

FAA SAA Dissemination Pilot Clarifications Document

The following questions and answers were collected by email as of Oct 3, 2010.
Please send any corrections or additional questions to
techdesk@opengeospatial.org

Revision log:

Oct 2, 2010	Nadine Alameh	First draft
Oct 3 2010	Nadine Alameh	Updated with more clarifications
Oct 4, 2010	Nadine Alameh	Updated with questions from bidders' telecon
Oct 5, 2010	Nadine Alameh	Funding spreadsheet and proposal template
Oct 8, 2010	Nadine Alameh & Johannes Echterhoff	Final update with more questions

Technical questions

WFS Questions

Q1. The component shown in Figure 5.1 of Annex B as a WFS – does it have to persist data or simply pass it to associated SWIM Web Service?

- A. There is no requirement to persist the data on the WFS. This could be discussed in the RFQ response as a way to improve performance of the system (while ensuring that the WFS is always serving up-to-date data)

Q2. In Annex B Appendix A (Conops), Figure 5.1 shows System Interfaces. We assume that the WFS is to interface to the “get SAA” operation at SAMS/NAS. Is this correct? Where is the documentation of this interface? Is there a way to get SAA changes in an asynchronous manner?

- A. The information about getSAA is in Appendices B & C of Annex. The WSDLs for the SWIM SAA services will be posted on a publicly accessible website soon.
- B. For the asynchronous communication about changes to the underlying SAMS database, that is delivered by the JMS service.

Q3. The WFS are shown as connected to the NASR Static Data Repository and the SAMS Operational Repository. Are these interfaces to web services, or is it anticipated that the WFS will be installed onto the NASR/SAMS databases?

- A. The SWIM services on top of these two databases are web services (WSDLs to be posted shortly on a publicly accessible website). The WFS should use the SWIM interfaces to get the data needed, and should not have access to the databases directly.

Q4. Does the WFS adapter have to support functionality not directly supported by SWIM, or not easily translatable to SWIM? For example, if SWIM doesn't support response paging or doesn't support joins, will the WFS adapter have to make up for it? What if the WFS adapter has to cache the data locally to achieve some of the expected WFS/FE 2.0 functionality?

- A. The WFS adapter should support the use cases and queries presented in Annex B. The use cases and the queries will be explored in greater detail during the kickoff to determine the exact mapping between the WFS and SWIM services. The WFS adapter should complement SWIM functionality (e.g. caching of local data) if that is needed to fulfill the use cases.

Q5. Is the WFS a read-only WFS?

- A. Yes. The Transactional part of the WFS is out of scope for this pilot.

Q6. Does the WFS adapter have to support stored queries and if so which of the following requests must be supported (ListStoredQueries, DescribeStoredQueries, CreateStoredQuery, DropStoredQuery)?

A. The queries needed to support the use cases listed in the RFQ are probably not complex enough to warrant the creation of Stored Queries. If you have a different perspective, please make sure to include that in your response to the RFQ.

Q7. Who defines the Capabilities document for the WFS? Will it be static or dynamic?

A. The Capabilities document for the WFS should be defined by the WFS provider. Since the feature types are not changing, it is expected that the Capabilities document is a static one.

Q8. Are CRS transformations needed in this project, and if so does the WFS adapter need to perform any of them?

A. Supporting CRS transformations is highly encouraged in line with the pilot objective of increasing the dissemination (and use) potential of the SAA data.

Q9. In DescribeFeatureType, will the WFS adapter have to serve up its own copy of the schema or will it retrieve it through SWIM?

A. Since the WFS adapter has to support AIXM 5.1 (not yet supported in SWIM), it has to serve up its own copy of the schema.

Q10. Are CRS transformations needed in this project, and if so does the WFS adapter need to perform any of them?

A. Supporting CRS transformations is highly encouraged in line with the pilot objective of increasing the dissemination (and use) potential of the SAA data.

Q11. If SOAP is mandatory, do the other two message encodings (XML over HTTP POST and KVP over HTTP GET) have to be supported?

A. Supporting the other encodings is highly encouraged in line with the pilot objective of increasing the dissemination (and use) potential of the SAA data.

Q12. Is a direct connection to the SAA database acceptable for a WFS implementation? This approach would not use SWIM interfaces

A. No a direct connection to the SAA database is not acceptable as a proposed solution. Use of SWIM interfaces to access SAA information is required.

Q13. When will the WSDLs be available? And what version of WSDL is being used?

- A. FAA is working on posting the WSDLs on a publicly accessible site.
- B. Checking on the version of WSDL used.

Q14. Some of the SUAs used in OWS-7 contained the surface geometries that contain polygon patches comprised of curveMembers whose segments are encoded using ArcbyCenterPoint and CirclebyCenterPoint geometries. Are the SUA data anticipated to be used in this pilot going to contain these geometry types (as these geometry types are not well-supported by off-the-self software)

- A. Yes, the SAAs will contain Arc and Circle by Center Point geometries.

CSW Questions

Q15. There is a reference to a CSW styles registry. Can we use CSW-ebRIM for this purpose?

- A. Yes, the portrayal requirement builds on the work done in OWS-7, which uses CSW-ebRIM.

FPS Questions

Q16. Can the FPS retrieve the SLDs from a CSW via the HTTP GET interface (not SOAP)?

- A. SOAP is required for the CSW to be SWIM compliant

Q17. Does the FPS need to support only KML? What about raster formats such as JPEG?

- A. The FPS should not only support KML. It is expected that the FPS support mainstream raster formats such as JPEG, SVG, etc.

Q18. Who defines the SLDs and the symbology?

- A. This work should build on the OWS-7 SLDs and symbology. The FPS provider, in coordination with the CSW provider, is responsible for defining the SLDs and symbology to be used in the pilot to complement the work done in OWS-7.

Q19. Does FPS have to support styling both AIXM 5.0 and 5.1?

- A. The pilot only requires the use of AIXM 5.1. So the FPS should only support AIXM 5.1.

Q20. Is there a direct interaction required between the FPS/WMS service and the SWIM service?

A. No, Figure 11 in Annex B shows that the FPS is interacting with the WFS to get the data, and not with the SWIM service directly.

Event Service Questions

Q21. Are Event Service security considerations or any other QoS parameters out of scope for this pilot?

A. Yes.

Q22. Will OASIS Web Services Notification (WSN) be the only specification to be considered and used for the Event Service implementation?

A. Yes OASIS WSN will be the only specification for implementing the Event Service in the pilot, since it was tested in the two testbeds OWS-6 and OWS-7. Note that there are plans to investigate the use of WS-Eventing in the Event Service SWG.

Q23. Does the Event Service need to use GeoRSS?

A. No. But you may propose to use GeoRSS if you justify its use to fulfill the use cases and/or as a step forward towards meeting the eventual end-to-end target architecture.

Q24. Is there a need for any discovery functionality in the Event Service?

A. No, but it may be mentioned to capture in the eventual end-to-end target architecture.

Q25. SAA use case #2 and #5 state “Subscription criteria might be related to one or more SAA”. This implies that for every single subscription there might be a need to fetch additional related SAA to perform matching algorithm which leads to the subscription matching one by one. This does not seem to be scalable.

A. This implies that the user can subscribe to changes to more than one SAA (either implicitly or explicitly) in one single subscription. The Event Service matches the subscription criteria with the incoming events. This is in-line with the current architecture of the Event Service.

B. Note that a JMS subscription can reference more than one SAA (e.g. all SAAs in Washington ARTCC), but a notification will only reference a single SAA.

C. The Event Service Adapter may need to fetch complete information for an SAA that is identified in a JMS message. This would be required

at most once per message in order to subsequently match the event against existing subscriptions. You are encouraged to include your performance considerations regarding the described notification approach in your RFQ response.

- Q26. Does the Event Service Adapter need to subscribe to a JMS service using both topic and message selector (e.g. UUID) based on individual subscriptions or Event Service Adapter can subscribe only to JMS service topic without message selectors and use internal Event Service matching capabilities to match events to subscriptions?
- A. An Event Service Adapter may subscribe to a JMS service using topic and message selectors. The Adapter can also perform all the matching internally.
- Q27. Will only 3 JMS topics be used for JMS Event Service Adapter? Are topic names predefined and constant for all events published from SR and OR?
- A. Appendix A – ConOps describes the relevant JMS topics. The topic names are predefined and constant for this Pilot.
- Q28. Is the content of an Event published to JMS topic from SR or OR always empty and only message property carries UUID of affected SAA? Are there exceptions to this? Is message property name that carries UUID predefined and constant for all events published from SR and OR?
- A. The SR's JMS events contain the UUID and the natural key for the SAA (name, type).
- B. The OR's JMS events contain the same information along with the schedule information and status of the airspace being updated.

Non-Technical questions

Q1. Can potential participants submit further questions by email?

A. Yes, by October 8, 2010 to techdesk@opengeospatial.org

Q2. How much funding is available?

A. This information cannot be disclosed at the moment.

Q3. Should we expect 100% cost recovery for our work?

A. In-kind contributions are not required, but are one of the criteria in the evaluation of the proposals. The exact percentage depends on various criteria.

Q4. Can we submit a proposal if we are not OGC members at the moment?

A. Application to OGC membership must be submitted with the proposal. Membership will need to be established prior to being invited to the kickoff.

Q5. Can organizations currently involved in SAA work under contract to FAA propose to this RFQ/CFP?

A. Yes, such organizations can propose for work that is not already funded by a separate FAA contract.

Q6. We are interested in observing this pilot to track this work into future phases.

A. OGC members may be given observer status to the pilot with sponsor's approval.

Q7. Several of the specifications referenced in Annex B include links to the OGC Portal System (<http://portal.opengeospatial.org>) which requires a username/password for access. Will OGC make these referenced specifications publicly available along with the OWS-7 Engineering Reports?

A. The OWS-7 Engineering Reports are public Reports and don't require username/access (all public Engineering Reports are listed at <http://www.opengeospatial.org/standards/per>)

B. Annex B has been updated to fix the references that require username/password. In particular

- i. On page 19, the link to the OWS-7 AIXM Assessment Report is updated to http://portal.opengeospatial.org/files/?artifact_id=40502

- ii. On page 20, the link to GML 3.2.1 is updated to
http://portal.opengeospatial.org/files/?artifact_id=20509
- iii. On pages 21, 24 and 26, the link to the OWS-7 Aviation Portrayal Engineering Report is updated to
http://portal.opengeospatial.org/files/?artifact_id=40134
- iv. On page 23, the link to the OWS-7 FUSE Integration Report is updated to
http://portal.opengeospatial.org/files/?artifact_id=40114

- C. The only non-public references in the RFQ are for the WFS 2.0 and FES 2.0 specifications. OGC can supply these documents to interested organizations (also refer to question about WFS 2.0 and FES 2.0)

Q8. Filter Encoding (FES) 2.0 and Web Feature Service (WFS) 2.0, which are specified in *Annex B* have not yet been adopted as standards, and agreed specifications have not yet been published. Mandating their use for this Pilot project will limit component development options, since open source projects such as deegree, Geotools, Geoserver and Mapserver have not implemented any future standards. In order to promote the development of non-proprietary and open-source components, rather than the customized commercial capabilities seen in other OGC testbeds, shouldn't the architecture specify the use of approved standards?

- A. Both WFS 2.0 and FES 2.0 have been voted on within OGC and were approved on Aug 23, 2010. Within ISO, the FES is already adopted but has not yet been published (waiting for release alongside the WFS). WFS is going through an FDIS vote currently. The final vote is scheduled to close on Nov 16, 2010.
- B. With both of these standards at FDIS level in ISO and approved within OGC, the pilot is an opportunity for industry to modify existing software to meet the V2.0 requirements for use in operational settings such as those described in the RFQ.

Q9. Although the OWS-7 Aviation thread included a task for "Evaluation and advancement of AIXM," the *FAA SAA Dissemination Pilot Annex A – Work Breakdown Structure* indicates that WBS elements 3.10.4, Data Requirements Assessment, and 3.10.5, Data Acquisition and Distribution, are out of scope. If a bidder proposes that AIXM 5.1 extensions along the lines of the Electronic Airspace Management (eASM) model are needed to adequately represent SAA reservation events, is it appropriate to include these out-of-scope WBS elements in their proposal?

- A. You can include such proposed extensions with their justifications in your response. If not covered in the current implementation of the

pilot, they could be incorporated, if appropriate, in the eventual end-to-end target architecture and next steps.

Q10. Can a team include a non-member organization?

A. Yes with conditions. The primary organization responding to the RFQ/CFP must be an OGC member or submit an application with the proposal. Membership privileges can be extended by the prime to a sub-contractor organization only for the scope of the sub-contracted task in the pilot. The membership privileges only apply to those persons of the sub-contracting organization involved in the pilot and only for the purposes of working on the pilot

Q11. Is kickoff attendance required?

A. Yes, funded organizations must have a representative at the kickoff. Webex and telecon arrangements may be established to make the kickoff accessible to additional persons from the attending organizations.

Q12. Are the proposal template and funding spreadsheet available?

A. Yes they have been made available as of Oct 5, 2010. Main body Section 5.1 was updated to reflect the proposal template sections.