

**OGC<sup>®</sup>**  
**Open Geospatial Consortium (OGC)**

Request for Quotations (RFQ)  
and  
Call for Participation (CFP)  
for

**OGC Web Services Initiative - Phase 9  
(OWS-9)**

RFQ Issuance Date: 22 February 2012

**Proposal Due Date: 6 April 2012**

## Table Of Contents

<b>1</b>	<b>Introduction.....</b>	<b>1</b>
1.1	Purpose .....	1
1.2	Background .....	1
1.3	The RFQ/CFP Documents and Process.....	1
1.4	Benefits to Participants .....	2
1.5	Intellectual Property in the Testbed .....	2
1.6	OGC Membership .....	2
1.7	Participant Roles in the Testbed .....	2
<b>2</b>	<b>Master Schedule .....</b>	<b>3</b>
<b>3</b>	<b>Proposal Submission Information .....</b>	<b>4</b>
3.1	General Terms and Conditions .....	4
3.2	Response Instructions.....	4
3.3	How to Transmit your Response .....	4
3.4	Questions and Clarifications.....	4
3.5	Reimbursements .....	4
<b>4</b>	<b>Proposal Format and Content .....</b>	<b>5</b>
4.1	Proposal Outline .....	5
4.2	Cover Page.....	5
4.3	Overview .....	5
4.4	Proposed Contribution .....	5
4.4.1	Specification Development.....	5
4.4.2	Component Development .....	6
4.4.3	Demonstration or Test Development.....	6
4.4.4	Data.....	6
4.4.5	Personnel.....	6
4.5	Proposed Contribution Cross Referenced To WBS .....	6
4.6	Level of Effort Estimate .....	6
4.6.1	Facilities.....	6
4.6.2	Hardware.....	7
4.6.3	Software .....	7
4.6.4	Operational Software Maturation Plan .....	7
4.7	Cost-Sharing Request.....	7
4.8	In-Kind Contributions.....	7
<b>5</b>	<b>Evaluation Criteria .....</b>	<b>8</b>
5.1	Technical.....	8
5.2	Management .....	8
5.3	Cost.....	8

**Annex A: OWS-9 Work Breakdown Structure and Requirements**

**Annex B: OWS-9 Architecture**

**Annex C: OWS-9 Concept of Operations**

**Annex D: OWS-9 Communications Plan**

# 1 Introduction

## 1.1 Purpose

The Open Geospatial Consortium (OGC®) has released this Request for Quotation / Call for Participation (RFQ/CFP) in order to solicit proposals in response to a refined set of requirements for the OGC Web Services Initiative Phase 9 (OWS-9). The OGC, on behalf of the project sponsors, will provide cost-sharing funds to partially offset expenses uniquely associated with the initiative, thus the solicitation is for quotations from bidders wishing to receive cost-sharing. However, not all proposals are expected to seek cost-sharing. OGC intends to involve as many participants in the initiative as possible, to the extent each participant can enhance and/or make use of the initiative outcomes, so the solicitation is also open to participants wishing to advance the synergy of the overall initiative.

## 1.2 Background

The OGC is engaged in an Interoperability Program which is a global, hands-on and collaborative prototyping program designed for rapid development and delivery of proven candidate specifications into OGC's Specification Program, which can then be formalized for public release. In OGC's Interoperability Initiatives, international technology developers and providers team together to solve specific geo-processing interoperability problems posed by the initiative's sponsoring organizations. OGC Interoperability Initiatives include test beds, pilot projects, interoperability experiments, and interoperability support services – all designed to encourage rapid development, testing, validation and adoption of open, consensus based standards specifications.

The policies and products that define the OGC Interoperability Program are available here: <http://www.opengeospatial.org/ogc/policies/ipp>

In October of 2011, the OGC issued a call for sponsors for the OWS-9 interoperability initiative to advance OGC's open framework for interoperability in the geospatial industry. Three meetings were conducted with potential OWS-9 sponsors to review the OGC technical baseline, discuss OWS-8 results, and identify OWS-9 requirements. After analyzing the sponsors input, the OGC Interoperability Team recommended to the sponsors that the content of the OWS-9 initiative be organized around the following threads:

- 1) Aviation Thread
- 2) Cross-Community Interoperability (CCI) Thread
- 3) Security and Services Interoperability (SSI) Thread
- 4) OWS Innovations Thread
- 5) Compliance & Interoperability Testing & Evaluation (CITE) Thread

## 1.3 The RFQ/CFP Documents and Process

The OWS-9 Initiative Management team (consisting of OGC and the sponsors) has established requirements and an initial architecture for the initiative (see Annex B). A set of sponsor requirements, a Work Breakdown Structure intended to achieve those requirements, and how these requirements will be phased are presented in Annex A. The Concept of Operations for the OWS is attached as Annex C. Annex D details the communication plan for OWS-9 Initiative.

Any organization interested in participating in the Testbed shall respond with a proposal. Instructions for submitting proposals are provided in Section 3.

The limited cost-sharing funding available is intended to partially offset engineering costs incurred by participants in support of this effort. **No funds shall be used to procure any proprietary hardware or software associated with this effort.**

Each organization with a role in the initiative shall sign a Participation Agreement with OGC that outlines roles and responsibilities of each participant and includes a statement of work (SOW). By doing so, participants will agree to work together for the realization of the OWS-9 initiative goals and for the benefit of the industry. Draft versions of the Participation Agreement and SOW are available to interested parties.

### **1.4 Benefits to Participants**

The OWS-9 initiative provides a business opportunity for vendors, users, and other interested parties to mutually define services, interfaces and protocols (as Engineering Reports (ERs)) in the context of a hands-on engineering experience expected to shape the future of geospatial Web Services software development and Web data publication. The sponsors are supporting this vision with cost-sharing funds to partially offset development costs associated with this capability and interoperable web service demonstrations. This offers OGC members a unique opportunity to recoup a portion of their expenses related to the OWS-9 initiative. Additionally, this effort has well-defined objectives, while providing a significant opportunity to explore alternatives in a unique hands-on engineering context.

### **1.5 Intellectual Property in the Testbed**

The OWS-9 Testbed will be conducted in accordance with the OGC Intellectual Property Rights Policy and Procedures that can be found here: <http://www.opengeospatial.org/about/ipr>

It is the objective of the testbed to support the OGC Standards Program in the development and publication of open standards. Participants in the Testbed will be required to allow OGC to publish documents based in whole or in part upon any intellectual property contributed by Participant in connection with the Testbed (“Participant IP”). OGC shall be the owner of the copyright of any documentation from the Testbed. Participant will be required to grant OGC a perpetual, non-exclusive, royalty-free license, with right to sublicense, to the patent rights in any Participant IP to the extent incorporated in, and necessary for the use of, the Specification. Beyond these requirements, Participant retain ownership in all Participant IP, including all patent, trade secret, copyright and other intellectual property rights in the Participant IP.

### **1.6 OGC Membership**

Proposing organizations must be an OGC member and familiar with the OGC mission, organization, and process. Proposals from non-members will be considered, if a completed application for OGC membership or a letter of intent to become a member is submitted prior to or along with the proposal.

### **1.7 Participant Roles in the Testbed**

There are several possible roles that organizations may play in the initiative as participants. These are:

- Developer of one or more software components implementing interfaces and protocols agreed in the early stages of the initiative for one or more of the services described in Annexes A and B,
- Developer of demonstrations and tests of the implemented software components, and/or
- Provider of data, personnel, software, hardware, or facilities that will contribute to the overall success of the initiative.

Participants should propose specifically against funded Work Items defined by the sponsors (see Annex A), but may go beyond that to request and propose in-kind contributions that address unfunded requirements. Participants should note that sponsors are only committed to funding Work Items labeled as funded in this current RFQ.

## 2 Master Schedule

The following table details the major events associated with OWS-9 and this RFQ:

<b>OWS 9 Testbed Milestones</b>	<b>ID</b>	<b>Completion Date</b>
RFQ Issued	M1	22 February 2012
Bidders' Teleconference		9 March 2012
Clarifications Posted and final questions due		23 March 2012
<b>RFQ Responses Due</b>	M2	6 April 2012
Participant selection complete		18 April 2011
Kickoff Workshop	M3	14-16 May 2012
Preliminary Design and Implementations	M4	20 July 2012
Final Delivery (all deliverables due including demo materials)	M5	21 December 2012
Demonstration at OGC TC meeting		14-18 January 2013

### **3 Proposal Submission Information**

#### **3.1 General Terms and Conditions**

Documentation submitted in response to this RFQ will be distributed to members of OGC staff, the IP Team, and sponsor staffs. Submissions will remain in the control of this group and will not be used for other purposes without prior written consent of the proposing organization. Please note that you will be asked to release the content of your proposal (less financial details) once you agree to participate in the testbed effort. Proprietary and confidential information must not be submitted under this request.

Participants will be selected to receive cost sharing funds on the basis of adherence to the requirements stipulated in this RFQ and the overall quality of their proposal. The primary objective of OWS Sponsors is to use cost sharing funds to promote the development of open consensus standards based on successful implementation and demonstration. We encourage respondents to exploit the results of innovative R&D efforts, but the objective is operational implementations that support the standards. Respondents are asked to define the migration path for producing operational solutions. Those proposing organizations not selected for cost sharing funds are encouraged to participate in OWS on an in-kind basis.

Each participant will be required to enter into a contract with OGC. This Participation Agreement will include a Statement of Work (SOW) defining the participant's responsibilities. The Participation Agreement also establishes that participants agree to work together towards the common goals of the initiative. Further details on this issue are found in the Concept of Operations (Annex C).

#### **3.2 Response Instructions**

To be considered all responses to this request shall be "complete"; i.e., your response must provide all information requested in Section 5. Responses shall use the response template provided in the RFQ package. The response shall consist of a technical volume and a cost volume. An outline with page limits is provided in section 5.1. Reviewers will be instructed to not read or evaluate any materials in excess of the page limits. Each requirement set description shall begin on a new page.

#### **3.3 How to Transmit your Response**

Transmit an electronic copy of your proposal to the OGC Technology Desk ([techdesk@opengeospatial.org](mailto:techdesk@opengeospatial.org)). Microsoft Word® 2003 for Windows, 2004 for Macintosh or higher format is preferred; however, Portable Document Format or Rich Text Format is acceptable.

Proposals must be received at OGC before the date in the OWS-9 Master Schedule (Section 1.8).

#### **3.4 Questions and Clarifications**

Questions and requests for clarification should be sent electronically to the OGC Technology Desk ([techdesk@opengeospatial.org](mailto:techdesk@opengeospatial.org)). All clarifications will be posted to the OWS-9 RFQ/CFP announcement page (<http://www.opengeospatial.org/standards/requests/86>) and to the OGC Technical Committee electronic mail reflector. Questions must be submitted before the date in the OWS-9 Master Schedule (Section 1.8).

#### **3.5 Reimbursements**

The OGC will not reimburse organizations for any costs incurred in connection with preparing proposals in response to this RFQ, or for travel to or from the Kickoff or demonstrations.

## 4 Proposal Format and Content

### 4.1 Proposal Outline

As part of this RFQ archive you will find two templates: the response template and a single spreadsheet template for both the cost sharing request and in-kind contributions. Proposing organizations shall use these templates in preparing their proposals. The proposal should follow the outline:

#### Technical Proposal

- Cover page
- Overview (Not to exceed two pages; will not contribute to technical evaluation)
- Proposed contribution (Basis for Technical Evaluation)
  - Aviation (Not to exceed seven pages)
  - Cross-Community Interoperability (CCI) (Not to exceed seven pages)
  - Security and Services Interoperability (SSI) (Not to exceed seven pages)
  - OWS Innovations (Not to exceed seven pages)
  - CITE (Not to exceed seven pages)
- Proposed contribution cross referenced to WBS (Contributes to Management Evaluation)

#### Cost Proposal (Not to exceed seven pages)

- Cost sharing request (Use Excel template for reporting costs)
- In-Kind contributions (Use Excel template for reporting in-kind contributions)

Each of these Technical and Cost Proposal Sections is described below.

### 4.2 Cover Page

Provide the name(s) of the proposal submitter(s) and point of contact information. Teams should list all teammates and point of contact information for each. When submitting point of contact information, please provide both a business/financial and technical point of contact.

### 4.3 Overview

Provide an introduction to the contents of your proposal and its benefits.

### 4.4 Proposed Contribution

Describe your proposed contribution to the initiative based on your desired role consistent with the Testbed Architecture (Annex B). Please do not just repeat a previous OWS testbed RFQ response. The initiative emphasis is on interoperable solutions to the sponsors' functional requirements and your RFQ response should be developed from that perspective. Justify your approach.

#### 4.4.1 Specification Development

If you plan to contribute or support the development of interoperability specifications for interfaces, operations, encodings, messages, or other relevant technologies, please include the following in your proposal:

- (1) Your views on the OWS Architecture.
- (2) Suggested modifications/additions you would recommend for OWS during the OWS-9 Initiative.
- (3) A list of personnel and brief summary of their qualifications to carry out these tasks.

(4) Role and Responsibilities of your technical representative e.g., Engineering Report author, schema editor, model designer, or technical contributor. Technical contributors shall write or design subsets of the specification. Everyone is expected to review work in progress.

#### **4.4.2 Component Development**

If you plan to contribute to the development of components within the Testbed Architecture, please include in your proposal as much detail as possible concerning the operating system, hardware, programming language, and proprietary software requirements or constraints that relate to your proposed development effort. Please provide the migration path for proposed components. Proposing organizations developing a server component are encouraged to develop a client component that exercises the functionality of the server(s) being provided.

*If you wish to provide a candidate starting point (i.e., an interface or protocol definition) for any of the cases in which you propose to have a role, please contribute this with your proposal.*

#### **4.4.3 Demonstration or Test Development**

If you are proposing to develop demonstrations or tests, please provide as much detail as possible concerning your proposed effort. Delineate aspects of the sponsor scenarios to which you believe you can contribute. In particular explain how your work will show the sponsor's desired level of interoperability.

*Do not assume a single vendor demonstration; rather the demonstration will be showing how your technology can interoperate with other participant's technology.*

#### **4.4.4 Data**

If you are proposing to contribute data to the effort, please indicate the format of the data (if applicable) and any proprietary software access requirements (if applicable). Please include the geographic coverage of the data, a thematic description of the data, geodetic context of the data and any other relevant metadata. Please also indicate alternate formats or access capabilities that you are willing to support, if necessary. Match your data contribution with a use case in Annex B.

#### **4.4.5 Personnel**

If you are proposing to contribute personnel to the initiative, please indicate the capabilities and experience of the personnel, location and mobility information (in other words, will the personnel need to remain at their present location? Will you support travel?). Indicate which personnel would be able to participate in kickoff activities and other testbed site activities.

### **4.5 Proposed Contribution Cross Referenced To WBS**

Review the WBS found in Annex A and map your proposed contribution to the task categories and items found there. Indicate which requirements are being met with your contributions in the descriptions of activities that your organization proposes to undertake.

### **4.6 Level of Effort Estimate**

Please provide an estimate of the value of your proposed contribution, including engineering, management, communications, travel, and so forth. Please begin this section on a new page so that it can be separated from the main body of your proposal.

#### **4.6.1 Facilities**

If you are proposing facilities, please include as much detail about the configuration of hardware and software at the facility, the network access and restrictions (if any), and the level of operational support in



place at the facility. Please provide information about your organizational approach to configuration management.

#### **4.6.2 Hardware**

If you are proposing to contribute hardware to the effort, please include a complete description of the hardware.

#### **4.6.3 Software**

If you are proposing to contribute software to the effort, please include a complete description of the software. You must include information about the operating environments that you intend to support in the context of the testbed.

#### **4.6.4 Operational Software Maturation Plan**

If you are proposing in the technical volume to provide software components that are either enhancements of your existing product line or entirely new products that exercise the specifications developed or enhanced during the course of this initiative then you must provide an Operational Software maturation plan. This plan shall identify the product in question, the specifications exercised by the product and the anticipated date of public availability of the product.

### **4.7 Cost-Sharing Request**

This section is *required* only from proposing organizations requesting cost sharing funds. Please provide a requested amount of cost-sharing funds (in US Dollars) and provide details of the costs that are being offset (e.g., labor category, number of hours, and hourly rate). Note that the sponsors intend to provide cost-sharing funds for only those activities uniquely attributable to initiative participation; e.g., a recipient should not request funds to offset costs that would have otherwise been incurred and funded through some other source such as internal research and development funding. Also, it is not customary to reimburse or provide funds for travel to the kickoff or final demonstration. This section must include a certification that the proposed reimbursable costs would not be otherwise incurred in support of non-Testbed activities. Use the attached cost-sharing template to itemize the costs being offset. This should be included in the section beginning with Level of Effort Estimate.

The Technical Proposal should only include the top-line value of the cost-sharing request and the basis of estimate discussions. Details of the costs estimate including rates should only appear in the Cost Proposal spreadsheet.

### **4.8 In-Kind Contributions**

Please provide an indication of the in-kind contributions that your organization will make to the OWS initiative. **This should reflect such contributions as labor, equipment, software, or data.** Use the attached in-kind contribution template to itemize the contributions being provided. The sponsors and OGC will use this information in the development of future initiatives. This should be included in the section beginning with Level of Effort Estimate.

The Technical Proposal should only include the top-line value of the cost-sharing request and the basis of estimate discussions. Details of the costs estimate including rates should only appear in the Cost Proposal spreadsheet.

## **5 Evaluation Criteria**

OWS-9 responses will be evaluated according to criteria set by the Sponsors. Those criteria can be divided into three areas: Technical, Management, and Cost.

### **5.1 *Technical***

The Technical criteria are described below.

- All applicable Requirements in the RFQ are addressed in the proposal
- Proposal provides risk-adjusted technical approach in support of the requirements
- Creativity and originality in the proposed solutions
- Proposed solutions could be executed within available resources
- Proposed Solutions are directed to achieve the goals set forth by OWS-9 initiative

### **5.2 *Management***

- Proposal adheres to and addresses all elements of Work Breakdown Structure
- Willingness to share information and work in a collaborative environment
- Achieves Sponsors' goals of enhancing availability of SCOTS or standards-based open source products in the market place

### **5.3 *Cost***

- Cost-share request is reasonable for proposed effort
- In-kind contribution is of value to OWS-9 initiative