

Overview of OGC Document Types

Carl Reed February 2015



Overview



- The following set of slides documents the current set of key OGC documents, their key policy and procedure actions, and key document work flows. This document was originally developed from a Planning Committee action from the June 2005 Planning Committee meetings in St. Johns.
 - Any and all comments are welcome.



Contents

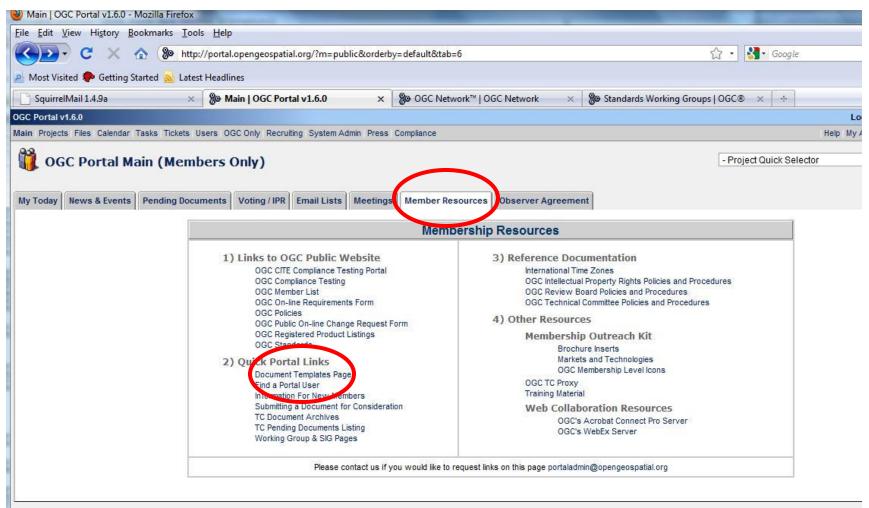


- OGC Document Templates
- OGC Document Numbers
- OGC Document Types



OGC Document Templates







OGC Document Numbers



OGC document numbers as shown in pending. These are assigned when a document is first uploaded to pending documents. Section 8.7.1 in the TC P&P

D N	Decree of (-Feb 490 to decretor)	A - II		0:	F	Hele eded
Doc Numbe		Author e for 2010/06/17 TC/PC	Group	Size	Format	Uploaded
10-124	OGC Identifiers – the case for http URIs	Simon Cox		142 KB	doc	2010-05-20 16:05:07
10-123		Leif Stainsby		100.99 KB		2010-05-20 15:49:26
10-122		Leif Stainsby		106.69 KB		2010-05-20 15:47:39
10-121		Leif Stainsby		103.8 KB	pdf	2010-05-20 15:46:42
10-120		Leif Stainsby		105.18 KB	pdf	2010-05-20 15:45:09
10-119		Leif Stainsby		111.5 KB	pdf	2010-05-20 15:43:50
10-118	_	Leif Stainsby		107.59 KB		2010-05-20 15:41:33
10-110	<u> </u>	Len Stainsby		107.55 KD	pui	2010-03-20 13.41.33
10-117	Define a packaging format for CSW-ebRIM Extension Packages	Leif Stainsby		105.39 KB	pdf	2010-05-20 15:33:17
10-116	Add support for multiple file input such as shp files	Bastian Schäffer		99.35 KB	pdf	2010-05-20 15:32:03
10-115	Make clear the distinction between a Process Description, a WPS Application Profile, a profile of the WPS Specification	Edward Nash		103.12 KB	pdf	2010-05-20 15:30:56
10-114	documents	Steven Keens		104.79 KB	pdf	2010-05-20 15:29:45
10-113	fragments.	Panagiotis (Peter) A. Vretanos		104.09 KB	pdf	2010-05-20 15:28:29
10-112	Refine Granularity of Timestamps	Thomas Lane		103 KB	pdf	2010-05-20 15:27:13
10-111	T dolla confinents on ocoal 13.0 specification draft	Martin Desruisseaux		167.54 KB	pdf	2010-05-20 12:56:54
09-142r3	Open GeoSMS Specification	Kuo-Yu slayer Chuang		359.66 KB	pdf	2010-05-20 11:26:18
10-110	Catalogue (CSW) 2.0.2 CR: introducing a new attribute to enrich the semantics of numberOfRecordsMatched	Yuqi Bai		104.88 KB	pdf	2010-05-19 14:55:49
10-066	— comanico or requiremente ciaco extension	Lorenzo Bigagli		103.67 KB	pdf	2010-05-19 14:53:14
10-065	Include MIME type specifications in XML encoding standards	Simon Cox		107.62 KB	pdf	2010-05-19 14:50:52
10-109	Make get Domain more general	Panagiotis (Peter) A. Vretanos		104.07 KB	pdf	2010-05-17 12:31:50
10-108	KML Change Request: Correct latitude & longitude bounds & defaults	Tyler Erickson		103.16 KB	pdf	2010-05-16 01:57:07
10-107r1	KVP parameter ordering and unrecognized KVP parameters	Keith Pomakis		105 KB	pdf	2010-05-16 01:51:26
10-106	BNF for WKT syntax does not specify whitespace between coordinates	Kevin Martin		104.01 KB	pdf	2010-05-16 01:43:58
10-105	Create new feature type capability for WFS	Panagiotis (Peter) Vretanos		101.55 KB	pdf	2010-05-16 01:41:46



Document Types



- Can be implemented in software. Encoding, Interface, API
- Abstract Specifications
 - Conceptual foundation / reference model for spec development
- Best Practices
 - How to use an OGC standard in a given context or domain
- Engineering Report
 - Report the results of an interoperability initiative
- Discussion Paper
 - Technical discussion related to one or more OGC standards
- White Paper
 - General Discussion on some topic of interest on OGC standards
- Change Request
 - Details on proposed change to an OGC standard





OGC Document Types



OGC Standards Documents



- OGC Standards Documents have 2 subtypes:
 - Abstract Specifications (AS)
 - Implementation Standards (IS)
- Standards are the primary "product" of the work of the Consortium.
- Guided by the Technical Committee Policies and Procedures.
 - http://portal.opengeospatial.org/files/?artifact_id=23325



Implementation Standard (IS)



- A document containing an OGC consensus computing technology <u>dependent</u> standard for application programming interfaces, models, and encodings as well as related standards based on the Abstract Specification or domain-specific extensions to the Abstract Specification provided by domain experts. (usually as a result of activity in a Working Group).
 - Formal review via the OGC RFC process. Next slide.
 - Includes member approved profiles and application schemas.



Request For Comment (RFC) - Candidate



Definition:

 A candidate standard that has been formally submitted into the standards process by a Standards Working Group. Typically, this submission occurs at the point the SWG requests formal OAB review of the document or for the official 30 day public comment period, whichever is first.

Clarification

- Can only be submitted by OGC members
- Requires an official vote in the SWG for such a request



Four sub-types of IS



Interface

 An IS that documents member agreement on named set of operations that characterize the behavior of an entity. An example is the WMS standard.

Encoding

 An IS that documents member agreement on how to describe geospatial data and to focus on what data is and how to structure, store and to send geographic information. An example is GML.

Profile

 An IS that documents member agreement on a strict subset of an OGC standard applicable to multiple Application Schemas. An example of a profile is the GML Profile for Simple Feature Exchange

Application Schema

 An IS that documents member agreement a subset of an OGC implementation standard and adds application specific entities, e.g., feature types. An example of an application schema is LandGML.



Abstract Specification (AS)



- A document (or set of documents) containing an OGC consensus computing <u>technology independent</u> specification for application programming interfaces and related specifications based on object-oriented or other IT accepted concepts that describes and/or models an application environment for interoperable geoprocessing and geospatial data and services products.
 - Formal review and vote by Members.
 - SWG not required. Can be developed in any OGC WG or SC.



Abstract Spec on the OGC website http://www.opengeospatial.org/standards/as



Abstract Specifications

The OGC Technical Committee (TC) has developed an architecture in support of its vision of geospatial technology and data interoperability called the OpenGIS Abstract Specification. The Abstract Specification provides the conceptual foundation for most OGC specification development activities. Open interfaces and protocols are built and referenced against the Abstract Specification, thus enabling interoperability between different brands and different kinds of spatial processing systems. The Abstract Specification provides a reference model for the development of OpenGIS Implementation Specifications.

Document Title (click to download)	♦ Version	◆ Document #	♦ Editor	♦ Date		
Topic 0 - Overview	5.0	04-084	Carl Reed	2005-06-27		
ntroduction and roadmap to the Abstract specification.						
Topic 1 - Feature Geometry	5.0	01-101	John Herring	2001-05-10		
Same as ISO 19107, available at http://www.iso.org.						
Topic 2 - Spatial referencing by coordinates	4.0	08-015r2	Roger Lott	2010-04-27		
Topic 2.1: Spatial Referencing by Coordinates - Extension for Parametric Values	1.0	10-020	Paul Cooper	2014-04-16		
Горіс 2.1						
Topic 3 - Locational Geometry Structures	4.0	99-103	Cliff Kottman	1999-03-18		
Provides essential and abstract models for GIS technology that is	s widely used.					
Topic 4 - Stored Functions and Interpolation	4.0	99-104	Cliff Kottman	1999-03-30		
This Topic Volume provides essential and abstract models for technology that is used widely across the GIS landscape. Its first heavy use is expected to occur in support of Coverage specifications (see Topic 6, The Coverage Type).						
Topic 5 - Features	5.0	08-126	Cliff Kottman and Carl Reed	2009-01-15		
From ISO 19101, "A feature is an abstraction of a real world phenomenon"; it is a geographic feature if it is associated with a location relative to the Earth.						
Topic 6 - Schema for coverage geometry and functions	7.0	07-011	OGC	2007-12-28		
This International Standard defines a conceptual schema for the spatial characteristics of coverages. Coverages support mapping from a spatial, temporal or spatiotemporal domain to feature attribute values where feature attribute types are common to all geographic positions within the domain. A coverage domain consists of a collection of direct positions in a coordinate space that may be defined in terms of up to three spatial dimensions as well as a temporal dimension.						
Topic 7 - Earth Imagery	5.0	04-107	George Percivall	2004-10-15		
Replaced previous material in Topic 7 with ISO 19101-2, Reference Model - Geographic Information - Imagery. Version 5 of OGC Topic 7 is identical with ISO 19101-2 Working Draft #3. Topic 7 will be updated jointly with the progress of ISO 19191-2. Appendix A of Topic 7, version 4						



Best Practices Document



Definition:

 A document containing discussion of best practices related to the use and/or implementation of an adopted OGC document or related technology and for release to the public. Best Practices Papers are the official position of the OGC and thus represent an endorsement of the content of the paper.

Clarification

- A best practice is a technique or methodology that, through experience and research, has proven
 to reliably lead to a desired result. A commitment to using the best practices in any field is a
 commitment to using all the knowledge and technology at one's disposal to ensure success.
- A best practice tends to spread throughout a field or industry after a success has been demonstrated. However, it is often noted that demonstrated best practices can be slow to spread, even within an organization. According to the American Productivity & Quality Center, the three main barriers to adoption of a best practice are a lack of knowledge about current best practices, a lack of motivation to make changes involved in their adoption, and a lack of knowledge and skills required to do so.
- Requires changes to the OGC TC P&P
- Requires changes to the OGC web site
- Most of the current OGC Recommendation Papers are in fact Best Practices documents.



Best Practices on the OGC Web Site

http://www.opengeospatial.org/standards/bp



Best Practices

Documents containing discussion of best practices related to the use and/or implementation of an adopted OGC document and for release to the public. Best Practices Documents are an official position of the OGC and thus represent an endorsement of the content of the paper. Schemas for some of these documents can be at the Best Practices Schema Repository.

♦ Document Title (click to view/download)	♦ Version	◆ Document #	♦ Editor	♦ Date		
A URN namespace for the Open Geospatial Consortium (OGC)	0.4	07-107r3	Carl Reed	2008-05-02		
This document describes a URN (Uniform Resource Name) namespace that is engineered by the Open Geospatial Consortium (OGC) for naming persistent resources published by the OGC. The formal Namespace identifier (NID) is "ogc".						
Binary Extensible Markup Language (BXML) Encoding Specification	0.0.8	03-002r9	Craig Bruce	2006-01-18		
This OGC Best Practices document specifies a binary encoding fithat is characterized by arrays of numbers. This encoding format				cientific data		
Cataloguing Earth Observation Products for ebXML Registry Information Model 3.0 based Catalogues cat-eo-ebxml-rim-3.0	1.0	10-189r2	Frédéric Houbie; Fabian Skivee	2012-06-12		
This OGC® document specifies the Earth Observation Products Extension Package for ebXML Registry Information Model 3.0, based on the [OGC 10-157r1] Earth Observation Metadata profile of Observations and Measurements. It enables CSW-ebRIM catalogues to handle a variety of metadata pertaining to earth observation p/roducts as defined in [OGC 10-157r1]. This proposed application profile document describes model and encodings required to discover, search and present metadata from catalogues of Earth Observation products. The profile presents a minimum specification for catalogue interoperability within the EO domain, with extensions for specific classes of metadata.						
Compliance Test Language (CTL) Best Practice	0.6.0	06-126r2	Chuck Morris	2009-07-21		
This document establishes Compliance Test Language, an XML grammar for documenting and scripting suites of tests for verifying that an implementation of a specification complies with the specification.						
Definition identifier URNs in OGC namespace	1.3	07-092r3	Arliss Whiteside	2009-01-15		
This document specifies Universal Resource Names (URNs) in the "ogc" URN namespace to be used for identifying definitions. These definitions include definitions of Coordinate Reference Systems (CRSs) and related objects, as specified in OGC Abstract Specification Topic 2: Spatial referencing by coordinates, plus several other resource types for which standard identifiers are useful in OGC Web Services. This document specifies the formats used by these URNs, including formats that can reference definitions recorded in the EPSG database and by other authorities. This document also specifies URNs for some specific definitions for which OGC is the custodian.						
DGIWG WMS 1.3 Profile and systems requirements for interoperability for use within a military environment WMS DGIWG Profile	0.9.0	09-102	Cyril Minoux	2009-09-02		
This document specifies requirements for systems providing maps using OGC Web Map Service. The document defines a profile of OGC WMS 1.3 implementation standard [WMS1.3], a list of normative system requirements and a list of non-normative recommendations. The Defence Geospatial Information Working Group (DGIWG) performed the work as part of through the S05 Web Data Access Service Project of the						



Engineering Report (ER)



Definition:

 A document that reports on some technical activity in an Interoperability Program Initiative. An ER is initially not a publicly available document. An ER does not represent the official position of the OGC or of the OGC Technical Committee.

Clarification

- ERs will not be referred to as a "candidate standard" "candidate standard".
- Developed by members potentially with help from OGC Consultants and staff
- An ER can become a Public Engineering Report, a Best Practices Paper, or submitted via the OGC RFC process for consideration as an adopted standard.
- Usually first released as a Public Engineering Report if members deem document is mature enough.



Public Engineering Reports on the OGC website http://www.opengeospatial.org/standards/per



OGC Public Engineering Reports

Documents that present technology issues being considered in the Working Groups of the Open Geospatial Consortium Technical Committee. Their purpose is to create discussion in the geospatial information industry on a specific topic. These papers do not represent the official position of the Open Geospatial Consortium nor of the OGC Technical Committee. Schemas for some of these documents can be at the Discussion Paper Schema Repository.

♦ Document Title (click to download)	♦ Version	◆ Document #	♦ Editor	♦ Date		
OGC® Testbed 10 Summary Engineering Report		14-044	Lew Leinenweber	2015-02-02		
The OGC Testbed 10 was an initiative of OGC's Interoperability Program to collaboratively extend and demonstrate OGC's baseline for geospatial interoperability. The majority of work for Testbed 10 was conducted between October 2013 and April 2014.						
USGS OGC® Interoperability Assessment Report		14-079r1	Ingo Simonis	2015-02-02		
The USGS Interoperability assessment was conducted under the OGC Interoperability Program with the goal to better understand how USGS customers make use of OGC compliant Web services operated by USGS. For this assessment, USGS customers have been invited to share their experiences and to describe their use cases and experiences made with USGS data services and products. From those descriptions, recommendations have been derived that help USGS to better understand their user community and optimize their service offerings.						
WaterML2.0 part 2 – rating tables, gauging observations and cross-sections: Interoperability Experiment Results		14-114r1	Peter Taylor	2014-12-30		
related to the monitoring points (stations/sites) where time-series data are typically collected. WaterML2.0 Part 2, is a candidate standard that defines how to exchange rating tables, gauging observations and cross-sections in an interoperable manner. This engineering report outlines the design and results of an OGC Interoperability Experiment (IE) that implemented and tested the current WaterML2.0 part 2 information model. The OGC IE experiment ran was conducted from November 2013 to August 2014. The use case for the IE involved exchange of data in three scenarios in Australia, US and the UK. This report describes the software requirements, design, deployments and challenges faced by the experiment. The results were used to improve the WaterML2.0 part 2 information model and provided the basis for the formation of an OGC Standards Working Group (SWG) in August 2014. This SWG is responsible for formalization of the candidate OGC standard, for submission in 2015.						
OGC® Aircraft Access to SWIM (AAtS) Harmonization Project Summary Report		14-086r1	Josh Lieberman, Johannes Echterhoff, Matt de Ris, George Wilber	2014-11-03		
This OGC® document summarizes the Aircraft Access to SWIM (AAts) Harmonization activity developed by a team funded by the FAA and led by the Open Geospatial Consortium (OGC). The activity involved assembling a core team of industry participant experts to analyze and harmonize four standards suites and/or standards-based architectures relevant to air-ground information exchange: • The Aircraft Access to SWIM (AAts) concept, • RTCA aeronautical information services (AIS) and meteorological (MET) information data link service committee's (SC-206) concepts and standards, • Air-Ground Information Exchange A830 (AGIE) standard and • OGC standards and architectural perspectives. Elements of this effort have included: • Creation and public release of a Request for Information • Analysis of the fits and overlaps between the four standards suites • Engagement with ongoing standards development efforts to reduce incompatibilities						
OGC® Aircraft Access to SWIM (AAtS) Harmonization		14-073r1	George Wilber,	2014-11-03		



OGC Discussion Paper (DP)



Definition:

 A document containing discussion of some technology or standards work for release to the public. Discussion Papers are not an official position of the OGC and contain a statement to that effect.

Clarification

- No change from current P&P
- A Discussion Paper can eventually become a Best Practices document or an adopted spec via the RFC process or the Profile adoption process.
- Not a white paper. A Discussion paper is related to one or more approved or candidate standards. A white paper is at a higher (more abstract) level.
- The Members deem the document is mature enough for public release.



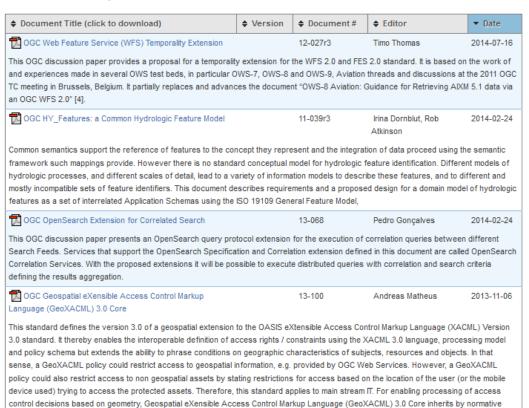
Discussion Papers are on the OGC website



Discussion Papers

Documents that present technology issues being considered in the Working Groups of the Open Geospatial Consortium Technical Committee. Their purpose is to create discussion in the geospatial information industry on a specific topic. These papers do not represent the official position of the Open Geospatial Consortium nor of the OGC Technical Committee. Schemas for some of these documents can be at the Discussion Paper Schema Repository.

View this List Sorted by Date





reference ISO 19125 which defines a geometry model and functions on geometry instances which enrich the XACML 3.0 specification.

OGC White Paper (WP)



Definition:

A publication released by the OGC to the Public that states a
position on a social, political, technical or other subject, often
including a high-level explanation of an architecture or framework of
a solution. A White Paper often explains the results or conclusions
of research.

Clarification

- A WP cab be written by OGC staff, OGC consultants, or OGC member(s) on a particular technology or domain topic of interest to the community and related to the ongoing standards development work of the Consortium.
- A WP will not be considered for adoption as an OGC Implementation Standard
- Release must be approved by the members (vote).
- Not an official position of the OGC



White Papers are published on the OGC website



A white paper is an OGC member approved publication released by the OGC to the Public that states a position on one or more technical considerations or other subjects that are germane to the work of the OGC, often including a high-level explanation of a standards based architecture or framework of a solution. A White Paper often explains the results or conclusions of research. A White Paper is not an official position of the OGC.

Title	Author	Date	File
			Formats
OGC Information Technology Standards for Sustainable Development (14-095)	Lance McKee	2015-01-23	
OGC Smart Cities Spatial Information Framework (OGC 14-115)	George Percivall	2015-01-21	
The Open Geospatial Consortium and EarthCube (OGC 11-159)	David Maidment, Ben Domenico, Alastair Gemmell, Kerstin Lehnert, David Tarboton, Ilya Zaslavsky	2011-10-19	1
Cyberarchitecture for Geosciences White Paper (OGC 11-145)	George Percivall	2014-05-20	₺
OGC Sensor Web Enablement: Overview and High Level Architecture (OGC 07-165r1)	Mike Botts, George Percivall, Carl Reed, John Davidson	2013-04-02	
Architecture of an Access Management Federation for Spatial Data and Services in Germany (OGC 12-026)	Andreas Matheus	2012-04-18	
Geospatial Business Intelligence (GeoBI) (OGC 09-044r3)	George Percivall and Raj Singh	2012-07-12	
Open Source and Open Standards (OGC 11-110)	Arnulf Christl and Carl Reed	2011-08-11	
OGC Standards and Cloud Computing (OGC 11-036)	Lance McKee, Carl Reed, Steven Ramage	2011-04-07	₺



Change Requests



- At any time, any OGC member or non-member can submit a Change Request Proposal (CRP). A CRP allows for the formal documentation of a proposed change to an existing, adopted OGC standard or abstract specification. The change could be an identified error, an inconsistency, a requested enhancement, or a major proposed enhancement. Submitted CRP's are catalogued and stored on a publicly accessible site.
- Only formal Change Requests shall be considered by Standards Working Groups in the OGC and are the basis for revisions to existing OGC standards.



OGC Change Requests



- Can be submitted by anyone Member or non-Members
- Use the public Change Request Submission application
 - http://portal.opengeospatial.org/public_ogc/change_request.php







Guiding Policies/Procedures by Document Type





Key policy points by Document Type **

Document Type	Member Review	WG Actions	IPR Review	E-Vote
White Paper	Yes	No	No	Yes
Best Practices	Yes	Yes	No	Yes
Discussion Paper	Yes	Yes	No	Yes
RFC	Yes	Yes	Yes	Yes



Key process actions for Implementation Specifications on next slide



IS Sub-type Processing Requirements

IS Sub-type	RFC Required?	Public Review?	IPR Review?
Interface	Yes	Yes	Yes
Encoding	Yes	Yes	Yes
Profile	No	Yes	No
Application Schema	No	Yes	Yes

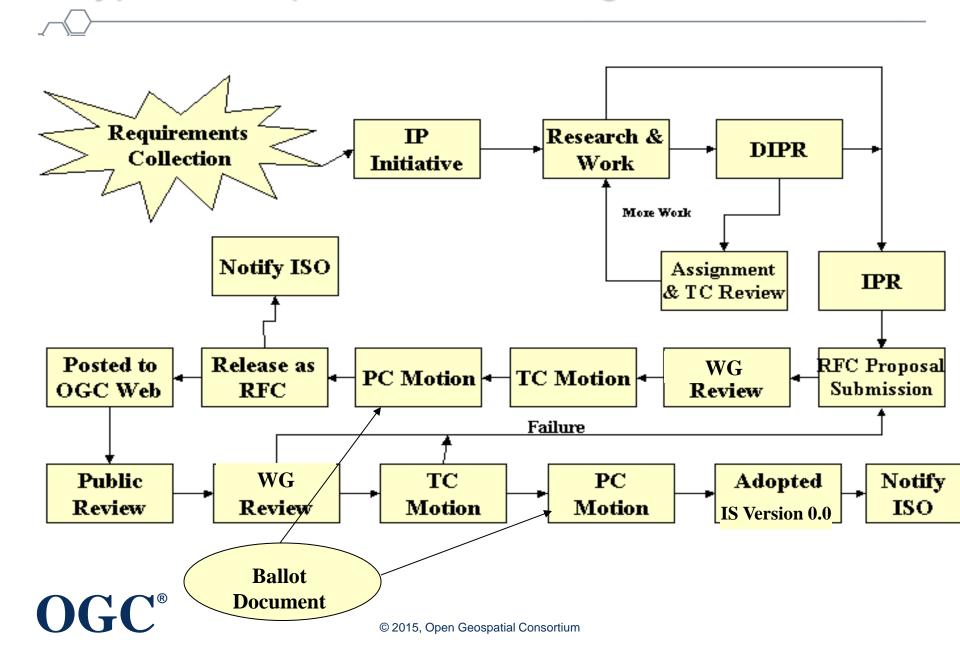




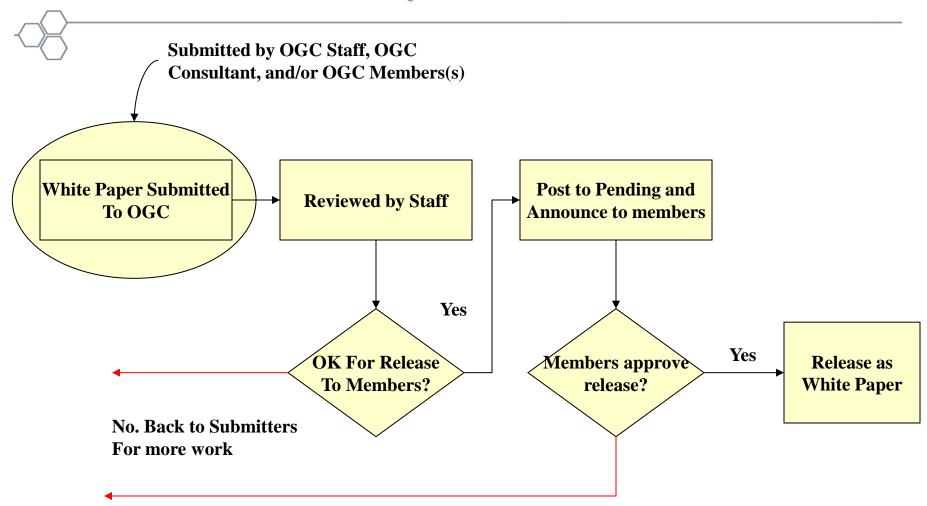
Work Flows by Document Type



Typical Adoption flow starting from Test bed

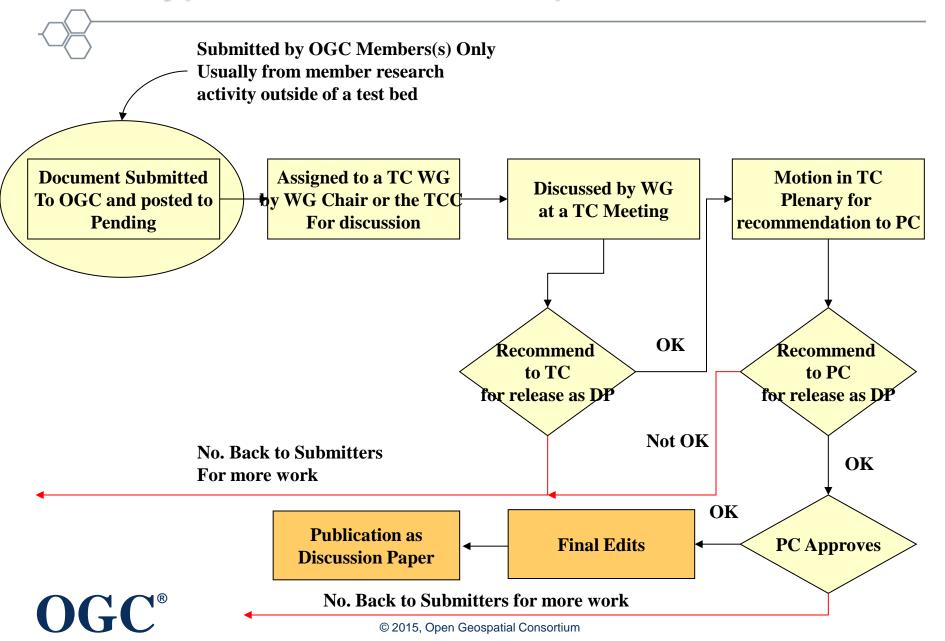


White Paper Work Flow

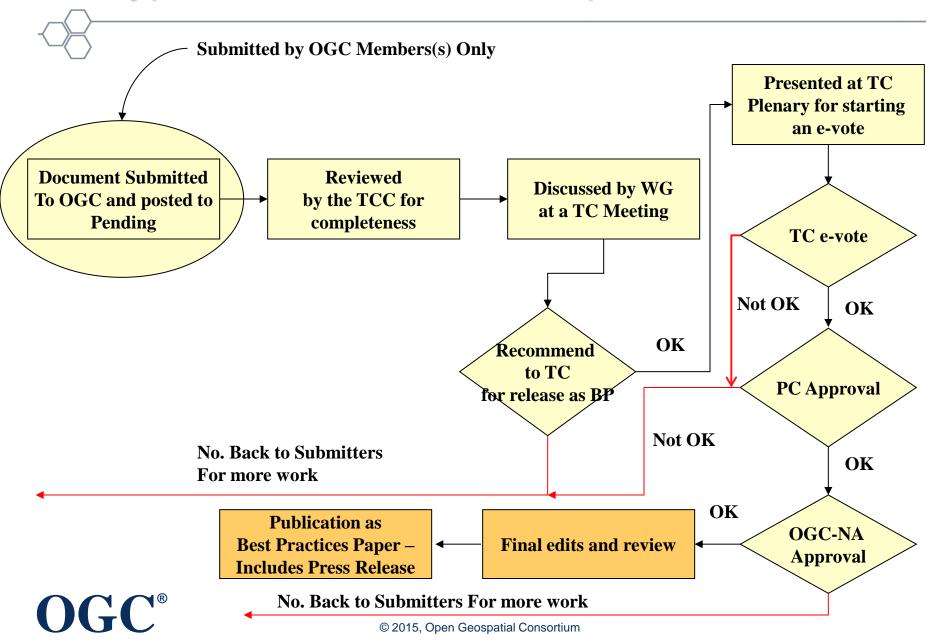




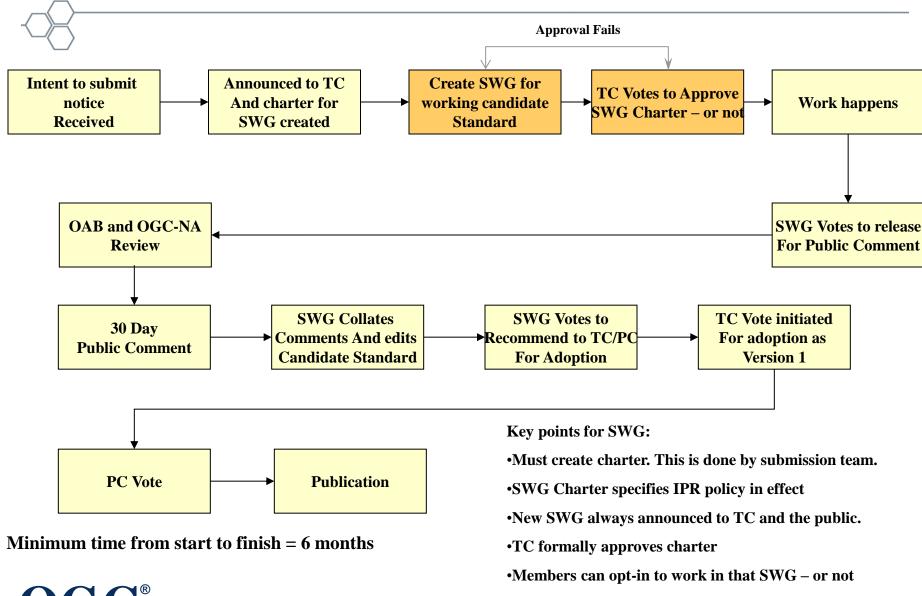
Typical Discussion Paper Work Flow



Typical Best Practices Paper Work Flow



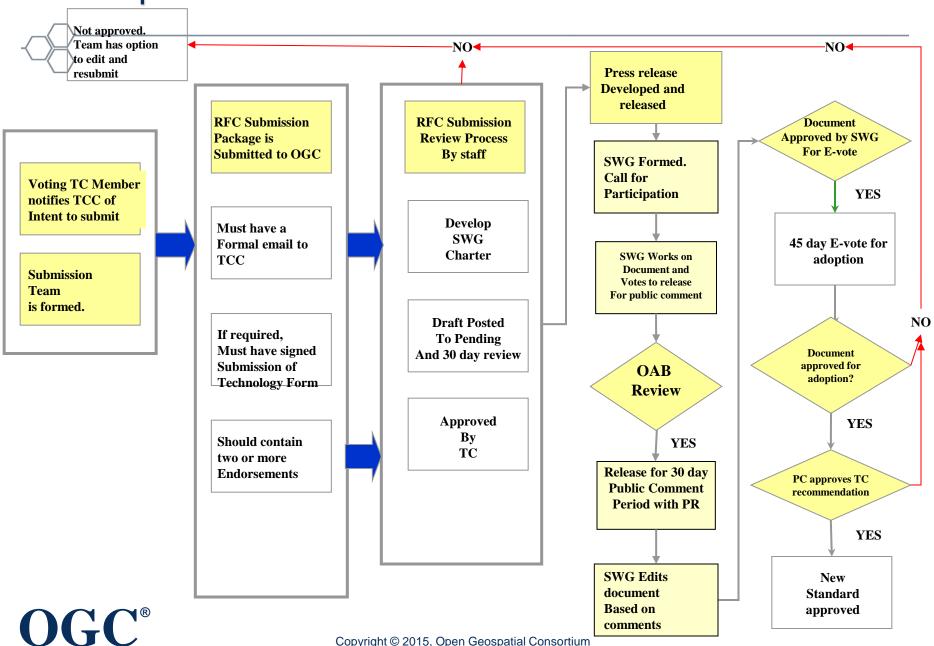
RFC Process General Overview – SWG based



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•A SWG can work application profiles/schemas Copyright © 2015, Open Geospatial Consortium

Request For Comment/SWG Detailed Process



Work Flow for a IS Profile

