

Feature	Attribute	Attribute Value	END	CND	EDG	FAC	TXT
<i>aer Aeronautical</i>							
GA015	Special Use Airspace						
	nam	Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	sua	Special Use Airspace Altitude Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GA035	NAVAIDS (Aeronautical)						
	acc	Accuracy Category					
		001 Accurate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		002 Approximate	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	chl	Channel Number	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	lfa	Light Function Aeronautical					
		010 Rotating Beacon	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		999 Other	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	mag	Magnetic Variation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	mca	Morse Code Attribute	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	nst	Navigation System Types					
		000 Unknown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		017 Non-Directional Radio Beacon (NDB)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		020 VHF Omni Directional Radio Range (VOR)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		021 VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		022 VHF Omni Directional Radio Range and TACAN (VORTAC)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		023 Tactical Air Navigation Equipment (TACAN)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	orc	Operating Range Category	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	wpt	Waypoint Description Code					
		000 Unknown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		005 Non-essential waypoint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		010 ATC compulsory waypoint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GA055	Waypoint/Reporting-Calling In Point						
	mag	Magnetic Variation	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	wpt	Waypoint Description Code					
		000 Unknown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		005 Non-essential waypoint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		010 ATC compulsory waypoint	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<i>dq Data Quality</i>							
N/A	Featureless Feature Table						
	aha	Absolute Horizontal Accuracy in Meters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ava	Absolute Vertical Accuracy in Meters	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	dqd	Data Quality Description	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	mcd	Map Compilation Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-1 TOD0 FACC Feature and Attribute Codes Sorted by Coverage

Feature	Attribute	Attribute Value	END	CND	EDG	FAC	TXT
<i>dq Data Quality</i>							
N/A	Featureless Feature Table						
	mpd	Map Print Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	mrd	Map Revision Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	mse	Map Sheet Edition	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	sdp	Source Description	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	sin	Source Identification	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	ss1	First Source Sheet or Data Identifier	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	ss2	Second Source Sheet or Data Identifier	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	thl	Data Quality Thematic Layer	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZD020	Void Collection Area						
	vca	Void Collection Attribute					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		001 Data Not Requested By User	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Area Too Rough to Collect	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		003 No Available Imagery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		006 No Available Map Source	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		007 No Suitable Imagery	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	vct	Void Collection Type					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		001 Relief	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		999 Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZD045	Text Description						
	n/a	No Attributes Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>ecr Earth Cover</i>							
ZD040	Named Location						
	n/a	No Attributes Required	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<i>mar Maritime</i>							
BG010	US-Current Flow UK-Current Flow/Tidal Stream Direction						
	coe	Certainty of Existence					
		001 Definite	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		002 Doubtful	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		003 Reported	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	crn	Current Rate Minimum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	crx	Current Rate Maximum	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	cur	Current Type Category					
		000 Unknown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		005 Ocean Flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	dof	Direction of Flow	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	hs1	Current Information (1)					
		000 Unknown/Not Applicable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		001 Jan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-1 TOD0 FACC Feature and Attribute Codes Sorted by Coverage

Feature	Attribute	Attribute Value	END	CND	EDG	FAC	TXT
<i>mar Maritime</i>							
BG010	US-Current Flow UK-Current Flow/Tidal Stream Direction						
	hs1	Current Information (1)					
		002 Feb	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		003 Mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		004 Apr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		005 May	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		006 Jun	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		007 Jul	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		008 Aug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		009 Sep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		010 Oct	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		011 Nov	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		012 Dec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	hs2	Current Information (2)					
		000 Unknown/Not Applicable	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		001 Jan	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		002 Feb	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		003 Mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		004 Apr	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		005 May	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		006 Jun	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		007 Jul	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		008 Aug	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		009 Sep	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		010 Oct	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		011 Nov	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		012 Dec	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC021	Maritime Limit Boundary						
	mbl	Maritime Boundary Limit					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		006 Territorial Waters-Limit of Sovereignty	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		016 Gulf Stream Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		017 Three Nautical Mile Line	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC031		018 Approximate Bathymetry	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Maritime Area						
	cod	Certainty of Delineation					
		001 Limits and Information Known	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Limits and Information Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	mac	Maritime Area Category					
		000 Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-1 TOD0 FACC Feature and Attribute Codes Sorted by Coverage

Feature	Attribute	Attribute Value	END	CND	EDG	FAC	TXT
<i>mar Maritime</i>							
FC031 Maritime Area							
	mac	Maritime Area Category					
		027 Submarine Exercise Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		028 Mine Laying Practice Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		101 Marine Sanctuary	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		104 Major Navy Operating Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		105 Minor Navy Operating Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		106 ASW Operating Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		107 Submarine Operating Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		108 Submarine Transit Lane (Submerged)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		109 Submarine Transit Lane (Surface)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		110 Surface Free Lane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		114 Sea Test Range	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		115 Submarine and Gunnery Exercise Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		116 Named Operating Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		140 Exercise Area Limit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		141 Unexploded Ordinance	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		142 Submarine Warning Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		143 Naval Operations Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		144 Inwater Tracking Range	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		145 FORACS V Limits	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		146 Missile Test Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		147 Bombing and Strafing Targets Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		148 Drill Minefield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		149 Abandoned Drill Minefield	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		150 Acronym Area - Purple	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		151 Acronym Area - Brown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		152 Acronym Area - Blue	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		153 Landing Craft Air Cushion (LCAC)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		154 Area FOXTROT	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		155 Submarine Danger Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		156 Surface Ship Safety Lane	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		157 Atlantic Fleet Weapons Range	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		158 Naval Defense Sea Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		159 UQC/WQC Test Area	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		999 Other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	txt	Text Attribute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FC036 Restricted Area							
	cod	Certainty of Delineation					
		001 Limits and Information Known	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-1 TOD0 FACC Feature and Attribute Codes Sorted by Coverage

Feature	Attribute	Attribute Value	END	CND	EDG	FAC	TXT
<i>mar Maritime</i>							
FC036	Restricted Area						
	cod	Certainty of Delineation					
		002 Limits and Information Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	txt	Text Attribute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FC101	Theodolite Line						
	n/a	No Attributes Required	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC102	Range Centerline						
	n/a	No Attributes Required	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC170	Safety Fairway						
	cod	Certainty of Delineation					
		001 Limits and Information Known	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Limits and Information Unknown	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	txt	Text Attribute	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZB035	Control Point/Control Station						
	sta	Station Type Category (Maritime)					
		000 Unknown	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		038 Theodolite Station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		039 Camera Station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		040 RADAR Target	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		041 SONAR Target	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		042 UQC/WQC Station	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		043 UEWS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		044 BOMIS	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		045 Transit Hut	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		046 FORACS Transducer 77 (FT77)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		047 NMH	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-2 TOD0 FACC Feature and Attribute Codes Sorted by Feature

Feature	Attribute	Attribute Value	Coverage	END	CND	EDG	FAC	TXT
BG010 US-Current Flow UK-Current Flow/Tidal Stream								
	Direction							
coe	Certainty of Existence							
	001	Definite	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	002	Doubtful	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	003	Reported	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
crn	Current Rate Minimum							
crx	Current Rate Maximum							
cur	Current Type Category							
	000	Unknown	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	005	Ocean Flow	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
dof	Direction of Flow							
hs1	Current Information (1)							
	000	Unknown/Not Applicable	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	001	Jan	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	002	Feb	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	003	Mar	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	004	Apr	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	005	May	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	006	Jun	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	007	Jul	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	008	Aug	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	009	Sep	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	010	Oct	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	011	Nov	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	012	Dec	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hs2	Current Information (2)							
	000	Unknown/Not Applicable	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	001	Jan	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	002	Feb	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	003	Mar	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	004	Apr	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	005	May	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	006	Jun	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	007	Jul	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	008	Aug	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	009	Sep	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	010	Oct	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	011	Nov	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	012	Dec	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nam	Name							
			mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-2 TOD0 FACC Feature and Attribute Codes Sorted by Feature (Continued)

Feature	Attribute	Attribute Value	Coverage	END	CND	EDG	FAC	TXT
FC021 Maritime Limit Boundary								
mbl	Maritime Boundary Limit							
	000	Unknown	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	006	Territorial Waters-Limit of Sovereignty	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	016	Gulf Stream Limits	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	017	Three Nautical Mile Line	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	018	Approximate Bathymetry	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC031 Maritime Area								
cod	Certainty of Delineation							
	001	Limits and Information Known	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	002	Limits and Information Unknown	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
mac	Maritime Area Category							
	000	Unknown	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	027	Submarine Exercise Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	028	Mine Laying Practice Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	101	Marine Sanctuary	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	104	Major Navy Operating Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	105	Minor Navy Operating Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	106	ASW Operating Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	107	Submarine Operating Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	108	Submarine Transit Lane (Submerged)	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	109	Submarine Transit Lane (Surface)	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	110	Surface Free Lane	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	114	Sea Test Range	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	115	Submarine and Gunnery Exercise Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	116	Named Operating Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	140	Exercise Area Limit	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	141	Unexploded Ordinance	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	142	Submarine Warning Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	143	Naval Operations Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	144	Inwater Tracking Range	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	145	FORACS V Limits	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	146	Missile Test Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	147	Bombing and Strafing Targets Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	148	Drill Minefield	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	149	Abandoned Drill Minefield	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	150	Acronym Area - Purple	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	151	Acronym Area - Brown	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	152	Acronym Area - Blue	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	153	Landing Craft Air Cushion (LCAC)	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	154	Area FOXTROT	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	155	Submarine Danger Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-2 TOD0 FACC Feature and Attribute Codes Sorted by Feature (Continued)

Feature	Attribute	Attribute Value	Coverage	END	CND	EDG	FAC	TXT
FC031 Maritime Area								
	mac	Maritime Area Category						
		156 Surface Ship Safety Lane	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		157 Atlantic Fleet Weapons Range	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		158 Naval Defense Sea Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		159 UQC/WQC Test Area	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		999 Other	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	txt	Text Attribute	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FC036 Restricted Area								
	cod	Certainty of Delineation						
		001 Limits and Information Known	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Limits and Information Unknown	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	txt	Text Attribute	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
FC101 Theodolite Line								
	n/a	No Attributes Required	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC102 Range Centerline								
	n/a	No Attributes Required	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
FC170 Safety Fairway								
	cod	Certainty of Delineation						
		001 Limits and Information Known	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Limits and Information Unknown	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	nam	Name	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	txt	Text Attribute	mar	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GA005 Airspace								
	aua	ATS Use Attribute						
		000 Unknown	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Air Defense Identification Zone (ADIZ)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		009 Control Zone (CTLZ)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		013 Flight Information Region (FIR)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		020 Military Operations Area (MOA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		021 Military Terminal Control Area (MTCA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		022 Military Upper Control Area (MUCA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		023 Oceanic Control Area (non-FAA) (OCA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		034 Terminal Control Area (TCA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		036 Special Operations Area (Air)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		039 Upper Control Area (UTA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		040 Upper Flight Information Region (UIR)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		046 Controlled Airspace	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		070 Oceanic Control Area (FAA) (OCA)	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		998 Not Applicable	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-2 TOD0 FACC Feature and Attribute Codes Sorted by Feature (Continued)

Feature	Attribute	Attribute Value	Coverage	END	CND	EDG	FAC	TXT
GA005 Airspace								
aur	Airspace Use Routes							
	005	Corridor	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	998	Not Applicable	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
icl	ICAO Airspace Classification							
	000	Unknown	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	001	Class A	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	002	Class B	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	003	Class C	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	004	Class D	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	005	Class E	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	006	Class F	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	007	Class G	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	998	Not Applicable	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
nam	Name		aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
sua	Special Use Airspace Altitude Limits		aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GA015 Special Use Airspace								
aua	ATS Use Attribute							
	079	Special Use Airspace Exclusions	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	998	Not Applicable	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
aul	Airspace Use Limitations							
	000	Unknown	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	002	Prohibited Area	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	003	Restricted Area	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	005	Alert Area	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	006	Warning Area	aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
nam	Name		aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
sua	Special Use Airspace Altitude Limits		aer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
GA035 NAVAIDS (Aeronautical)								
acc	Accuracy Category							
	001	Accurate	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	002	Approximate	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
chl	Channel Number		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
lfa	Light Function Aeronautical							
	010	Rotating Beacon	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	999	Other	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mag	Magnetic Variation		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
mca	Morse Code Attribute		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nam	Name		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nst	Navigation System Types							
	000	Unknown	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	017	Non-Directional Radio Beacon (NDB)	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-2 TOD0 FACC Feature and Attribute Codes Sorted by Feature (Continued)

Feature	Attribute	Attribute Value	Coverage	END	CND	EDG	FAC	TXT
GA035 NAVAIDS (Aeronautical)								
nst	Navigation System Types							
	020	VHF Omni Directional Radio Range (VOR)	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	021	VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME)	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	022	VHF Omni Directional Radio Range and TACAN (VORTAC)	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	023	Tactical Air Navigation Equipment (TACAN)	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
orc	Operating Range Category		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
wpt	Waypoint Description Code							
	000	Unknown	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	005	Non-essential waypoint	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	010	ATC compulsory waypoint	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
GA055 Waypoint/Reporting-Calling In Point								
mag	Magnetic Variation		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
nam	Name		aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
wpt	Waypoint Description Code							
	000	Unknown	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	005	Non-essential waypoint	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	010	ATC compulsory waypoint	aer	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
N/A Featureless Feature Table								
aha	Absolute Horizontal Accuracy in Meters		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ava	Absolute Vertical Accuracy in Meters		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
dqd	Data Quality Description		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
mcd	Map Compilation Date		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
mpd	Map Print Date		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
mrd	Map Revision Date		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
mse	Map Sheet Edition		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
sdp	Source Description		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
sin	Source Identification		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ss1	First Source Sheet or Data Identifier		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ss2	Second Source Sheet or Data Identifier		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
thl	Data Quality Thematic Layer		dq	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZB035 Control Point/Control Station								
sta	Station Type Category (Maritime)							
	000	Unknown	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	038	Theodolite Station	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	039	Camera Station	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	040	RADAR Target	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	041	SONAR Target	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	042	UQC/WQC Station	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MIL-PRF-89049/10A

APPENDIX D

Table D-2 TOD0 FACC Feature and Attribute Codes Sorted by Feature (Continued)

Feature	Attribute	Attribute Value	Coverage	END	CND	EDG	FAC	TXT
ZB035 Control Point/Control Station								
	sta	Station Type Category (Maritime)						
		043 UEWS	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		044 BOMIS	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		045 Transit Hut	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		046 FORACS Transducer 77 (FT77)	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		047 NMH	mar	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ZD020 Void Collection Area								
	vca	Void Collection Attribute						
		000 Unknown	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		001 Data Not Requested By User	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		002 Area Too Rough to Collect	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		003 No Available Imagery	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		006 No Available Map Source	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		007 No Suitable Imagery	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	vct	Void Collection Type						
		000 Unknown	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		001 Relief	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
		999 Other	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ZD040 Named Location								
	n/a	No Attributes Required	ecr	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ZD045 Text Description								
	n/a	No Attributes Required	dq	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

MIL-PRF-89049/10A
APPENDIX D

D.3.2 TOD0 FACC Feature Glossary

B - Hydrography

BG - Hydrography-Tide and Current Information

BG010 US-Current Flow UK-Current Flow/Tidal Stream Direction (DIGEST Status: Published FACC)

The flow direction of a current.

F - Demarcation

FC - Demarcation-Boundaries/Limits/Zones (Hydrographic)

FC021 Maritime Limit Boundary (DIGEST Status: Published FACC)

A line where on either side certain activities or factors of significance to navigation and/or operation apply.

FC031 Maritime Area (DIGEST Status: Published FACC)

An area in which certain activities or factors of significance to navigation and/or operation apply.

FC036 Restricted Area (DIGEST Status: Published FACC)

An area in which certain aspects of navigation are restricted.

FC101 Theodolite Line (DIGEST Status: Published FACC)

Lines of known bearing from fixed geographic locations. Used to determine accurate positions of a vessel on certain test ranges.

FC102 Range Centerline (DIGEST Status: Published FACC)

A surveyed reference track marking the center of a test range. Vessels undergoing testing must maintain position along this track.

FC170 Safety Fairway (DIGEST Status: Published FACC)

A route established for the safe passage of vessels through offshore oil and gas fields and minefields.

G - Aeronautical Information

GA - Aeronautical Information-Air Routes

GA005 Airspace (DIGEST Status: Published FACC)

Designated airspace within which some or all aircraft may be subjected to air traffic control.

GA015 Special Use Airspace (DIGEST Status: Published FACC)

Airspace of defined dimension identified by area on Earth's surface where activities must be confined because of their nature and/or where limitations may be imposed on aircraft operations not associated with those activities.

GA035 NAVAIDS (Aeronautical) (DIGEST Status: Published FACC)

Any visual or electronic device which provides point-to-point guidance information or position data.

GA055 Waypoint/Reporting-Calling In Point (DIGEST Status: Published FACC)

A predetermined geographical position, used for route instrument approach definition or progress reporting purposes or to change frequency etc.

Z - General

ZB - General-Control Points

ZB035 Control Point/Control Station (DIGEST Status: Published FACC)

An object or mark on the ground of known position, elevation, or both.

ZD - General-Miscellaneous

ZD020 Void Collection Area (DIGEST Status: Published FACC)

An area lacking suitable source coverage, or where data is not required.

MIL-PRF-89049/10A

APPENDIX D

D.3.2 TOD0 FACC Feature Glossary (Continued)

ZD - General-Miscellaneous

ZD040 Named Location (DIGEST Status: Published FACC)

A geographic place on the earth, not normally appearing as a feature on a map, but having a name that is required to be placed on a map.

ZD045 Text Description (DIGEST Status: Published FACC)

An area in which a characteristic or an activity pertaining to the area can be described and possibly labeled on a product if deemed important at the time the product is being produced.

MIL-PRF-89049/10A
APPENDIX D

D.3.3 TOD0 FACC Attribute Glossary

ACC Accuracy Category (DIGEST Status: Published FACC)

Accuracy of geographic position.

- 001 Accurate (Published FACC)
- 002 Approximate (Published FACC)

AHA Absolute Horizontal Accuracy in Meters (DIGEST Status: Published FACC)

The difference between the recorded horizontal coordinates of features and their true positions expressed as a circular error at 90% probability.

- 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	m	N/A

AUA ATS Use Attribute (DIGEST Status: Published FACC)

The particular use of the designated airspace.

- 000 Unknown (Published FACC)
- 002 Air Defense Identification Zone (ADIZ) (Published FACC)
- 009 Control Zone (CTLZ) (Published FACC)
- 013 Flight Information Region (FIR) (Published FACC)
- 020 Military Operations Area (MOA) (Published FACC)
- 021 Military Terminal Control Area (MTCA) (Published FACC)
- 022 Military Upper Control Area (MUCA) (Published FACC)
- 023 Oceanic Control Area (non-FAA) (OCA) (Published FACC)
- 034 Terminal Control Area (TCA) (Published FACC)
- 036 Special Operations Area (Air) (Published FACC)
- 039 Upper Control Area (UTA) (Published FACC)
- 040 Upper Flight Information Region (UIR) (Published FACC)
- 046 Controlled Airspace (Published FACC)
- 070 Oceanic Control Area (FAA) (OCA) (Published FACC)
- 079 Special Use Airspace Exclusions (Published FACC)
- 998 Not Applicable (Published FACC)

AUL Airspace Use Limitations (DIGEST Status: Published FACC)

Airspace wherein activities must be confined because of their nature and/or wherein limitations may be imposed upon aircraft operations.

- 000 Unknown (Published FACC)
- 002 Prohibited Area (Published FACC)
- 003 Restricted Area (Published FACC)
- 005 Alert Area (Published FACC)
- 006 Warning Area (Published FACC)

AUR Airspace Use Routes (DIGEST Status: Published FACC)

A specified route designed for channeling the flow of traffic as necessary for the provision of air traffic services.

- 005 Corridor (Published FACC)
- 998 Not Applicable (Published FACC)

AVA Absolute Vertical Accuracy in Meters (DIGEST Status: Published FACC)

The difference between the recorded elevations of features and their true elevations at a specific point referenced to the same vertical datum at 90% probability.

- 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Metres	Floating Point	N/A	m	N/A

MIL-PRF-89049/10A
APPENDIX D

D.3.3 TOD0 FACC Attribute Glossary (Continued)

CHL Channel Number (DIGEST Status: Published FACC)

The channel representing the frequency assigned by the controlling authority.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

COD Certainty of Delineation (DIGEST Status: Published FACC)

Indicates knowledge of the feature's limits or information.

001 Limits and Information Known (Published FACC)

002 Limits and Information Unknown (Published FACC)

COE Certainty of Existence (DIGEST Status: Published FACC)

Indicates knowledge of the feature's existence.

001 Definite (Published FACC)

002 Doubtful (Published FACC)

003 Reported (Published FACC)

CRN Current Rate Minimum (DIGEST Status: Published FACC)

Minimum speed of current.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	kn	N/A

CRX Current Rate Maximum (DIGEST Status: Published FACC)

Maximum speed of current.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Knots	Floating Point	N/A	kn	N/A

CUR Current Type Category (DIGEST Status: Published FACC)

The horizontal movement of a body of water.

000 Unknown (Published FACC)

005 Ocean Flow (Published FACC)

DOF Direction of Flow (DIGEST Status: Published FACC)

Bearing of movement or direction of the flow.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Short Integer	0 to 359	1 deg	N/A

DQD Data Quality Description (DIGEST Status: Published FACC)

Contains a text string describing specific conditions occurring within a coverage at the location identified by the dq feature. Typically this refers to edgematch problems observed between two source maps and identifies any steps taken to ameliorate the problem.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

HS1 Current Information (1) (DIGEST Status: Published FACC)

Month of appearance of the current.

000 Unknown/Not Applicable (Published FACC)

001 Jan (Published FACC)

002 Feb (Published FACC)

MIL-PRF-89049/10A
APPENDIX D

D.3.3 TOD0 FACC Attribute Glossary (Continued)

HS1 Current Information (1) (DIGEST Status: Published FACC)

Month of appearance of the current.

- 003 Mar (Published FACC)
- 004 Apr (Published FACC)
- 005 May (Published FACC)
- 006 Jun (Published FACC)
- 007 Jul (Published FACC)
- 008 Aug (Published FACC)
- 009 Sep (Published FACC)
- 010 Oct (Published FACC)
- 011 Nov (Published FACC)
- 012 Dec (Published FACC)

HS2 Current Information (2) (DIGEST Status: Published FACC)

Month of disappearance of the current, if different from HS1.

- 000 Unknown/Not Applicable (Published FACC)
- 001 Jan (Published FACC)
- 002 Feb (Published FACC)
- 003 Mar (Published FACC)
- 004 Apr (Published FACC)
- 005 May (Published FACC)
- 006 Jun (Published FACC)
- 007 Jul (Published FACC)
- 008 Aug (Published FACC)
- 009 Sep (Published FACC)
- 010 Oct (Published FACC)
- 011 Nov (Published FACC)
- 012 Dec (Published FACC)

ICL ICAO Airspace Classification (DIGEST Status: Published FACC)

ICAO designated airspace classification.

- 000 Unknown (Published FACC)
- 001 Class A (Published FACC)
- 002 Class B (Published FACC)
- 003 Class C (Published FACC)
- 004 Class D (Published FACC)
- 005 Class E (Published FACC)
- 006 Class F (Published FACC)
- 007 Class G (Published FACC)
- 998 Not Applicable (Published FACC)

LFA Light Function Aeronautical (DIGEST Status: Published FACC)

Type of lighting provided or type of lighting system used.

- 010 Rotating Beacon (Published FACC)
- 999 Other (Published FACC)

MAC Maritime Area Category (DIGEST Status: Published FACC)

Area in which certain activities or factors of significance to navigation or operations apply.

- 000 Unknown (Published FACC)
- 027 Submarine Exercise Area (Published FACC)
- 028 Mine Laying Practice Area (Published FACC)
- 101 Marine Sanctuary (Published FACC)
- 104 Major Navy Operating Area (Published FACC)

MIL-PRF-89049/10A
APPENDIX D

D.3.3 TOD0 FACC Attribute Glossary (Continued)

MAC Maritime Area Category (DIGEST Status: Published FACC)

Area in which certain activities or factors of significance to navigation or operations apply.

- 105 Minor Navy Operating Area (Published FACC)
- 106 ASW Operating Area (Published FACC)
- 107 Submarine Operating Area (Published FACC)
- 108 Submarine Transit Lane (Submerged) (Published FACC)
- 109 Submarine Transit Lane (Surface) (Published FACC)
- 110 Surface Free Lane (Published FACC)
- 114 Sea Test Range (Published FACC)
- 115 Submarine and Gunnery Exercise Area (Published FACC)
- 116 Named Operating Area (Published FACC)
- 140 Exercise Area Limit (Published FACC)
- 141 Unexploded Ordinance (Published FACC)
- 142 Submarine Warning Area (Published FACC)
- 143 Naval Operations Area (Published FACC)
- 144 Inwater Tracking Range (Published FACC)
- 145 FORACS V Limits (Published FACC)
- 146 Missile Test Area (Published FACC)
- 147 Bombing and Strafing Targets Area (Published FACC)
- 148 Drill Minefield (Published FACC)
- 149 Abandoned Drill Minefield (Published FACC)
- 150 Acronym Area - Purple (Published FACC)
- 151 Acronym Area - Brown (Published FACC)
- 152 Acronym Area - Blue (Published FACC)
- 153 Landing Craft Air Cushion (LCAC) (Published FACC)
- 154 Area FOXTROT (Published FACC)
- 155 Submarine Danger Area (Published FACC)
- 156 Surface Ship Safety Lane (Published FACC)
- 157 Atlantic Fleet Weapons Range (Published FACC)
- 158 Naval Defense Sea Area (Published FACC)
- 159 UQC/WQC Test Area (Published FACC)
- 999 Other (Published FACC)

MAG Magnetic Variation (DIGEST Status: Published FACC)

Horizontal angle between true north and magnetic north measured East (positive value) or West (negative value) according to whether magnetic north lies east or west of true north.

- 0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Degrees	Floating Point	-180 to 180	deg	N/A

MBL Maritime Boundary Limit (DIGEST Status: Published FACC)

A line where on either side certain activities or factors of significance to navigation or operations apply.

- 000 Unknown (Published FACC)
- 006 Territorial Waters-Limit of Sovereignty (Published FACC)
- 016 Gulf Stream Limits (Published FACC)
- 017 Three Nautical Mile Line (Published FACC)
- 018 Approximate Bathymetry (Published FACC)

MCA Morse Code Attribute (DIGEST Status: Published FACC)

The ASCII (ISO 646) letter that is being emitted by either the Navigation Signal Type (NST), Sound Signal Type (SST), Light Characteristic (CHA), or Electronic Beacon Type (BET).

MIL-PRF-89049/10A**APPENDIX D****D.3.3 TOD0 FACC Attribute Glossary (Continued)****MCA Morse Code Attribute (DIGEST Status: Published FACC)**

The ASCII (ISO 646) letter that is being emitted by either the Navigation Signal Type (NST), Sound Signal Type (SST), Light Characteristic (CHA), or Electronic Beacon Type (BET).

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

MCD Map Compilation Date (DIGEST Status: Published FACC)

Appropriate date of compilation of map or dataset. Coded YYYYMMDD.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Date	ASCII Text	N/A	N/A	See Appendix C

MPD Map Print Date (DIGEST Status: Withdrawn/Rejected)

Print date of map or dataset.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Date	Date	N/A	N/A	See Appendix C

MRD Map Revision Date (DIGEST Status: Withdrawn/Rejected)

Revision date of map or dataset.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Date	Date	N/A	N/A	See Appendix C

MSE Map Sheet Edition (DIGEST Status: Published FACC)

Alphanumeric String containing the edition of the map sheet.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

N/A No Attributes Required (DIGEST Status: No Attributes Required)

No attributes are required for this feature.

NAM Name (DIGEST Status: Published FACC)

Any identifier or code.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	Lexical	N/A	N/A	See Appendix C

NST Navigation System Types (DIGEST Status: Published FACC)

Type of equipment or system used in electronic navigation (primary system).

000 Unknown (Published FACC)

017 Non-Directional Radio Beacon (NDB) (Published FACC)

020 VHF Omni Directional Radio Range (VOR) (Published FACC)

021 VHF Omni Directional Radio Range/Distance Measuring Equipment (VOR/DME) (Published FACC)

022 VHF Omni Directional Radio Range and TACAN (VORTAC) (Published FACC)

023 Tactical Air Navigation Equipment (TACAN) (Published FACC)

ORC Operating Range Category (DIGEST Status: Published FACC)

The range of the NAVAID beyond which the capture of the signal is not completely assured.

MIL-PRF-89049/10A
APPENDIX D

D.3.3 TOD0 FACC Attribute Glossary (Continued)

ORC Operating Range Category (DIGEST Status: Published FACC)

The range of the NAVAID beyond which the capture of the signal is not completely assured.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Nautical Miles	Short Integer	-32767 to 32767	1 n.m.	N/A

SDP Source Description (DIGEST Status: Published FACC)

Title or description of source.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

SIN Source Identification (DIGEST Status: Published FACC)

Alphanumeric string containing the map sheet, source name or source identification number.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

SS1 First Source Sheet or Data Identifier (DIGEST Status: Withdrawn/Rejected)

This item contains the name of the first map sheet number or other source where a line feature crosses or runs along the source boundary, and requires a data quality description.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

SS2 Second Source Sheet or Data Identifier (DIGEST Status: Withdrawn/Rejected)

This item contains the name of the second map sheet number or other source where a line feature crosses or runs along the source boundary, and requires a data quality description.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

STA Station Type Category (Maritime) (DIGEST Status: Published FACC)

Equipment or activity at site.

- 000 Unknown (Published FACC)
- 038 Theodolite Station (Published FACC)
- 039 Camera Station (Published FACC)
- 040 RADAR Target (Published FACC)
- 041 SONAR Target (Published FACC)
- 042 UQC/WQC Station (Published FACC)
- 043 UEWS (Published FACC)
- 044 BOMIS (Published FACC)
- 045 Transit Hut (Published FACC)
- 046 FORACS Transducer 77 (FT77) (Published FACC)
- 047 NMH (Published FACC)

SUA Special Use Airspace Altitude Limits (DIGEST Status: Published FACC)

Description of the altitude limits of Special Use Airspaces.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

MIL-PRF-89049/10A
APPENDIX D

D.3.3 TOD0 FACC Attribute Glossary (Continued)

THL Data Quality Thematic Layer (DIGEST Status: Published FACC)

The thematic layer identifier for each layer in the database.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	ASCII Text	N/A	N/A	See Appendix C

TXT Text Attribute (DIGEST Status: Published FACC)

Narrative or other description.

0 Actual Value

Units	Format	Range	Increment	Maximum Characters
Text	Lexical	N/A	N/A	See Appendix C

VCA Void Collection Attribute (DIGEST Status: Published FACC)

Reason data is not collected.

- 000 Unknown (Published FACC)
- 001 Data Not Requested By User (Published FACC)
- 002 Area Too Rough to Collect (Published FACC)
- 003 No Available Imagery (Published FACC)
- 006 No Available Map Source (Published FACC)
- 007 No Suitable Imagery (Published FACC)

VCT Void Collection Type (DIGEST Status: Published FACC)

Identifies type of missing information.

- 000 Unknown (Published FACC)
- 001 Relief (Published FACC)
- 999 Other (Published FACC)

WPT Waypoint Description Code (DIGEST Status: Published FACC)

The name/type of a named waypoint

- 000 Unknown (Published FACC)
- 005 Non-essential waypoint (Published FACC)
- 010 ATC compulsory waypoint (Published FACC)

MIL-PRF-89049/10A

INDEX

<u>Paragraph</u>	<u>Section</u>	<u>Page</u>
Absolute horizontal accuracy	3.2.1	2
Absolute vertical accuracy	3.2.2	2
Accuracy	3.2	2
Acquisition requirements	6.2	11
Aeronautical Coverage	C.3.2	20
Analysis limitation	6.1.1	11
Applicable Documents	2.	1
Applicable Documents	A.2	12
Applicable Documents	B.2	13
Applicable Documents	C.2	19
Applicable Documents	D.2	46
Cartographic considerations for TOD0 database	3.14	8
CD labeling	3.16.1	9
CD ROM labeling and packaging	3.16	9
Changes from previous issue	6.6	11
Classification	3.15.1	9
Compilation scale	3.14.2	9
Continuity	3.5	3
Coordinate System	3.4	3
Coverage attribute table	B.3.2.3	17
Coverage directory files	3.11.4	6
Coverage metadata	3.11.4.1	6
Coverage topology	3.11.4.3	7
Cross-tile topology	3.12.2	8
Data coverages	3.11.4.2	6
Data dictionary organization	A.3.1	12
Data Quality Coverage	C.3.1.1	19
Data Quality Table	B.3.2.4	18
Database and library naming conventions	3.11.2	6
Database directory files	3.11.1	4
Database header table	B.3.1.1	13
Database size	3.13.2	8
Database-level record layout	B.3.1	13
Databases	3.10.1	4
Datum	3.3	3
Definitions	6.4	11
Dimensions	3.7	4
Distribution medium	3.13	8
Earth Cover Coverage	C.3.3	29
Feature and attribute coding scheme	3.8	4
Feature class structure level	3.11.5	7
Feature Codes by Coverage and Feature Type	D.3	46
Feature table structure and contents	3.11.5.1	7
First article	3.1	2
General	2.1	1
General	C.3.1	19
Geographic organization	3.13.1	8
Geographic reference table	B.3.2.2	17
Government Documents	2.2	1

MIL-PRF-89049/10A
INDEX

<u>Paragraph</u>	<u>Section</u>	<u>Page</u>
Horizontal datum	3.3.1	3
Information booklet	3.16.2	9
Information booklet text	3.16.2.2	9
Information booklet TODO specific items	3.16.2.1	9
Intended use	6.1	10
Library attribute table	B.3.1.2	15
Library directory files	3.11.3	6
Library metadata	3.11.3.1	6
Library Reference Coverage	C.3.5	45
Library reference coverages	3.11.3.2	6
Library-level record layout	B.3.2	15
Limits	3.14.4	9
Maritime Coverage	C.3.4	33
Mean Sea Level (MSL)	6.4.1	11
Minimum polygon size	3.14.3	9
NGA operational help desk	6.7	11
Notes	6.	10
Notes related attribute table	3.11.5.2.1	7
Order of precedence	2.3	2
Other government documents	2.2.2	2
Packaging	5.	10
Packaging	5.1	10
Primitive Tables and associated files	3.11.6	8
Product specific items	3.16.1.1	9
Purpose	1.2	1
Related attribute tables	3.11.5.2	7
Relative accuracy	3.2.3	3
Requirements	3.	2
Scope	1.	1
Scope	1.1	1
Scope	A.1	12
Scope	A.1.1	12
Scope	B.1	13
Scope	B.1.1	13
Scope	C.1	19
Scope	C.1.1	19
Scope	D.1	46
Scope	D.1.1	46
Security	3.15	9
Source	3.14.1	8
Specifications, standards, and handbooks	2.2.1	2
Subject term (key word) listing	6.5	11
Supersession	6.3	11
Symbol related attribute table	3.11.5.2.2	7

MIL-PRF-89049/10A
INDEX

<u>Paragraph</u>	<u>Section</u>	<u>Page</u>
Text feature class	3.11.5.3	7
Thematic layer organization	3.6	3
TOD0	C.3	19
TOD0 Data Dictionary Organization	A.3	12
TOD0 Database and Library VPF Table Contents	B.3	13
TOD0 directory organization	3.10	4
TOD0 feature and attribute data dictionary organization	D.3.1	46
TOD0 library header table	B.3.2.1	15
TOD0 tile sizes	3.12.1	8
TOD0 tiling scheme	3.12	8
Units of measure	3.9	4
Use of TOD0 in conjunction with DNC	3.11.3.3	6
Verification	4.	10
Vertical datum	3.3.2	3
VPF structure levels, tables, and files	3.11	4

MIL-PRF-89049/10A
CONCLUDING MATERIAL

Custodian:
Navy - NO

Preparing Activity

NIMA - MP
(Project GINT-0351)

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above by using the ASSIST Online database at <http://assist.daps.dla.mil/>.