

This version of the Clarifications document presents questions that were received as of 21 January 2016 at 0620 U.S. Eastern Time. Responses to these questions are provided below. Please send any corrections or additional questions to [techdesk@opengeospatial.org](mailto:techdesk@opengeospatial.org).

| <b>Revision Log</b>  |                            |  |
|--|----------------------------|--|
| <b>Date &amp; Time (Eastern)<br/>This Question's Most<br/>Recent Answer Was Posted</b> | <b>Name</b>                | <b>Category /<br/>Question Number(s)</b> |
| 30 October 10:30am   | Scott Serich               | ● General / Q1-Q21                       |
| 30 October 12:44pm   | Terry Idol, Scott Serich   | ● General / Q22                          |
| 31 October 11:00am   | Scott Serich               | ● LSA / Q1<br>● CNS [old CON] / Q1       |
| 1 November 8:40am  | Luis Bermudez              | ● CMP [old COM] / Q1                     |
| 1 November 9:00am  | Scott Serich               | ● CNS [old CON] / Q2                     |
| 1 November 1:30pm  | Charles Chen               | ● AVI / Q1-Q3                            |
| 2 November 10:00am   | Ingo Simonis               | ● LDS / Q1-Q2                            |
| 3 November 13:00pm   | Terry Idol, Scott Serich   | ● General / Q23                          |
| 3 November 13:00pm   | Greg Buehler, Scott Serich | ● General / Q24                          |
| 4 November 4:00am  | Ingo Simonis               | ● LDS / Q2-Q3                            |
| 4 November 10:05am   | Ingo Simonis, Scott Serich | ● Annex B Corrigenda / Q1                |
| 4 November 16:45pm   | Scott Serich               | ● General / Q21 (revised)                |
| 5 November 8:20am  | Scott Serich               | ● General / Q2-Q3 (revised)              |
| 5 November 1:00pm  | Charles Chen               | ● AVI / Q4                               |
| 5 November 3:00pm  | Charles Chen               | ● AVI / Q5-Q6                            |
| 6 November 6:00am  | Ingo Simonis               | ● LDS / Q4                               |
| 6 November 6:00am  | Ingo Simonis               | ● FO / Q1                                |
| 6 November 1:00pm  | Charles Chen               | ● AVI / Q7                               |
| 8 November 9:30am  | Charles Chen               | ● AVI / Q8                               |
| 10 November 7:00am   | Luis Bermudez              | ● CMP [old COM] / Q2-Q4                  |
| 16 November 10:00am  | Scott Serich               | ● Revised Deadline ... / Q1              |
| 16 November 11:00am  | Scott Serich               | ● Revised Deadline ... / Q1 (revised)    |
| 16 November 2:40pm   | Scott Serich               | ● General / Q3 (revised)                 |
| 18 November 3:15pm   | Luis Bermudez              | ● CMP [old COM] / Q5                     |

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|---------------------|--------------|-----------------------------|
| 22 November 9:30am  | Scott Serich | ● Revised Deadline ... / Q2 |
| 11 December 7:20am  | Scott Serich | ● CMD [old COC] / Q1        |
| 17 December 12:15pm | Scott Serich | ● LSA / Q2                  |
| 17 January 5:40am   | Scott Serich | ● Revised Deadline ... / Q2 |

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## 1 Revised Submission Deadline and Kickoff for Non-Aviation Threads

Q1. What schedule revisions have been made?

- A. There will be two separate RFQ submission deadlines and kickoff dates for the Testbed 12 threads. Responses to the **Aviation** thread must still be received before 5:00 pm U.S. Eastern Standard Time (EST) on Friday, 20 November 2015.

Responses to the other six ("**Non-Aviation**") threads, however, are now due before 5:00 pm U.S. Eastern Standard Time (EST) on **Friday, 11 December 2015**.

Also, Testbed 12 kickoff venues and dates have been announced. The **Aviation** Thread kickoff meeting will be held at the Harris Corporation Offices in Washington, DC, 19-21 January 2016.

The kickoff meeting for all of the other **Non-Aviation** threads will be held at the USGS Headquarters in Reston, VA on 2-4 March 2016, in the week before the OGC Technical Committee meeting at the World Bank in Washington, DC.

The testbed Demonstration Event has also been rescheduled and will now be held in December, 2016.

For convenience, the Aviation deliverables are listed below:

- i) Funded
    - (1) E001 Catalog ER
    - (2) E002 Brokering [Data Broker] ER
    - (3) E003 Asynchronous Messaging ER
    - (4) F001 Aviation Security ER
    - (5) F002 Aviation Semantics ER
    - (6) F011 FIXM GML ER
    - (7) F003 CSW
    - (8) F004 AVI Client Data Broker + CSW
    - (9) F005 WFS AMXM
    - (10) F006 Data Broker
    - (11) F012 WFS FIXM
  - ii) Unfunded
    - (1) E004 SBVR ER
    - (2) E005 Aviation Architecture ER
    - (3) E006 WFS-TE AIXM
    - (4) F007 Aviation Web Service (WMS/WCS)
    - (5) F008 Aviation Client JMS + AMQP
    - (6) F009 JMS + AMQP Server
    - (7) F010 WFS AIXM
- Q2. What is the revised master schedule?
- A. The revised master schedule is as follows:
- 23 October, 2015: RFQ Issuance
  - 2 November: Bidders Q&A Webinar
  - 20 November: **new** deadline for submitting bidder questions
  - 20 November: **AVI-only** Proposal Submission Deadline
  - 25 November: **AVI-only** Bidder Notifications Started
  - 11 December: **new Non-AVI** Proposal Submission Deadline
  - 25 January: **Non-AVI** Bidder Notifications Started
  - 19-21 January, 2016: **AVI-only** Kickoff Workshop Event, Washington, DC
  - **2-4 March**: **Non-AVI** Kickoff Workshop Event, Reston, VA, USA
  - **29 November**: Demonstration Event

## 2 Annex B Corrigenda

- Q1. Are there any Clarifications contained in other documents?
- A. Yes. *Annex B Section 8.11* has been revised to resolve ambiguous and partly missing requirements.

Attempting to present these changes directly in the Clarifications document (i.e., outside the context of *Annex B* itself) was deemed to be inefficient and potentially confusing. Instead, a revised version of *Annex B* can be downloaded from the following link:

[https://portal.opengeospatial.org/files/?artifact\\_id=65484](https://portal.opengeospatial.org/files/?artifact_id=65484).

Please consult the *Corrigenda* table on page i of this document for full details of all corrections.

### 3 General Clarifications

- Q1. Where can the full RFQ be found?  
A. The full RFQ can be found at <http://www.opengeospatial.org/standards/requests/139>.
- Q2. My organization is not familiar with the testbed proposal process. What's the best way to obtain assistance?  
A. Read the full RFQ (main body, annexes, templates) and this Clarifications document carefully from end-to-end. Be sure to build your proposal using the response templates (one Word document and one Excel spreadsheet, included with the RFQ). Submit any remaining questions to [techdesk@opengeospatial.org](mailto:techdesk@opengeospatial.org).
- Q3. How late will questions be accepted?  
A. Interested parties may submit questions through 20 November 2015 by email to [techdesk@opengeospatial.org](mailto:techdesk@opengeospatial.org). Responses will be provided in updated versions of this Clarifications document.
- Q4. My organization has never participated in a testbed or other OGC Interoperability Program (IP) initiative before. Will this impact our likelihood of selection?  
A. As indicated in the *Evaluation Criteria* listed in the RFQ *Main Body* document, prior participation in OGC initiatives is not an explicit evaluation criterion. Prior participation could potentially afford an organization a more intimate understanding of OGC IP processes and requirements from prior initiatives. But organizations could also gain understanding by reviewing the material at the IP policies & procedures link provided in the RFQ and the work products (e.g., engineering reports) from prior initiatives.
- Q5. Should we expect 100% cost recovery for our work? Are we expected to propose a specific proportion of in-kind vs. cost-share?  
A. As stated in the RFQ *Main Body* document *Section 5 Sponsor Priorities*, all Participants are required to provide at least some level of in-kind contribution (labor, software, data, hardware, travel, etc.), but no specific proportion is required. In prior testbeds, the overall leverage of total in-kind contributions to total cost-share funding has ranged from 2.0 to 3.5.

- Q6. Can we submit a proposal if we are not OGC members at the moment?
- A. Membership is required to participate in testbed execution. As stated in the RFQ *Main Body* document *Section 2 General Requirements*, proposals from non-members will be considered provided that a completed application for OGC membership (or a letter of intent to become a member) is submitted prior to (or along with) the proposal.
- Q7. Is attendance at the Kickoff required?
- A. In-person attendance at the Kickoff Workshop is considered the best opportunity to establish the team working relationships and coordination to achieve a most successful initiative. Participants receiving cost-sharing compensation are required to attend the Kickoff, including thread activities of each thread for which they were selected. Participants providing only in-kind contributions may avoid this requirement with prior permission. GoToMeeting and teleconference arrangements may be established to make the kickoff accessible to additional persons from the attending organizations.
- Q8. Are costs for travel to the kickoff reimbursed?
- A. Offers to selected bidders are based solely on deliverables, with no reimbursement for any other direct costs (ODCs) such as travel expense.
- Q9. May a bidder propose against multiple threads?
- A. Yes, bidders are permitted (and encouraged) to propose against multiple threads. The *Response Template* and *Finance Spreadsheet* template provide instructions on how to arrange multi-thread proposals.
- Q10. Will only one organization be selected for each deliverable?
- A. Not necessarily. Multiple Participant organizations could potentially be selected to work on independent instances of the same deliverable.
- Q11. Are the sponsors involved in the evaluation and selection process?
- A. Sponsors are involved in the evaluation and selection activities. But all negotiation for participation (and any resulting contracts) will be between OGC and the participating organization.
- Q12. What does the label "Un-Neg" mean in the Funding Status column of the deliverable tables in *Section 5 Sponsor Priorities* of the RFQ Main Body document? Should we still propose against these deliverables?
- A. The label "Un-Neg" (still under negotiation) indicates that a potential sponsor has indicated an intent to provide funding, but the contract reflecting the final commitment of this funding is still pending. OGC will not be able to enter into any downstream cost-sharing contracts with participants (for the associated deliverables) until this funding has been secured under an executed contract with the sponsor. However, if and when the contract with the sponsor has been executed, these deliverables would convert to an "F" (funded) status. So, in general, any interested bidder should propose against these deliverables.
- Q13. What does the label "U" mean in the Funding Status column of the deliverable tables in *Section 5 Sponsor Priorities* of the RFQ Main Body document? Should we still propose against these deliverables?

- A. The label "U" (unfunded) indicates that a sponsor has identified a potential requirement that would make a contribution to the testbed but was not deemed to merit funding. Bidders are encouraged to propose in-kind contributions toward these unfunded deliverables.
- Q14. Are there any incumbents working with the sponsors currently on these threads?
- A. There are no incumbents. Testbed participation offers are formed in an open, competitive process. Some selected bidders may be first-time participants, while others may have participated in previous OGC initiatives.
- Q15. How much funding can be typically requested?
- A. The total amount of cost-share funding requested will depend on the number and kind of requirements the bidder proposes to address and nature of the proposed contribution.
- Q16. Does the funding cover also indirect costs or only labor?
- A. Cost-share funding is intended to cover labor only, and is awarded on a deliverable-by-deliverable basis. The *Cost sharing template* tab in the *Finance Spreadsheet* template has been crafted to support the buildup of a bidder's cost-sharing proposal. As indicated in the *In-kind contribution template* tab in that same workbook, in-kind contributions may cover a broader set of costs, including labor, travel, hardware, software, and data.
- Q17. Are team bids acceptable?
- A. It depends on what is meant by "team bid." Each participation contract will be executed bilaterally between OGC and a single organization. Multilateral contracts including multiple participants will not be formed. Beyond this, however, there are no restrictions regarding how the participant organization chooses to accomplish its deliverable obligations (e.g., with or without contributions from third-party "team members") so long as its obligations are met.
- Q18. Is there any preference given to proposed solutions that have been certified compliant via the OGC Compliance Program?
- A. Yes. As indicated under the *Technical Criteria* in *Section 3 Evaluation Criteria* of the RFQ *Main Body* document, preference will be given, where applicable, to proposed solutions that are OGC-compliant. In general, OGC-compliant products are easier to integrate, therefore facilitating the work to be performed in the testbed.
- Q19. How can the best use be made of the *Finance Spreadsheet* template?
- A. The *Finance Spreadsheet* template is intended to show representative examples. Bidders should replace the sample entries with specific entries for the proposed cost-share requests and in-kind contributions.

The *Cost sharing template* tab has been crafted to support the buildup of a cost-sharing proposal. For each cost line item in the provided table, a bidder should enter the activity, a particular deliverable (including number), and the personnel, rate, and hours that went into the funding

request for that item. The last column is pre-populated with a formula that simply multiplies rate by hours for that item.

If cost-sharing requests are being made against multiple threads, the table provided can be copied and inserted (as many times as needed) above the row containing the *Grand Total Cost Share Request* entry. Don't forget to modify the grand-total formula to add all table subtotals across all threads.

The *In-kind contribution template* tab can be completed in a similar manner except that a bidder should also enter estimated values for travel, hardware, software, data and other proposed contributions.

- Q20. There are several threads with close abbreviations: COC, CON, and COM. Can these be replaced with less-confusing abbreviations?
- A. Yes. The following abbreviations were adopted in the *Corrigenda* version of *Annex B*, described above in Section 1 Annex B Corrigenda, Question 1. The RFQ *Main Body* document was left unchanged. These new abbreviations will be fully adopted starting with the Kickoff Workshop Event.
- i) Command Center: replaced COC with CMD
  - ii) Consolidation: replaced CON with CNS
  - iii) Compliance Testing: replaced COM with CMP
- Q21. When is the funding status of "Un-Neg" deliverables expected to be finalized?
- A. The funding has already been allocated and is awaiting final contract negotiations. We hope to have the contracting to be finalized at any time. We will post a notification once the funding has been finalized.
- Q22. (webinar) Where can the slides from the Bidders Q&A Webinar be found?
- A. A link to the webinar slides is available on the RFQ web page at <http://www.opengeospatial.org/standards/requests/139>.
- Q23. (webinar) What will the end date be for the period of performance in participant agreements?
- A. This period of performance is expected to run through September 30, 2016.
- Q24. (webinar) Are all the Testbed 11 Engineering Reports published yet?
- A. Not all of the Testbed 11 Engineering Reports are published publicly, yet. There are several ERs that are in preparation for final publishing, some that are in the approval process, and a couple that are being refined by the editors.

#### 4 Field Operations (FO) Thread Clarifications

- Q1. Regarding item A026 (Mobile App supporting off road routing calculation based on GeoPackage data), it was not entirely clear to us whether this component is required to interact with other apps through the Common Map API, or whether this item is a stand-alone mobile app that is meant as a

demonstration of the road routing calculation using metadata in a GeoPackage file. Other items in section 8.17.3 seem to explicitly mention an interaction with the Common Map API, for instance items A054 and A055. Our assumption is that item A026 does not involve the Common Map API directly, unlike some of the other deliverables. Could you confirm or refute this? And perhaps clarify what the interaction (if any) between A026 and the Common Map API would involve?

A. A026 does not involve the Common Map API directly, but shall make its data available in a way that other tools (A054 and A055) can use it. The idea is that you generate a route for your car (a026), then abandon your car at some stage and recalculate a route taking additional information into account. Another app now needs to take care of the routing data plus other data in order to calculate a route for a person on foot. A026 shall support this other app by providing appropriate data, e.g. all routing data in the area or similar, thus A026 e.g. needs to provide GeoPackage export options for specific regions. Other ideas welcome.

## 5 Large-Scale Analytics (LSA) Thread Clarifications

Q1. In *Main Body* document, *Section 5.2 LSA Thread Deliverables and Funding Status*, was deliverable [A079](#) “WPS Conflation Service Profile ER” incorrectly listed in the *Components* table when it should have been listed in the *Documents* table?

A. Yes, deliverable [A079](#) should have appeared in the *Documents* table instead.

Q2. Is it a typo where *Table 2 – Large-Scale Analytics (LSA) Thread Deliverables and Funding Status* in the *Main Body* document lists [A079](#) WPS Conflation Service Profile ER under “Components”?

A. Yes, this deliverable should have been listed in the “Documents” section of this table instead.

## 6 Linked Data and Advanced Semantics for Data Discovery and Dynamic Integration (LDS) Thread Clarifications

Q1. The summary for component [A051](#) (CSW-ebRIM) calls for “implementing semantic mapping” between the NSG and DGIWG metadata frameworks. Since these are both based on ISO 19115, what does this work entail? Have mappings already been defined?

A. A corrigendum for section 8.11 will be provided. Mappings have not been defined so far. Please see updated Annex B, page two.

Q2. The summary for component [A051](#) (CSW-ebRIM) requires “supporting the pub-sub work as discussed in section 8.11.” However, section 8.11 does not mention pub-sub capabilities. Should this refer to 8.6 instead?



- A. A corrigendum for section 8.11 will be provided. Please see updated Annex B, page two.
- Q3. (webinar) Do we know what will be the target Schema Registry to integrate for the semantic mediation ? Which standard does it use ?
- A. The schema registry serves as a registry of styles. It shall be designed by the participants. Applicable standards shall be discussed.
- Q4. (webinar) Will data compliant to NEO (NSG enterprise ontology) be provided by the sponsors?
- A. The sponsor will provide the NSG Application Schema (NAS) 7.0 schema but the participant is being asked to create the data based upon that. Once data is collected and populated based on the NAS model, the participant needs to transform this data into RDF. A032 includes two datasets, one in GML and one in RDF/OWL.

## 7 Command Center (CMD) Thread Clarifications

- Q1. Is it a typo where *Table 4 – Command Center (COC) Thread Deliverables and Funding Status* in the *Main Body* document lists the primary thread for *A011-3 WFS Synchronization ER* as being LDS (rather than COC [now CMD])?
- A. Yes, this is a typo. The cell content “LDS” should instead have read “COC”.

## 8 Consolidation (CNS) Thread Clarifications

- Q1. In *Main Body* document, *Section 5.5 CON [now CNS] Thread Deliverables and Funding Status*, was deliverable A045 “WCS Conventional Server” incorrectly listed as a primary deliverable under the CON [now CNS] thread?
- A. Yes it was incorrectly listed. It should have been indicated as a secondary deliverable under CON [now CNS] thread (with bold “LSA” indicating that this is a primary deliverable under the LSA thread). This table row should also have been shaded gray.
- Q2. There is nothing in *Annex B* corresponding to the deliverable A092 “WCS DGIWG Portal ER” in the *Main Body* document, *Section 5.5 CON [now CNS] Thread Deliverables and Funding Status*. Should this deliverable have been excluded from the *Main Body* document?
- A. Yes, deliverable A092 “WCS DGIWG Portal ER” should not have been included in the *Main Body* document, *Section 5.5 CON [now CNS] Thread Deliverables and Funding Status*.

## 9 Aviation Thread (AVI) Clarifications

- Q1. How shall the CSW component (F003) be "integrated" with the FAA-NSRR registry? Federated search seems to be implied by the third bullet point, but metadata harvesting may also be practicable.
- A. The FAA is in the process of re-engineering the NSRR. This task is intended to demonstrate the viability of a **single** registry implementation with the ability to query on services contained within FAA's service catalog and function interoperably with the SESAR registry. The FAA would prefer not to have two registries due to costs and maintenance complexity. Therefore, an extension to the new NSRR implementation or a service facade representing a CSW implementation is preferred. Possible solutions will be reviewed during the testbed kickoff and development and will be presented to aviation sponsors for further input. Participants selected for this task will be provided further details regarding the new NSRR implementation. See also <https://www.faa.gov/nextgen/programs/swim/governance/outreach/media/SWIM%20Common%20Registry%20Concept%20Architecture%20and%20Implementation.pdf>
- Q2. Do the existing FAA and Eurocontrol registries implement any OGC specifications or other standard APIs? None are identified in the supporting documentation.
- A. It is assumed, however, that today's current implementations of FAA and Eurocontrol registries do **not** implement OGC specifications. However, SWIM services which are registered and catalogued in the registry may be implemented with OGC service specifications such as WFS, WCS, etc. A case study was conducted in OWS-9, Advance discovery interoperability task, which sought to establish a SESAR compliant registry using CSW (12-145 OWS-9 Aviation Metadata & Provenance ER). This task builds upon the work of previous testbeds to demonstrate an integrated solution and provide an engineering report describing best practices and approaches for FAA to implement a SWIM Common Registry using OGC standards. See also <https://www.faa.gov/nextgen/programs/swim/governance/outreach/media/SWIM%20Common%20Registry%20Concept%20Architecture%20and%20Implementation.pdf>
- Q3. Regarding the requirement to provide a "Cost effective approach to supporting the governance of service metadata", what aspects of governance are not adequately addressed by the existing NSRR and Eurocontrol service registries?
- A. The requirement is as stated, "*Cost effective approach to supporting the governance of service metadata including quality and integrity.*" The intent of this requirement is to ensure that service metadata is accurate and up to date. The current (old) implementation of the NSRR is a design-time registry that requires manual entry of information. As such,

the information may become stale or inaccurate as services are updated. The CSW implementation should demonstrate a service registry that is easy to update and maintain (thereby demonstrating cost effectivity). Further details will be provided at the OGC Testbed Aviation Thread kickoff.

Q4. Section 4.4 in Annex B (Advance Use of Data Broker) refers to an AIXM WFS and a AMXM WFS (F005). The section mentions that the AMXM WFS (F005) service contacts a AIXM WFS service to retrieve and transform data. However, in the deliverables, we don't see any development for an AIXM to AMXM transformation service. So our question is whether the AMXM WFS (F005) is meant to implement a transformation in its service, or whether there is some other third party service that can act as a transformation service for AIXM to AMXM conversion. Or, should the AMXM WFS (F005) act as a stand-alone service that serves AMXM natively from a local database? In other words: Does item F005 actually involve developing a transformation component between these two exchange formats?

A. It is envisaged that F005 is a stand alone WFS serving AMXM data, and F010 is a stand alone WFS serving AIXM data. F006 is a Data Broker which facilitates the requests between the AMXM WFS to the AIXM WFS while also handling the data transformation.

Q5. Annex B-4.5 (F003): Regarding the requirement to provide a harmonized SDCM, is a complete implementation of the SDCM 1.0 working draft required?

A. The FAA and SESAR JU have worked together to formulate a joint SDCM (<http://www.faa.gov/nextgen/programs/swim/governance/servicesemantics/view/sdcm%20march%2028%202014/sdcm%20march%2028%202014.html>). This SDCM can be used for the effort and modified as needed to include the service descriptions within the CSW.

Q6. Annex B-4.5 (F003): What APIs (and message content models) do the FAA and Eurocontrol registries support in order to facilitate interworking with CSW components? e.g. UDDI, OAI-PMH (repository), custom REST, something else?

A. The FAA is developing the NSRR 2.0 using Drupal, which is an open source content management platform. The goal is to demonstrate how components of CSW can be integrated or used to augment their registry to provide interoperability. The focus of the development will be on the FAA registry. The engineering report will analyze the needs of the Eurocontrol registry and harmonizing it with the FAA registry as research.

Q7. Annex B-4.5 (F003): What exactly is meant by "semantic querying of geospatial data" in the context of deliverable F003 (CSW)? We did notice that WSDOM was referenced elsewhere (4.7), but it is not directly mentioned as a capability or an input in sec. 4.5.

A. Per the sponsor's clarification: "When we think in the context of semantically and, at the same time, geospatially enriched service descriptions, we want to be able to query content [from the registry] semantically in order to answer geographical questions: "What area is covered by a serviced dataset?"

- Q8. [refer to Q6] (F003) Since the FAA NSRR 2.0 registry is based on Drupal, can we assume that SCDM concepts are implemented as entity types and can be accessed using a RESTful API (a core feature in Drupal v8, via module in v7)?
- A. Sponsor clarification: "Yes, this is a good assumption. Furthermore, FAA is working on designing RESTful interface to communicate with European registry."

## 10 Compliance Testing (CMP) Thread Clarifications

- Q1. The current WFS2 spec does not allow for creating or updating the capabilities document. Is this new capability (applies to [A058](#), [A059](#)) expected to be documented in a formal specification change request or just implemented as a (custom) vendor extension?
- A. As documented in the Annex B, the current test already supports transactions, which is restricted to features. The participant will document the extent of transaction operations to update capabilities of the WFS server. The participant will document the use cases and provide possible solutions. The solutions can be formalized in different ways, which is to be discussed during the testbed. For example. a change request or other.
- Q2. Annex B-8.22, p. 99 (A058, A059): With respect to implementing and testing various join predicates for WFS2, what does "multi-source integration" mean?
- A. The expected WFS-T executable test suite and reference implementation to be developed in Testbed 12 must support adding content from different sources by using the transaction capabilities of WFS-T. Sources can be any data provider, such as agencies or crowdsource communities. Joins can help querying: all information about a feature (including the transaction data from different communities) , what was added, and when and who added it.
- Q3. Annex B-8.22, p. 99 (A058): What is "Object Based Production" and how is it related to feature versioning?
- A. Objects are like features. They have attributes and the values can be changed over time. Agencies are working towards organizing and better querying of information related to an object. See for example this presentation <https://www.ncsi.com/diaid/2013/presentations/johnston.pdf>. Objects can change via WFS-T. If the object changes it might be required to have a new version.
- Q4. Annex B-8.22, p. 99 (A058): Since tests for locking behavior already exist, are additional tests being requested here? If so, what kind?
- A. The locking in WFS 2.0 behavior should be exercised to support editing of features and versioning from multiple sources. It might be required to improve the test or to create a change request.
- Q5. Annex B-8.22 p.98: Where is the result of the HP Fortify Software Evaluation performed against TEAM Engine?
- A. The report can be found [here](#).

## 11 Sponsor-Provided Clarifications

Q1. [... currently no clarifications ...]

A. .