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OGC® EO Data Access Best Practice

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Abstract

TODO

Suggested additions, changes, and comments on this draft document are welcome and encouraged. Such suggestions may be submitted by email message or by making suggested changes in an edited copy of this document.

Keywords

ogcdoc, eo, earth observation

Terms and definitions

This document uses the standard terms defined in Subclause 5.3 of [OGC 06-121r9], 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 conform to this standard.

Submitting organizations

The following organizations have submitted this Best Practice to the Open GeoSpatial Consortium, Inc.:

- EOX IT Services GmbH * *
- European Space Agency (ESA)

Document Contributor Contact Points

All questions regarding this document should be directed to the editor or the contributors.

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Changes to the OGC ® Abstract Specification

The OGC ® Abstract Specification does not require any changes to accommodate the technical contents of this (part of this) document.

Future Work

TODO

Foreword

TODO

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. The Open Geospatial Consortium shall not be held responsible for identifying any or all such patent rights.

Recipients of this document are requested to submit, with their comments, notification of any relevant patent claims or other intellectual property rights of which they may be aware that might be infringed by any implementation of the standard set forth in this document, and to provide supporting documentation.

Introduction

TODO

OGC® EO Data Access Best Practice

Chapter 1. Scope

TODO

Chapter 2. Conformance

TODO Needed?

Chapter 3. Normative references

The following normative documents contain provisions that, through reference in this text, constitute provisions of this specification. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. For undated references, the latest edition of the normative document referred to applies.

OGC 06-121r9, *OGC Web Services Common Standard*, version 2.0

TBD OGC 09-146r2, *Coverages Implementation Schema / GML 3.2.1 Application Schema for Coverages*, version 1.1

Conformance classes used: *gml-coverage*

TBD OGC 09-110r4, *OGC® Web Coverage Service 2.1 Interface Standard Core*, version 2.1

Conformance classes used: *core*

OGC 11-053r1, *OGC® Web Coverage Service Interface Standard - CRS Extension*, version 1.0

Conformance classes used: *crs*, *crs-gridded-coverage*

OGC 12-039, *OGC® Web Coverage Service Interface Standard - Scaling Extension*, version 1.0

Conformance classes used: *scaling*

OGC 12-040, *OGC® Web Coverage Service Interface Standard - Range Subsetting Extension*, version 1.0

Conformance classes used: *record-subsetting*

OGC 12-049, *OGC® Web Coverage Service Interface Standard - Interpolation Extension*, version 1.0

Conformance classes used: *interpolation*

OGC 09-147r3, *OGC® WCS 2.0 Interface Standard - KVP Protocol Binding Extension*, version 1.0

Conformance classes used: *get-kvp*

OGC 09-149r1, *OGC® WCS 2.0 Interface Standard - SOAP Protocol Binding Extension*, version 1.0

Conformance classes used: *soap*

OGC 12-100r1, *OGC® GML Application Schema - Coverages - GeoTIFF Coverage Encoding Profile*, version 1.0

Conformance classes used: *geotiff-coverage*

OGC 14-100r2, *OGC® CF-netCDF 3.0 encoding using GML Coverage Application*, version 2.0

Conformance classes used: *CF-netCDF-1.6 GML encoding*, *CF-netCDF-1.6 data format*, *CF-netCDF-1.6 multipart data encoding*

OGC 12-108, *OGC® GML Application Schema - Coverages JPEG2000 Coverage Encoding Extension*, version 1.0

Conformance classes used: *jpeg2000-coverage*

OGC 10-157r4, *Earth Observation Metadata Profile of Observations and Measurements*, version 1.1.0

Conformance classes used: *eop, sar, opt*

Chapter 4. Terms and definitions

For the purposes of this document, the terms and definitions given in the above references apply. In addition, the following terms and definitions apply. An arrow "→" indicates that the following term is defined in this Clause.

4.1. Coverage

digital representation of a spatio-temporally varying phenomenon as defined in

4.2. Dataset

2-D → EO Coverage



A Dataset usually represents observations obtained by satellite instruments.

4.3. Dataset Series

collection of → EO Coverages

4.4. EO Coverage

Rectified Grid → Coverage or Referenceable Grid → Coverage having an → EO Metadata record and a WGS84 bounding box

4.5. EO Metadata

→ EO Coverage's metadata record

4.6. Stitched Mosaic

→ EO Coverage composed from subsets of one or more co-referenced → Datasets

4.7. EO Product

An EO Product contains one or more related → EO Product Datasets plus metadata and optionally auxiliary data like → EO Product Quicklooks.

4.8. EO Product Dataset

One or more files each containing one or more → EO Coverages.

4.9. EO Product Quicklook

A visual representation of a usually reduced → EO Product Dataset encoded in an image format. The → EO Product Dataset may combine different bands.

4.10. Lineage record

Data structure documenting an operation that has been applied to the → coverage it is part of

4.11. refers to

contains, in its → EO Metadata element as defined in [OGC 10-157r4], the → EO Metadata element of

Chapter 5. Conventions

5.1. UML notation

Unified Modeling Language (UML) static structure diagrams appearing in this specification are used as described in Subclause 5.2 of OGC Web Services Common [OGC 06-121r9].

5.2. Data dictionary tables

The UML model data dictionary is specified herein in a series of tables. The contents of the columns in these tables are described in Subclause 5.5 of [OGC 06-121r9]. The contents of these data dictionary tables are normative, including any table footnotes.

5.3. Namespace prefix conventions

The following namespaces are used in this document. The prefix abbreviations used constitute conventions used here, but are **not** normative. The namespaces to which the prefixes refer are normative, however.

Table 1. Namespace mappings

Prefix	Namespace URI	Description
xsd	http://www.w3.org/2001/XMLSchema	XML Schema namespace
ows	http://www.opengis.net/ows/2.0	OWS Common 2.0
gml	http://www.opengis.net/gml/3.2	GML 3.2.1
gmlcov	http://www.opengis.net/gmlcov/1.1	Coverages Implementation Schema 1.1
wcs	http://www.opengis.net/wcs/2.1	WCS 2.1
eop	http://www.opengis.net/eop/2.0	Earth Observation Metadata Profile of Observations and Measurements
opt	http://www.opengis.net/opt/2.0	Optical Earth Observation Metadata Profile of Observations and Measurements (extension of eop)
sar	http://www.opengis.net/sar/2.0	SAR Earth Observation Metadata Profile of Observations and Measurements (extension of eop)
wcseo	http://www.opengis.net/wcs/wcseo/1.1	WCS Application Profile - Earth Observation 1.1

Prefix	Namespace URI	Description
scal	http://www.opengis.net/wcs/scaling/1.0 (schema uses http://www.opengis.net/WCS_service-extension_scaling/1.0)	WCS Scaling Extension
int	http://www.opengis.net/wcs/interpolation/1.0 (schema uses http://www.opengis.net/WCS_service-extension_interpolation/1.0)	WCS Interpolation Extension
crs	http://www.opengis.net/wcs/crs/1.0	WCS CRS Extension
gmd	http://www.isotc211.org/2005/gmd	ISO 19139 Metadata
gmi	http://standards.iso.org/iso/19115-2/gmi/1.0	ISO 19139-2 Metadata
mdb	http://standards.iso.org/iso/19115-3/mdb/1.0	ISO 19115-3 Metadata

5.4. Multiple representations

When multiple representations of the same information are given in a specification document these are consistent. Should this not be the case then this is considered an error, and the [XML Schema](#) shall take precedence.

Chapter 6. rangeType Description Enhancements

6.1. Overview

TODO

TODO

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- [8] OGC 09-025r2, OpenGIS Web Feature Service 2.0 Interface Standard - With Corrigendum, version 2.0.2
- [9] OGC 16-118 EO Data Access Best Practice, version 0.0.1

Annex A: Revision History

Date	Release	Author	Paragraph modified	Description
2016-07-22	0.0.1	Stephan Meißl	All	Draft proposal from ESA project EVO-ODAS