

**National Imagery Transmission Format Standard
Technical Board**

NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

CONFORMANCE PROGRAM PLAN

FOR

**NATIONAL IMAGERY TRANSMISSION FORMAT
STANDARD (NITFS)**

November 2023

Version 1.0

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Change Log

Date	Location Affected	Description
2 January 1990	All	Intelligence Communications Architecture Project Office, "National Imagery Transmission Format Certification Plan"
30 June 1993	All	Defense Information Systems Agency (DISA), Joint Interoperability and Engineering Organization (JIEO) Circular 9008, "National Imagery Transmission Format Standard (NITFS) Certification Test & Evaluation Program Plan"
3 January 1994	All	DISA JIEO, "National Imagery Transmission Format Standard (NITFS) Certification Test Plan"
24 January 1996	All	DISA JIEO Circular 9008, Errata
25 August 1998	All	National Imagery and Mapping Agency, N-0105/98, "National Imagery Transmission Format Standard (NITFS) Standards Compliance and Interoperability Test and Evaluation Program Plan, Version 1.0"
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FOREWORD

This document establishes the National Geospatial-Intelligence Agency (NGA) Conformance Program Plan for the National Imagery Transmission Format Standard (NITFS) (hereafter referred to as NITFS Conformance Program Plan (NCP)) for achieving and sustaining conformant implementations of NITFS to promote interoperability within the National System for Geospatial Intelligence (NSG) and Allied System for Geospatial Intelligence (ASG) enterprises.

This NCP provides an authoritative means to assess and confirm NITFS conformance throughout the development and fielding of capabilities that implement NITFS. To accomplish this, the plan:

- Defines NITFS Conformance Certification guidance within the NSG and participating ASG enterprises.
- Prescribes the policies, roles and responsibilities, and processes involved in assessing and confirming NITFS conformance.
- Defines the administrative process and associated testing requirements to conduct conformance assessments and certification tests.

This NCP applies to elements of the Intelligence Community (IC), Department of Defense (DoD), non-DoD/IC Federal agency members of the NSG, international partners, commercial vendors, state/local municipalities, and tribal organizations responsible for the operation, acquisition, or development of systems, applications, or plug-ins employing technology that collects, procures, produces, serves, exchanges, ingests, or uses imagery or imagery-related content governed by NITFS.

As the designated Defense Intelligence Enterprise Manager for geospatial intelligence (GEOINT) and the GEOINT Functional Manager for the IC, NGA established this NCP to assess and confirm the integration of NITFS standards in the NSG/ASG enterprises. The Joint Interoperability Test Command serves as NGA's Executive Test Agent in the execution of this NCP and issuance of NITFS Conformance Certifications.

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1.0 INTRODUCTION

1.1 Purpose

This document establishes the National Geospatial-Intelligence Agency (NGA) Conformance Program Plan for the National Imagery Transmission Format (NITF) Standard (NITFS) (hereafter referred to as NITFS Conformance Program Plan (NCPP)) for achieving and sustaining conformant implementations of NITFS to promote interoperability within the National System for Geospatial Intelligence (NSG) and Allied System for Geospatial Intelligence (ASG) enterprises. This Program Plan supports NSG Directive (NSGD) 3201, NGA's Geospatial Intelligence (GEOINT) Functional Manager Standards Assessment (GFMSA) Program that promotes GEOINT standards-based interoperability across the NSG.

1.2 Objectives

The objectives of the NCPP are to:

- Define NITFS Conformance Certification guidance within the NSG and participating ASG.
- Define the policies, roles and responsibilities, and processes involved in assessing and confirming NITFS conformance.
- Define the administrative process and associated testing requirements to conduct conformance assessments and certification tests.

1.3 Scope

This NCPP prescribes the policies, defines the roles and responsibilities of participating organizations, and defines the processes that provide product owners an authoritative means to assess and confirm NITFS conformance throughout the development and fielding of capabilities that implement NITFS.

1.4 Background

NITFS is a subset of GEOINT standards defining the format and content requirements for capabilities exchanging imagery and imagery-related data. GEOINT standards, themselves, are a subset of interoperability standards specified in the Department of Defense (DoD) Information Technology (IT) Standards Registry (DISR) and Intelligence Community (IC) Enterprise Standards Baseline (IC ESB) mandated for use in the acquisition of all United States (U.S.) DoD and IC systems that produce, use, or exchange GEOINT information.

In 1989, the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)) mandated NITFS conformance to resolve interoperability issues occurring within the NSG. Shortly thereafter, ASD(C3I) instituted the NITFS Certification Program to independently confirm developmental and fielded systems integrated NITFS (i.e., were conformant).

In 1993, the NITFS Certification Test and Evaluation (CTE) Program established the Central Imagery Office (CIO), now NGA, as the NITFS Certification Authority, providing oversight and

resources to the NITFS CTE Program; the Defense Information Systems Agency (DISA) as the DoD authority for NITFS validation testing; and the Joint Interoperability Test Command (JITC) as the Executive Test Agent in the execution of the NITFS CTE Program. In 1995, the CIO designated JITC as signatory to issue NITFS conformance certification letters and reports on behalf of the CIO.

In 2004, NGA established the National Center for GEOINT Standards and the GEOINT Standards Working Group (GWG) as the primary organizations for managing GEOINT standards for the NSG. The GWG adopted the NITF Technical Board, formed in 1987, and rebranded it as the NITFS Technical Board (NTB) to serve as the focus group for imagery, imagery-related standardization activities and other related aspects within the NSG for the GEOINT community. The NTB facilitates the development, selection, adoption, profiling, documentation, application, implementation, and testing of standards essential to establishing interoperability for still imagery, gridded data, associated metadata, and other related aspects within the NSG.

Appendix E summarizes the key milestones in the development of NITFS and the NITFS Conformance Program.

1.5 Authority

Per Executive Order 12333, as amended by EO 13470, the Director of NGA (D/NGA) is designated as the Functional Manager (FM) for geospatial intelligence, and USDI memo dated 13 December 2021, Subject: Defense Intelligence Enterprise Manager Arrangement, names D/NGA as the Defense Intelligence Enterprise Manager (DIEM) for GEOINT, hereafter both referred to as the GEOINT FM. Per DoD Directive (DoDD) 5105.60, NGA serves as the DoD Lead for GEOINT standards and prescribes, mandates, and enforces standards and architectures related to GEOINT and GEOINT tasking, collection, processing, exploitation, and international geospatial information for the DoD Components and for the non-DoD elements of the IC. Per DoD Instruction (DoDI) 8310.01, standards conformance occurs through testing to confirm that a product or system adheres to a defined standard, standard profile, or specification. Per DoDI 8330.01, NGA confirms the integration of GEOINT standards and architectures in GEOINT and GEOINT-related systems. Conformance certification is the confirmation a system integrated NITFS in accordance with the processes prescribed by this NCPP.

1.6 Applicability

The NCPP applies, to the extent described in NSGD 3201, to elements of the IC, DoD, non-DoD/IC Federal agency members of the NSG, international partners, commercial vendors, state/local municipalities, and tribal organizations responsible for the operation, acquisition, or development of systems, applications, or plug-ins employing technology that collects, procures, produces, serves, exchanges, ingests, or uses imagery or imagery-related content governed by NITFS.

The applicable technology includes capabilities fully or partially implementing NITFS found in the DISR or IC ESB (refer to Appendix D for additional information regarding the DISR and IC ESB and the location of NITFS citations). Capabilities include: sensors generating data in NITF; secondary processors converting non-NITF formats to NITF; libraries cataloging, processing, and displaying NITF products; imagery guards analyzing and disseminating NITF products; applications and plug-ins displaying, exploiting, targeting from, or generating NITF products; web-based services performing any of the aforementioned functions; test applications evaluating NITFS, etc. Hereafter, in the context of this NCPP, these capabilities are referred to as “Implementations.”

1.7 Policies

In accordance with the authority in DoDD 5105.60 and DoDI 8330.01, it is policy that:

- a. NGA, as the GEOINT FM, prescribes the authoritative means to assess and confirm integration of NITFS (aka conformance).
- b. JITC, as NGA’s Executive Test Agent, is the designated test agent that confirms NITFS conformance and issues NITFS Conformance Certifications.
- c. Conformance **SHALL** be assessed and confirmed for all fielded and developmental systems implementing NITFS, to include systems performing limited NITF functionality.
- d. Uncertified, fielded Implementations **SHALL** obtain NITFS Conformance Certification to mitigate interoperability risks.
- e. Certified Implementations **SHALL** be retested if:
 - 1) the tested NITF configuration has been modified,
 - 2) the tested configuration has added new NITFS functionality, or
 - 3) any NITFS mandated changes have been made to the Implementation since the previous test event.

NOTE: Fielding uncertified NITFS implementations poses a high level of risk to interoperability and may negatively affect interoperating systems, degrade or preclude support to the warfighter, or result in costly, non-conformant workarounds.

1.8 Funding

The Program Sponsor (NGA) funds the Executive Test Agent’s operation and maintenance of its test facility in support of the NCPP. Test Sponsors fund the Executive Test Agent in the execution of conformance testing conducted at the test facility or agreed upon locations.

2.0 ROLES AND RESPONSIBILITIES

This section describes the roles that have on-going responsibilities in the execution of the NCPP. Appendix G provides point of contact information for each of these roles.

2.1 NGA

NGA, as the GEOINT FM, confirms the integration of GEOINT standards and is the Program Sponsor (PS). In support of the NCPP, the NTB, as an entity of the NSG, will act as the PS on behalf of NGA and will:

- a. Oversee the execution of the overall process by the Executive Test Agent necessary to grant NITFS conformance certification.

- b. Assist in the development, promulgation, and utilization of the NCPP for NITFS.
- c. Define the policies, roles, and responsibilities required for the Executive Test Agent to execute the NCPP effectively.
- d. Provide core funding and budget oversight for the general operation of the NCPP, to include conformance test reviews, development of NGA tools necessary to perform testing, continued maintenance of NGA-developed test tools, maintenance of reporting mechanisms, etc.
- e. Assist with arbitration of test limitations or issues occurring during conformance certification testing.

2.2 Executive Test Agent

JITC serves as NGA's Executive Test Agent to conduct NITFS test and test-related activities. As a fee-based test agent, JITC supports agreements with members of the NSG, international partners, and commercial vendors. JITC also serves as the Signatory for NITFS Conformance Certification. As the Executive Test Agent, JITC will:

- a. Operate and maintain a facility to conduct NITFS conformance testing. The JITC's GEOINT Test, Evaluation, and Certification (TEC) Facility is located at Fort Huachuca, Arizona.
- b. Develop and maintain:
 - 1) Test documentation (e.g., NCPP, test plans)
 - 2) Measures (i.e., test applications, test data, test procedures)
 - 3) Expertise (e.g., knowledge, skill, proficiency) as directed by the Program Sponsor
- c. Inform the NTB as the PS on test program limitations/issues impacting the means to conduct conformance certification tests.
- d. Validate and re-validate changes to NITFS configurations when requested by the NTB, or a Test Sponsor.
- e. Support agreements with NSG, commercial, and international Test Sponsors.
- f. Conduct conformance tests, when funded by Test Sponsors, per agreed upon test configurations.
- g. Confirm conformance and issue certifications when applicable.
- h. Maintain an online register of Implementations issued a NITFS Conformance Certification.
- i. Maintain records of test artifacts (i.e., test requests, test plans, test reports, test data samples) minimally for 4 years or greater as resources permit.
- j. Coordinate with the NTB on interpretational discrepancies in standards and technical deficiencies in conformance criteria and test measures.

The DoD, IC, and other NSG members/partners have different acquisition and development processes and milestone models. Some developments use various forms of the agile development methodology. With early coordination, the Executive Test Agent can adapt test processes to support those development processes (e.g., Agile, DevSecOps, DoD Rapid Acquisition Model).

2.3 Product Owner

The Product Owner (PO) (e.g., Program Management Office, Developer, etc.) is defined as the owner or manager responsible for asserting and assessing conformance of an Implementation during the acquisition process. The PO's will:

- a. Select the applicable NITFS and NITFS-related standards, and if needed, consult with the NTB to verify Implementation requirements are compatible with selected NITFS.
- b. Revise Implementation requirements to support compatible NITFS configurations to assert conformance.
- c. Contact the NTB when Implementation requirements are not compatible with NITFS to determine a resolution.
- d. Consult with the GFMSA Team on the proper design artifacts (e.g., Data Content Specification (DCS)) to promote complete and accurate conformance assessments/confirmations.
- e. Prepare the proper design artifacts while asserting conformance that specify how the standards will be implemented to support requirements.
- f. Execute applicable responsibilities as specified in NSG Manual (NSGM) 3202.

2.4 Test Sponsor

The Test Sponsor (e.g., Test Customer) may be a first-, second-, or third-party stakeholder requiring an independent, authoritative conformance evaluation of NITFS implementations. This may be in pursuit of Conformance Certification or for general assessment purposes (e.g., to determine conformance status or test readiness) per agreed upon test scope. The Test Sponsor may also be a stakeholder in the validation of a proposed resolution to NITFS. The Test Sponsor will:

- a. Ensure test planning, conduct, and reporting of development activities includes conformance assessment and GFMSA test objectives specified in NSGM 3202 Enclosure 4 when applicable.
- b. Contact the Executive Test Agent to request testing and submit the required forms to initiate scope analysis and cost estimates.
- c. Assist the Executive Test Agent in preparing the required agreement forms to accomplish testing and allot sufficient time for agreements to be reviewed and signed; this varies depending on the agreement type.
- d. Transfer funds to the Executive Test Agent in accordance with the agreement to initiate test planning and execution. Test Sponsors will fund their own labor, travel, shipping, etc. associated with testing.
- e. Execute responsibilities detailed in Sections 3 and 4, as applicable.

2.5 NITFS Technical Board

Per the NTB charter and in support of the NCPP, the NTB will:

- a. Determine the suitability of existing standards to support emerging capabilities and propose resolutions when needed.
- b. Enlist POs or elect community subject matter experts (SMEs) to prepare proposed resolutions (i.e., revisions to existing standards or addition of new standards).
- c. Oversee the preparation, validation, and submission of proposed resolutions.

- d. Resolve NITFS issues encountered during development, validation, implementation, testing, and operations that impact NSG interoperability.
- e. Approve validated test measures and maintain a register for community visibility and use.
- f. Adjudicate conflicting interpretations of standards or application of conformance criteria and test measures.

3.0 CONFORMANCE PROCESSES

3.1 Overview

The NCPP recognizes that conformance is achieved through a series of processes occurring throughout a system’s acquisition. These processes originate with conformance assertion during NITFS selection, whereby the PO obtains and evaluates evidence from documentation reviews or other sources to make a substantiated assertion that a system integrates NITFS in a manner enabling interoperability. The processes continue through design, assessments during development, and conformance confirmation during final development, integration, and fielding. Figure 1 illustrates these processes, grouped into five stages. Figure 1 also illustrates the process to revise or create new standards to support new NITFS configurations or new capabilities, a conditional stage for standards resolutions depicted by the gears on the right. In these cases, conformance criteria and test measures are updated or created to facilitate accurate assessments.

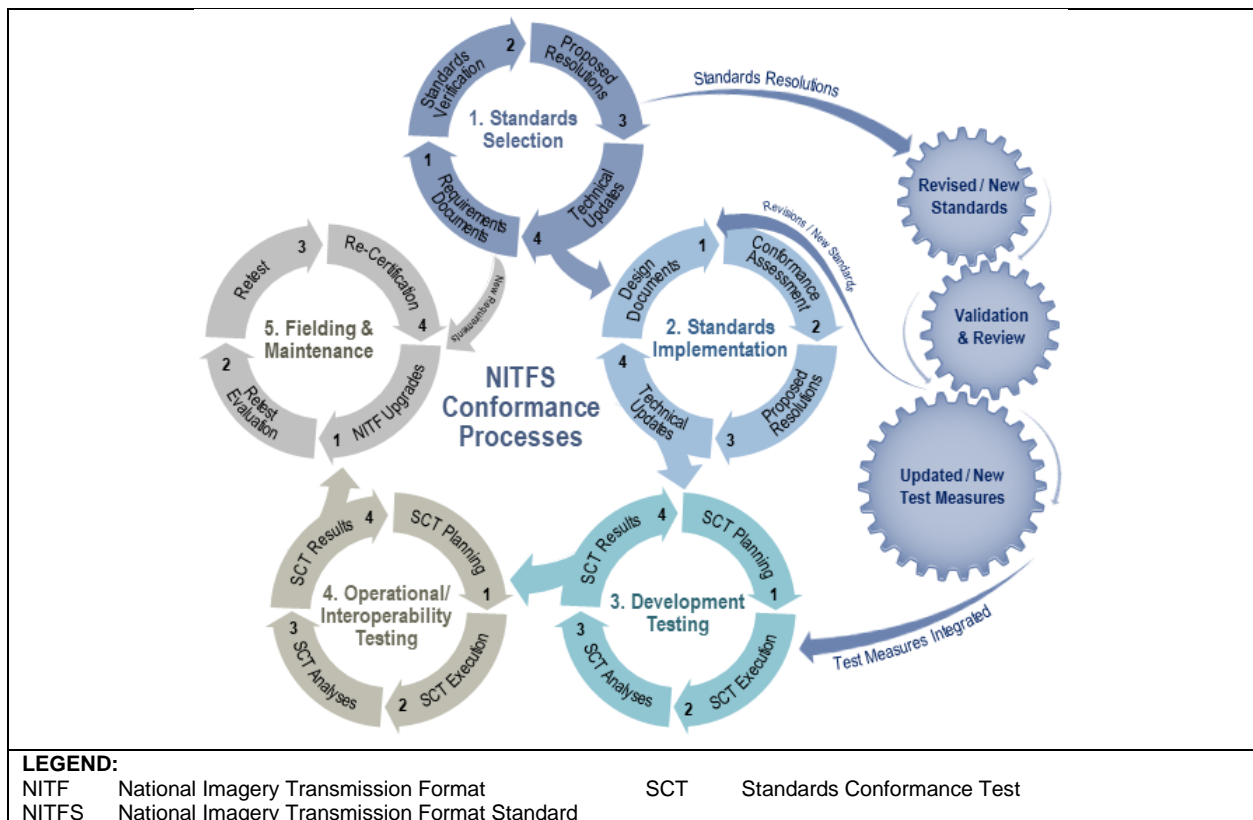


Figure 1. NITFS Conformance Processes

The following sections describe the purpose and activities associated with each stage.

3.2 Standards Selection

Once the appropriate authority validates/certifies the system's mission requirements and associated information exchange requirements, the PO initiates the Standards Selection stage (Stage 1) and selects the appropriate NITFS to implement the imagery or imagery-related requirements. During this stage, the PO analyzes and determines if the selected NITFS and specified NITF configurations are compatible with the validated/certified requirements. If the NITFS and NITF configurations are compatible, the PO can assert conformance. If not, the PO cannot accurately assert conformance in subsequent design and development planning. In some cases, the PO can modify the requirements for compatibility with standardized NITF configurations. Often, however, compatibility is not achieved, and the PO notifies the NTB to request a resolution. The resolution may entail a change to an existing standard or creation of a new standard, as determined by the NTB.

3.3 Standards Resolutions

If the compatibility issue(s) identified during Stage 1 require a change to NITFS to resolve, the NTB initiates the Standards Resolution stage (Conditional Stage). During this stage, the NTB either enlists the PO or elects a community SME to prepare the proposed resolution. The resolution may be as simple as augmenting existing NITF fields to define new configurations or the provisioning of a new Support Data Extension (i.e., Tagged Record Extension, Data Extension Segment). In some cases, a profile of NITFS and associated standards may be required to support the new capability. The NTB makes this determination and coordinates with the PO or SME on the required artifacts (i.e., templates, Abstract Test Suites (ATSs), Executable Test Suites, etc.). This stage may include standards validation to ensure the PO and stakeholders have validated criteria and measures to assess conformance during Implementation development.

3.4 Standards Implementation

During the Standards Implementation stage (Stage 2), the PO integrates conformance in the Implementation's design by preparing the appropriate artifacts (e.g., DCS, Data Product Specification, Interface Control Document, etc.) detailing how the system implements NITFS to support the validated/certified requirements while satisfying conformance criteria. Without the appropriate design artifacts, the PO, stakeholders, and test agents cannot fully assess conformance during Implementation development. At this stage, the PO should identify test agents to conduct assessments to assert conformance.

3.5 Conformance Assessments

The PO conducts initial conformance assessments during development testing (Stage 3) as a first-party tester, using the authoritative means (i.e., conformance criteria and test measures) prescribed by the NTB. Doing so reduces test cycles and costs associated with second-party (user) and third-party (independent) test agent assessments (e.g., assessments conducted by the Executive Test Agent). The PO may consult with the NTB when conflicts are perceived between the conformance criteria, test measures, and the respective NITFS. Refer to Appendix F for descriptions of test measures. Conformance assessments continue into

operational and interoperability test events (Stage 4) and may be conducted by second- and third-party test agents. All testers must use, minimally, the test measures prescribed by the NTB when conducting conformance assessments; exceptions must be approved by the NTB. For these assessments, scope, measures, artifacts, etc. are as agreed upon between the PO and sponsored test agents. These assessments provide the PO the evidence to assert conformance during Implementation development.

3.6 Conformance Confirmation

The Executive Test Agent conducts conformance confirmations and issues NITFS Conformance Certifications prior to fielding (Stage 4) and post fielding (Stage 5). For information on the conformance test process, refer to Section 5. For POs attempting to determine if NITFS Conformance Certification is applicable to their program, refer to Section 6 for currently established certification requirements. POs must obtain Conformance Certification prior to or during the early stages of operational/interoperability testing (Stage 4) to mitigate interoperability risks (e.g., deficiencies, failures, costly workarounds). If the NITF configurations of a certified Implementation are changed post fielding (Stage 5), the PO must consult with the Executive Test Agent to evaluate requirements and schedule a retest to maintain an active certification.

4.0 CONFORMANCE TESTING

4.1 Purpose

Conformance testing comprises activities conducted by first-, second-, and third-party test agents to assess conformance. The NCPP assumes testing by first-, second-, and even third-party test agents during Implementation development and operational testing, but requires the Executive Test Agent conduct the confirmation test that results in certification.

4.2 Process

For tests conducted by first-, second-, or third-party test agents, the Test Sponsor and the respective test agent negotiate the test procedures to be executed. Test agents must use the prescribed conformance criteria and measures when the test scope includes conformance testing.

For tests conducted by the Executive Test Agent, the Test Sponsor may request a conformance assessment to receive an independent evaluation on the conformance status of a system or a test to confirm conformance for certification issuance. The Test Sponsor and Executive Test Agent determine the specifics of the test activity by signed agreement. For Test Sponsor's planning and scheduling purposes, the following sections summarize the Executive Test Agent's conformance testing process, as illustrated in Figure 2.

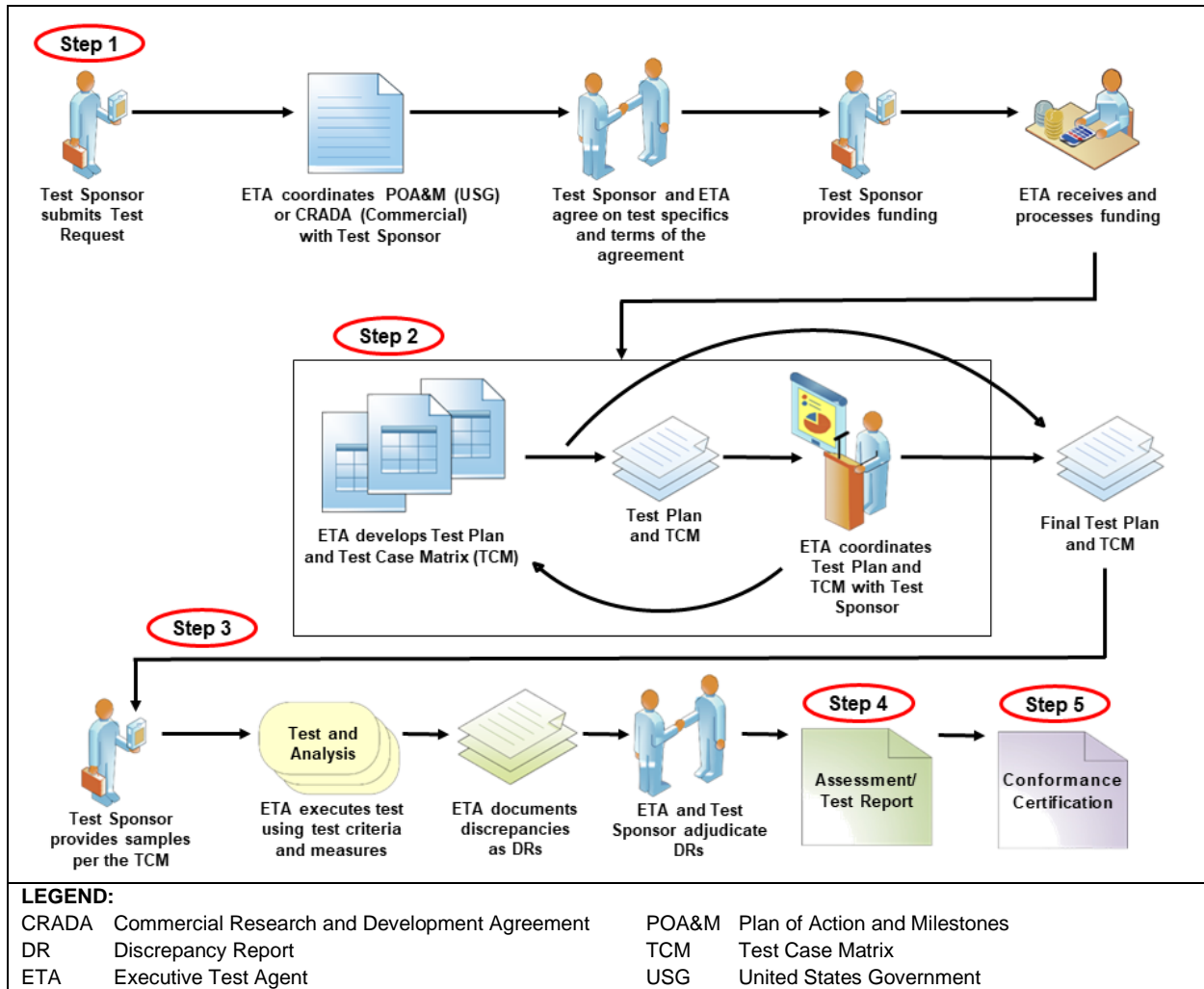


Figure 2. Executive Test Agent Conformance Test Process

4.2.1 Step 1. Test Request

The Test Sponsor submits a Test Request Form identifying the type of testing (i.e., Conformance Assessment or Certification Test) and detailing administrative and technical information required by the Executive Test Agent to scope the type of NITFS configurations to be tested and determine the cost to conduct testing. A Test Request Form example can be found in Appendix F, but is subject to change as NITFS configurations and agreement forms change. Test Sponsors are encouraged to coordinate at least six months in advance of required testing to draft, ratify, and fund agreements. The Executive Test Agent supports agreements with members of the NSG via an Interagency Agreement, commercial vendors via a Cooperative Research and Development Agreement (CRADA), and international partners via a Foreign Military Sales Agreement (FMSA). Agreements can be valid for up to five years. The Executive Test Agent recommends agreements cover the maximum length of time to allow schedule flexibility across fiscal years and, if needed, to expedite retests or re-certifications.

4.2.2 Step 2. Test Planning

Once the Executive Test Agent receives and processes the funds provided by the Test Sponsor, it can initiate test planning. The Executive Test Agent obtains the latest system documents from the Test Sponsor to determine the implemented NITFS, the functional/exchange requirements the system must satisfy, and how the system implements the NITFS configurations to satisfy those requirements. The Executive Test Agent coordinates discrepancies between system documents and the respective standards via Comment Resolution Matrix with the Test Sponsor for resolution before formal test planning begins.

Once the Executive Test Agent reviews and resolves discrepancies with system documents, the Executive Test Agent generates a Test Case Matrix (TCM) specifying the combination of NITFS configurations to conduct deterministic testing (example in Appendix F). The Test Sponsor verifies each test case is valid and makes updates to the system's configuration documents to resolve differences. The Executive Test Agent and Test Sponsor finalize the TCM after resolving all discrepancies. Further, if the Executive Test Agent's test facility cannot instantiate the required system architectures because of resource, policy, or practical limitations, the Executive Test Agent and Test Sponsor determine the appropriate location to conduct testing.

Using the finalized TCM, the Executive Test Agent prepares and delivers a test plan describing the test purpose, system under test, NITFS and GFMSA requirements, test background, scope, limitations, and test and evaluation methodology (methods and measures), and provides an example results table, points of contact, and other pertinent administrative information. The test plan addresses the system architecture and additional artifacts required to evaluate GFMSA objectives. Limitations to evaluate GFMSA objectives are documented in the test report.

4.2.3 Step 3. Test Execution

The Test Sponsor provides Implementation NITFS sample(s) (i.e., test data from production systems or software samples from consuming systems that display NITF) in accordance with the TCM in the test plan. The Executive Test Agent verifies the received Implementation samples fulfill TCM requirements and reports deficiencies to the Test Sponsor for adjudication. The Executive Test Agent documents test cases not covered by the provided samples as limitations in the test report(s). Unsampled test cases rated as high risk prevent completion of certification testing. Once the TCM is fulfilled, the Executive Test Agent conducts the test per the finalized test plan using the measures and methods described in the test plan.

4.2.4 Step 4. Test Reporting

After analyzing all samples and adjudicating deficiencies, the Executive Test Agent prepares and delivers a test report to the Test Sponsor and, if applicable, the GFMSA Team. If the Executive Test Agent reports Category 1 or 2 conformance discrepancies (i.e., those deemed to have an immediate adverse operational impact), the Executive Test Agent and Test Sponsor coordinate a retest. Appendix F contains definitions of all discrepancy categories and a test report example. For Conformance Assessment, the test report is the final step.

4.2.5 Step 5. Certification

If the Test Sponsor requested a Certification Test and testing of the Implementation was complete and successful (i.e., no Category 1 or 2 discrepancies), the Executive Test Agent issues NITFS Conformance Certification via citation to the NITFS Conformance Certification Register and if applicable notifies the GFMSA Team (via email). If testing of the Implementation was incomplete or unsuccessful, the Executive Test Agent provides the Test Sponsor a Denial of Certification notification and if applicable notifies the GFMSA Team (via email).

Once certified, if the system undergoes version changes, either due to configurational changes to the NITFS components or configurational changes to the implemented NITFS, the PO or Test Sponsor can request the Executive Test Agent review the changes to determine a need for a retest to certify the new version.

4.3 NITFS Conformance Certification Register

The Executive Test Agent maintains the GEOINT Conformance Certification Register, an online register of Implementations that successfully demonstrated NITFS conformance. The register is located at <https://jitic.fhu.disa.mil/projects/nitf>. Certifications are specific to the system version and NITFS configurations tested. Implementations not on the register either did not conduct testing or did not successfully complete testing with the Executive Test Agent.

If users discover NITFS-based interoperability issues with certified implementations in the field, POs are encouraged to contact the Program Sponsor or Executive Test Agent to investigate the cause (e.g., post-certification configurational change, untested variables, etc.) and to possibly provide a solution or recommendation to solve or mitigate the issues.

5.0 CERTIFICATION REQUIREMENTS

5.1 Purpose

The following sections summarize organizations with documented NITFS Conformance Certification requirements.

5.2 Joint Interoperability Test Command

Per DoDI 8330.01, interoperability certification must be granted before fielding a new IT capability or upgrade to existing IT. JITC serves as the Interoperability Certification Authority for all DoD IT, including National Security Systems, with joint, multinational, or interagency interoperability requirements. For systems employing technology governed by policy mandating specific standards conformance requirements (e.g., NITFS), the JITC Interoperability Process Guide requires that the PO or Sponsor cite or provide JITC documentation of appropriate standards conformance prior to any test and evaluation activity that supports Joint Interoperability Certification. For systems that implement NITFS, NITFS Conformance Certification and the associated test report are the required documentation.

5.3 NGA Test Organization

The NGA Integration Test and Image Quality Office Assessment Division, also known as the NGA Test Organization (NTO), and the NGA Image Quality Division conduct independent, enterprise-level testing of NGA's DoD Intelligence Information System, joint, and Service systems in accordance with the NSG/ASG Enterprise Test and Evaluation Master Plan. The test plan requires that POs obtain NITFS certification prior to NTO's integration and image quality testing. Based on NTO's recommendation, NGA issues Certificates to Field for tested systems that authorizes deployment to operations.

5.4 North Atlantic Treaty Organization

Per Allied Engineering Data Publication 2 (AEDP-02), North Atlantic Treaty Organization (NATO) Intelligence, Surveillance and Reconnaissance (ISR) Interoperability Architecture (NIIA) Architecture Description, systems that exchange digital secondary imagery and imagery related products between NATO nations must demonstrate compliance with Standardization Agreement (STANAG) 4545, "NATO Secondary Image Format (NSIF)," (the NATO variant of NITFS), via an accredited test facility. The accredited test facility should document the name, version, and supported features of the implementation, the names of the developer and sponsoring organization, and the date of the test. Note, subsequent to the publication of AEDP-02, NSIF and NITFS requirements were combined into a single document, the Joint Basic Image Interchange Format (BIIF) Profile (JBP). Once the implementation is deemed compliant to JBP and associated documentation, the test facility will provide a certificate of compliance to the test sponsor. Note, NATO programs implementing NITFS, in addition to NSIF, to support joint operations with the NSG, must obtain NITFS Conformance Certification from the Executive Test Agent to be listed on the Executive Test Agent's NITFS Conformance Certification register.

5.5 Commercial Organizations

NSG programs subject to the fielding requirements above require NITFS Conformance Certification for integrated/ingested commercial products. Further, NGA Statements of Work require NITFS Conformance Certification for commercial systems generating NITFS imagery products prior to NSG system ingest, such as commercial imagery, Controlled Image Base, and Digital Point Positioning Database products, etc. In general, commercial organizations planning to implement NITFS to sell to or support NSG members should plan, schedule, and obtain NITFS Conformance Certification during development. Commercial organizations with uncertified products currently integrated/ingested by NSG members should undergo independent conformance testing and obtain NITFS Conformance Certification to mitigate interoperability deficiencies that may lead (and have led) to costly, non-conformant workarounds. NSG programs prospecting to procure NITFS Conformance Certified commercial products can refer to the Executive Test Agent's NITFS Conformance Certification Register for certified products.

5.6 Other

Placeholder for other NSG/ASG members to declare and document NITFS conformance certification requirements.

APPENDIX A

ACRONYMS

ASD(C3I)	Assistant Secretary of Defense for Command, Control, Communications, and Intelligence
ASG	Allied System for Geospatial Intelligence
ATS	Abstract Test Suite
BIIF	Basic Image Interchange Format
C3I	Command, Control, Communications, and Intelligence
CDD	Capability Development Document
CIO	Central Imagery Office, Chief Information Officer
CIVA	Compliant Image Validation Analyzer
CONOPS	Concept of Operations
CPD	Capability Production Document
CRADA	Cooperative Research and Development Agreement
CTE	Certification Test and Evaluation
DCI	Director of Central Intelligence
DCR	Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy Change Recommendation
DCS	Data Content Specification
DIEM	Defense Intelligence Enterprise Manager
DISA	Defense Information Systems Agency
DISR	DoD Information Technology Standards Registry
DPS	Data Product Specification
DoD	Department of Defense
DoDD	DoD Directive
DoDI	DoD Instruction
ETA	Executive Test Agent
EARS	Easy Approach to Requirements Syntax
EO	Executive Order
ESB	Enterprise Standards Baseline
ETS	Executable Test Suite
FM	Functional Manager
FMSA	Foreign Military Sales Agreement
GEOINT	Geospatial Intelligence
GFMSA	GEOINT Functional Manager Standards Assessment

GWG	GEOINT Standards Working Group
IC	Intelligence Community
ICD	Interface Control Document, Initial Capabilities Document
ICS	Intelligence Community Standard
IEC	International Electrotechnical Commission
IEEE	Institute of Electrical and Electronics Engineers
IPI	Image Processing and Interchange
ISO	International Organization for Standardization
ISR	Intelligence, Surveillance, and Reconnaissance
IT	Information Technology
JBP	Joint Basic Image Interchange Format Profile
JITC	Joint Interoperability Test Command
JPEG	Joint Photographic Experts Group
MIL-STD	Military Standard
NATO	North Atlantic Treaty Organization
NCPP	NITFS Conformance Program Plan
NCGIS	National Center for Geospatial Intelligence Standards
NGA	National Geospatial-Intelligence Agency
NIIA	NATO ISR Interoperability Architecture
NITF	National Imagery Transmission Format
NITFS	National Imagery Transmission Format Standard
NSG	National System for Geospatial Intelligence
NSGD	NSG Directive
NSGM	NSG Manual
NSIF	NATO Secondary Image Format
NTB	NITFS Technical Board
NTO	NGA Test Organization
PO	Product Owner
PS	Program Sponsor
SDE	Support Data Extension
SME	Subject Matter Expert
STANAG	Standardization Agreement
T&E	Test and Evaluation
TCM	Test Case Matrix
TEC	Test, Evaluation, and Certification
USC	United States Code

APPENDIX B

GLOSSARY

The following terms and definitions are used within this plan. The definitions presented are derived from cited source documents. Attempts have been made to clarify, unite, or further expand upon the original sources.

Abstract Test Suite (ATS)	A generalized test for a requirement stated in human-understandable terms. An abstract test makes no reference to a specific item or Implementation Under Test. Abstract tests are not executable tests. Also known as an Abstract Test Case.
Anticipated Users	Users/systems identified in the implementation's Initial Capabilities Document (ICD); Doctrine, Organization, Training, Materiel, Leadership and Education, Personnel, Facilities and Policy Change Recommendation (DCR); Concept of Operations (CONOPS); Capability Development Document (CDD); and Capability Production Document (CPD)
Assert	Substantiate with evidence.
Assessments	Broad term relating to testing activities to evaluate conformance. When conducted by a first-party tester, referred to as a Self-Assessment. When conducted by a second- or third-party tester, simply referred to as an assessment. Assessments are not confirmations, but preparatory activities to lead to confirmation activities conducted by the Executive Test Agent, i.e., Certification Tests.
Category 1	The discrepancy is deemed to have an immediate adverse operational impact on the anticipated systems/users. The Executive Test Agent will not issue conformance certification when this risk category is present and does not recommend fielding until appropriately resolved.
Category 2	The discrepancy is deemed to have an immediate adverse operational impact on unanticipated systems/users within the enterprise. The Executive Test Agent will not issue conformance certification when this risk category is present and does not recommend fielding until appropriately resolved.

Certification	Authoritative confirmation determined by the Executive Test Agent using the prescribed conformance criteria and test measures.
Compliance	The capability of the software product to adhere to standards, conventions or regulations in laws and similar prescriptions. [“Information Technology – Software Product Evaluation – Quality Characteristics and Guidelines for Their Use”, International Standard ISO/IEC 9126].
Confirmation	A testing activity conducted by the Executive Test Agent, on behalf of the National Geospatial-Intelligence Agency (NGA), to confirm the conformant integration of National Imagery Transmission Format Standard (NITFS) of an implementation.
Conformance	Confirmation by testing that a system, product, IT service, or interface adheres to a standard, standards profile, or specification. [DoDI 8310.01, Information Technology Standards in the DoD]
Consuming Implementation	A system that interprets (i.e., reads, decodes, unpacks) National Imagery Transmission Format (NITF) formatted data.
Data Content	Raw image data, supporting data, and semantic metadata contained with the NITF format.
Data Content Specification (DCS)	A detailed description of a dataset or data layer, together with additional information that will enable it to be created, supplied to, and used by other organizations. The DCS is a technical document that provides essential information for data collection and metadata population. A DCS describes the ideal dataset or “how a dataset should be.” In contrast, the actual state of the dataset and how closely it conforms to the DCS are described in a dataset’s associated metadata.
Data Product Specification (DPS)	A detailed description of a dataset or dataset series together with additional information that will enable it to be created, supplied to, and used by another party. It is a precise technical description of the data product in terms of the requirements that it will or may fulfill.
Denial of Certification	Issuance by the Executive Test Agent when an implementation failed a test per agreed upon conformance criteria and test measures. Typically, when test results yield a Category 1 or Category 2 conformance discrepancy.

Deterministic Testing	Every run of the test suite for the same software implementation should yield the same result. Predictable.
Department of Defense Information Technology Standards Registry (DISR)	A registry of Information Technology (IT) standards selected through a defined governance process. It contains the minimal set of rules governing the arrangement, interaction, and interdependence of IT system parts or elements, whose purpose is to ensure that a conformant system satisfies a specified set of requirements. It defines the service areas, interfaces, standards (DISR elements), and standards profiles applicable to all Department of Defense (DoD) systems. Use of the DISR is mandated for the development and acquisition of new or modified fielded IT systems throughout the DoD. The standards cited in the DISR replaced the Joint Technical Architecture.
Executable Test Suite	An instantiation of an ATS. It includes all of the low-level details necessary to perform the ATS. Executable test cases and modules will likely be specific to the Implementation Under Test.
Executive Test Agent	The designated, third-party agent. The Joint Interoperability Test Command serves as NGA's Executive Test Agent in the execution of this NCPP and issuance of NITFS Conformance Certifications.
Fielded System	A post-acquisition Information Technology/National Security System in use by operational or headquarters units (regardless of the process used to put it into operational use). Fielded systems may be modified or improved through standard DoD or Intelligence Community (IC) processes.
First-party test agent/ stakeholder	Parties with a vested interest in the product (e.g., system sponsor, program office, product owner, developer, etc.)
Geospatial Intelligence (GEOINT)	The exploitation and analysis of imagery and geospatial information to describe, assess, and visually depict features and geographically referenced activities on the earth. Geospatial Intelligence consists of imagery, imagery intelligence, and geospatial information (10 United States Code (USC) §467[5]).

GEOINT Functional Manager Standards Assessment (GFMSA)	The systematic process of obtaining and evaluating evidence from documentation reviews, demonstrations, evaluations, examinations, tests, questionnaires, surveys and collateral sources to make a substantiated assertion that a system (or its GEOINT components) conformingly implements GEOINT standards in a manner enabling interoperability across the National System for Geospatial Intelligence (NSG) enterprise.
GEOINT Standard	A documented agreement containing technical specifications or other precise criteria to be used consistently as rules, guidelines, or definitions of characteristics to ensure that materials, products, processes, or services are fit for the analysis and visual representation of physical features and geographically referenced activities.
Imagery	A likeness or representation of any natural or manmade feature or related object or activity, and the positional data acquired at the same time the likeness or representation was acquired, including products produced by space-based national intelligence reconnaissance systems, and likeness or presentations produced by satellites, airborne platforms, unmanned aerial vehicles, or other similar means. The term does not include handheld or clandestine photography taken by, or on behalf of, human intelligence collection organizations. (Title 10 USC §467)
Imagery Intelligence	The technical, geographic, and intelligence information derived through the interpretation or analysis of imagery and collateral materials as defined by Title 10 USC §467.
Implementations	Capabilities fully or partially implementing NITFS found in the DISR or Intelligence Community Enterprise Standards Baseline (IC ESB). This includes sensors generating data in NITF; secondary processors converting non-NITF formats to NITF; libraries cataloguing, processing, and displaying NITF products; imagery guards analyzing and disseminating NITF products; applications and plug-ins displaying, exploiting, targeting from, or generating NITF products; web-based services performing any of the aforementioned functions, test applications evaluating NITFS, etc.

Intelligence Community Enterprise Standards Baseline (IC ESB)	The formally identified minimal set of enterprise standards determined to align with and facilitate implementation of an organization’s enterprise architecture. Compliance with the organization’s enterprise architecture is measured, in part, by adherence of information resources and enterprise architecture-related IT items to relevant standards in the enterprise standards baseline.
Interoperability	The ability of systems, units, or forces to provide data, information, materiel, and services to, and accept the same from, other systems, units, or forces, and to use the data, information, materiel, and services exchanged to enable them to operate effectively together. IT interoperability includes both the technical exchange of information and the end-to-end operational effectiveness of that exchange of information as required for mission accomplishment. Interoperability is more than just information exchange. It includes systems, processes, procedures, organizations, and missions over the life cycle and must be balanced with cybersecurity.
Interoperability Certification	A formal statement of adequacy, provided by the responsible interoperability certification authority agency, that a system has met its interoperability requirements.
Interoperability Certification Authority	The office with the certification authority for the interoperability. Verifies that the IT has met its interoperability requirements, as proven through test and evaluation. For IT with joint, multinational, and interagency interoperability requirements, the Interoperability Certification Authority is JITC. For all other IT, the owning DoD Component designates the Interoperability Certification Authority.
National System for Geospatial Intelligence (NSG)	A combination of technology, policies, capabilities, doctrine, activities, people, data and organizations necessary to produce GEOINT in an integrated, multi-discipline, multi-security domain environment. The geospatial intelligence-related members of the IC, Military Departments, Joint Staff, Combatant Commands, and other U.S. government departments and agencies, including the Central Intelligence Agency, the Federal Bureau of Investigation, and the Department of Homeland Security, with contributions from international entities, private industry, academia, and defense or civil community service providers are part of the NSG Community.

Producing Implementation	A system that generates (i.e., produces, encodes, packs) NITF formatted data.
Program Manager	The person tasked with developing and fielding the new IT system
Program Sponsor	NGA, as the DIEM for GEOINT, confirms the integration of GEOINT standards and is the Program Sponsor, in support of the NCPP.
Reference Implementation	An authoritative source of NITFS implementation information that guides and constrains the instantiation of solution implementation by providing rules, principles and holistic models and patterns of the abstract implementation elements together with a common vocabulary, and sets of technical standards/specifications
Second-party test agent/ stakeholder	Those who will use or benefit from the products (e.g., customer, anticipated users, unanticipated users).
Self-Assessment	An assessment performed by the system sponsor or program manager in consonance with the assessment processes and methods established by the GFMSA program. (Also described as assessment).
Stakeholder	Individuals or organizations who are invested in a defined project and who are affected by this project in some way, and their input has a direct impact on the project's final results.
Test	Process by which a system or components are exercised, and results analyzed to provide conformance/performance-related information.
Test Agent	Individuals/groups (i.e., first-, second-, third-parties, Executive Test Agent) performing the conformance assessment/confirmation.
Test Measure	A device or technique (e.g., applications, data, methods, etc.) used to obtain data about specific traits or characteristics of an Implementation.
Test Sponsor	Funds testing and champions the system's requirements. Must have a scope of responsibility wide enough to be aware of the operational space within which the system will work, and all the other systems, current and future, with which it should interoperate.

Third-party test agent/
stakeholder

Independent organization not directly associated with
producing or consuming the NITF product.

Unanticipated Users

Users/systems not identified in the implementation's ICD,
DCR, CONOPS, CDD, and CPD.

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APPENDIX C

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ISO/IEC 12087-5:1998, "Information technology - Computer graphics and image processing - Image Processing and Interchange (IPI) - Functional specification - Part 5: Basic Image Interchange Format (BIIF)," October 1998, Last reviewed and confirmed in 2016

Military Handbook (MIL-HDBK) 1300A, "Military Handbook for the National Imagery Transmission Format Standard (NITFS)," 12 October 1994

Military Specification (MIL-PRF) 89034A with Amendment 2, "Performance Specification, Digital Point Positioning Data Base (DPPDB)," 3 August 2018

MIL-PRF-89041A with Amendment 1, "Performance Specification, Controlled Image Base (CIB)," 28 September 2023

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APPENDIX D

NATIONAL IMAGERY TRANSMISSION FORMAT STANDARDS

The Director, National Geospatial-Intelligence Agency, as the Department of Defense (DoD) lead for geospatial intelligence (GEOINT) information technology (IT) standards, identifies and develops the GEOINT IT standards in coordination with the GEOINT Standards Working Group (GWG). The GWG facilitates validation and publication of GEOINT IT standards, through the DoD Joint Enterprise Standards Committee, into the DoD IT Standards Registry (DISR) Baseline and the Intelligence Community (IC) Enterprise Standards Baseline (ESB). DISR is the single, unifying DoD registry for approved IT and national security systems standards.

The National Imagery Transmission Format Standard (NITFS) Technical Board (NTB) serves as a technical board within the Imagery Focus Group of the GWG and is the focal point for imagery, and imagery-related standardization activities within the GEOINT community.

The DISR and IC ESB standards citations for standards managed by the NTB, as well as non-cited standards-related documents the NTB determined to be important to the successful creation, discovery, exchange, and/or use of GEOINT data, information, services, and applications in the National System for Geospatial Intelligence, can be found at <https://nsgreg.nga.mil/ntb.jsp>.

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APPENDIX E

NATIONAL IMAGERY TRANSMISSION FORMAT STANDARD CONFORMANCE PROGRAM HISTORY

The National Imagery Transmission Format (NITF) Standard (NITFS) Conformance Program initiated in 1990 after the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)) mandated NITFS conformance for all still imagery implementations within the Department of Defense (DoD). The following chronology summarizes key milestones in the development of NITFS and the NITFS Conformance Program.

- 1984 ASD(C3I) identifies the need for a common data format and initiates NITF development.
- 1987 NITF 1.0 approved for demonstration capability, but not as a general implementation baseline.
- 1989 ASD(C3I) approves NITF 1.1 as the baseline version.
- 1990 ASD(C3I) publishes the NITFS Certification Program establishing the program to test NITFS implementations of the DoD and Military Services prior to fielding.
- 1991 ASD(C3I) assigns the Defense Information Systems Agency (DISA) as the Executive Agent for DoD information standards. DISA establishes JITC as the Executive Test Agent.
- 1994 NITF 2.0 published 12 October 1994 as Military Standard (MIL-STD) 2500A to allow colored and larger images, Joint Photographic Experts Group compression, and annotated symbols via Computer Graphics Metafile. (Notice 1 and 2 published in 1997, Notice 3 in 1998)
- 1993 NITFS Certification Test & Evaluation (CTE) Program Plan published establishing the Central Imagery Office, now the National Geospatial-Intelligence Agency (NGA), as the Certification Authority and provides oversight/resources to the NITFS CTE Program; DISA as the DoD authority for NITFS validation testing; JITC as the Executive Test Agent in the execution of the NITFS CTE Program; and DCI, as the IC authority, mandating NITFS conformance with NITF 2.0. The program required that all NITFS implementations, fielded or developmental, must achieve conformance certification.
- 1994 JITC publishes the NITFS Certification Test Plan describing processes, criteria, and methods used in testing. It was a generic test plan primarily intended to document conformance criteria not explicitly documented in the respective NITFS.
- 1995 Central Imagery Office, now NGA, designates JITC as the Signatory for NITFS Certification.

- 1997 NITF 2.1 published as MIL-STD-2500B to become the technical baseline for establishing an International Standardization Profile of International Organization for Standardization/International Electrotechnical Commission (ISO/IEC) 12087-5. (Change Notice 1 published in 1998, Change Notice 2 in 2001).
- 1998 Standardization Document STDI-0002, Version 1 published standardizing Support Data Extension (i.e., Tagged Record Extensions, Data Extension Segments) to expand the functional interoperability of NITFS using controlled extensions. (Version 2 published in 2000, Version 3 in 2007, Version 4 in 2011, Version 5 in 2019).
- 1998 North Atlantic Treaty Organization (NATO) Imagery Working Group publishes Standardization Agreement (STANAG) 4545 providing allies a NATO version of NITFS; differentiated by format name (i.e., NATO Secondary Imagery Format (NSIF)).
- 1998 National Imagery and Mapping Agency, now NGA, published N-0105/98, NITFS Standards Compliance and Interoperability Test and Evaluation Program Plan, Version 1.0, establishing the program for achieving and sustaining NITFS-based interoperability by all fielded and developmental digital imagery implementations.
- 2003 ASD(C3I) was redesignated ASD (Networks and Information Integration) ASD(NII).
- 2006 MIL-STD-2500C published to incorporate Requests for Change. (Change Notice 1 published in 2017 and Change Notice 2 in 2019).
- 2012 ASD(NII) was disestablished in 2012, with authorities and responsibilities transferred to the DoD Chief Information Officer (CIO).
- 2015 NGA publishes National System for Geospatial Intelligence (NSG) Directive 3201 and NSG Manual (NSGM) 3202 establishing data sharing objectives for standards implementations operating across the geospatial intelligence enterprise.
- 2021 Information Technology - Computer Graphics and Image Processing -Registered Graphical Item, Class: BIIF Profile - Joint BIIF Profile (JBP) 2021.2, 20 April 2021.
- 2023 NGA publishes the NCPP, updating the program per NSGM 3202 and deferring to NITFS for documented conformance criteria.

APPENDIX F

TEST RESOURCES

The following sections describe the test resources (i.e., conformance criteria, test measures, test artifacts) available to programs and test agents to conduct conformance assessments.

F.1 Conformance Criteria

Conformance criteria are the requirements detailed in the standards that govern the generation (i.e., pack, encode) and interpretation (i.e., unpack, decode) of National Imagery Transmission Format (NITF) data. These requirements are presented in the form of syntactic and semantic specifications; to include content requirements for profile and profile-like implementations. As NITF standards are prepared/updated, these requirements are provided in the Easy Approach to Requirements Syntax format throughout the document. Table F-1 shows conformance criteria examples excerpted from the International Organization for Standardization/International Electrotechnical Commission Joint Basic Image Interchange Format (BIIF) Profile (JBP).

Table F-1. Conformance Criteria (Example)

Requirements	
JBP-2021.2-001	<i>The Joint BIIF Profile (JBP) operational concept shall be used as an interoperability specification for transmission and storage of electronic imagery within and among North Atlantic Treaty Organisation (NATO), Department of Defense (DOD) and Intelligence Community (IC) organizations.</i>
JBP-2021.2-002	<i>Packing/production implementation shall ensure all produced JBP files are compliant within the bounds of the established complexity levels as found in Section 4.5.5 and as defined in Table G-1 Still Imagery (STI) or Table 27 of NGA.STND.0044, the Motion Imagery Extensions for NITF 2.1 (MIE4NITF) standard for Motion Imagery (MI), for the associated features (images, graphics, text, and Data Extension Segments) supported for production.</i>
JBP-2021.2-003	<i>When unpacking/rendering a compliant file, the implementation shall ensure that the information from JBP supported files are presented as the originator (the production system/secondary processor) compliantly designed and populated.</i>

As newer standards emerge, the documents include Abstract Test Suites (ATS) to detail the necessary test modules and test cases to assess conformance. In former standards, these were provided equivalently in the form of a generic test plan (e.g., N-0105/98) listing subtests and test cases. These ATSs become an Executable Test Suite (ETS) when the necessary test measures are identified, developed/compiled, and applied specific to the implementation's requirements.

F.2 Test Measures

Test measures are the testing applications, data, and methods used to formulate the ETS. It is the responsibility of the program and tester to determine the applicable test measures. The following is for consideration:

F.2.1 Test Applications


When testing implementations that generate NITF data, testers are encouraged to use the National Imagery Transmission Format Standard (NITFS) Technical Board (NTB) community test tool, the Compliant Image Validation Analyzer (CIVA), and NITFS-certified display applications.

F.2.1.1 Compliant Image Validation Analyzer (CIVA)

The Executive Test Agent provides CIVA to supplement executable test suites with an independently developed parser. In addition to parsing and displaying metadata content, CIVA automates analyses for format constructs, image data constructs, and field value constraints. It also provides metadata analysis tools to search large file sets, compare metadata content between files, and modify metadata fields. CIVA does not provide full conformance analyses, given the contextual nuances associated with implementing NITFS, but it enables users to perform manual analyses to ensure completeness and accuracy of content in accordance with system requirements. Use of CIVA does not equate to a NITFS Conformance Certification.

Programs and test agents may request CIVA at the following link:

<https://jitc.fhu.disa.mil/projects/nitf>. Figure F-1 is an example CIVA Request Form. The form provides instructions on how to route the request (not shown in the illustration).



GEOINT Test, Evaluation, & Certification Facility
Joint Interoperability Test Command (JITC)
Fort Huachuca, Arizona

CIVA REQUEST FORM

JITC's Geospatial-Intelligence (GEoint) Test, Evaluation, and Certification (TEC) (GEoint-TEC) Facility develops and distributes Compliant Image Validation Analyzer (CIVA) to support GEoint programs in conducting National Imagery Transmission Format (NITF) Standards (NITFS) conformance assessments. Current users please fill out Requestor and Government Sponsor blocks below and follow routing instructions on the last page.

Requester:

Name:

Organization:

Program:

E-mail:

Phone:

Mailing Address:

Country of Citizenship:

Government Sponsor: (If not the same as requestor)

Name:

Organization:

Program:

E-mail:

Phone:

Mailing Address:

Country of Citizenship:

System Description:

Please describe the NITF component under test for us to understand how CIVA will be used.

Operating system(s):

Windows Mac Linux

NITF Configurations To Be Assessed:
The following sections list MIL-STD 2800C, STDI-0001, and STDI-0002 features, some of which are not supported by CIVA. JITC will use information collected in these sections to determine future CIVA developments.

Format	Image Segment	Text Segment	Graphic Segment
<input type="checkbox"/> NITF 2.0	<input type="checkbox"/> MONO	<input type="checkbox"/> RGB	<input type="checkbox"/> STA
<input type="checkbox"/> NITF 2.1	<input type="checkbox"/> MULTI	<input type="checkbox"/> RGB/LUT	<input type="checkbox"/> LUT1
<input type="checkbox"/> NSIF 1.0	<input type="checkbox"/> NOODISPLY	<input type="checkbox"/> LPH	<input type="checkbox"/> URS
<input type="checkbox"/> NSIF 1.0i	<input type="checkbox"/> INVECTOR	<input type="checkbox"/> YES/NO/0	<input type="checkbox"/> NITF
	<input type="checkbox"/> POLAR		<input type="checkbox"/> Labels
			<input type="checkbox"/> Bit Map
			<input type="checkbox"/> GSI

Image Data Attributes

PHYSIC	RESAMPLES	IMODE	COMPRESSION
<input type="checkbox"/> B	<input type="checkbox"/> 1	<input type="checkbox"/> B	<input type="checkbox"/> D
<input type="checkbox"/> C	<input type="checkbox"/> 2	<input type="checkbox"/> P	<input type="checkbox"/> E
<input type="checkbox"/> INT	<input type="checkbox"/> 3	<input type="checkbox"/> R	<input type="checkbox"/> F
<input type="checkbox"/> SI	<input type="checkbox"/> >3	<input type="checkbox"/> B	<input type="checkbox"/> X
<input type="checkbox"/> R		<input type="checkbox"/> T	<input type="checkbox"/> Z
			<input type="checkbox"/> C1
			<input type="checkbox"/> C2
			<input type="checkbox"/> C3
			<input type="checkbox"/> C4
			<input type="checkbox"/> C5
			<input type="checkbox"/> C6
			<input type="checkbox"/> C7
			<input type="checkbox"/> C8
			<input type="checkbox"/> C9
			<input type="checkbox"/> M3
			<input type="checkbox"/> M4
			<input type="checkbox"/> M5
			<input type="checkbox"/> M6
			<input type="checkbox"/> M7
			<input type="checkbox"/> M8

Data Extension

<input type="checkbox"/> Unknown	<input type="checkbox"/> CSIFAB	<input type="checkbox"/> LUDARA	<input type="checkbox"/> THE_OVERFLOW
<input type="checkbox"/> CSATTA	<input type="checkbox"/> CSIFPA	<input type="checkbox"/> MOVING_TARGET_REPORT	<input type="checkbox"/> WBID_FRAME
<input type="checkbox"/> CSATFB	<input type="checkbox"/> CSIFPB	<input type="checkbox"/> GSDDEF	<input type="checkbox"/> WEATHER_DATA_DES
<input type="checkbox"/> CSCDOB	<input type="checkbox"/> EXT_DEF_CONTENT	<input type="checkbox"/> RIFDES	<input type="checkbox"/> XML_DATA_CONTENT
<input type="checkbox"/> CSEPHB	<input type="checkbox"/> ICC_PROFILE_SUPPORT_DES	<input type="checkbox"/> STREAMING_FILE_HEADER	

Tagged Record Extensions

<input type="checkbox"/> Unknown	<input type="checkbox"/> CSBHA	<input type="checkbox"/> HISTDA	<input type="checkbox"/> IMACSA	<input type="checkbox"/> PAINB	<input type="checkbox"/> RELCCA	<input type="checkbox"/> SEGPA
<input type="checkbox"/> AC3SA	<input type="checkbox"/> CSBDA	<input type="checkbox"/> HRDCPA	<input type="checkbox"/> MTOCA	<input type="checkbox"/> PAINC	<input type="checkbox"/> RGRORA	<input type="checkbox"/> SENRA
<input type="checkbox"/> ACDOB	<input type="checkbox"/> CSBPA	<input type="checkbox"/> ICHPA	<input type="checkbox"/> MRODPA	<input type="checkbox"/> PAINPA	<input type="checkbox"/> RPODPA	<input type="checkbox"/> SENRPA
<input type="checkbox"/> ACDOB	<input type="checkbox"/> CSBPA	<input type="checkbox"/> ICHPA	<input type="checkbox"/> MRODPA	<input type="checkbox"/> PAINPA	<input type="checkbox"/> RPODPA	<input type="checkbox"/> SENRPA
<input type="checkbox"/> ACQTB	<input type="checkbox"/> CSBDB	<input type="checkbox"/> ILLJMA	<input type="checkbox"/> MPODDB	<input type="checkbox"/> PAINPB	<input type="checkbox"/> RSPIDR	<input type="checkbox"/> SENRDB
<input type="checkbox"/> ACFTA	<input type="checkbox"/> CSBFB	<input type="checkbox"/> ILLJMB	<input type="checkbox"/> MPODDB	<input type="checkbox"/> PAINPB	<input type="checkbox"/> RSPIDR	<input type="checkbox"/> SENRDB
<input type="checkbox"/> ACFTB	<input type="checkbox"/> CSBFB	<input type="checkbox"/> ILLJMB	<input type="checkbox"/> MPODDB	<input type="checkbox"/> PAINPB	<input type="checkbox"/> RSPIDR	<input type="checkbox"/> SENRDB
<input type="checkbox"/> ACFTB	<input type="checkbox"/> CSBFB	<input type="checkbox"/> ILLJMB	<input type="checkbox"/> MPODDB	<input type="checkbox"/> PAINPB	<input type="checkbox"/> RSPIDR	<input type="checkbox"/> SENRDB
<input type="checkbox"/> AMMDA	<input type="checkbox"/> CSBFA	<input type="checkbox"/> IMBLKA	<input type="checkbox"/> MPODFA	<input type="checkbox"/> PAINFB	<input type="checkbox"/> RSMAPB	<input type="checkbox"/> STODFA
<input type="checkbox"/> AMMDA	<input type="checkbox"/> CSBFA	<input type="checkbox"/> IMBLKA	<input type="checkbox"/> MPODFA	<input type="checkbox"/> PAINFB	<input type="checkbox"/> RSMAPB	<input type="checkbox"/> STODFA
<input type="checkbox"/> ATTPA	<input type="checkbox"/> CSBDA	<input type="checkbox"/> IMBDA	<input type="checkbox"/> MPODPA	<input type="checkbox"/> PAINPA	<input type="checkbox"/> RSMAPB	<input type="checkbox"/> STODPA
<input type="checkbox"/> BANGDA	<input type="checkbox"/> CSBTA	<input type="checkbox"/> IMBTA	<input type="checkbox"/> MPODPA	<input type="checkbox"/> PAINPA	<input type="checkbox"/> RSMAPB	<input type="checkbox"/> STODPA
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F.2.1.2 NITF Applications

The NITFS Technical Board recommends programs and test agents use NITFS-certified applications in the ETS. This minimizes risks with applications generating conformance discrepancies not attributable to the Implementation. NITFS-certified applications can be identified on the Executive Test Agent's NITFS Conformance Certification Register at the following link: <https://jitic.fhu.disa.mil/projects/nitf>.

F.2.2 Test Data

The Executive Test Agent develops test data to support a wide range of NITFS conformance testing. The test data is simulated to exercise a broad range of format and metadata configurations not always available, accessible, or releasable in real data. Per request, the Executive Test Agent makes this test data available for program and test agents assessing implementations that interpret NITF data. These test data sets typically include positive and negative test cases for testers to assess the robustness of the implementation.

Programs and test agents may request test data at the following link: <https://jitic.fhu.disa.mil/projects/nitf>. Figure F-2 illustrates an example Test Data Request form. The form provides instructions on how to route the request (not shown in the illustration).



GEINT Test, Evaluation, & Certification Facility
Joint Interoperability Test Command (JITC)
Fort Huachuca, Arizona

TEST DATA REQUEST FORM

JITC's Geospatial-Intelligence (GEINT) Test, Evaluation, and Certification (TEC) (GEINT-TEC) Facility develops various types of National Imagery Transmission Format Standards (NITFS) data to conduct a wide range of conformance testing. We make this data available to promote conformance for GEINT programs in development.

Requester:
Name: Mr./Ms.
Organization: Spell out any acronyms please
Program: Spell out any acronyms please
E-mail:
Phone:
Mailing Address:
Country of Citizenship:

Government Sponsor: (If not the same as requestor)
Name: Mr./Ms.
Organization: Spell out any acronyms please
Program: Spell out any acronyms please
E-mail:
Phone:
Mailing Address:
Country of Citizenship:

System Description:

NITF Configurations To Be Assessed:
The following sections list MIL-STD-2030C, STIC-0001, and STIC-0002 features, some of which may not be test data representation. JITC will use information collected in these sections to determine future test data development.

Format	Image Segment	Text Segment	Graphic Segment
<input type="checkbox"/> NTF 2.0	<input type="checkbox"/> ANONO	<input type="checkbox"/> RGB	<input type="checkbox"/> STA
<input type="checkbox"/> NTF 2.1	<input type="checkbox"/> MULTI	<input type="checkbox"/> RGB/MT	<input type="checkbox"/> UT1
<input type="checkbox"/> NTF 3.0	<input type="checkbox"/> HOBBSPY	<input type="checkbox"/> VPH	<input type="checkbox"/> UMS
<input type="checkbox"/> NTF 3.0.1	<input type="checkbox"/> INVECTOR	<input type="checkbox"/> YCBCRG1	<input type="checkbox"/> NTF
	<input type="checkbox"/> POLAR		<input type="checkbox"/> LZW
			<input type="checkbox"/> BI Map
			<input type="checkbox"/> CGM

Image Data Attributes

PUTYPE	NBANDS	IMODE	COMPRESSION
<input type="checkbox"/> B	<input type="checkbox"/> 1	<input type="checkbox"/> B	<input type="checkbox"/> 0
<input type="checkbox"/> C	<input type="checkbox"/> 2	<input type="checkbox"/> P	<input type="checkbox"/> 1
<input type="checkbox"/> INT	<input type="checkbox"/> 3	<input type="checkbox"/> R	<input type="checkbox"/> 2
<input type="checkbox"/> SI	<input type="checkbox"/> x3	<input type="checkbox"/> X	<input type="checkbox"/> 3
<input type="checkbox"/> A		<input type="checkbox"/> T	<input type="checkbox"/> 4
		<input type="checkbox"/> 2	<input type="checkbox"/> 5
			<input type="checkbox"/> 6
			<input type="checkbox"/> 7
			<input type="checkbox"/> 8
			<input type="checkbox"/> 9
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			<input type="checkbox"/> 97
			<input type="checkbox"/> 98
			<input type="checkbox"/> 99
			<input type="checkbox"/> 100

Data Extension

<input type="checkbox"/> Unknown	<input type="checkbox"/> CSFAB	<input type="checkbox"/> UDARA	<input type="checkbox"/> THE_OVERFLOW
<input type="checkbox"/> CSATTA	<input type="checkbox"/> CSQRA	<input type="checkbox"/> ADVWNO_TARGET_REPORT	<input type="checkbox"/> WREB_FRAME
<input type="checkbox"/> CSATTB	<input type="checkbox"/> CSQRB	<input type="checkbox"/> CSQDFP	<input type="checkbox"/> WEATHER_DATA_DES
<input type="checkbox"/> CSC50B	<input type="checkbox"/> EXT_DEF_CONTENT	<input type="checkbox"/> APFDES	<input type="checkbox"/> XML_DATA_CONTENT
<input type="checkbox"/> CSFPHB	<input type="checkbox"/> KCC_PROFILE_SUPPORT_DES	<input type="checkbox"/> STREAMING_FILE_HEADER	

Tagged Record Extensions

<input type="checkbox"/> Unknown	<input type="checkbox"/> CSQ21A	<input type="checkbox"/> HSTDA	<input type="checkbox"/> MIMCSA	<input type="checkbox"/> RANMB	<input type="checkbox"/> RELCCA	<input type="checkbox"/> SEQSPA
<input type="checkbox"/> ACS15A	<input type="checkbox"/> CSQND4	<input type="checkbox"/> HRDCPA	<input type="checkbox"/> INTDOA	<input type="checkbox"/> RANMC	<input type="checkbox"/> RGRDRA	<input type="checkbox"/> SENBRA
<input type="checkbox"/> ACC20B	<input type="checkbox"/> CSQPH4	<input type="checkbox"/> ICHP4	<input type="checkbox"/> IMOD2A	<input type="checkbox"/> RANFA	<input type="checkbox"/> RPFCD4	<input type="checkbox"/> SENBRB
<input type="checkbox"/> ACEF0B	<input type="checkbox"/> CSQRA4	<input type="checkbox"/> ICHPB	<input type="checkbox"/> IMFQ3A	<input type="checkbox"/> RANFB	<input type="checkbox"/> RPFCD8	<input type="checkbox"/> SBD0A
<input type="checkbox"/> ACQV7B	<input type="checkbox"/> CSQRB	<input type="checkbox"/> ELU4A	<input type="checkbox"/> IMPQ3B	<input type="checkbox"/> RANFC	<input type="checkbox"/> RPFDR	<input type="checkbox"/> SDFP8
<input type="checkbox"/> AFTA	<input type="checkbox"/> CSQSD4	<input type="checkbox"/> ELU4B	<input type="checkbox"/> IMPQ4A	<input type="checkbox"/> RANFD	<input type="checkbox"/> RPFDR8	<input type="checkbox"/> SDFP8B
<input type="checkbox"/> AC7B	<input type="checkbox"/> CSQSB	<input type="checkbox"/> IM4SD4	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFE	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> AM4DA	<input type="checkbox"/> CSQFA4	<input type="checkbox"/> IM4LE4	<input type="checkbox"/> IMPQ4A	<input type="checkbox"/> RANFG	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> AM4DB	<input type="checkbox"/> CSQFB	<input type="checkbox"/> IM4LEB	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFH	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> AT7FA	<input type="checkbox"/> ENQDA	<input type="checkbox"/> IM4R4A	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFI	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5A	<input type="checkbox"/> EXQTA	<input type="checkbox"/> IM4R4A	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFL	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5B	<input type="checkbox"/> EXQTB	<input type="checkbox"/> IM4R4B	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFM	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5C	<input type="checkbox"/> EXQTC	<input type="checkbox"/> IM4R4C	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFN	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5D	<input type="checkbox"/> EXQTD	<input type="checkbox"/> IM4R4D	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFO	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5E	<input type="checkbox"/> EXQTE	<input type="checkbox"/> IM4R4E	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFP	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5F	<input type="checkbox"/> EXQTF	<input type="checkbox"/> IM4R4F	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFQ	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5G	<input type="checkbox"/> EXQTG	<input type="checkbox"/> IM4R4G	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFR	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5H	<input type="checkbox"/> EXQTH	<input type="checkbox"/> IM4R4H	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFS	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5I	<input type="checkbox"/> EXQTI	<input type="checkbox"/> IM4R4I	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFT	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5J	<input type="checkbox"/> EXQTI	<input type="checkbox"/> IM4R4J	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFU	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5K	<input type="checkbox"/> EXQTK	<input type="checkbox"/> IM4R4K	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFV	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5L	<input type="checkbox"/> EXQTL	<input type="checkbox"/> IM4R4L	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFW	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5M	<input type="checkbox"/> EXQTM	<input type="checkbox"/> IM4R4M	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFX	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5N	<input type="checkbox"/> EXQTN	<input type="checkbox"/> IM4R4N	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFY	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5O	<input type="checkbox"/> EXQTO	<input type="checkbox"/> IM4R4O	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFZ	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5P	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4P	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFA	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5Q	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4Q	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFB	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5R	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4R	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFC	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5S	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4S	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFD	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5T	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4T	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFE	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5U	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4U	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFF	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5V	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4V	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFG	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5W	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4W	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFH	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5X	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4X	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFI	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5Y	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4Y	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFJ	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C
<input type="checkbox"/> B4D5Z	<input type="checkbox"/> EXQTP	<input type="checkbox"/> IM4R4Z	<input type="checkbox"/> IMPQ4B	<input type="checkbox"/> RANFK	<input type="checkbox"/> RPFDR8B	<input type="checkbox"/> SDFP8C

Other Configurations: Please describe other desired configurations in the test data.

Figure F-2. Test Data Request Form (Example)

F.2.3 Test Methods

The associated conformance documents detail the test methods. Figure F-3 illustrates an example test method excerpted from the NITF 2.1 Motion Imagery Extensions Conformance document.

A.2.10. Quick-Look Images.			
a) Test Purpose: Verify quick-look image conformance.			
b) Test Method: Quick-Look images may be present in a manifest file or any NITF file within a collection. The presence of Quick-Look images is indicated through the setting of various MTIMSA TRE field values (see Table 23). Scan through all files in a collection to determine which contain quick-look images.			
c) Reference: NGA.STND.0044_1.3.1 section 6.13 and Table 23.			
d) Test Type: Basic			
LEGEND:			
NGA	National Geospatial-Intelligence Agency	STND	Standardization Document
NITF	National Imagery Transmission Format	TRE	Tagged Record Extension

Figure F-3. Test Method (Example)

F.3.2 Test Plan

Once testing is initiated, the Executive Test Agent prepares a test plan detailing administrative and technical information of the test. Figure F-5 illustrates the overall document content and artifacts within the plan to analyze requirements and to specify required test cases for the implemented configurations.

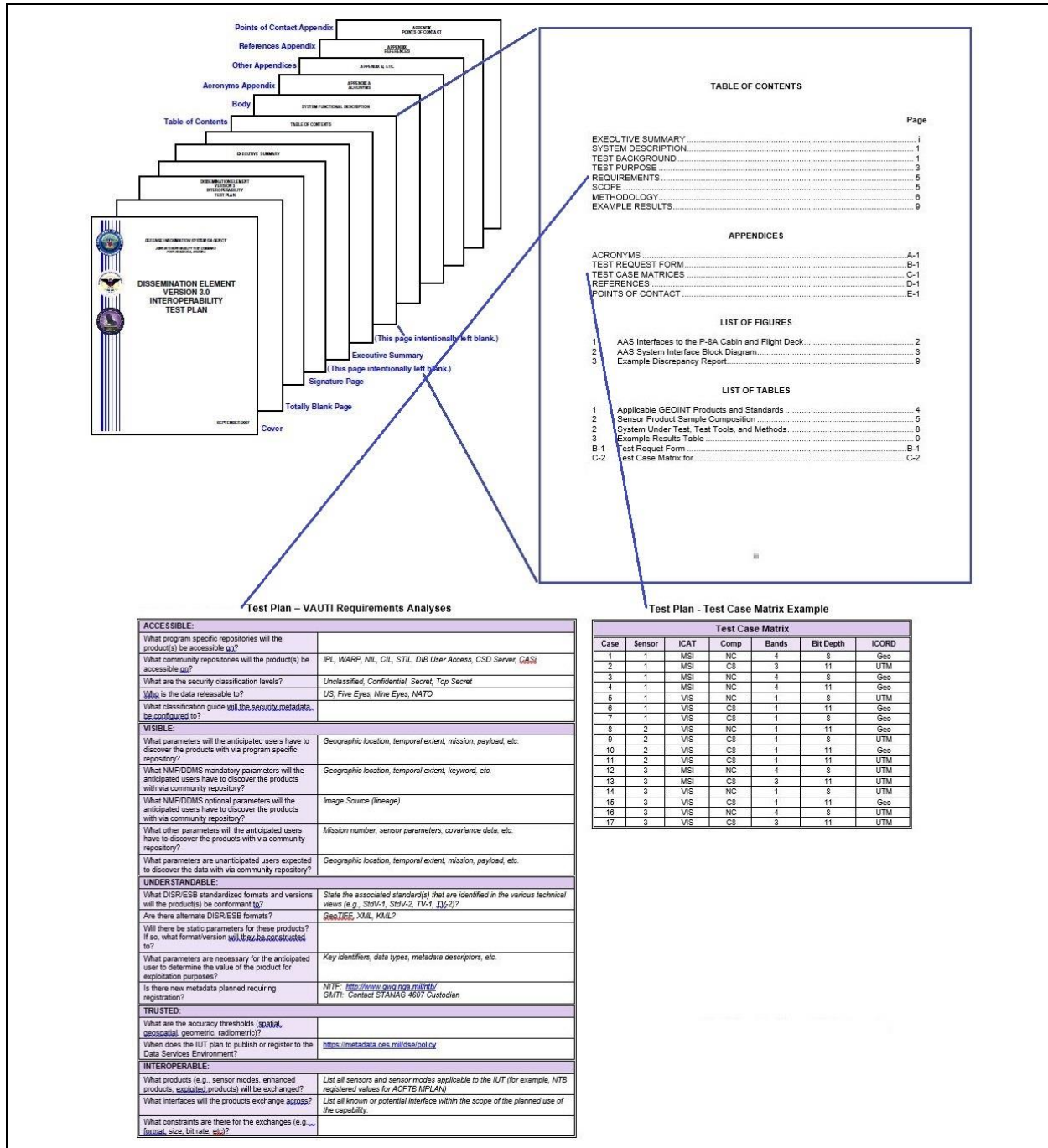
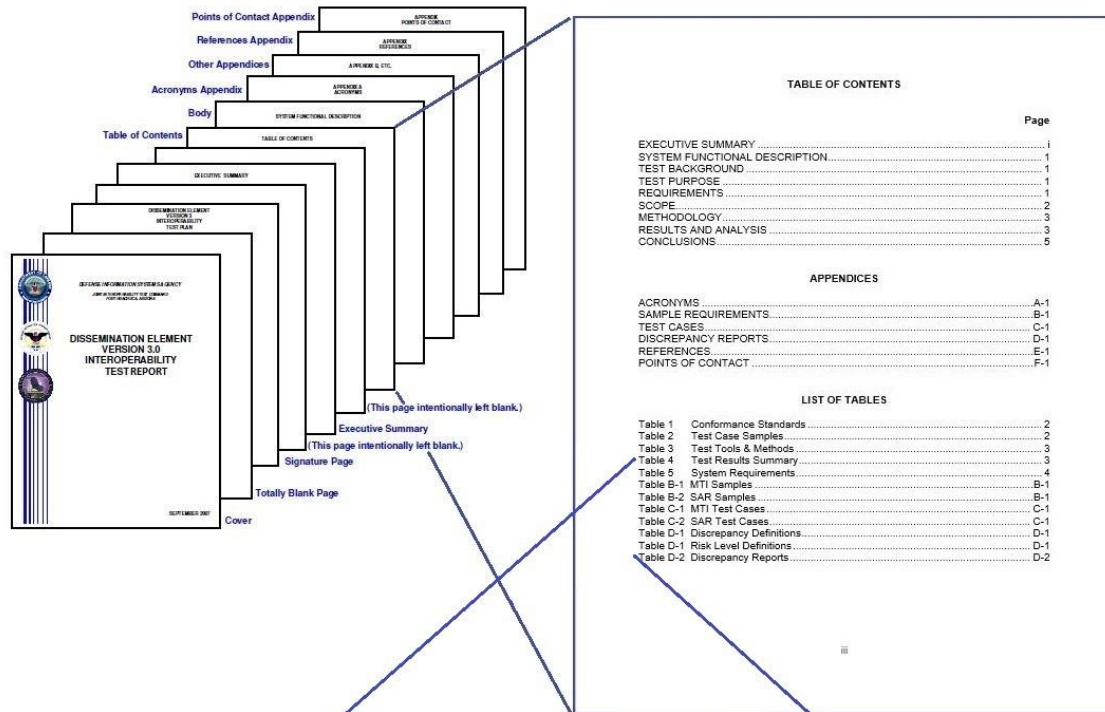


Figure F-5. Test Plan (Example)

F.3.3 Test Report

After testing, the Executive Test Agent prepares a test report detailing the final administrative and technical information of the test. Figure F-6 illustrates the overall document content and artifacts within the report to describe, rate, and map conformance discrepancies to system requirements.



Test Results Summary

Mission	Operational Activities	System Functions	DRs
Conduct Battlespace Awareness	A2.2 Conduct Surveillance	1.2.3 Personnel Recovery, Dynamic Targeting 1.3.3 Track Support 1.3.4 Battlespace Awareness 1.5.1 Radar 1.5.2 Surveillance / Reconnaissance 1.5.3 Targeting Support	DR-05
	A2.3 Integrate Onboard Data with Sensor Data	1.2.2 Maritime Ops Support 1.3.3 Track Support 1.5.3 Targeting Support	DR-02
Conduct Battle Management Command & Control	A2.6 Provide Intelligence Support	1.1.1 I&W Support 1.1.2 Post Attack Assessment 1.5.1 Radar 1.5.2 Surveillance / Reconnaissance 1.5.3 Targeting Support	DR-02 DR-04
	A3.1 Conduct Battle Management	1.1.2 Post Attack Assessment 1.2.2 Maritime Ops Support 1.3.4 Battlespace Awareness	DR-02 DR-04
	A3.2 Provide C2 for Air Interdiction	1.1.1 I&W Support 1.5.3 Targeting Support	DR-02 DR-04
	A3.3 Provide C2 for Close Air Operations	1.1.2 Post Attack Assessment 1.3.4 Battlespace Awareness	DR-02 DR-04
	A3.4 Provide C2 for Personnel Recovery Operations	1.1.1 I&W Support 1.2.3 Personnel Recovery, Dynamic Targeting	DR-02 DR-04
	A3.5 Provide C2 for Maritime Operations	1.2.2 Maritime Ops Support 1.3.4 Battlespace Awareness	DR-02 DR-04
	A3.7 Support Joint Special Tasks	1.1.1 I&W Support 1.5.3 Targeting Support	DR-02 DR-04
	A3.8 Task & Retask Assets	1.3.4 Battlespace Awareness	DR-02 DR-04

Test Results

DR-01	Syntactic Discrepancy	Risk Level 2
TITLE	Extraneous Bytes	
REFERENCE	MIL-STD-2500C	
CRITERIA	Files are structurally conformant in accordance with MIL-STD-2500C.	
TEST CASES	All SRF Samples	
DESCRIPTION	SAR imagery contained extraneous bytes at the end of the file unaccounted for by the file header or image subheader. The extraneous bytes had no functional value. It appears the software over allocated bytes when saving the files.	
RISK	Receiving applications may reject processing the file due to syntactic anomaly.	
RECOMMENDATION	Developer investigates and resolves source of extraneous bytes.	
DR-03	Syntactic Discrepancy	Risk Level 4
TITLE	JPEG Codestream Field Errors	
REFERENCE	BPJ2K01.00, Section 9.2.2	
CRITERIA	Xsiz and Ysiz coincide with NBPR and NBPC.	
TEST CASES	All NTF samples with IC as C8.	
DESCRIPTION	For this compressed imagery, JPEG codestream fields: Xsiz and Ysiz should be equal to image subheader fields: NBPR and NBPC. However, these fields are not equal.	
RISK	This is redundant metadata associated with JPEG imagery. Receiving application supporting JPEG embedded NTF should read the JPEG codestream to display the imagery.	
RECOMMENDATION	Edit NBPR and NBPC fields for consistency with Xsiz and Ysiz fields.	

Figure F-6. Test Report (Example)

The Executive Test Agent uses the definitions in Table F-2 to characterize the conformance discrepancies and the definitions in F-3, derived from NSGM 3202, to identify the risk of the conformance discrepancies to the National System for Geospatial Intelligence/Allied System for Geospatial Intelligence enterprise systems and users.

Table F-2. Discrepancy Types

Type	Definition
Syntactic	Errors or deficiencies directly or indirectly impacting the interpretability of the NITF data. These discrepancies relate to the generation or interpretation of the format. Typically, discrepancies of this nature violate format specifications, compression schemes or any standardized specification that governs the interpretability of the data format.
Semantic	Errors or deficiencies directly or indirectly impacting the understandability of the NITF data. These discrepancies relate to the generation or interpretation of the NITF data and metadata content. Typically, discrepancies of this nature violate data dictionaries or any standardized specification that governs the understandability of the NITF data and metadata content.
Functional	Errors or deficiencies directly or indirectly impacting the usability of NITF data. These discrepancies relate to the generation or interpretation of the NITF data and metadata content. Typically, discrepancies of this nature violate community or system-specific documentation, community data models, or any authoritative document that governs the usability of the NITF data and metadata content.

Table F-3. Discrepancy Categories

Category	Definition
1	The discrepancy is deemed to have an immediate adverse operational impact on the anticipated systems/users. The Executive Test Agent will not issue conformance certification when this risk category is present and does not recommend fielding until appropriately resolved.
2	The discrepancy is deemed to have an immediate adverse operational impact on unanticipated systems/users within the enterprise. The Executive Test Agent will not issue conformance certification when this risk category is present and does not recommend fielding until appropriately resolved.
3	The discrepancy is characterized as having no immediate operational impact on the anticipated systems/users, but a minor inconvenience or annoyance. The discrepancy will not impede the current standards conformance registration effort, the developers may elect to not correct the anomaly at the time of discovery; however, the problem must be corrected prior to its next registration event.
4	The discrepancy is characterized as having no immediate operational impact on unanticipated systems/users within the enterprise, but a minor inconvenience or annoyance. The discrepancy will not impede the current standards conformance registration effort. The developers may elect to not correct the anomaly at the time of discovery; however, the problem must be corrected prior to its next registration event.
5	The anomaly does not appear to violate any written or implied doctrine or specification; however, the anomaly may be of questionable practicality, utility, or functionality having little or no operational impact. These observations are presented as information only, and any further action will be at the discretion of the developer/program manager.

APPENDIX G

POINTS OF CONTACT

Program Sponsor

National Geospatial-Intelligence Agency
GEOINT & IT Standards Division (TAES) Arnold
3838 Vogel Road
ATTN: NTB Room 1-039 TAES Mail Stop: L-069
Arnold, Missouri 63010-6205
Email: NTBChair@nga.mil

Executive Test Agent

Joint Interoperability Test Command
Geospatial Intelligence Test, Evaluation, and Certification Facility
ATTN: JTE1 Standards Conformance Branch
2001 Brainard Road
Fort Huachuca, Arizona 85613-7020
Phone: (520) 538-5458
Email: disa.jitc.nitf@mail.mil
URL: <https://jitc.fhu.disa.mil/projects/nitf>

National Imagery Transmission Format Standards Technical Board (NTB)

NTB Chair

Email: ntbchair@nga.mil
URL: <https://gwg.nga.mil/ntb/>

Geospatial Intelligence Functional Manager Standards Assessment (GFMSA) Program

Unclassified Contact

Email: GFMSA_Team@nga.mil
URL: https://intelshare.intelink.gov/sites/gfmsa*

* Requires .mil or .gov domain with Common Access Card or Personal Identity Verification card to access.

Secret Internet Protocol Router Network (SIPRNET) Contact

Email: GFMSA_Team@nga.smil.mil
URL: <https://intelshare.intelink.sgov.gov/sites/gfmsa>

Joint Worldwide Intelligence Communications System (JWICS) Contact

Email: GFMSA_Team@coe.ic.gov

URL: <https://intelshare.intelink.ic.gov/sites/gfmsa>

Standards Resources

Department of Defense Information Technology Standards Registry (DISR)

URL: <https://gtg.csd.disa.mil/dsr/standards/search/simple.html>*

* Requires a registered account on the Global Information Grid Technical Guidance Federation website

National System for Geospatial Intelligence (NSG) Standards Registry

<https://nsgreg.nga.mil/registers.jsp>

North Atlantic Treaty Organization (NATO) Standardization Office (NSO)

Email: nso@nso.nato.int

URL: <https://nso.nato.int/nso/>