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Request for Quotation (RFQ)

And

Call for Participation (CFP)

OGC Web Services Initiative - Phase 5 (OWS-5)

Annex A

OWS-5 Work Breakdown Structure and Work Items

RFQ Issuance Date: May 11, 2007

Proposal Due Date: June 8, 2007

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1   Introduction

This Annex A document is an integral part of the OWS-5 RFQ/CFP. It describes the Work Breakdown Structure (WBS) and the work items for the OGC Web Services Initiative – Phase 5 (OWS-5) Initiative. The Work Items are segregated into six threads. Each thread classifies work items in Phases, for funded and unfunded items, by current sponsors.

2   Sponsor Priorities by Phase

Table 1 shows the OWS-5 Work Items in each of the six threads. The work items will be completed in two distinct phases – OWS 5.1 and OWS 5.2. The phase for each of the work items are detailed in the Phase/Funding column within Table 1 as Phase 1 and Phase 2 respectively. Work items that are designated with an "f" are work items that are currently funded. Those that have a "u" are within scope of this RFQ but may not be funded. In summary:

- 1f = Phase 1, Funded

- 1u = Phase 1, Not funded

- 2f = Phase 2, Funded

- 2u = Phase 2, Not funded

Work items within the CAD/GIS/BIM thread are provided for comments with the anticipation that CGB will be conducted in Phase 2. Comments on the CGB in Annex B are solicited now to support a RFQ/CFP for Phase 5.2 as defined in Master Schedule.

Those who are responding to the OWS-5 RFQ fall in two categories: (a) Proposing Organizations, or (b) Participants. Proposing organizations can provide proposals for any work items that are funded in Phase 1 or Phase 2. Participants are those organizations who wish to provide "In-Kind Contribution" for any of the work items within Phase 1 or Phase 2. For cost sharing funds, proposing organizations should focus on funded work items only. Any submission (or relevant section thereof) that addresses unfunded work items will be viewed and treated as a proposal for In-Kind Contribution.

Please note there are several deliverables in Phase 1 needing to be fully completed by 5.1 Interim Milestone as defined in Master Schedule (Main Body, Section 4.6). Other Phase 1 deliverables may be completed in Phase 5.2.

Table 1 - OWS-5 Work Items by Phase

	Phase
Sensor Web Enablement (SWE)	
Interoperability Program Reports (IPRs)	
GeoReferenceable Imagery IPR (SOS/WPS/WCS)	1f & 2f
SWE Profile for TPPU	2f
SOS Change Request IPR	2f
SWE Change Requests IPRs	2u
WCS Sub-setting IPR	2f
Mass Market/EO SWE Interfaces	1u

Implementations	
SOS - Georeferenceable Image	1f & 2f
WPS - Image Geopositioning Service	1f & 2f
WCS-T - Georeferenceable Image subsetting, JPIP	1f & 2f
SPS for airborne and spaceborne sensors	1f
Mass Market/EO SWE Implementations	1u
SOS for IEEE-1451	1u
Geo-Processing Workflow (GPW)	
Interoperability Program Reports (IPRs)	
OWS Workflow Architecture IPR	1f
OWS SOAP/WSDL Common IPR	1f
WPS - Conflation IPR	1f & 2f
WPS - EO Algorithm IPR	1f
WFS 1.2 Change Request IPR (SOAP/WSDL)	2f
GeoDRM Engineering CR IPR	1u
Security IPR	1u
Implementations	
WFS-T 1.2 plus SOAP/WSDL	2f
WCS-T 1.1 plus SOAP/WSDL	2f
WMS 1.3 plus SOAP/WSDL	2u
OWS Integrated Client	2f
BPEL workflow scripts	1f
BPEL Workflow engine	1u
WPS - Conflation Service	2f
WPS - EO Algorithm	1f
WCPS	1u
WPS- Topology Quality Assessment Service (TQAS)	1u
WPS – Generalization Service	1u
WPS - Clipping Service	1u
GeoDRM Services	2u
Information Communities and Semantics	
Interoperability Program Reports (IPRs)	
Local MSD Implementation Profile IPR	2f

Data View Architecture IPR	2f
GEOINT NAS Schema Processing IPR	2f
Implementations	
GML 3.2.1 application schemas - NAS V1.8.	1f
GML 3.2.1 application schemas - NAS V2.0.	2f
GML 3.2.1 application schemas - Local MSD	1f
GML 3.2.1 App Schema - grid coverage DTED	2f
GML 3.2.1 instance doc - Local MSD	1f
GML 3.2.1 instance doc - grid coverage	2f
Enhance UML-GML Application Schema tool	1f & 2f
OGC Catalog (ebRIM profile of ISO 19115)	1f & 2f
Web Feature Service: GML 3.2.1 Local MSD	2u
Web Coverage Service: grid coverage DTED	2u
CAD/GIS/BIM (CGB)	
Interoperability Program Reports (IPRs)	
Roadmap for integration of AEC+FM information models and Geospatial Information Infrastructure	RFC
Transactional Web Feature Services for BIM	RFC
Catalog/Registry Requirements for BIM and CityModel Features (addressing IFD and Omniclass)	RFC
Best practices for developing IDM and MVDs for IFC and CityGML	RFC
Georeferencing BIM with IFC2x3G in Web Services	RFC
IFC IDMs and MVDs for CityGML	RFC
IFC IDM/MVD for Space Planning and Assessment	RFC
IFC IDM/MVD for First Responders	RFC
IFC IDM/MVD for Indoor Location Services	RFC
CityGML IDM/MVD for Emergency Preparedness	RFC
CityGML IDM/MVD for neighborhood Impact Assessment	RFC
CityGML IDM/MVD for Space Planning / Space Planning, Validation and Assessment	RFC
Implementation of Geospatial IDMs and MVDs in CAD Authoring Tools	RFC
Mediation of Indoor Location by Identifiers and Geospatial Coordinates	RFC
CityGML Development in GIS	RFC
GeoDRM for BIM	RFC

Integration of CityModels with GIS	RFC
Implementations	
Integration of WFS-T for BIM with Clients via GeoDRM Gateway	RFC
Integration of WFS of BIM with CS/W through automated harvest	RFC
Integration of WFS of BIM with CS/W through active publishing	RFC
Integration of Lightweight 3D GML Viewing Client with WFS-T for BIM	RFC
Integration of Lightweight 3D GML Viewing Client with LBS Tracking Service	RFC
Integration with GIS Analysis and Data Development Client with WFS through CityGML	RFC
Integration of CAD/BIM Editing Clients with NBIMS Information delivery Manuals, and IFC Model Views	RFC
Integration of IFC to CityGML Conversion modules within BIM Authoring or WFS-BIM components	RFC
Agile Geography	
Interoperability Program Reports (IPRs)	
Federated Geo-synchronization Service	2u
KML/OWS Study IPR	1f
Implementations	
Federated Geo-synchronization service	2u
Federated Geo-synchronization clients	2u
GeoDRM Broker service	2u
GeoDRM Encoding for Federated Geo-sync	2u
KML WFS Client	1f
KML GML Client	1f
Component WMS (FPS) with KML output	1f
KML Imagery Annotation Client	1u
Compliance and Interoperability Test and Evaluation (CITE)	
Interoperability Program Reports (IPRs)	
CITE IPR	2f
Implementations	
WCS 1.0 scripts for TEAM engine	2f
WCS 1.1 Compliance test scripts	2f
WCS 1.1 Reference Implementation	2f
WFS 1.1 XLink test scripts	2f

WFS 1.1 XLink reference implementation	2f
CSW 2.0.2 ebRIM/19115 profile Compliance Test	2f
CSW 2.0.2 ebRIM/19115 profile Reference Implementation	2f
SOS 1.0 Compliance Test script	2f
SOS 1.0 Reference Implementation	2f
SPS 1.0 Compliance Test script	2f
SPS 1.0 Reference Implementation	2f
TEAM engine maintenance	2u

Table 1 - OWS-5 Work Items by Phase

3   Interoperability Initiative Process Framework

This section describes a flexible framework of standards, repeatable processes, which can be combined and adapted as necessary to address the requirements of each Interoperability Initiative. These tasks are executed with a Virtual Team Infrastructure. This Process Framework forms the basis for the OWS-5 Initiative Work Breakdown Structure. Figure 1 shows Interoperability Initiative Process Framework.
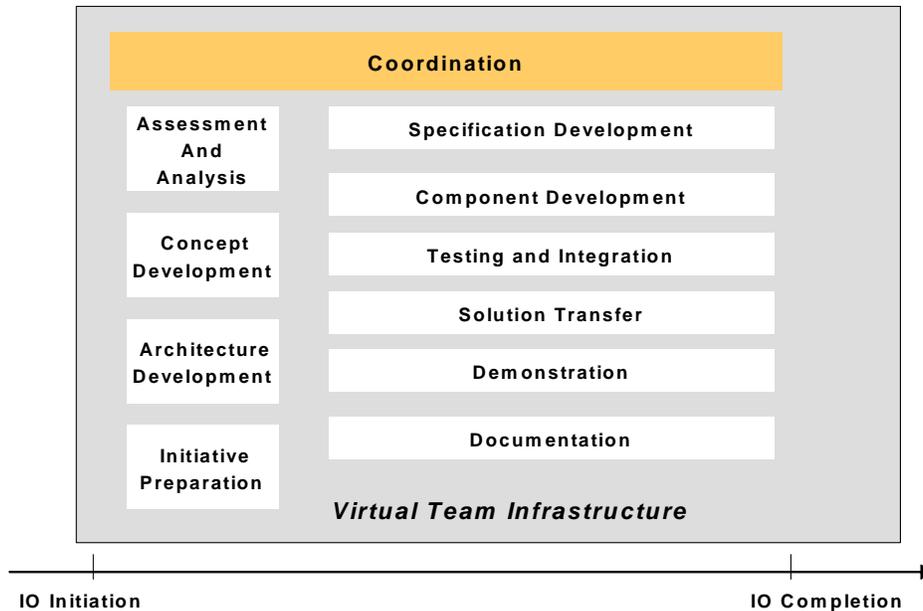

Figure 1: Interoperability Initiative Process Framework.

3.1 *Tasks*

3.1.1 Coordination

This task enables overall coordination among assigned OGC Staff, OGC Interoperability Program (IP) Team, Sponsors, selected organizations, and other TC/PC Members as needed to perform the following Subtasks:

- **Collaborative Environment -** OGC IP Team provides synchronous and asynchronous collaboration environments for cross organizational, globally distributed, virtual teams working interdependently to execute Initiative Orders Activities under this subtask include reading email, engaging in collaborative discussions and attending teleconferences.

- **Initiative Plan Development** – Support development of Project Plans, Project Schedules and Work Breakdown Structures (Work Package). Input may include technical and project management approach, tasks/schedules, communications plan, resource plans, risk and mitigation strategies, and definition of the specifications, standards, component development and integration tasks necessary to realize the Enterprise, Computational, and Information Architecture views.

- **Management** – Project management services include requirement, cost, schedule and performance monitoring and status reporting. The PM must ensure that assigned project tasks are performed within the budgets, the work is progressing according to the agreed schedule, and any changes to requirements or personnel are managed to reduce the risk of cost overrun and schedule delay.

- **Communication** – Includes communicating status and issues of concern for ongoing Project related activities and planned Initiative to OGC and other organizations e.g. ISO. This task does not include IP Business Development functions.

3.1.2 Assessment and Analysis

This task requires assessment/evaluation and analysis of issues and documentation of an organization's or domains existing capabilities, and assessment of requirements for OGC compliant technology. This task is implemented during Planning Studies. .

3.1.3 Concept Development

This task conducts a Feasibility Study that assesses emerging technologies and architectures capable of supporting eventual Interoperability Initiatives (e.g. Testbed). Part of the concept development process is the use of a Request for Technology (RFT) to gain a better understanding of the current state of a potential technology thrust and the architecture(s) used in support of that technology. The feasibility study examines alternative prototype mechanisms that enable commercial web-services technology to interoperate. The study may also assess the costs and benefits of the architectural approaches, technologies, and candidate components to be utilized in a testbed and potential demonstration. This task also collates Sponsor requirements and assesses the applicability of current specifications.

3.1.4 Architecture Development

This task defines the architectural views for any given Initiative. In the context of the Open GIS Interoperability Program, there are three–and perhaps more - architectural views for any given effort. These views are the Enterprise View, Information View and Computational View (Based on RMODP). Part of the Architecture Development task may be the use of an RFQ to industry to enable organizations interested in participating in an Interoperability Initiative to respond with a proposal. This task may also be implemented during Planning Studies.

3.1.5   Initiative Preparation

This task defines the participant budget (if any), develops and executes agreements and contracts that outline roles and responsibilities of each participant. This task may refine the Work Package.

3.1.6   Specification Development

This task defines and develops models, schemas, encodings, and interfaces necessary to realize required Architectures. It includes specification Pre-design and Design tasks. This task may include activities to coordinate ongoing Initiatives with Specification Program activities.

3.1.7   Component Development

This task develops prototype interoperable commercial software components based on draft candidate implementation specifications or adopted specifications necessary to realize the required Architecture.

3.1.8   Testing and Integration

This task integrates, documents and tests functioning interoperable components and infrastructures that execute operational elements, assigned tasks, and information flows required to fulfill a set of user requirements. It includes Technology Integration Experiments (TIEs).

3.1.9   Solution Transfer

This task prepares prototypical interoperable components so that they can be assembled at required sites.

3.1.10   Demonstration

This task defines, develops and deploys functioning interoperable components and infrastructures that execute operational elements, assigned tasks, and information flows required to fulfill a set of user requirements.

3.1.11   Documentation

This Task ensures development and maintenance of the pre-specification, pre-conformant interoperable OpenGIS technologies (including Draft Interoperability Program Reports and Interoperability Program Reports), and the systems level documentation (example user documentation, etc.) necessary to execute the Initiative. This task may include coordination with OGC Specification Program activities including the Documentation Team.

3.1.12   Compliance Testing

This Task ensures development of draft compliance test guidelines (at a minimum) and test suites for engineering specifications detailed in Interoperability Program Reports. This task includes coordination with OGC Specification Program activities including the Compliance Testing and Interoperability Evaluation Subcommittee.

4   OWS-5 Work Breakdown Structure (WBS)

The following Work Breakdown Structure (WBS) is derived from the OGC Interoperability Initiative Process Framework. This WBS should be interpreted in the following manner:

- Items that are grayed out are either IP Team tasks, have already been completed, or are not required for the OWS-5 Initiative.

- Bold text is a task grouping or subtask grouping.

- Plain text indicates tasks against which proposing organizations should respond.

- Italic text indicates the task explanation (These task explanations are valid only for OWS-5; subsequent initiatives will issue appropriate task explanations).

A proposing organization does not have to respond to all tasks below. However bold italic text in the task explanation indicates which tasks are mandatory or conditional. Conditional tasks are those that are mandatory if a selected organization takes on certain non-mandatory tasks. All responses shall use this WBS to structure their responses. Evaluations of responses will be based on whether a proposal addresses the work items within the WBS. This is a mandatory requirement. The OWS-5 project management plan and schedule will use the WBS during the contract performance period. .

5   Coordination

5.1   *Collaborative Environment*

The following tasks are mandatory for selected organizations.

5.1.1   Routine and ad hoc telecons as assigned

The selected organization shall provide a technical representative and an alternate to participate in regularly scheduled telecoms or an ad hoc telecom.

5.1.2   E-mail review and comment

Selected organization shall provide technical representatives to participate in specification and prototypical component development discussions via the OWS-5 mail list.

5.1.3   Action Item status reporting

Selected organizations shall report the status of their work in response to any action item accepted by them in whole or part. Action Items will be assigned to relevant work groups with an identified work group leader. Action item status shall be reported to the relevant work group leader.

5.2   *Initiative Plan Development*

5.2.1   Project Plan Development

5.2.2   Project Schedule Development

5.2.3   WBS Development

5.2.4   Concept of Operations Development

5.3   *Management*

The following tasks are mandatory for selected organizations.

5.3.1   Status Reporting

All status reporting will be conducted within the portal. Business/contract representatives for selected organizations shall report the status of their work as assigned to and accepted by them in their SOW following the structure of this WBS. Status reports will reflect the WBS item number and name, the "health" of the effort with green indicating optimal; yellow indicating issues have arisen that appear resolvable; and

red indicating that issues have arisen that require immediate resolution or the effort will not succeed, and finally the report will describe the work done to fulfill the WBS item. Status reports will be submitted to the Thread Architects on a <u>Monthly</u> basis on the portal for compilation to an overall thread and initiative status. The first status reports after Kickoff will be due on <u>the third of the month or the first Monday thereafter</u>. A one-time Kickoff status report shall be provided that includes a list of personnel assigned to support the OWS-5 initiative. The kickoff status report shall be submitted to the portal and the OWS-5 Initiative Manager <u>no later than the first day of the OWS-5 kickoff</u> in soft copy format only.

5.3.2   Initiative Accounting

Business/contract representatives for selected organizations shall submit an invoice to the OGC Business Office at OGC Headquarters. The invoice shall include the OGC Accounting Job Code provided in the contract, the work completed during the prior month, and itemized list of Deliverables. The invoice shall include the budgetary not to exceed amount.

5.4   *Communication*

5.4.1   OGC Internal IP Status Briefings

5.4.2   OGC External IP Status Briefings

6   Assessments and Analysis

6.1   *Organizational Capability Review*

6.2   *Organizational OGC Requirements Review*

7   Concept Development

7.1   *Sponsor Feasibility Study Review*

7.2   *RFT Development*

7.3   *RFT Response Analysis*

7.4   *RFT Response Review*

8   Architecture Development

8.1   *Enterprise View Development*

8.2   *Information View Development*

8.3   *Computational View Development*

9   Initiative Preparation

9.1   *Sponsor Planning TEMs*

9.2   *RFQ Development*

9.3   *Participant Budget Development*

9.4   *Contract Development*

9.5   *SOW/SOP Development*

10 Specification Development

The proposal shall include brief resume(s) or qualifications of technical representative(s) to lead Specification Development effort for each or applicable tasks listed below. All selected organizations shall send technical representatives to the OWS-5 Kickoff meeting. The attendance at this meeting will be mandatory for all selected organizations.

10.1 *Model Development*

Technical representatives of selected organizations shall develop or support the development of models that represent a service, interface, operation, message, or encoding that is being developed for the OWS-5 initiative. These models may be in UML or some other appropriate modeling language. All models developed in the initiative will be posted to OGC Network^{TM}.

10.2 *Schema Development*

Technical representatives of selected organizations shall develop or support the development of schemas that specify an interface that is being developed for the OWS-5 initiative. These schemas will be written in XML Schema or some other appropriate language. All schemas developed in the initiative will be posted to OGC Network^{TM}.

10.3 *Encoding Development*

Technical representatives of selected organizations shall develop or support the development of encodings that specify an interface that is being developed for the OWS-5 initiative. These encodings will be specified in XML Schema or some other appropriate language. As applicable, all encodings developed in the initiative will be posted to OGC Network^{TM}.

10.4 *Interface Development*

Technical representatives of selected organizations shall develop or support the development of interfaces that specify operations, encodings or messages that are being developed for the OWS-5 initiative. These interfaces will be specified in XML Schema or some other appropriate language. As applicable, all interfaces developed in the initiative will be posted to OGC Network^{TM}.

10.5 *Specification Program Coordination*

Technical representatives of selected organizations shall submit Interoperability Program Reports (IPRs) pertaining to interface developments for OWS-5 to the OGC Technical Committee for review. Those representatives shall present said Reports to relevant OGC TC special interest groups and work with SIG members to resolve issues that the members may raise with regard to the IPR and the interface(s) described therein.

11 Component Development

The proposal shall include brief resume(s) or qualifications of technical representative(s) to lead Component Development effort for each or applicable tasks listed below.

11.1 *Prototypical Interoperable Software Development*

The proposal shall include the resume(s) of technical representative(s) to lead Prototypical Interoperable Software Development effort outlined below.

11.1.1 Server software development

Selected organizations shall develop server software or modify existing product server software to exercise the interfaces developed under the Specification Development tasks in item 6 above. The selected organizations will make this server software available for sponsor review and input during the initial period of the OWS-5 initiative.

11.1.2 Client software development

Selected organizations shall develop client software or modify existing product client software to exercise the servers developed under the Component Development tasks of OWS-5. The selected organizations will make this client software available for sponsor review and input during the initial period of the OWS-5 initiative. Selected organizations shall develop client software to support their server software or make arrangements with other participants to use their client software to exercise their server during the course of the initiative. This is subject to approval by the sponsors and IP Team to ensure that the third party client is appropriate for exercising the functionality of the relevant server. If the proposing organization is developing server software and client software, then the client software shall exercise all OWS-5 or other OGC services provided by their server.

11.2 *Special Adaptation Development*

Selected organizations shall adapt client or server software to exercise relevant mainstream IT technology and standards such as PKI and e-commerce technologies.

12 Testing and Integration

12.1 *Configuration Management*

12.1.1 CM Plan Development

Selected organization shall provide a representative to develop a configuration management plan for interfaces and components developed during the OWS-5 initiative.

12.1.2 Initiative CM

Selected organization shall provide a representative to exercise the configuration management plan for interfaces and components developed during the OWS-5 initiative.

12.2 *Infrastructure Setup*

12.2.1   Operating Systems

12.2.2   Networks

12.2.3   Web Server

12.2.4   Database Server

12.2.5   Web Browsers

12.2.6   SW Installation & Integration

12.2.7   Data Loading

12.3 *Technology Integration Experiments*

12.3.1   Iterations 1-N

12.3.1.1 Component Interface Test

Task Explanation-The Proposing organization shall provide a technical representative to conduct formal Technology Integration experiments that exercise server and/or client component software's ability to properly implement the interfaces, operations, encodings, and messages developed during OWS-5. There will be multiple TIEs during the course of OWS-5 that will exercise various interfaces, operations, encodings, and messages developed during OWS-5. There may also be multiple iterations of a particular TIE or set thereof. **This item is mandatory for all organizations proposing to deploy server interfaces for OWS-5**

12.3.1.2 Test Result Analysis

Task Explanation-The Proposing organization shall provide a technical representative to report the outcome and relevant software reporting messages from TIEs in which the proposing organization participates. These TIE results shall be submitted to the OWS-5 email list and within Monthly Status Report to be courtesy copied to the initiative architect. **This item is mandatory for all organizations proposing to develop deploy server interfaces for OWS-5.**

12.4 *System Tests*

12.4.1 Functional Test

12.4.2 Interface Test

12.4.3 Performance Test

13 Solution Transfer

13.1 *Software Installation*

Selected organization shall provide a licensed copy of OWS-5 relevant software components for installation/integration onto the OGC Network. This could be accomplished by making the software component(s) available from an open site on their network OR by installing it on a sponsor or other host machine on the OGC Network. If the latter option is taken, then the selected organization shall provide a technical representative to install the software component(s). **This is mandatory for all organizations proposing to develop software components for OWS-5.**

13.2 *Software Integration*

13.3 *Data Loading*

Selected organization shall provide a technical representative to load data to any server components the proposing organization may develop. This task includes data loading to OGC Network based servers. **This item is mandatory for all organizations proposing to develop server components for OWS-5.**

14 Demonstration

14.1 *Use Case Development*

Selected organization shall provide a technical representative to develop or support the development of use cases that define and explain the utility of the interfaces developed during OWS-5. These use cases shall be used to provide a basis for demonstration storyboards and the demonstration itself.

14.2 *Storyboard Development*

Selected organization shall provide a technical or business representative to develop or support the development of the demonstration storyboards that will define the structure and content of the demonstration.

14.3 Venue Access

14.4 Data Requirements Assessment

14.5 Data Acquisition and Distribution

14.6 *Demonstration Preparation and Delivery*

Selected organization shall provide a technical and/or business representative to develop or support the development of demonstration that will exercise the functionality of the interfaces developed during OWS-5. The representative(s) will also support the demonstration event(s) as required. Selected organization will maintain server and client software for a period of no less than one year after the completion of the OWS-5 demonstration. **This item is mandatory for all organizations proposing to develop software components for OWS-5.**

15 Documentation

15.1 *IPR Development*

Selected organization shall provide a technical representative to serve as editor of a relevant Interoperability Program Report (IPR). Not all organizations responding to this item will be required to provide an editor; alternatively however they shall support the editor by providing authors for sections of the IPR and for reviews of the Draft IPR (DIPR). The IPR is the deliverable of the work items within OWS-5 WBS.

Participants shall use the appropriate IP Document template posted on the OGC portal at the following location when preparing IP reports for submittal as part of this testbed initiative:

http://portal.opengeospatial.org/index.php?m=projects&a=view&project_id=147&tab=2&artifact_id=10533)

15.2 *System Documentation Development*

15.2.1 Functional Specification

15.2.1.1 Architectural Overview

Selected organization shall provide a technical representative to develop an architectural overview of their software component(s) relevant to the OWS-5 architecture. **This item is mandatory for all organizations proposing to deploy server interfaces for OWS-5.**

15.2.1.2 Use Cases

Selected organization shall provide a technical representative to develop use cases to show the functionality of their software components in the context of the OWS-5 architecture. **This item is mandatory for all organizations proposing to deploy server interfaces for OWS-5.**

15.2.1.3   UML System Models

15.2.1.4   System Configuration

Selected organization shall provide a technical representative to develop a detailed document describing the combined environment of hardware and software component(s) that compose their contribution to OWS-5. This item is mandatory for all organizations proposing to develop software components for OWS-5 to be installed at sponsor or other host sites connected to the OGC Network.

15.2.2   Installation Guide

Selected organization shall provide a technical representative to develop an installation guide for their software component(s). This item is mandatory for all organizations proposing to develop software components for OWS-5 to be installed at sponsor or other host sites connected to the OGC Network.

15.2.3   Training Material & Users Guide

Selected organization shall provide a technical representative to develop a User's Guide and Training Materials pertaining to their software component(s) developed or modified for OWS-5. The documents shall be provided to sponsors and IP Team to support their ability to demonstrate the proposing organization's contributions to the OWS-5 initiative. ***This item is mandatory for all organizations proposing to develop software components for OWS-5***.

15.3 Planning Study Report

16 Compliance Test Development

Technical representatives of selected organizations shall develop draft compliance test documentation pertaining to an interface developed or enhanced for OWS-5. For candidate specifications, this test documentation shall, at a minimum, consist of test guidelines that would form the basis for development of more detailed and complete test scripts as the specification matures toward an approved specification. For mature candidate specifications, that are believed to be ready for vote to become approved specifications, participants shall evolve existing or prepare test scripts to form a complete set of tests to fully test an implementation of a specification for compliance with its requirements. Compliance test documentation shall be included in an Interoperability Program Report. This task includes coordination with OGC Specification Program activities including the Compliance Testing and Interoperability Evaluation Subcommittee. Proposals shall address this task along with Task 6, Specification Development and Task 11, Documentation in this Annex.

16.1 *Summarize TIEs, demo results and data issues*

Technical representatives of selected organizations shall include information detailing progress pertaining to the implementation of the interface by including TIE results, lessons-learned from the demo, and particular data issues.

16.2 *Compliance Test*

Technical representatives of selected organizations shall outline all of the necessary information to conduct a valid compliance test of the interface, including the sub items below

16.2.1   Test Cases

Technical representatives of selected organizations shall outline a valid compliance test for the interface. A valid compliance test will include identification of all required and optional server requests in the interface, the acceptable results for testing servers, the syntax checks to perform for testing client requests;

an explanation of an acceptable verification of the results (machine, human, etc); a list of expected/valid warnings or exceptions to interface behavior; a matrix of test dependencies and explanation of ordering tests appropriately for inherent tests and dependencies.

16.2.2 Data

Technical representatives of selected organizations shall identify appropriate data sets for use in conducting a compliance test for an interface.

16.2.3 Recommendations

Technical representatives of selected organizations shall document recommendations to resolve issues with the current state of the interface, or with the compliance tests.