USA LifeCycle Management of ISO TC211 Standards

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Presentation Topics

• The Standards Life Cycle Management cycle
• US Key Geospatial Standards Development Organizations
• US Government Standards Policies
• US TAG Representation to ISO TC211
• US adopted ISO TC211 Standards
• Standards Governance
• Issues
The Standards Life-Cycle

1. Requirements Gathering and Standards Development
2. Piloting and Testing
3. Adoption, Configuration Control, and Publication
4. Implementation and Institutionalization
5. Retirement Reaffirmation Revision

Repeat
Key US Geospatial Standards Development Organizations

ISO
International Organization for Standardization

ISO/TC 211
Geographic information/Geomatics

incits
InterNational Committee for Information Technology Standards

OGC®
Open Geospatial Consortium, Inc.

fgdc
Federal Geographic Data Committee

NIST
National Institute of Standards and Technology

Geospatial Intelligence Standards Working Group
US Government Standards Policies

- OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities
  - Encourage federal agencies to benefit from the expertise of the private sector
  - Promote federal agency participation…to ensure creation of standards that are useable by federal agencies
  - Reduce reliance on government-unique standards where an existing voluntary standard would suffice
  - Codified into US Public Law - Pub. L. 104-113, the "National Technology Transfer and Advancement Act of 1995,“
  - NIST ACTION: To date over 210 (of roughly 225) FIPS have been withdrawn by NIST
• INCITS is an ANSI accredited Standards Development Organization

• The work of INCITS L1, Geographic Information Systems (GIS) consists of adopting or adapting information technology standards and developing digital geographic data standards. Digital geographic data standards are concerned with creating, defining, describing, and processing such data.

• INCITS L1 has 16 Member organizations (50% Commercial Sector, 30% Fed Govt, 10% Professional Societies, 10% Academia)

• INCITS L1 has adopted 26 ISO TC211 Standards
INCITS Standards sold at ANSI eStandards Store http://webstore.ansi.org/

Standards are $30US
INCITS/ISO Standards (1)

- INCITS/ISO 6709 - 2008 [2008]  Standard representation of geographic point locations by coordinates
INCITS/ISO Standards (2)

- INCITS/ISO 19133 - 2005 [2006]  Geographic information - Location Based Services - Tracking and navigation
- INCITS/ISO 19135 - 2005 [2006]  Geographic information - Procedures for registration of geographical information items
- INCITS/ISO 19137 - 2007 [2007]  Geographic information - Core profile of the spatial schema
Federal Geographic Data Committee

- FGDC Policy on Recognition of non-Federally Authored Standards
- This policy establishes two levels of FGDC recognition for non-Federally authored standards and specifications:
  - *Endorsement* – The non-Federally authored standard or specification has the same status as that of an FGDC developed standard, i.e., its use by Federal agencies is mandatory.
  - *Recommendation* – The non-Federally authored standard or specification is recognized as useful for geographic data capture, exchange, archiving, and/or processing but is not deemed to be of such broad applicability that its use should be made mandatory. The FGDC shall publicize it and encourage its use, but will not require its use by Federal agencies.
Geospatial Intelligence Standards Working Group (GWG)

Working as a Community:

• Participatory governance – *the community forum* for all standardization activities & functions related to GEOINT

• Bring *subject matter experts* together within the DoD and IC to fully address GEOINT standards matters

• Enhance our ability to *manage and share GEOINT data* among disparate groups
# GWG Members

## GWG Core Working Group
- NGA
- CIA
- NRO
- NSA
- Army
- Navy
- Air Force
- Marine Corps
- ODNI
- OSD (NII and AT&L)
- STRATCOM
- SOCOM
- JFCOM
- EUCOM
- NORTHCOM
- Joint Staff (J2)
- DHS
- DOE
- DISA
- DIA
- DLA
- DARPA
- FGDC

## Associate Members
- American National Standards Institute (ANSI)
- International Organization for Standardization (ISO) / Chair, TC 211
- Open Geospatial Consortium (OGC)
- US Geospatial Intelligence Foundation (USGIF)
- Digital Geospatial Information Working Group (DGIWG)
- Joint ISR Capability Group (JISRCG)
- ABCA (United Kingdom, Canada, Australia)
The DoD IT Standards Registry (DISR)

- A single, unifying DoD registry for approved standards citations and a registry for approved DoD IT standards profiles

- **DISR Mandated Standards** - the minimum set of essential standards for the *acquisition* of all DoD systems that produce, use, or exchange information and, when implemented, facilitate the flow of information in support of the warfighter

- New / modified systems throughout DoD are required to include all applicable DISR mandated standards in baseline (TV-1)
DISR Standards Lifecycle Definitions

Emerging
- Expected to be *mandated within three year*
  - Test, implementations, technical maturity
- May be implemented but not in lieu of mandated standard
- Use (TV-1) requires a waiver and a Technology Insertion Risk Assessment
- Generally placed in *TV-2*

Mandated
- Essential for interoperability across the enterprise
- *Minimum Set* of essential standards for the *acquisition* of all DoD systems that produce, use, or exchange info, and, when implemented, facilitates the flow of info in support of warfighter
- Required for the management, development, and acquisition of *new or improved systems throughout* the DoD

Retired
- New standards / technology now available and implemented
- Require waiver and Migration Plan
- *Inactive*, remain in the DISR Registry
MANDATED

• ISO 6709:2008 Standard representation of geographic point location by coordinates, 2008-07-02
• ISO 19107:2003 Geographic information - Spatial schema, 08 May 2003
• ISO 19108:2002/Cor 1:2006 Geographic information - Temporal schema, 12 September 2002, with Technical Corrigendum 1, 16 October 2006
• ISO 19109:2005 Geographic information - Rules for application schema, June 23, 2005
• ISO 19110:2005 Geographic information - Methodology for feature cataloguing, 11 February 2005
• ISO 19111:2007 Geographic information -- Spatial referencing by coordinates, 26 June 2007
• ISO 19112:2003 Geographic information - Spatial referencing by geographic identifiers, 21 October 2003
• ISO 19115:2003 w/ ISO 19115 Cor. 1:2006 Geographic information - Metadata, 8 May 2003, with Technical Corrigendum 1, 5 July 2006
• ISO 19119:2005 w/ Amd 1:2008 Geographic information - Services, Extensions of the service metadata model:2005, w/Amd 1:2008
• ISO 19123:2005 Geographic information - Schema for coverage geometry and functions, August 31, 2005
• ISO 19135:2005 Geographic information - Procedures for item registration, October 14, 2005
• ISO 19136:2007 Geographic information -- Geography Markup Language, 2007-08-23
• ISO/TS 19138:2006 Geographic information - Data quality measures, 22 November 2006

EMERGING

INCITS License (GWG) for 50 Standards – provided free to GWG members
Issues

• Resource Constraints (People and $$$)
• Backward Compatibility
• Synchronization/Harmonization across ISO TC211 Standards and within Geospatial Standards community
QUESTIONS