
CHARTER

Geospatial Intelligence Standards Working Group (GWG)

Revised: June 2016



www.gwg.nga.mil

Preface

Since its inception in the Fall of 2004, the Geospatial-Intelligence (GEOINT) Standards Working Group (GWG) has worked diligently to coordinate the adoption of standards to enable the sharing of GEOINT across the National System for Geospatial-Intelligence (NSG). Common imagery formats, semantics, data structures and models, metadata tagging, security marking to name a few: adopting such standards has enabled the sharing of GEOINT from disparate systems and phenomenologies at an unprecedented level, providing the foundation for interoperability.

As we enter the next decade of GWG service to the NSG, the Cloud is a reality. Enterprise-wide Information Technology (IT) environments, i.e. the Intelligence Community (IC) Information Technology Enterprise (IC ITE) and the Department of Defense (DoD) Joint Information Environment (JIE), are realities. Using web services to share GEOINT data over these environments is of utmost priority, making interoperability through the use of common GEOINT standards critical to our nation's security. We must embrace coming technological advances – e.g., 3D imaging, GEOINT on mobile devices, new phenomenologies – to give our warfighters and decision makers the GEOINT – still imagery, full-motion video, activity-based intelligence...– they need when they need it on the platforms available to them. And we must do this in a highly connected world where our cyber-smart adversaries are constantly trying to infiltrate our systems.

It is imperative that each GWG member organization be actively involved in the GEOINT standards activities of the GWG and its Focus Groups as we approach new technologies and the interoperability challenges that await us while we work to ensure our warfighters and decision makers have the right GEOINT on demand.

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1. Purpose

1.1. Charter

This charter defines the scope, mission, organization, function, responsibilities, and procedures of the GWG. This charter also establishes the GWG as a working group under the DoD and IC Joint Enterprise Standards Committee (JESC). As stated in Reference 4.E, the JESC “...recommends common Information Technology (IT) enterprise standards for the respective DoD and IC information environments, i.e. Joint Information Environment (JIE) and the IC IT Enterprise (IC ITE), to the DoD and IC CIOs [Chief Information Officers] for approval... The JESC activities and priorities align with the JIE and IC ITE goals and objectives, which call for standards-based implementation of the enterprise architecture to enable interoperability and to ensure information sharing and safeguarding.”

The GWG is the community forum for establishing the GEOINT standards baseline for the DoD and IC. It is led by the National Geospatial-Intelligence Agency (NGA) in accordance with the Director of NGA’s (D/NGA’s) authorities as the Functional Manager for GEOINT and the NSG, as established in applicable laws, Director of National Intelligence (DNI) and DoD directives, guidance, and agreements cited in references 4.H and 4.I. Reference 4.G defines GEOINT as “the exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict physical features and geographically referenced activities on the Earth. GEOINT consists of imagery, imagery intelligence, and geospatial information”. Standards that enable the discovery, access, use, integration, dissemination, exchange, and exploitation of GEOINT include, but are not limited to:

- A. Format and compression of still and motion imagery and gridded data content
- B. Application schemas for geospatial feature encoding, data dictionaries and catalogues
- C. Portrayal of geospatial products
- D. Metadata models and strategies for GEOINT
- E. GEOINT services architecture
- F. Sensor models for GEOINT services, production and applications
- G. World geodetic system and geomatics

1.2. GWG

The GWG serves as a US DoD, Intelligence Community (IC), Federal, and Civil community-based forum to advocate for IT standards and standardization activities related to GEOINT. In this capacity, the GWG supports the D/NGA in carrying out GEOINT Functional Manager responsibilities for standards in accordance with reference 4.I. The GWG performs two major roles: 1) as a Technical Working Group (TWG) of the JESC, with all the responsibilities of a JESC body; and 2) as a coordinating body for the GEOINT community to address all aspects of GEOINT standards.

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1.2.1 GEOINT TWG

As a JESC TWG, the GWG recommends adoption of standards by the DoD and IC through citation in the joint DoD/IC Enterprise Standards Baseline (ESB). The ESB is hosted in the DoD IT Standards Registry (DISR) and IC Enterprise Registry and Repository (ER2). The DISR/ER2 serves as the registry of GEOINT standards citations, identifying those standards mandated for use within the NSG community.

The GWG concentrates on GEOINT standards and standardization activities related to enabling interoperability in net- and data-centric environments and standards supporting enabling technologies, data architectures, and software tools. In most instances the GWG focus is on standards in three DISR Service Areas: GEOINT: Geospatial, GEOINT: Motion Imagery and GEOINT: Still Imagery. These Service Areas are described as follows:

GEOINT: Geospatial

Standards that include dictionaries, definitions, models, metadata, and formats to facilitate mapping, analysis, exploitation, portrayal, and exchange of geospatial data.

GEOINT: Motion Imagery

Standards that include the tasking, collection, posting, processing, storage, exploitation, discovery, retrieval, and exchange of motion imagery, associated metadata, audio, and other support data.

GEOINT: Still Imagery

Standards that include the tasking, collection, posting, processing, storage, exploitation, discovery, retrieval, and exchange of digital still imagery and gridded data associated with geospatial intelligence. The standards in this service area address imagery and gridded data topics such as formatting, compression, support data, metadata, graphical and textual annotations, image quality, and imagery-derived data and products.

1.2.2 GEOINT Community Coordination

As a GEOINT standards body, the GWG acts as an advisory group to the D/NGA as the GEOINT Functional Manager. Through the GWG, community consensus is formed to advance GEOINT standards that enable interoperability, meeting the requirements of community members. The GWG provides a standards-focused forum to:

- A. Exchange information and discuss GEOINT standards-related issues
- B. Make recommendations to D/NGA regarding GEOINT standards issues, policy, and/or guidance as requested and/or necessary
- C. Identify emerging standards and provide advice on the need to develop new standards; coordinate the development of new standards or specifications when appropriate
- D. Serve as the Subject Matter Expert (SME) within the DoD and the IC for GEOINT standards matters

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2. Scope

The GWG provides community leadership and management of GEOINT standardization activities for the NSG. Reference 4.H establishes the NSG and defines it as the combination of technology, policies, capabilities, doctrine, activities, people, data, and communities necessary to produce geospatial intelligence in an integrated multi-intelligence, multi-domain environment. It includes the DoD and IC components, including, where appropriate, coalition and Federal civil agency partners.

The GWG is responsible for all activities assigned by the JESC, including making recommendations for GEOINT standards to be cited in the ESB and for coordinated advice and policy recommendations on GEOINT standards issues related to the ESB. The GWG also serves as the community coordination body for review of GEOINT standards for which NGA is the Lead Standardization Activity in accordance with the Defense Standardization Program (DSP), reference 4.A.

In its coordinating and advisory role, GWG activities extend to all aspects of GEOINT standardization, to include but not limited to issues related to GEOINT standards identification, adoption, promulgation, implementation, compliance, and education.

3. Mission

The GWG supports the JESC in the configuration management of GEOINT standards citations within the ESB. Additionally, the GWG provides a standards-focused forum that the NSG community can use to exchange and communicate issues regarding GEOINT standards requirements, development, implementation, and conformance. The GWG recommends GEOINT standards for data, systems, and their interfaces to ensure interoperability with DoD and IC systems.

4. References

- A. DoD Instruction 4120.24, Defense Standardization Program (DSP), 13 July 2011
- B. Joint Enterprise Standards Committee (JESC) Charter, v1.0, 23 January 2013
- C. Deleted
- D. DoD Net-Centric Data Strategy, 9 May 2003
- E. JESC Standard Operating Procedures, version 1.0, 01 December 2014
- F. Executive Order 12333, United States Intelligence Activities, amended July 31, 2008
- G. Title 10 U.S. Code §467
- H. National System for Geospatial Intelligence Directive (NSGD) 1100, Roles and Responsibilities of the Functional Manager of the National System for Geospatial Intelligence (NSG) and the Establishment of the NSG, 2 August 2014
- I. DoD Directive 5105.60, National Geospatial-Intelligence Agency (NGA), 29 July 2009
- J. National System for Geospatial Intelligence Memorandum for NGA Chief Information Officer, Mar 17 2008
- K. OMB Circular No. A-119 Revised, Federal Participation in the Development and use of Voluntary Consensus Standards and in Conformity Assessment Activities, 10 February 1998

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- L. DoDI 8310.01, Information Technology Standards in the DoD, 2 February 2015
- M. Defense Standardization Program (DSP) Standardization Directory (SD-1), “Standardization Directory,” 01 April 2014

5. GWG Organization

The GWG is organized to support the DoD/IC JESC and GEOINT standards community (refer to Figure 1) effectively and efficiently. The GWG consists of the following:

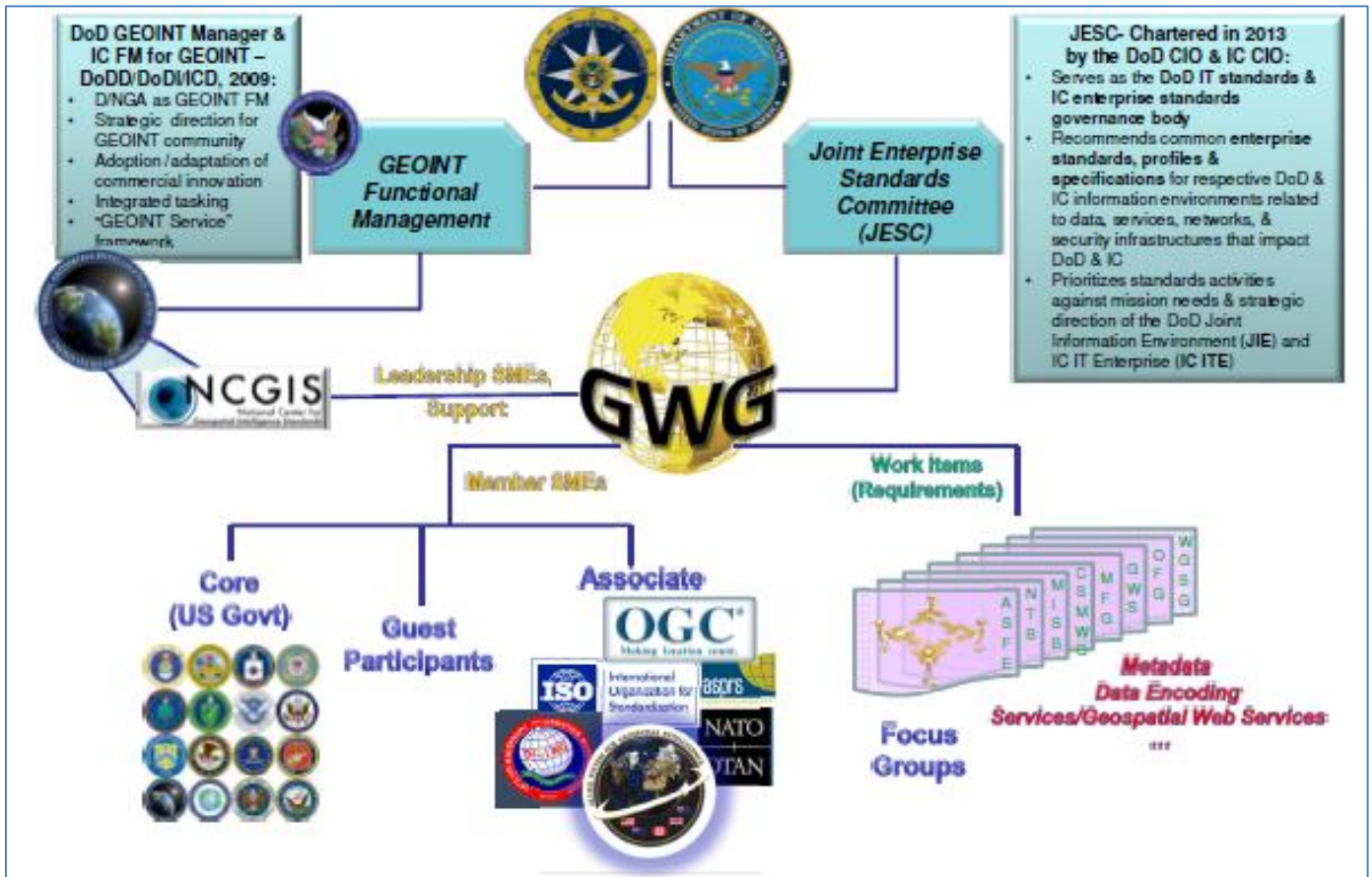


Figure 1. GEOINT Standards Community Governance

- A. Chair: The Director, NGA/National Center for Geospatial Intelligence Standards (NCGIS), the National GEOINT Officer (NGO) for GEOINT Standards at NGA, or designated alternate chairs the GWG. The functions of a TWG chair are stated in reference 4.E, paragraph 2.2.2.
- B. Secretariat: The Director of NCGIS provides or arranges for the Secretariat and administrative support for the GWG.
- C. Focus Groups: Focus Groups are established at the initiative of the GWG Chair or Core membership to handle specific functional or technical issues as necessary. Focus Groups support a subset of standards managed by the GWG, usually focused on one specific

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technology or major standards issue. Focus group responsibilities encompass, but are not limited to, the following:

- Adhering to DSP SD-1 (reference 4.M) community coordination requirements for GEOINT standards development efforts, as appropriate
- Identifying candidate standards for citation in the ESB via the web-based tool, DISRonline
- Supporting standards development efforts
- Maintaining cognizance of related standards activities in other standards organizations
- Coordinating DISRonline Change Requests arising from their groups or as assigned by the GWG Chair

D. Members:

- Core Members: Core Members have primary authority and responsibility toward gathering consensus in the GWG. Core Members are listed in Appendix B, Section 2.
- Associate Members: Associate Members augment the core membership resources as representatives from other organizations to serve as subject matter experts. Specific member organizations are designated by the GWG Chair. These members fall into the following categories:
 - External Standards Forums: The GWG has relationships with national and international standards development and promulgation bodies and consortia, for example, Defence Geospatial Information Working Group (DGIWG), Open Geospatial Consortium (OGC), and the International Organization for Standardization (ISO).
 - Commercial Sector: The GWG will establish relationships, where appropriate, with commercial vendors and consortia in order to communicate GWG requirements and influence those communities to meet requirements through non-proprietary Standards-Based Commercial-Off-The-Shelf (SCOTS) solutions.
 - North Atlantic Treaty Organization (NATO) Allies, coalition partners and other stakeholder nations: This category of membership includes U.S. International partners, such as the United Kingdom, Canada, Australia, and New Zealand as well as NATO organizations such as the NATO Joint Capability Group on Intelligence Surveillance & Reconnaissance (JCGISR).

E. Guest Participants: The GWG Chair or core members may invite individuals or teams as Guests for technical presentations as deemed appropriate by the GWG Chair.

6. Functions and Responsibilities

The GWG is responsible for:

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- 1) Coordinating the population and configuration management of the GEOINT standards citations within the ESB
- 2) Serving as the community forum for the coordination of all GEOINT standards and standardization activities and functions

7. Procedures

- A. The GWG will meet nominally three times per calendar year. The chair or any Core Member may request additional meetings of the GWG if circumstances dictate. GWG meetings follow a published agenda prepared and distributed by the chair. The chair is responsible for overseeing and directing all meetings.
- B. Detailed procedures are documented in the GWG standard operating procedures, which are approved by GWG core members.
- C. The GWG shall review this charter every three years or more often as changes dictate, and GWG core members shall approve revisions, as necessary, to ensure adequate continuity and appropriateness.

Approved:

Jeffrey R. Bell, NGA
Chair, Geospatial Intelligence Standards Working Group
National GEOINT Officer (NGO) for GEOINT Standards
Director, National Center for Geospatial Intelligence Standards
National Geospatial-Intelligence Agency

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Appendix A: Acronyms

| | |
|---------|--|
| AT&L | (OSD) Acquisition, Technology and Logistics |
| CENTCOM | US Central Command |
| CIA | Central Intelligence Agency |
| CIO | Chief Information Officer |
| COI | Community of Interest |
| D/NGA | Director, National Geospatial-Intelligence Agency |
| DARPA | Defense Advanced Research Projects Agency |
| DIA | Defense Intelligence Agency |
| DGIWG | Defence Geospatial Information Working Group |
| DISA | Defense Information Systems Agency |
| DISR | DoD IT Standards Registry |
| DHS | Department of Homeland Security |
| DLA | Defense Logistics Agency |
| DNI | Director of National Intelligence |
| DoD | Department of Defense |
| DOE | Department of Energy |
| DSP | Defense Standardization Program |
| ER2 | (IC) Enterprise Registry and Repository |
| ESB | (Joint DoD and IC) Enterprise Standards Baseline |
| EUCOM | US European Command |
| FBI | Federal Bureau of Investigation |
| FGDC | Federal Geographic Data Committee |
| GEOINT | Geospatial Intelligence |
| GWG | Geospatial Intelligence Standards Working Group |
| IC | Intelligence Community |
| IC ITE | Intelligence Community IT Enterprise |
| ISO | International Organization for Standardization |
| IT | Information Technology |
| JCGISR | Joint Capability Group on Intelligence Surveillance & Reconnaissance |
| JESC | (DoD/IC) Joint Enterprise Standards Committee |
| JIE | (DoD) Joint Information Environment |
| JS J2 | Joint Staff, Directorate for Intelligence |
| JS J6 | Joint Staff, Directorate for Command, Control, Communications and Computers (C4) & Cyber |

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| NATO | North Atlantic Treaty Organization |
| NCGIS | National Center for Geospatial Intelligence Standards |
| NGA | National Geospatial-Intelligence Agency |
| NGO | National GEOINT Officer |
| NII | (OSD) Networks and Information Integration |
| NORTHCOM | US Northern Command |
| NRO | National Reconnaissance Office |
| NSA | National Security Agency |
| NSG | National System for Geospatial Intelligence |
| ODNI | Office of the Director of National Intelligence |
| OGC | Open Geospatial Consortium |
| OMB | (White House) Office of Management and Budget |
| OSD | Office of the Secretary of Defense |
| PACOM | US Pacific Command |
| SCOTS | Standards-based Commercial-Off-The-Shelf |
| SME | Subject Matter Expert |
| SOCOM | US Special Operations Command |
| STRATCOM | US Strategic Command |
| TWG | Technical Working Group |

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Appendix B: Core Membership

The GWG's Core Membership consists of the following organizations:

1. National Geospatial-Intelligence Agency (NGA)
2. Central Intelligence Agency (CIA)
3. National Reconnaissance Office (NRO)
4. National Security Agency (NSA)
5. Office of the Director of National Intelligence (ODNI)
6. Office of the Secretary of Defense (OSD): Networks and Information Integration (NII), and Acquisition, Technology and Logistics (AT&L)
7. US Army
8. US Navy
9. US Air Force
10. US Marine Corps
11. US Central Command (CENTCOM)
12. US European Command (EUCOM)
13. US Northern Command (NORTHCOM)
14. US Pacific Command (PACOM)
15. US Special Operations Command (SOCOM)
16. US Strategic Command (STRATCOM)
17. Joint Staff, Directorate for Intelligence (J2)
18. Federal Bureau of Investigation (FBI)
19. Federal Geographic Data Committee (FGDC)
20. Defense Information Systems Agency (DISA)
21. Defense Intelligence Agency (DIA)
22. Defense Logistics Agency (DLA)
23. Defense Advanced Research Projects Agency (DARPA)
24. Department of Energy (DOE)
25. Department of Homeland Security (DHS)
26. National Aeronautical and Space Administration (NASA)