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URN Namespace for the Defence Geospatial Information Working Group (DGIWG)

Abstract

This document describes the Namespace Identifier (NID) for Uniform Resource Name (URN) Namespace resources published by the Defence Geospatial Information Working Group (DGIWG). The DGIWG defines and manages resources that utilize this URN name model.

Management activities for these and other resource types are provided by the DGIWG Registry System (DRS).

Status of This Memo

This document is not an Internet Standards Track specification; it is published for informational purposes.

This document is a product of the Internet Engineering Task Force (IETF). It represents the consensus of the IETF community. It has received public review and has been approved for publication by the Internet Engineering Steering Group (IESG). Not all documents approved by the IESG are a candidate for any level of Internet Standard; see Section 2 of RFC 5741.

Information about the current status of this document, any errata, and how to provide feedback on it may be obtained at http://www.rfc-editor.org/info/rfc6288.

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1. Introduction

The DGIWG is a multi-national body responsible to the Defence organizations of member nations for coordinated advice and policy recommendations on standards and practices for geospatial information and support services. The DGIWG creates standards and recommended practices required to enable the provision, exchange, and exploitation of geospatial information. It supports the requirements of the North Atlantic Treaty Organization (NATO) and the other alliances that its member nations participate in, including peacekeeping sanctioned by the United Nations.

The DGIWG has defined, and continues to define, standards, processes, and procedures for the use of international standards in the DGIWG community.

The DGIWG geospatial standards are built upon the generic and abstract standards for geographic information defined by the International Organization for Standardization (ISO) TC/211 technical committee. The DGIWG makes use of the service specifications endorsed by the Open Geospatial Consortium (OGC).

The DGIWG defines information components for use in the development of product specifications and application schemas for military geospatial data. The DGIWG also establishes service specifications, encoding formats, and testing methodologies to meet military geospatial intelligence requirements.

Some of the solutions being developed by the DGIWG need XML namespaces that are managed so that they are unique and persistent. To assure that the uniqueness is absolute, the registration of a specific Namespace ID (NID) for use by the DGIWG was deemed appropriate. Therefore, a full and complete registration will follow the namespace specification process as defined in [RFC3406]. For the processes that the DGIWG uses to manage this and other registries, see the "DGIWG Terminology Register Technical Specification" document [STD-DP-07-024-ed1.0.1].

2. URN Specification for "dgiwg" NID

Namespace ID: dgiwg

Registration Information:

registration version number: 1
registration date: August 2011

Declared registrant of the namespace:

Registering organization: Defence Geospatial Information Working Group
Name: The Secretary (attn: Mr. Paul Burton)
Address: Defence Geospatial Information Working Group (DGIWG)
UK Hydrographic Office
Admiralty Way
TAUNTON
Somerset TA1 2DN
United Kingdom

Designated contact:

Role: The DGIWG Registry Services Administrator
Email: dgiwg-urn-admin@dgiwg.org

Declaration of syntactic structure:

The Namespace Specific String (NSS) of all URNs that use the "dgiwg" NID will have the following structure:

urn:dgiwg:{DGIWGresource}:{ResourceSpecificString}

where the "DGIWGresource" is a US-ASCII string that conforms to the URN syntax requirements [RFC2141] and defines a specific class of resource type. Each resource type has a specific labeling scheme that is covered by "ResourceSpecificString", which also conforms to the naming requirements of [RFC2141]. The only exception is that the character ":" shall not be used as part of the "DGIWGresource" string. This is to avoid possible confusion. Further, "DGIWGresource" is case sensitive.

The DGIWG maintains a naming authority, the DGIWG Registration System (DRS), that will manage the assignment of "DGIWGresources" and the specific registration values assigned for each resource class. Other DGIWG standards documents will define the "ResourceSpecificStrings" for a given "DGIWGresource".

Relevant ancillary documentation:

The DGIWG defines a number of specific lists of information elements that can be combined with the models in product specifications and application schema. These are maintained by the DGIWG. More information about the DRS, and the registration activities and procedures to be followed, can be found in the document "DGIWG Terminology Register Technical Specification" [STD-DP-07-024-ed1.0.1], which provides the procedures for the DGIWG registration of geographical items. https://portal.dgiwg.org/files/?artifact_id=5438&format=doc. This is a stable URI. Additional information may be found at http://www.dgiwg.org/dgiwg/htm/registers/registers.htm.

Identifier uniqueness considerations:

The DRS will manage resources using the "dgiwg" NID and will be the authority for managing the resource type identifiers and subsequent strings associated with them. In the associated procedures, the DRS will ensure the uniqueness of the strings or shall permit secondary responsibility for management of well-defined sub-trees. URNs issued by the DRS may not be reassigned.

The DGIWG may permit use of experimental type values that will not be registered. As a consequence, multiple users may end up using the same value for separate uses. As experimental usage is only intended for testing purposes, this should not be a real issue.

Identifier persistence considerations:

The DRS will provide clear documentation of the registered uses of the "dgiwg" NID. The DRS will establish a registry for DGIWGresources. Each DGIWGresource will have a separate description in the registry and may have its own sub-registry.

The registries and information will be published and maintained by the DRS on its web site.

Process of identifier assignment:

As defined in the DGIWG Terminology Register Technical Specification, the DRS will provide procedures for registration of each type of resource that it maintains. Each such resource may have three types of registration activities:

1. Registered values associated with DGIWG specifications or services

2. Registration of values or sub-registries to other entities

3. Name models to be used for experimental purposes

Process for identifier resolution:

The namespace is not listed with a Resolution Discovery System (RDS); this is not relevant.

Rules for Lexical Equivalence:

No special considerations; the rules for lexical equivalence of [RFC2141] apply.

Conformance with URN Syntax:

No special considerations.

Validation mechanism:

None specified. URN assignment will be handled by procedures implemented in support of DRS activities.

Scope:

Global

3. Examples

The following examples are representative urns that could be assigned by the DRS. They may not be the actual strings that would be assigned.

Example 1

DGIWGresource "crs"
Syntax: "urn:dgiwg:crs:<crs name>"

ResourceSpecificString: A simple string with the name of the coordinate reference system (CRS) defined in a sub-registry.

Use: Defines the urn to be used for queries to a DGIWG CRS registry that provides URIs for the CRS.

Example 2

DGIWGresource "dfdd"
Syntax: "urn:dgiwg:fad:dfdd<fad_code>:<fad_name>"

The DGIWG maintains a feature and attribute data (FAD) registry that contains registers of geographic information concepts used to characterize aspects of real-world phenomena for different information communities (https://www.dgiwg.org/FAD/registers.jsp).

urn:dgiwg:fad:dfdd:Aerodrome:aerodrome

urn:dgiwg:fad:dfdd:Helipad:helipad

urn:dgiwg:fad:dfdd:AerodromeMoveAreaLighting:aerodrome
movement-area-lighting

4. Namespace Considerations

The Defence Geospatial Information Working Group is developing a variety of applications and services. Some of these services require that supporting information (e.g., data descriptions, attributes, etc.) be fully specified. For proper operation, descriptions of the needed supporting information must exist and be available in a unique, reliable, and persistent manner. These dependencies provide the basis of need for namespaces, in one form or another.

As the work is ongoing and the Defence Geospatial Information Working Group covers many technical areas, the possibility of binding to various other namespace repositories has been deemed impractical. Each object or description, as defined by the DGIWG, could possibly be related to multiple different other namespaces, so further conflicts of association could occur. Thus, the intent is to utilize the Defence Geospatial Information Working Group Registration System, operated by the DGIWG, as the naming authority for DGIWG-defined objects and descriptions.

5. Community Considerations

The objects and descriptions required for registration services defined by the DGIWG are publicly available for use by other organizations. The DGIWG will provide public access and support for name requests by other organizations. This support can be enabled in a timely and responsive fashion as new objects and descriptions are produced. These will be enabled in a fashion similar to current IANA processes. A description of the DGIWG collaboration process is available on the DGIWG website: http://www.dgiwg.org/dgiwg/.

Due to DGIWG coordination with other standards organizations and the use of standards from other standards organizations, there is a need to avoid duplicate or replicated names, such as those for coordinate reference systems. In order to coordinate the consistent use of names and namespaces, the DGIWG has formal relationships with both the OGC and with ISO. As long as having consistent names and namespaces across these organizations does have security implications for certain classes of applications (see below), then shared names and namespaces will be used.

6. Security Considerations

For many applications that use DGIWG standards and terminology, there are no additional security considerations other than those normally associated with the use and resolution of URNs in general (which are described in [RFC1737], [RFC2141], and [RFC3406]). However, for a certain class of applications related to war fighter and peacekeeping operations, there is a high level of importance for having secure methods to access locations once the URN resolution has taken place (i.e., after the name-to-location resolution). In these cases, agreed-upon military command and control (C2) security, including authentication and authorization, shall be considered. However, the majority of communications in a military environment, just as in any environment, are low-level un-secure or minimally secure information. The Internet is well used, and a URN is necessary for compatible web services.

7. IANA Considerations

This document registers with IANA a new formal URN Namespace ID, "dgiwg", following the procedures as defined in RFC 3406 [RFC3406]. The completed registration template is in Section 2 of this document. The "Uniform Resource Names (URN) Namespaces" registry is available from the IANA website: http://www.iana.org.

8. References

8.1. Normative References

[RFC2141] Moats, R., "URN Syntax", RFC 2141, May 1997.

[RFC3406] Daigle, L., van Gulik, D., Iannella, R., and P. Faltstrom, "Uniform Resource Names (URN) Namespace Definition Mechanisms", BCP 66, RFC 3406, October 2002.

8.2. Informative References

[RFC1737] Sollins, K. and L. Masinter, "Functional Requirements for Uniform Resource Names", RFC 1737, December 1994.

[STD-DP-07-024-ed1.0.1] DGIWG Terminology Register Technical Specification, June 2008.

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