



Federal Geographic Data Committee Standards Update May 2011

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FGDC

Cultural Resources Spatial Data Standard

- The standard will be used to create, maintain, and distribute cultural resource spatial data. It will ensure that geospatial data are linked to attribute databases that describe each cultural resource.
- Information about this standard may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/cultural-resources/cultural-resources-home>.
- A workgroup teleconference was held April 26.
- The six task groups defined by the work group have met via teleconference, established leaders, and developed priorities.
- The individual task groups overlap focus on different aspects of the standard creation effort; however, all rely on examining existing standards, regulations, policies and laws that govern transfer of spatial data and cultural resource data. The task group dedicated to examining the existing information will begin work immediately and provide feedback to all of the task groups beginning in May 2011.
- The work group's work plan outlines that there will be a basic framework for the data transfer standard by the end of calendar year 2011.
- The work group plans to have a working draft by April 2012.
- Contact: Deidre McCarthy, Deidre_McCarthy@nps.gov, 202-354-2141

Shoreline Data Content Standard

- This standard is intended to enhance the shoreline framework by providing technical guidance on shoreline semantics, data structures, and their relationships to builders and users of shoreline data.
- Information about the standard may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/shoreline-data-content/index.html>.
- A final draft *might* be resubmitted to the FGDC in summer 2010.
- There are no updates to report for the May 2011 FGDC Coordination Group meeting.
- Contact: Doug Graham, Doug.Graham@noaa.gov, 301-713-2675 x170

United States Thoroughfare, Landmark, and Postal Address Data Standard

- This standard specifies data content, data classification, data quality, and data exchange in XML for street addresses and landmark addresses and points of postal delivery.
- Information about the standard may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/street-address/index.html>.

- The FGDC-endorsed standard is now published. It may be found at http://www.fgdc.gov/standards/projects/FGDC-standards-projects/street-address/FGDC_endorsedAddressStandard.zip. It may also be found at www.urisa.org.
- Contact: Martha Wells, mwells@spatialfocus.com, 205-616-0205

Coastal and Marine Ecological Classification Standard (CMECS)

- CMECS provides a means of classifying ecological and habitat units using a common terminology.
Information about CMECS may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/cmecs-folder/cmecs-index-page>.
- Two teams have been formed from the CMECS Working Group to address the most fundamental issues revealed by the public input comments. Both groups have held at least one meeting.
- Pilot projects are currently underway or in the planning phase.
- A presentation on status of CMECS and highlights from the public review process was made at the Coastal Geotools conference in Myrtle Beach (March 21, 2011). Other presentations are planned.
- A final draft is planned for December 2011.
- Contact: Mark Finkbeiner, mark.finkbeiner@noaa.gov, 843-740-1264

Federal Buildings and Facilities Geospatial Data Content Standard

- Information about this standard may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/FederalBldgsFacilities/index>.
- There are no updates to report for the May 2011 FGDC Coordination Group meeting.
- Contact Sandra Downie, sandra.downie@gsa.gov

Federal Trails Data Standard (FTDS)

- The functional scope of the standard includes the definition of a core set of trail data attributes, corresponding values, and definitions.
- Information about this standard may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/trail-data-standard/trail-data-standards>.
- On April 21, 2011, the SWG unanimously recommended CG approval of Federal Trails Data Standard for FGDC endorsement. (http://www.fgdc.gov/standards/organization/FGDC-SWG/meetings/2011-04-21_SWG). The recommendation was forwarded to the CG.
- The CG will vote to approve the Federal Trails Data Standard for FGDC endorsement at its May 2011 meeting.
- Contact: David Duran, David_Duran@nps.gov, (303) 969-2176.

National Wetland Classification Standard maintenance and revision

- The objective is to produce a newly edited and updated version of the wetlands classification standard, *Classification of Wetlands and Deepwater Habitats of the United States*.

- Information about this standard may be found at <http://www.fgdc.gov/standards/projects/FGDC-standards-projects/maintenance-review-wetlands-classification-std/index>.
- There are no updates to report for the May 2011 FGDC Coordination Group meeting.
- Contact Bill Wilen, Bill_Wilen@fws.gov 703 358-2278

INCITS Technical Committee L1, Geographic information systems

Some information is carried over from the April 2011 standards update.

North American Profiles

- Further work on the project to develop a North American Profile of ISO 19110, Geographic information - Methodology for Feature Cataloguing is pending advancement of the ISO 19115-1 and ISO 19110 revision projects.
- There is interest in revising the North American Profile of ISO 19115:2003, Geographic information - Metadata, given that ISO 19115 is being revised. The North American Profile of ISO 19115:2003 is an FGDC-endorsed standard.

ISO/Committee Draft (CD) 19101-1 Geographic information – Reference model — Part 1: Fundamentals (reference no. n 3070)

- “This standard defines the reference model for standardization in the field of geographic information.”
- An editing committee meeting is scheduled for Monday, May 23, in Delft, The Netherlands. While ISO 19101:2002 is **not** an FGDC-endorsed standard, ISO 19109:2005, which is an FGDC-endorsed standard, builds on the domain reference model of ISO 19101. ISO 19109:2005 is also mandated in the DISR.

ISO/TS 19101-2:2008, Geographic information -- Reference model -- Part 2: Imagery

- “The objective of this Technical Specification is the coordinated development of standards that allow the benefits of distributed geographic image processing to be realized in an environment of heterogeneous IT resources and multiple organizational domains.”
- ISO/TC 211 has issued a call for vote on systematic review of ISO/TS 19101-2:2008. National bodies will make recommendations to withdraw the standard, revise/amend the standard, confirm the standard as-is, confirm with correction of errors, or to abstain.

ISO 19103 Geographic information – Conceptual schema language (Revision of ISO 19103:2004)

- “This International Standard provides rules and guidelines for the use of a conceptual schema language within the context of geographic information. The chosen conceptual schema language is the Unified Modeling Language (UML).” The standard will be updated according to UML 2.0. “This International Standard identifies the combination of the Unified Modeling Language (UML) static structure diagram with its associated Object Constraint Language

(OCL) and a set of basic type definitions as the conceptual schema language for specification of geographic information.”

- o ISO/TS 19103:2004 is an FGDC-endorsed standard.
- o UML 2.2 is an FGDC-endorsed standard. It is also mandated in the DISR.
- o Object Constraint Language (OCL), Version 2.2, February 2010 is mandated in the DISR.
- A project team meeting is scheduled during the week of May 23-27 in Delft, The Netherlands.

ISO 19107:2003 Geographic information – Spatial schema

- ISO Technical Committee (TC) 211, Geographic information/Geomatics, has issued a call for a new work item proposal to revise ISO 19107:2003.
- ISO 19107:2003 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO 19108:2002 Geographic information – Temporal schema

- ISO TC 211 has issued a call for a new work item proposal to revise ISO 19108:2002.
- ISO 19108 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO 19109 Geographic information - Rules for application schema (Revision of ISO 19109:2005)

- This standard defines “rules for creating and documenting application schemas, including principles for the definition of features.”
- A project team meeting is scheduled for the week of May 23-27, in Delft, The Netherlands.
- ISO 19109:2005 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO 19110 Geographic information – Methodology for feature cataloguing (Revision of ISO 19110:2005)

- This International Standard defines the methodology for cataloguing feature types.
- A project team meeting is scheduled during the week of May 23-27 in Delft, The Netherlands.
- ISO 19110:2005 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO 19110:2005 Geographic information – Methodology for feature cataloguing, Amendment 1

- Amendment 1 provides XML schemas that are “meant to enhance interoperability by providing a common specification for describing, validating, and exchanging feature catalogue information.”
- A vote on a recommendation on approval as an International Standard closed April 24. The XML encoding is needed for the project to develop a North American Profile of ISO 19110.

ISO 19112:2003 Geographic information – Spatial referencing by geographic identifiers

- ISO TC 211 has issued a call for a new work item proposal to revise ISO 19112:2003.
- ISO 19112:2003 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO/CD 19115-1 Geographic information – Metadata – Part 1: Fundamentals (n 3071)

- This standard defines “the schema required for describing information and services. It provides information about the identification, the extent, the quality, the spatial and temporal schema, spatial reference, and distribution of digital data.”
- An editing committee meeting will be held the week of May 23-27 in Delft, The Netherlands.
- This edition will cancel and replace ISO 19115:2003, Geographic information – Metadata.
- ISO 19115:2003 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO DIS 19117 Geographic information — Portrayal (Revision of ISO 19117:2005)

- Refer to April 2011 Standards Update for information about ISO 19117.

ISO 19119 Geographic information - Services (Revision of ISO 19119:2005)

- This standard provides a “framework for developers to create software that enables users to access and process geographic data from a variety of sources across a generic computing interface within an open information technology environment.”
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.
- This standard will cancel and replace ISO 19119:2005.
- ISO 19119:2005 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO 19123:2005 Geographic information – Schema for coverage geometry and functions

- ISO TC 211 has issued a call for a new work item proposal to revise ISO 19123:2005.
- ISO 19123:2005 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO 19130-2 Geographic information - Imagery sensor models for geopositioning — Part 2: SAR, InSAR, Lidar and Sonar

- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.
- The project leader for this project is Dr. Liping Di, Chair, INCITS L1.

ISO 19133:2005, Geographic information - Location-based services - Tracking and navigation

- ISO TC 211 has issued a call for a new work item proposal to revise ISO 19133:2005.
- ISO 19133:2005 is an FGDC-endorsed standard (it is not a DISR standard).

ISO 19135-1 Geographic information – Procedures for item registration – Part 1 (Revision of ISO 19135:2005)

- ISO 19135:2005 is being revised to ensure that the XML encoding in ISO 19135-2 is compliant with the conceptual models in ISO 19135.
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.
- ISO 19135:2005 is an FGDC-endorsed standard. It is also mandated in the DISR.

ISO/Draft Technical Specification (DTS) 19135-2 Geographic information – Procedures for item registration — Part 2: XML Schema Implementation

- “This document defines an XML encoding for the storage and exchange of registers and register items compliant with ISO 19135:2005, Geographic information – Procedures for item registration. This encoding conforms to the rules described in ISO 19139:2007, Geographic Information – Metadata – XML Schema Implementation.”
- An editing team meeting is scheduled for Tuesday, May 24 in Delft, The Netherlands.
- Both ISO 19135:2005 and ISO 19139:2007 are FGDC-endorsed standards. They are both mandated in the DISR.

ISO 19139-2 Geographic information - Metadata - XML Schema Implementation - Part 2 : Extensions for imagery and gridded data

- “This Technical Specification defines geographic metadata for Imagery and gridded data XML (gmi) encoding. This Technical Specification extends the ISO/TS 19139 specification to define XML Schema implementation for ISO 19115-2, Metadata for imagery and gridded data.”
- ISO 19115-2:2009 is an FGDC-endorsed standard (it is not a DISR standard).
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.

ISO 19141:2008, Geographic information -- Schema for moving features

- ISO/TC 211 issued a call for vote on systematic review of ISO 19141:2008. National bodies will make recommendations to withdraw the standard, revise/amend the standard, confirm the standard as-is, confirm with correction of errors, or to abstain.
- The FGDC has endorsed ISO 19141:2008 (it is not a DISR standard).

ISO Draft International Standard (DIS) 19144-2 Geographic information — Classification systems — Part 2: Land Cover Meta Language (LCML)

- An editing committee meeting is scheduled for Tuesday, May 24, in Delft, The Netherlands.

ISO 19145, Geographic information - Registry of representations of geographic point location (n 3083)

- “This International Standard specifies the process for establishing, maintaining and publishing registers of representation of geographic point location in compliance with ISO 19135.”
- No updates to report for the May 2011 FGDC Coordination Group meeting.

ISO 19147, Geographic information – Transfer nodes

- “This international standard specifies the data types, and operations associated with those types, for the implementation of Transfer Nodes and their services in transport modelling and location based services.”
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.

ISO 19150-1, Geographic information — Ontology — Part 1: Framework

- “This Technical Specification defines the framework for semantic interoperability of geographic information. This framework defines a high level model of the components required to handle semantics in the ISO geographic information standards with the use of ontologies.”
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.

ISO 19150-2, Geographic information - Ontology - Part 2: Rules for developing ontologies in the Web Ontology Language (OWL)

- “ISO 19150-2 defines rules and guidelines for the development of ontologies to support interoperability of geographic information over the Semantic Web. It defines the conversion of the UML class diagram elements used in the ISO geographic information standards into Web Ontology Language (OWL).”
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.

ISO DIS 19152, Geographic information — Land Administration Domain Model (LADM)

- The focus of this standard is on “that part of land administration that is interested in rights, responsibilities and restrictions affecting land (or water), and the geometrical (geospatial) components thereof.”
- No updates to report for the May 2011 FGDC Coordination Group meeting.

ISO DIS 19155, Geographic information – Place identifier (PI) architecture

- “This International Standard specifies an architecture that defines a reference model with an encoding method for an identifier of a place.” The concept of place may include “places” in the virtual world, such as URIs.
- INCITS issued a call for L1 position and vote on suitability for publication as an International Standard.

ISO/CD 19157, Geographic information – Data quality

- “This International Standard establishes the principles for describing the quality of geographic data.”
- This standard is related to ISO/TS 19138:2006, Geographic information -- Data quality measures, which is an FGDC-endorsed standard. ISO/TS 19138:2006 is also mandated in the DISR.

ISO/DTS 19158, Geographic information – Quality assurance of data supply (n 3084)

- “The framework defined in ISO 19158 enables a customer to satisfy itself that its suppliers, both internal and external, are capable of delivering geographic information to the required quality.”
- A vote on sending the text for final ISO/DTS19158 Geographic information – Quality assurance of data supply to ISO will be held at the Delft Plenary.

ISO 19159, Geographic information — Calibration and validation of remote sensing imagery sensors and data

- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.

ISO 19160, Geographic information – Addressing

- The objective of this study project is to “review existing address standards in order to identify international addressing standardization requirements and to make recommendations on how these should be developed.”
- A project team meeting is scheduled for the week of May 23-27 in Delft, The Netherlands.

Other

- ISO/TC 211 issued a new work item proposal for Ubiquitous public access - Reference model for vote. INCITS subsequently issued a call for U.S. national position on the new work item proposal. The project, if approved, will develop a conceptual framework to deal with “how geographically explicit context information can be extracted from varied information sources (such as lexical information, photos, voices, and more), how a multitude of open geographic data produced and distributed by the general public can be semantically linked to meet the user’s contextual requests, and how heterogeneous types of geographic information can be seamlessly accessed, and integrated, and provided to a user regardless of the kind of device the user operates.”

The next L1/U.S. TAG meeting is scheduled for May 18.

The ISO TC 211 plenary and associated meetings are scheduled for May 23-27, in Delft, The Netherlands. The calendar is posted at http://www.isotc211.org/Delft/Calendar_Delft.htm. USGS, Census, and NGA are sending people to represent the U.S. at the ISO TC 211 meetings and plenary.

Contact Julie Maitra, FGDC representative to INCITS L1, jmaitra@fgdc.gov, (703) 648-4627 or your agency representative to INCITS L1. INCITS L1 Chair: Liping Di, Ph.D, ldi@gmu.edu.

Open Geospatial Consortium

- The OGC seeks comment on the discussion paper, "Requirements and Space-Event Modeling for Indoor Navigation." For information about accessing the discussion paper and submitting comments, see <http://www.opengeospatial.org/pressroom/pressreleases/1369>.
- The Group on Earth Observations (GEO) has announced a Call for Participation (CFP) in the 4th phase of the GEOSS Architecture Implementation Pilot (AIP-4). Responses to this CFP are

requested by May 8. For more information, see <http://www.opengeospatial.org/pressroom/pressreleases/1367>.

- The OGC has recently approved several standards:
 - o OGC Network Common Data Form (netCDF) Core Encoding Standard and netCDF Binary Encoding Extension Standard - netCDF Classic and 64-bit Offset Format. Although netCDF was originally developed for the Earth science community, it can be used to communicate and store a wide variety of multidimensional data. The netCDF data model is particularly well suited to providing data in forms familiar to atmospheric and oceanic scientists. For more information, see <http://www.opengeospatial.org/pressroom/pressreleases/1373>
 - NOAA and NASA have formally recognized NetCDF.
 - NetCDF is an FGDC-endorsed standard.
 - o OGC Sensor Web Enablement (SWE) Common Service Model Interface Standard Version 2.0 and the OGC SWE Common Data Model Encoding Standard Version 2.0. Both SWE Common standards are designed to be used with other existing OGC® Sensor Web Enablement standards such as OGC Sensor Model Language (SensorML) Encoding Standard, Sensor Observation Service (SOS) Interface Standard and Sensor Planning Service (SPS) Interface Standard. For more information, see <http://www.opengeospatial.org/pressroom/pressreleases/1378>.
 - OpenGIS® SensorML Encoding Standard v 1.0 is an FGDC-endorsed standard. It is also mandated in the DISR.
 - OpenGIS® Sensor Observation Service Interface Standard, version 1.0.0 is an FGDC-endorsed standard. It is also mandated in the DISR.
 - OpenGIS® Sensor Planning Service Implementation Specification, version 1.0.0 is an FGDC-endorsed standard. It is also mandated in the DISR. The GWG will vote on a recommendation to add SPS 2.0 as an emerging standard to the DISR at its May 25 meeting.
 - o OGC GeoAPI 3.0 Interface Standard. The GeoAPI standard provides a set of Java® language interfaces based on the ISO 19100 series of geospatial abstract models for metadata and feature geometry as well as two OGC Abstract Specifications for metadata and coordinate reference systems. For more information, see <http://www.opengeospatial.org/pressroom/pressreleases/1380>.
 - o OGC Observations and Measurements (O&M) - XML Encoding Standard. This standard specifies an XML implementation for the OGC and ISO Observations and Measurements (O&M) conceptual model (OGC Observations and Measurements v2.0, which is also published as ISO/DIS 19156), including a schema for Sampling Features. This encoding is an essential dependency for the OGC Sensor Observation Service (SOS) Interface Standard.” For more information, see <http://www.opengeospatial.org/pressroom/pressreleases/1381>.
 - Open Geospatial Consortium, Observations and Measurements - Part 1 - Observation schema, Version 1.0, 2007/12/08 is listed as an emerging standard in the DISR. The OGC has deprecated this standard.
 - OpenGIS® Sensor Observation Service Interface Standard, version 1.0.0 is an FGDC-endorsed standard. It is also mandated in the DISR.
 - OGC Observations and Measurements - XML Implementation, version 2.0 and ISO 19156 Geographic Information: Observations and Measurements (OGC O&M v2.0) are identified as “on-deck” standards for the 11-3 GWG/DISR cycle.
- The Open Geospatial Consortium (OGC) is launching a 3D Portrayal Interoperability Experiment (IE) on May 26 to advance best practice for implementing standards for publishing Federal Geographic Data Committee • www.fgdc.gov • Email: fgdc@fgdc.gov

and streaming 3D geospatial assets related to urban planning and landscape visualization. For more information, see <http://www.opengeospatial.org/pressroom/pressreleases/1377>.

- The next OGC TC/PC meetings are scheduled for June 12-17 in Taiwan. The week's events will run concurrently with the Third International AR (Augmented Reality) Standards Meeting
- Subscribe to OGC news feeds and the OGC newsletter for current information about OGC activities.

Geospatial-Intelligence Standards Working Group (GWG)

- The DISR 11-1 baseline was released the week of April 18-22.
- The GWG polling session (voting members only) is scheduled for May 25.
- The GWG Secretariat released the change request (CR) package for voting on April 26. The FGDC OS has subsequently released the CR package to the FGDC Standards Working, FGDC GWG task team, and FGDC Coordination Group.
- There will be a meeting to discuss change requests on Wednesday, May 11, in Room 2A316, U.S. Geological Survey. Conference Dial-in Number: (218) 862-1001; Host Access Code: 453045*; Participant Access Code: 453045#
- GWG Focus Group meetings are scheduled for May 24.
- The GWG plenary will be held May 26, 8:30 am-4:30 pm at the USGS Auditorium. All are welcome to attend.

FGDC/GWG process alignment

- FGDC/GWG process alignment is an agenda item for the May 2011 FGDC Coordination Group meeting.
- The FGDC GWG task team met April 26 to validate an FGDC review and approval process that will integrate with the standards process used by the GWG.
- The goal is to implement the FGDC review and approval process in time for the GWG polling session (11-3 cycle) expected for early October.
- FGDC participation on GWG Focus Groups is key to the success of integration of an FGDC review and approval process that will integrate with the GWG standards process. The following roles and responsibilities have been identified as necessary activities of the FGDC focus group members:
 - o Participate in Focus Group meetings
 - o Represent the FGDC in the Focus Groups
 - o Review change requests
 - o Evaluate the standards in the change requests for applicability to the civilian community
 - o Develop positions for FGDC endorsement (which will in turn influence the vote at the GWG voting session) of standards in the change requests
 - o Provide the position recommendation on a standard to the FGDC
 - o Populate a table (to be developed) with recommendations for FGDC vote (details TBD)
- The FGDC is issuing a formal call for FGDC participation on the GWG Focus Groups.
- USGS has proactively identified people to participate in several GWG Focus Groups.
- The FGDC will identify additional standards in the DISR for consideration for FGDC endorsement: this is intended as a process of "catch-up" until the FGDC can align its process with the GWG/DISR standards process.

Contact Julie Maitra, FGDC representative to GWG, jmaitra@fgdc.gov, (703) 648-4627.