

DEPARTMENT OF THE INTERIOR**Geological Survey****Federal Geographic Data Committee (FGDC); Public Review of the Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management**

ACTION: Notice; Request for comments.

SUMMARY: The FGDC is conducting a public review of the Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management. The purpose of this public review is to provide software vendors, data users and producers with an opportunity to comment on this standard in order to ensure that it meets their needs.

Participants in the public review are encouraged to provide comments that address specific issues/changes/additions that may result in revisions to the draft Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management. All participants who make comments during the public review period will receive an acknowledgment of the receipt of their comment. After comments have been considered, participants will receive notification of how their comments were addressed. After the formal adoption of the standard by the FGDC, the revised standard and a summary analysis of the changes will be made available.

DATES: Comments must be received on or before May 20, 1999.

CONTACT AND ADDRESSES: The draft standard is posted at Internet address: <http://www.fgdc.gov/standards/documents/standards/accuracy/chapter4.pdf>.

Requests for written copies of the standard should be addressed to "Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management", FGDC Secretariat (attn: Jennifer Fox), U.S. Geological Survey, 590 National Center, 12201 Sunrise Valley Drive, Reston, Virginia 20192; or facsimile 703-648-4270; or Internet at gdc@usgs.gov.

Reviewer's comments may be sent to the FGDC via Internet mail to: gdc-geosp4@www.fgdc.gov. Reviewer comments may also be sent to the FGDC Secretariat at the above address. Please send one hardcopy version of the comments and a soft copy version, preferably on a 3.5x3.5 diskette in WordPerfect 5.0 or 6.0/6.1 format.

For answers to general questions related to this standard, please contact the Federal Geographic Data Committee (FGDC) Facilities Working Group.

SUPPLEMENTARY INFORMATION: Following is the complete proposal for the "Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management."

Project Title: Geospatial Positioning Accuracy Standards, Part 4: Architecture, Engineering, Construction, and Facilities Management.

Submitting Organization: Federal Geographic Data Committee (FGDC) Facilities Working Group.

Objectives

This Part 4 provides accuracy standards for engineering drawings, maps, and surveys used to support planning, design, construction, operation, maintenance, and management of facilities, installations, structures, transportation systems, and related projects. It is intended to support geospatial mapping data used in various engineering documents, such as architectural, engineering, and construction (A/E/C) drawings, site plans, regional master planning maps, and related Geographical Information System (GIS), Computer-Aided Drafting and Design (CADD), and Automated Mapping/Facility Management (AM/FM) products. These products are typically created from terrestrial, satellite, acoustic, or aerial mapping techniques that output planimetric, topographic, hydrographic, or feature attribute data.

Scope

This standard defines accuracy criteria, accuracy testing methodology, and accuracy reporting criteria for object features depicted on A/E/C spatial data products and related control surveys. It references established voluntary standards that may be used for some smaller scale A/E/C mapping applications. In addition, Appendix A contains general guidance for specifying accuracy criteria for selected types of A/E/C features or control surveys. Using the standards and guidance contained in this section, end users of A/E/C products (e.g., planners, designers, constructors) can specify surveying and mapping accuracy requirements needed for their projects or specific CADD/GIS layers, levels, or entities. From these specifications, data producers (e.g., surveyors, mappers, photogrammetrists) can determine the instrumentation, procedures, and quality control processes required to obtain and verify the defined accuracies.

Applicability

These standards are applicable to geospatial data products used on various A/E/C or facilities management projects. A/E/C projects are normally confined to small geographical areas typically less than 4,000 ha (10,000 acres) where simple survey techniques are employed to establish project control points, perform topographic or photogrammetric mapping, or provide construction layout and alignment control. Unlike geospatial map products covered under PART 3, A/E/C data products are often only locally referenced within a project site, may not contain absolute georeferenced coordinates, and are typically compiled at scales larger than 1:20,000 (1 in = 1,667 ft). These standards may apply to the following types of engineering applications: transportation systems (roads, railroads, airfields, canals); utility systems (water supply, sanitary sewer, fuel, communication, electrical, mechanical); residential, commercial, recreational, and industrial structures and facilities; flood control and navigation systems (dams, levees, locks); architectural site or landscape plans; engineering master planning studies; environmental mapping, modeling, and assessment studies; hydraulic and hydrological studies; geophysical exploration surveys; and construction measurement and payment surveys. These standards do not generally apply to architectural, mechanical, or electrical detail data inside of a building or structure that are typically used within the CADD system for engineering and design.

Related Standards

This standard was largely taken from existing U.S. Army Corps of Engineers engineering, surveying, and mapping standards, and from Department of Defense Tri-Service Facility Engineering CASS/GIS standards—see References. The American Society for Photogrammetry and Remote Sensing (ASPRS) "Accuracy Standards for Large-Scale Maps" outlined in PART 3, Appendix B, is also directly applicable to PART 4—see paragraph 4.4.1 for specific relationships between ASPRS and Part 4.

This PART 4 may be used in conjunction with, or independent of, other Parts of the overall Geospatial Positioning Accuracy Standard. PART 1 Reporting Methodology applies directly to this Part, in particular, accuracy standard reporting. Certain portions of Part 2, Standards for Geodetic Networks, apply to A/E/C projects or features within an A/E/C project that are

connected by control surveys to an established regional geodetic control network (i.e., geo-referenced). PART 2 does not apply to engineering, construction, topographic, or photogrammetric mapping surveys that are referenced to boundary control or physical features (streets, structures, etc.) within, or adjacent, to the project site. If A/E/C projects, or sub features within a project, are connected by control surveys to an established regional geodetic control network (i.e., geo-referenced), then certain portions of PART 2 may be applicable. PART 3, National Standard for Spatial Data Accuracy, applies to those A/E/C map products that are fully geo-referenced. The spatial accuracy definitions, accuracy testing, and accuracy reporting criteria in PART 3 may be used for georeferenced A/E/C map products. Part 4 applies to marine construction and dredging of navigation channels, including related hydrographic surveying support. PART 5 should be consulted for hydrographic surveying standards applicable to preparation of nautical charts.

Standards Development Procedures

This standard was developed and periodically reviewed by the FGDC Facilities Working Group during the period 1996–1998. The initial draft of the standard was taken from U.S. Army Corps of Engineers Engineer Circular 1110–1–87, Standards for Maps, Drawings, Engineering Surveys, Construction Site Plans, and Related Geospatial Data Products.

Maintenance Authority

The U.S. Army Corps of Engineers is responsible for developing and maintaining the A/E/C geospatial positional accuracy data standards for the Facilities Working Group of the Federal Geographic Data Committee. Address questions concerning the standards to: Headquarters, U.S. Army Corps of Engineers, ATTN: CECW–EP (W.A. Bergen), 20 Massachusetts Avenue NW, Washington, DC 20314–1000.

Dated: January 28, 1999.

Richard E. Witmer,

Chief, National Mapping Division, Geological Survey.

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DEPARTMENT OF THE INTERIOR

Geological Survey

Federal Geographic Data Committee (FGDC); Public Review of the Remote Sensing Swath Data Content Standard

ACTION: Notice; Request for comments.

SUMMARY: The FGDC is conducting a public review of the Remote Sensing Swath Data Content Standard. The purpose of this public review is to provide software vendors, data users and producers with an opportunity to comment on this standard in order to ensure that it meets their needs.

Participants in the public review are encouraged to provide comments that address specific issues/changes/additions that may result in revisions to the draft Remote Sensing Swath Data Content Standard. All participants who make comments during the public review period will receive an acknowledgment of the receipt of their comment. After comments have been considered, participants will receive notification of how their comments were addressed. After the formal adoption of the standard by the FGDC, the revised standard and a summary analysis of the changes will be made available.

DATES: Comments must be received on or before May 20, 1999.

CONTACT AND ADDRESSES: The draft standard is posted at Internet address: http://www.fgdc.gov/standards/documents/standards/swath_data/

Requests for written copies of the standard should be addressed to “Remote Sensing Swath Data Content Standard”, FGDC Secretariat (attn: Jennifer Fox), U.S. Geological Survey, 590 National Center, 12201 Sunrise Valley Drive, Reston, Virginia, 20192; or facsimile 703–648–4270; or Internet at gdc@usgs.gov.

Reviewer's comments may be sent to the FGDC via Internet mail to: edc-swathdata@www.fgdc.gov. Reviewer comments may also be sent to the FGDC Secretariat at the above address. Please send one hardcopy version of the comments and a soft copy version, preferably on a 3.5x3.5 diskette in WordPerfect 5.0 or 6.0/6.1 format.

For answers to general questions related to this standard, please contact the Federal Geographic Data Committee (FGDC) Standards Working Group Imagery subgroup, Benjamin Kobler, NASA Goddard Space Flight Center, Mail Code 423, Greenbelt, MD 20771. Phone: 301–614–5231. Electronic mail: ben.kobler@gsfc.nasa.gov.

SUPPLEMENTARY INFORMATION: Following is the complete proposal for the “Remote Sensing Swath Data Content Standard.”

Project Title: Remote Sensing Swath Data Content Standard.

Submitting Organization: Federal Geographic Data Committee (FGDC) Standards Working Group Imagery subgroup.

Objectives

The primary objective of this standard is to define the minimum content for remote sensing swath data (hereinafter called the swath data model). Such a content standard will provide a solid basis upon which to develop interoperable data formats for this common form of remote sensing data.

The standard has the following goals:

1. To provide a common conceptual framework for encoding swath and swath-like data,
2. To encourage interuse of swath and swath-like data through implementation of transfer standards within the conceptual framework,
3. To involve non-federal organizations in the development of this standard, thus encouraging broad applications.

Scope

The standard defines the minimal content requirements for a remote sensing swath and the relationships among its individual components. It also discusses the treatment of optional supporting information within the swath model. Under the Federal Geographic Data Committee Standards Reference Model (FGDC 1997b), this standard is classified as a Data Content Standard. Data content standards provide semantic definitions of a set of objects and of the relationships among them. This standard defines a concept called a *swath* that provides a means for associating certain kinds of remote sensing data with their geolocation. To that end, it defines those items of information content that are necessary for the realization of the swath concept. As a content standard, it does not specify encoding. Encoding may be specified at some future time by a separate standard or standards.

The standard specifies only the information that varies with time or from pixel to pixel. Information that is constant for all data points, such as the axes about which platform roll, pitch, and yaw are measured or the orientation of individual instruments relative to the platform, would be specified elsewhere, for example, in a content standard for remote sensing metadata.