Name type specification – ontology resources

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i. **Preface**

This document specifies a rule for constructing OGC names that may be used for identifying ontology resources.

ii. **Document terms and definitions**

This document uses the normative terms (SHALL, SHOULD, etc) defined in Subclause 5.3 of [OGC 06-121r3], which is based on the ISO/IEC Directives, Part 2: Rules for the structure and drafting of International Standards. In particular, the word “shall” (not “must”) is the verb form used to indicate a requirement to be strictly followed to comply with this specification.

Name production rules in this document are expressed using ABNF (IETF RFC 5324).
Name type specification – ontology resources

1 Scope

An OGC name is required for ontology resources published by OGC. This includes OWL ontologies, classes and properties.

NOTE: This set of names is intended to be used for ‘T-box’ ontology elements. ‘A-box’ ontology elements, and supporting elements such as functions and rules, are identified with /def/ identifiers, as described in http://www.opengeospatial.net/doc/def-names-1

2 Normative references


OGC 05-020r10, Technical Committee Policies and Procedures
http://www.opengis.net/doc/tc-policies

OGC 09-046r2, OGC Naming Authority – Procedures http://www.opengis.net/doc/ogc-na-policies

3 Terms and Definitions

3.1 T-box

T-Box statements describe a conceptualization, a set of concepts and properties for these concepts.

NOTE: T-Box statements are broadly equivalent to a ‘schema’ or data model, classes and their properties.

3.2 A-box

A-Box statements are T-Box-compliant statements.

NOTE: A-Box statements are broadly equivalent to ‘data’, instances and individuals.
4 Naming rule

4.1 OGC name schemes

A http URI scheme [IETF RFC 3986] is defined by OGC to provide persistent names for resources of interest in geographic information infrastructures. The generic syntax for OGC names is described in [OGC Naming Authority – Procedures].

The generic syntax for OGC http URIs is

\[
\text{URI} = "http://www.opengis.net/" \text{OGCResource } \\ "/" \text{ResourceSpecificPath}
\]

The following ABNF adapted from [IETF RFC 3986] provides some basic definitions required in the rest of this document.

\[
\begin{align*}
\text{segment} & = *\text{pchar} \\
\text{segment-nz-nc} & = 1*\text{pchar-nc} \\
\text{pchar} & = \text{unreserved} / \text{pct-encoded} / \text{sub-delims} / ":" / "@" \\
\text{pchar-nc} & = \text{unreserved} / \text{pct-encoded} / \text{sub-delims} / ":" \\
\text{pct-encoded} & = "%" \text{HEXDIG} \text{HEXDIG} \\
\text{unreserved} & = \text{ALPHA} / \text{DIGIT} / ":" / ";" / ":" / ":" \\
\text{reserved} & = \text{gen-delims} / \text{sub-delims} \\
\text{gen-delims} & = ":" / ";" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" / ":" \\
\text{sub-delims} & = "!" / ":" / "@" / "#" / "[" / "]" / "@" \\
\end{align*}
\]

4.2 Production rule for ontology names

The basic form for an OGC name that identifies an ontology resource shall be produced using the following rule:

\[
\begin{align*}
\text{OGCResource} & = "ont" \\
\text{ResourceSpecificPath} & = [ \text{aggregate } \\ "/" ] \text{ontology } [ "#" \text{code} ] \\
\text{aggregate} & = \text{segment-nz-nc} ; \text{token denoting a set of ontologies} \\
\text{ontology} & = \text{segment-nz-nc} ; \text{token denoting the ontology} \\
\text{code} & = \text{segment-nz-nc} ; \text{localname for ontology element}
\end{align*}
\]

The base URI (i.e. without the ‘#’ separator and ‘code’ element) is used to identify an ontology as a whole, which may import other ontologies.
A full URI denotes an ontology class or property.

5 Name assignment policy

The register of names http://www.opengis.net/register/ogc-na/name is controlled by OGC-NA. Changes to this register (addition, deletion, and supersession) shall be initiated by a submission to the OGC Naming Authority names@opengeospatial.org.

6 Examples

The following ontology resources are defined in OGC’s GeoSPARQL standard http://www.opengis.net/doc/geosparql:

- http://www.opengis.net/ont/geosparql

  the GeoSPARQL ontology.

- http://www.opengis.net/ont/geosparql#SpatialObject

  the SpatialObject class from the GeoSPARQL ontology.

- http://www.opengis.net/ont/gml#Polygon

  the Polygon class from the GML ontology.

- http://www.opengis.net/ont/geosparql#hasGeometry

  the hasGeometry property from the GeoSPARQL ontology.

7 Bibliography

OGC 11-052 GeoSPARQL http://www.opengis.net/doc/geosparql

OGC 09-047r3 Name type specification – definitions – part 1 – basic name http://www.opengis.net/doc/def-names-1

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## Revision History

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<tr>
<td>29 June 2012</td>
<td>0.1 Draft</td>
<td>Simon Cox</td>
<td>N/A</td>
<td>Initialised Draft Document. Using 09-047r3 as template</td>
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<td>0.2 Draft</td>
<td>Simon Cox, Clemens Portele</td>
<td>3.2</td>
<td>Added step in URI for aggregates of ontologies</td>
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