Where IGI&S is Going

The Direction of Installation Geospatial Information and Services for 2017 and Beyond

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Themes

- The OSD Perspective
- Requirements for IGI&S
- Recent Accomplishments
- How IGI&S Relates to the Larger GIS Community
- Data Sensitivity
- The Need for Authoritative Data and Data Quality

DoD Authorities for Geospatial Information and Services (GI&S)

- Geospatial information and services (GI&S)
  - The collection and use of geodetic, geomagnetic, imagery, gravimetric, aeronautical, topographic, hydrographic, littoral, cultural, and toponymic data accurately referenced to the Earth
- The National Geospatial-Intelligence Agency (NGA) has lead for all GI&S in DoD
  - Focus on warfighter support and intelligence requirements
  - Coordinate all GI&S standards within DoD
- Installation geospatial information and services (IGI&S)
  - A subset of GI&S
  - The GI&S data and maps tailored to construction, sustainment, environmental management, and test and training range operations on DoD facilities worldwide
- The USD(AT&L) has lead for all installation management in DoD
  - Includes business systems and associated data, standards
  - IGI&S is under USD(AT&L) purview (DoDI 8130.01)

The Perspective from the Top

- DoDI 8130.01, "Installation Geospatial Information and Services" is two years old → **implementation expected**
- The Office of the Secretary of Defense (OSD) needs IGI&S to be visible, accessible, understandable, trusted, and interoperable
- OSD is using IGI&S for strategic planning and situational awareness
- Often, we simply want to know "where is it?"
- Growing need at enterprise level for IGI&S to support emergency response, homeland defense
- OSD activity does not (and should not) duplicate Components' capabilities

OSD Level Requirements for IGI&S

- Current Requirements
  - Business mission planning, Impact analysis of current events
  - Financial Improvement and Audit Readiness (FIAR)
  - Federal Flood Risk Management Strategy
  - GEOINT Visualization Services (GVS) and Map of the World (high side data sources)
  - Real property categorization and sustainment cost modeling
- Emerging Requirements
  - Mass Warning and Notification
  - WebEOC, etc. (common operating picture)
  - Explosives Safety Siting (ESS) – web-based system
  - Mission Assurance Risk Management System (MARMS)
  - Global Force Management Data Initiative (GFM DI)
  - Closure and realignment analysis

Use of IGI&S for Audit Readiness and Real Property Inventory

- NDAA FY 2010 Audit Readiness Requirement: DoD implemented the Financial Improvement and Audit Readiness (FIAR) plan to achieve audit readiness by September 30, 2017*
  - One of two FIAR Plan priorities: improve controls and processes for "Mission critical asset information" (includes real property information)
- IGI&S plays key role supporting the FIAR goals of establishing "existence and completeness" of real property assets
  - Assists in reconciliation of the real property inventory of each Military Department

*Established in NDAA 2010; clarified in NDAA 2014

Use of IGI&S for Audit Readiness and Real Property Inventory (Contd)

- Military Departments use IGI&S to support audit readiness
  - Department of the Army
    - Three years of proven results reconciling real property data (existence and completeness) with IGI&S data
    - Implementing standard process to reconcile fuels and “linear assets” (such as roads, utility systems) with IGI&S data
  - Department of the Navy progressively improved its real property inventory over the last three years reconciling real property asset records with IGI&S data
    - U.S. Marine Corps process similar to Navy; results fed back as updates to the real property and IGI&S databases
  - Department of the Air Force uses IGI&S data to update “linear assets” in real property inventory
    - More reconciliation processes in development

Accomplishments Since July, 2016

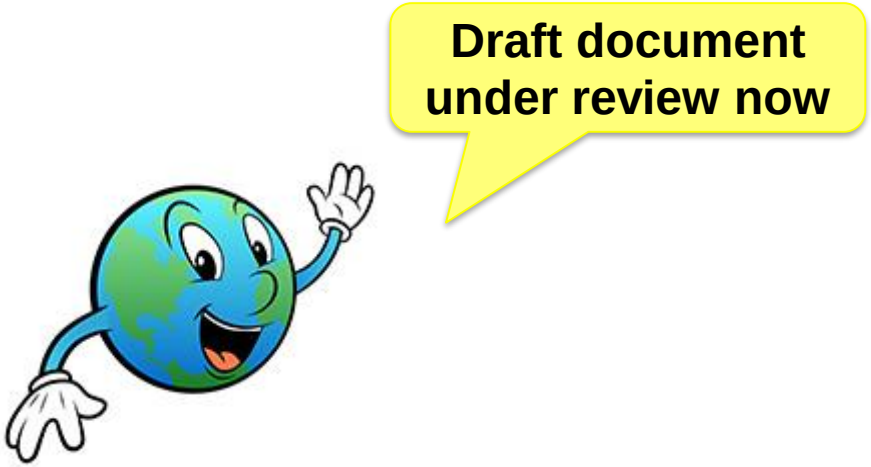
- SDSFIE-R ***DONE***
- SDSFIE-Q
  - Main document ***DONE***
  - DCS General Guidance ***DONE***
  - DCS for each CIP layer ***UNDERWAY***
- SDSFIE-M v 2.0 and implementation ***UNDERWAY***
- Implementation of SDSFIE-V v 4.0 ***UNDERWAY***
- Revise Change Management Process ***DONE***
  - SDSFIE Governance Plan (R1)
  - SDSFIE-V Implementation Guidance (R2)
- ADS Implementation Guidance ***UNDERWAY***

IGG SOP

UNDERWAY (Draft)

IGG Standard Operating Procedures (SOP)

- DoDI 8130.01 and FBGB Charter are key references
- Outline of IGG SOP (draft)
  - Purpose
  - Mission and Scope of the IGG
    - IGI&S Portfolio Management
    - Standards Governance
    - Data Management
  - Membership
  - Roles and Responsibilities
  - Working Groups
  - Meetings
  - Voting Procedures
  - Operations
  - Annex A: Current Working Groups



Federal Geographic Data Committee (FGDC) Coordination

- Federal Geographic Data Committee (FGDC): a US government committee which promotes the coordinated development, use, sharing, and dissemination of geospatial data on a national basis
  - Chaired by DOI; OMB is vice-chair
  - 32 Federal agency members
- DoD participates at all levels of the FGDC
  - Top level (Steering Committee) Representative - NGA
  - Second level (Coordination Group) Representatives – NGA, USD(AT&L), and US Army Corps of Engineers
  - DoD contributes technical expertise on 11 of 18 subcommittees
  - Benefits to DoD: standards development, data sharing, and burden sharing for common GIS requirements

IGI&S Standards Coordination

- Aligned with international, federal, and private sector standards where practicable
  - DoD requires a combination of external and DoD-specific GIS standards to meet mission needs
- GIS standards in DoD
  - NGA coordinates all GIS standards but focus is on warfighting and intelligence
  - IGI&S uses many (but not all) NGA-developed GIS standards
  - USD(AT&L) develops and maintains three IGI&S standards tailored to our unique uses of GIS for sustaining and operating DoD facilities worldwide
- Applicability of federal GIS standards
  - 17 of 31 FGDC standards are applicable to IGI&S missions
  - DoD real property and IGI&S data aligns with 12 of 17 applicable FGDC standards and dozens of other international standards

Sensitivity of IGI&S Data and Maps

- Increasing precision of IGI&S data has increased its sensitivity in this high threat environment
  - Raw, highly detailed IGI&S data poses greatest sensitivity and risk
  - Releasing large GIS datasets (aggregating multiple installations or large geographic regions) also poses higher security risks
- Some sensitive IGI&S data is shared for official uses, but protected
  - US Census Bureau for decennial census
  - Homeland security community for emergency response
- Basic IGI&S data and installation maps publicly released after security review

IGI&S Authoritative Data Source (ADS) – Why Each Installation Needs One

The ADS is the "Geospatial Library" for each Installation

Business functions produce or consume authoritative geospatial data – curation is needed!

FY17 CIP Data Call – Proposed Content

Proposed Changes for FY17

Layer	Justification
ADD: DocksAndWharfs	USN proposed; Census Bureau Request
REMOVE: ExternalPropertyInterest	REPI now collecting this data

Components must also submit a data quality checklist (14 items) as a "self evaluation"

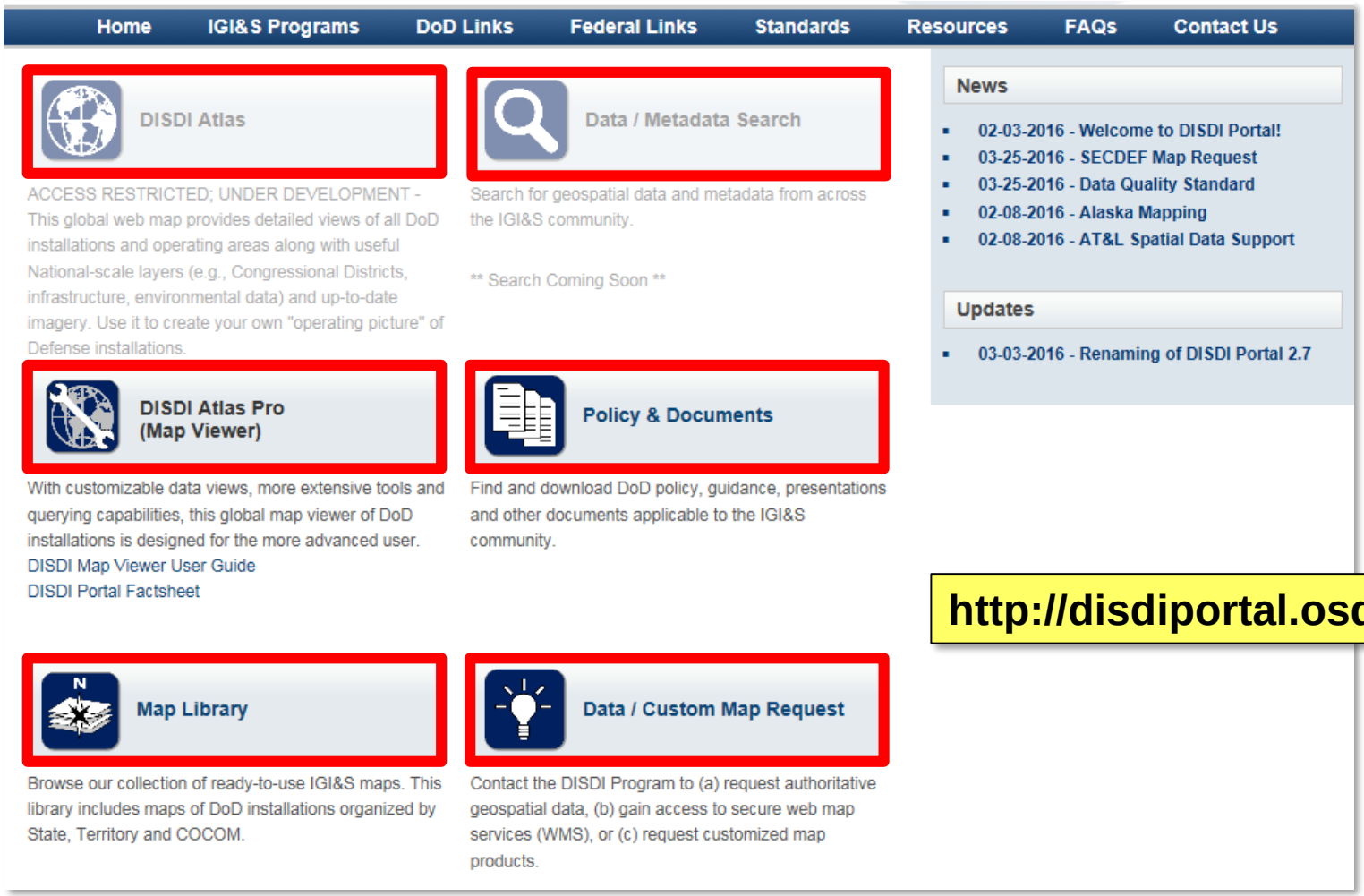
Note: DISDI will coordinate a separate data request for USACE Division/District Offices, Locks/Dams/Reservoirs/Rec. Areas

SDSFIE-V v 3.1 Layer Name	Current (FY16) CIP Layers
AccessControl	
AirAccidentZone	
Bridge	
Building	
EnvironmentalRemediationSite	
ExternalPropertyInterest	
Fence	
FutureProjects	
GolfCourse	
HistoricDistrict	
ImpactArea	
Installation	
LandParcel	
LandUse	
MilitaryRange	
MilitaryTrainingLocation	
MilQuantityDistance CombinedArc	
NatResAcquisitionBoundary	
NoiseZone	
Outgrant	
PavementBranch*	
PavementSection*	
RailSegment**	
RailTrack**	
RecreationArea	
RoadCenterline (not in Gold)***	
RoadPath***	
RoadSeg***	
Site	
Tower	
VehicleParking	
Wetland	

Useful Public Links

- DoDI 8130.01, Installation Geospatial Information and Services (download on DoD Issuances site http://www.dtic.mil/whs/directives/)
- http://www.acq.osd.mil/eie/BSI/BEI_DISDI.html DISDI Program public page with links to the DoD Components' IGI&S Program web pages are here
- http://sdsfieonline.org Public registry of IGI&S data standards and related documents (registration required)
- http://www.acq.osd.mil/eie/Downloads/DISDI/installations_ranges.zip Downloadable data set for Military Installations, Ranges, and Training Areas (shapefile)

DISDI Portal (DoD only)



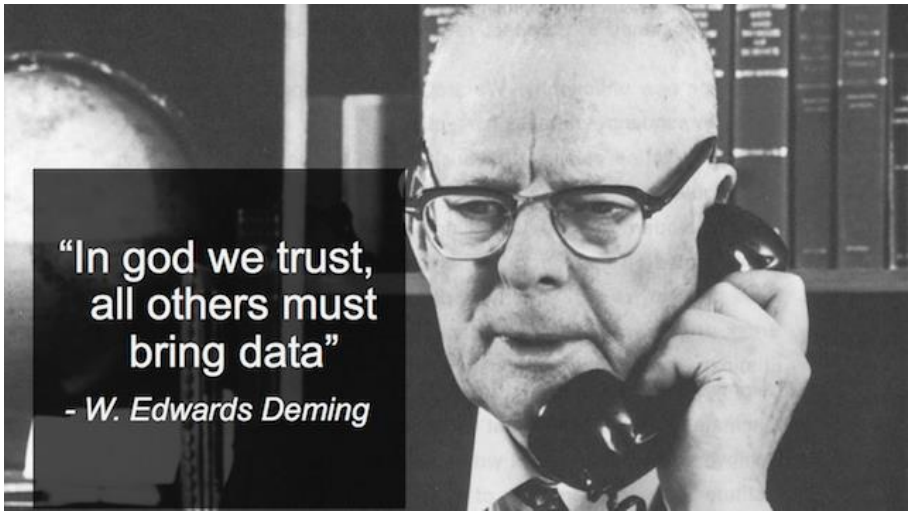
http://disdiportal.osd.mil/

Summary

- Policy for IGI&S is driving greater maturity of the capability
  - 93% of the 7,382 DoD sites now have basic GIS data
  - 83% of 523 major installations have detailed GIS data
  - IGI&S standards are mature, aligned to a broad array of missions
- OSD level requirements for high quality IGI&S are growing
- IGI&S community actively contributes to GEOINT and federal forums
- IGI&S standards, while unique, are highly compatible with applicable federal standards
- DoD continues to make installation maps publicly available, but most underlying IGI&S raw data is considered too sensitive to release per national security requirements

Our Vision

"To provide authoritative, cost-effective defense installation geospatial information and services for fact-based decision making across the DoD spectrum of operations."



QUESTIONS?