



NATIONAL GEOSPATIAL-INTELLIGENCE AGENCY

Know the Earth... Show the Way... Understand the World

Geopolitical Entities, Names, and Codes Standard

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FGDC, Coordination Group Meeting

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Background

- Former Federal Information Processing Standard (FIPS) 10-4, Countries, Dependencies, Areas of Special Sovereignty, and Their Principal Administrative Divisions, was the U.S. Government standard for country codes for many years, but was withdrawn by the National Institute of Standards and Technology (NIST) on September 2, 2008
- Use of non-government standards, where they meet the needs of the Government, instead of use of government-unique standards is required to comply with Public Law 104-113, National Technology Transfer and Advancement Act of 1995, and OMB Circular A-119, Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities
- The International Organization for Standardization (ISO) 3166, Codes for the representation of names of countries and their subdivisions, Part 1 – Country codes, and Part 2 – Country subdivision code has been identified as the standard to which the U.S. Government should transition, but it must be profiled for U.S. Government use



DoD Response

- FIPS 10-4 has a sunset tag and will be retired from the DoD Information Technology Standards Registry (DISR) in December 2012
- Undersecretary of Defense for Acquisition, Technology, and Logistics (USD/ATL) memo “Department of Defense Country Code Standard” dated June 6, 2011, directs DOD to implement a US Profile of ISO 3166-1, Country codes (either digraph or trigraph) by September 30, 2012
 - No equivalent directive for Intelligence Community (IC) at this time
- NGA is leading a Country Codes Working Group (CCWG), which has been established as a Federal Government forum for coordination of country code requirements and for maintenance of a U.S. Government Profile of ISO 3166



Geopolitical Entities, Names, and Codes Standard

- The Geopolitical Entities, Names, and Codes (GENC) Standard will be the U.S. Government Profile of ISO 3166
- Provides an authoritative set of country codes and names for use by the Federal Government for information exchange
- The GENC will use ISO 3166 code elements whenever possible, but will be modified where necessary to comply with U.S. law and U.S. Government recognition policy



Why a Profile?

- ISO 3166-1 country code elements are based on United Nations recognition and the names of countries provided by member states
- ISO 3166-2 subdivision code elements and names are based on information that is reported by the sovereign country
- A U.S. Government profile is needed for
 - Countries, subdivisions, and/or names for which the U.S. Government does not agree with the sovereign nation on
 - U.S. Government is required by Public Law 80-242 (1947) to use names approved by the U.S. Board on Geographic Names (BGN)
 - Code elements for geopolitical entities needed by the Federal Government for information exchange purposes that are not recognized by the ISO 3166 Maintenance Agency (MA) for inclusion in the ISO 3166 standard



Examples of U.S. Exceptions

- Myanmar/Burma
 - ISO 3166-1 has a code elements 2-letter code MM and 3-letter code MMR for the UN-recognized country name “Myanmar”
 - U.S. BGN does not recognize the name “Myanmar”
 - U.S. Government can use the codes MM and MMR, but the BGN approved name is “Burma”
- Palestinian Territory (Occupied)
 - ISO 3166-1 has code elements PS and PSE for the “Palestinian Territory (Occupied)”
 - U.S. Government policy now (recent change) allows for recognition of “Palestinian Territory” (without the term “Occupied”) as one entity but also uses separate code elements for “Gaza Strip” and “West Bank”
- Midway Islands
 - ISO 3166-1, Country code has code elements UM and UMI for “United States Minor Outlying Islands” (which includes Midway Island and other islands), and Midway Island is a subdivision code element UM-71 in ISO 3166-2, Country subdivision codes
 - Some U.S. Government users need 2-letter or 3-letter code elements for Midway Islands, not a five character subdivision code, for Midway Islands to support information exchange requirements



User-Assigned Code Elements

- ISO 3166-1, Country code, Section 8.3.1 allows the standard to be extended by means of user-assigned code elements
- User-assigned codes aren't a part of the "official" standard but are allowed to be used when needed for data exchange purposes
 - Coordination with ISO 3166 Maintenance Agency is recommended
- User-assigned code element ranges
 - AA, QM to QZ, XA to XZ, and ZZ
 - AAA to AAZ, QMA to QZZ, XAA to XZZ, and ZZA to ZZZ
 - 900-999
- ISO 3166-2, Subdivision codes, Section 7.1.4 also has provisions for user-assigned codes, using any code element that hasn't been assigned yet, but consultation with ISO 3166 Maintenance Agency is still recommended



Migration Strategy

FIPS 10-4 to GENC

- Assign a 2-character, 3-character, and 3-digit code for each country-level code element formerly in FIPS 10-4, or its successor Geopolitical Entities and Codes (GEC) code element list
 - As a regular ISO 3166-1 code element wherever possible
 - As a user-assigned code element (extension to but not part of ISO 3166-1) if for whatever reason the U.S. Government cannot use a regular ISO 3166-1 code element



Alphanumeric Codes

- Alphanumeric codes are non-conflicting with ISO 3166-1 code elements
 - ISO 3166 uses all 2-letter (AA-ZZ), all 3-letter (AAA-ZZZ) and all 3-digit numeric (000-999)
 - The only thing left is alphanumeric
- Alphanumeric codes will be used for
 - Time sensitive code requirements
 - Exercise codes and other special purpose codes that are needed for a specific purpose but are not real country or subdivision codes
 - ISO 3166 Maintenance Agency will not recognize a user-assigned code for an entity requested by the U.S. Government



Country Codes Working Group

- Geospatial Intelligence Standards Working Group (GWG) is a DOD/IC forum for managing Geospatial Intelligence (GEOINT) standards
- Country Codes Working Group (CCWG) has been established under the GWG's Metadata Focus Group to serve as a Federal Government forum for coordinating requirements for country and subdivision codes, and managing the content of a country codes registry
 - Centralized body for U.S. Government activities to request new country and subdivision code elements
 - Vet changes to the ISO 3166 standard made by the ISO 3166 Maintenance Agency to ensure they comply with U.S. Law and U.S. Government recognition policy
 - If necessary, replace noncompliant ISO 3166 code elements and/or names with coordinated user-assigned codes/names



CCWG Membership Status

- BIMA
- DFAS
- DHRA
- DHS (OCIO)
- DISA
- DLA
- DMDC
- DOS
- FAA
- FBI
- FCC
- Joint Staff J3
- NGA
- NIST
- NRO
- NSA
- OUSD/AT&L
- USDA
- U.S. Army/CIO/G-6
- U.S. Navy/N2/N6E4
- USMEPCOM
- USSTRATCOM
- USTRANSCOM

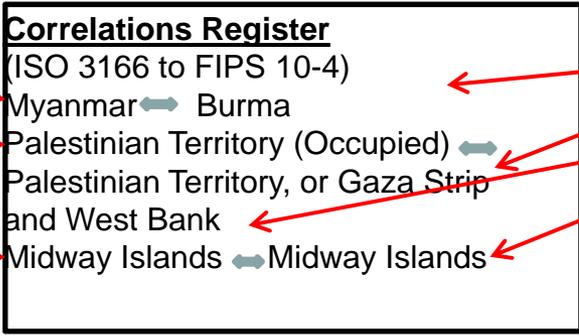
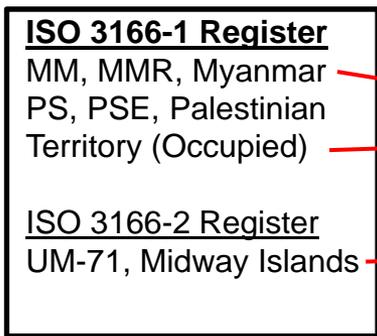
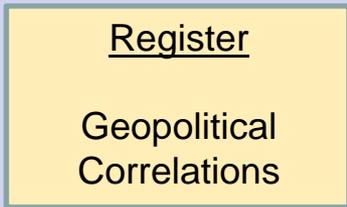
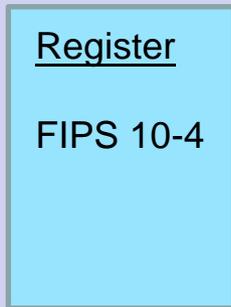
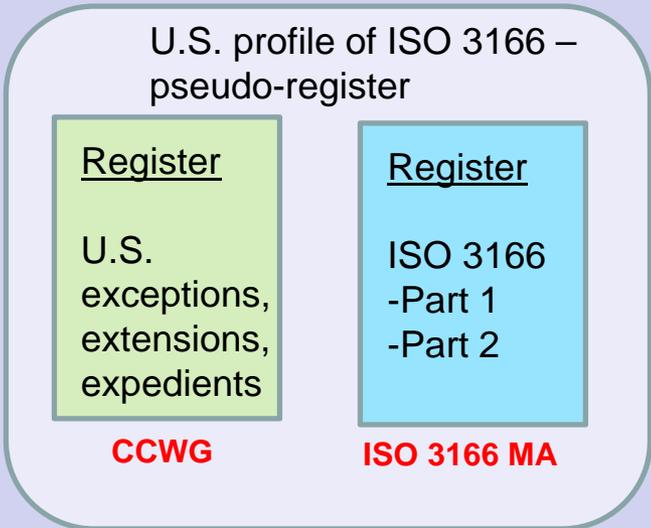


GENC Registry

- NGA is developing a registry to host country and subdivision code data as part of the National System for Geospatial Intelligence Standards Registry (NSGReg)
 - <https://nsgreg.nga.mil>
- Registers
 - ISO 3166 (multi-part)
 - FIPS 10-4 (withdrawn)
 - Geopolitical Entities and Codes (FIPS 10-4's informal successor)
 - Geopolitical Entities, Names, and Codes Standard
 - STANAG 1059 (NATO's country code standard)
- Also includes a register of geopolitical correlations
 - Knowing the correlations between geopolitical entities in different country code standards enables the determination of a mapping from one code set to another code set
- Tracking changes as an “item series” over time will enable the determination of past correlations (and the mappings)
 - NGA is working to obtain historical data
- Correlations data will be used by a DISA-developed enterprise mediation service



GENC Registry





GENC Standard

- A standard specifying the structure and management for the nominal “U.S. Government Profile of ISO 3166”
 - Contains data structure documentation and sample data content
 - Normatively references the applicable parts of the (dynamic) GENC Registry for specific data content for country code elements, subdivision elements, and geopolitical correlations
- Draft ready early July 2012
- Publication projected September 2012
- The GENC Standard will be mandated in the DISR and Intelligence Community Standards Registry in Cycle 13-1 and will replace both ISO 3166-1 and FIPS 10-4 as the mandated standard for country codes and subdivision codes
 - The CCWG will work with the ITSC Secretariat regarding an out of cycle review and processing for the GENC Standard



Next Steps

- Coordinate with the National Information Standards Organization (NISO) regarding transitioning from a U.S. Government standard to a U.S. national standard
- Identify additional code requirements and incorporate those deemed within scope of the CCWG, and provide appropriate coordination for those of relevance but outside the scope of the CCWG
 - Release codes
 - Water bodies
 - Non-state entities
 - Other?



Mediation Service

- From USD/AT&L memo, June 6, 2012
“Deputy Chief Management Officer (DCMO) will monitor the progress of the transition and identify an efficient approach to develop, host, and maintain the long-term enterprise-level electronic mediation capability to translate between ISO 3166-1 trigraph and digraph and other commonly used DOD country code formats in cases where legacy systems or processes use an alternate format and cannot be updated in a timely manner. This mediation capability must be provided on an enterprise level for an expected transition period through 2020.”



DISA Mediation Service

- GENC Registry will be federated with the DoD Data Services Environment (DSE) and DoD Metadata Registry (MDR) and the IC Enterprise Registry and Repository (ER2)
- Enterprise Service Bus (ESB) will provide DoD with an enterprise-ready, highly available platform where they and their integrators can deploy custom applications
- Available by spring of 2013
- NIPRNET and SIPRNET
- Availability on JWICS and to other Federal Government entities are issues to be resolved



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