About This Standard

Mandated

Standard Identifier **MIL-STD-2407(1)**

Title of Standard

Interface Standard for Vector Product Format (VPF), 28 June 1996, with Notice of Change, Notice 1, 26 October 1999

Standards History

Introduced to Registry	Date Emerging	Date Mandated	Last Status Update	Last Status Review	Inactive/ Retired
2003-04-04	n/a	2003-04-04	2003-04-04	2008-04-03	n/a

Replaced MIL-STD-2407

Standards Body DoD Broken Link?

URL to Access or Acquire http://assist.daps.dla.mil/quicksearch

Working Group

Primary Owner Geospatial Intelligence TWG (GWG)

Secondary Interests Information Transfer TWG
Application / Messaging TWG

Service Area GEOINT: Geospatial

KIPs No KIP Found

Standard Applicability

2008-03-27

Geospatial services are also referred to as mapping, charting, and geodesy (MC&G) services. Vector Product Format (VPF) defines a common format, structure, and organization for data objects in large geographic databases based on a georelational data model and intended for direct use. Existing geospatial products that implement VPF include: Vector Map (VMap) Levels 0-2, Urban Vector Map (UVMap), Digital Nautical Chart (DNC), Vector Product Interim Terrain Data (VITD), Digital Topographic Data (DTOP), World Vector Shoreline Plus (WVSPLUS). Tactical Ocean Data (TOD) Levels 0-4, and Vector Vertical Obstruction Data (VVOD). For these vector-based products, this standard is mandated.

2003-10-03

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Standard Abstract

2003-04-04

The vector product format (VPF) is a standard format, structure, and organization for large geographic databases that are based on a georelational data model and are intended for direct use. VPF is designed to be compatible with a wide variety of applications and products. VPF allows application software to read data directly from computer-readable media without prior conversion to an intermediate form. VPF uses tables and indexes that permit direct access by spatial location and thematic content and is designed to be used with any digital geographic data in vector format that can be represented using nodes, edges, and faces. VPF defines the format of data objects, and the georelational data model provides a data organization within which software can manipulate the VPF data objects.

Profiling Questions

GEOINT: Geospatial

- Is any of your geospatial data in geographic databases intended for direct use?

Products Incorporating This Standard

Commercial Joint Mapping Toolkit (C/JMTK) ¿ ESRI-based ESRI Arc-Info Intergraph VPF Production System, GeoMedia Cartographer and GeoMedia VPF DataServer ERDAS Imagine

Relevant Information

DoD format for NGA's vector-based products used by geographic information system (GIS) and other DoD systems. VPF standard products include Vector Map (VMap) Levels 0-2, Urban Vector Map (UVMap), Digital Nautical Chart (DNC), Vector Product Interim Terrain Data (VITD), Digital Topographic Data (DTOP), World Vector Shoreline Plus (WVSPLUS). Tactical Ocean Data (TOD) Levels 0-4, and Vector Vertical Obstruction Data (VVOD). Geospatial Symbols for Digital Display (GeoSym), MIL-PRF-89045A is available for use to symbolize NGA VPF products. This citation was prepared in November 2007 by the GWG ASFE Focus Group (Gleason).

Implementation Guidance

MIL-STD-2407 is the US profile for the Digital Geospatial Information Exchange Standard (DIGEST), STANAG 7074.

Standard Selection Criteria

Net-Centric Interoperability

This standard defines a digital geospatial data exchange format for a family of products produced by National Geospatial-Intelligence Agency, and provided to users via the NGA Gateway, which is NGA s primary outlet for geospatial intelligence information via web services. System developers need the VPF Standard to develop applications that use and display NGA VPF data in Service/Command/Agency systems.

Technical Maturity

The VPF Standard is technically mature, and stable. Edition 2 was published in 1996 and Change Notice 1 was published in 1999. No further change notices are planned. Many commercial Geographic Information Systems (GIS) have import functions that allow users to import VPF data into their applications. These

include ESRI ARC Info, Intergraph VPF Production System and GeoMedia Cartographer, and ERDAS Imagine. The standard has been in use since 1992, when the Defense Mapping Agency introduced its first VPF product, the Digital Chart of the World (DCW). VPF will probably be replaced by a version of Geographic Mark-Up Language (GML) in the future, but current versions of GML do not support all of the functionality in the current VPF standard for topology.

Public Availability

The MIL-STD-2407 is a published DOD standard, available from the DOD Single Stock Point for Standards and Specifications (DODSSP) ASSIST at http://assist.daps.dla.mil/quicksearch/. There is no user charge to get documents from the DODSSP.

Implementability

The US Army and US Navy are the primary users of the VPF Standard, but all services use the VPF products. The Digital Nautical Chart (DNC), which is based on VPF is being used for surface navigation by the Navy, and direct read of VPF is mandated by OPNAVINST 9420.2, Implementation of ECDIS-N Certification Process. Numerous US Army systems use Vector Product Format data for situational awareness display and GIS applications. All services use Vector Vertical Obstruction Data (VVOD) and VVOD is implemented in Falconview used by mission planning systems. Commercial Joint Mapping Toolkit (C/JMTK) has the ability to ingest and display VPF data. Commercial vendors who have implemented import of VPF include ESRI, Intergraph, ERDAS Imagine.

Authority

MIL-STD-2407 is a DOD standard, prepared by the National Geospatial-Intelligence Agency, under the authority of the Defense Standardization Program (DSP). The standard is maintained using DSP policies and procedures.

Standard Type	Military
Keywords for Search	None