Open Geospatial Consortium (OGC)

AAtS Harmonization Initiative - RFI Webinar
October 1\textsuperscript{st} 2013

Johannes Echterhoff
(interactive instruments / OGC)
RELEVANCE TO AATS
OGC Standards - Interoperable Dissemination and Sharing of Geospatial Information

• Discovery - of information and services

• Access and dissemination – of geospatial information
  – Feature and coverage data
  – Tailored to user needs
  – Upon request or when available

• Processing – of geospatial information

• Security – for integrity and confidentiality of information

© 2013 Open Geospatial Consortium
OGC Standards
Building Blocks for Multiple Domains

• Information Models - for example:
  – General Feature Model (GFM)
  – Geography Markup Language (GML)
  – Observations & Measurements (O&M)
  – Styled Layer Descriptor (SLD) / Symbology Encoding (SE)

• Service Interfaces - for example:
  – Catalogue Service for the Web (CSW)
  – Web Feature Service (WFS)
  – Web Coverage Service (WCS)
  – Web Map Service (WMS)
  – Feature Portrayal Service (FPS)
  – Event Service

Domain specific profiles and extensions possible, for example:
  • Guidance and Profile of GML for use with Aviation Data
  • WFS Temporality Extension
Towards a New Aviation Information Management Paradigm

Legacy
Paper unable to handle demands

Standards

Aviation Information Management

Future
Flexible, interoperable, ready for new requirements
Information Exchange Models for Aviation domains – Aviation Information Management enablers

Aviation Information Management

- AIM
- AIXM
- WXXM
- FIXM
- Flight
- Environment
- Flow Management
- Capacity Demand
- Airport
- Surveillance
- Weather

Based on / harmonized with OGC standards (e.g. AIXM, WXXM)

© 2013 Open Geospatial Consortium
Globally connected SWIM environments

Are we there yet?
Globally connected SWIM environments

SWIM environments are different
Interoperable dissemination of Aviation information from multiple SWIM environments - facilitated by OGC service interfaces
Demonstration Setup in OGC Web Services Testbed Phase 9

Key part of the AAtS Concept

OGC Services (WFS,ES)

Common Services
Registry
WPS
WMS/FPS

DMS

SWIM

OGC Services (WFS,ES)

© 2013 Open Geospatial Consortium
RELEVANT CURRENT ACTIVITIES
Current Activities – OGC Interoperability Program (IP)

- AAtS Harmonization Initiative

- OGC Web Services Testbed Phase 10 (OWS-10)
  - Aviation Thread: exchange of aeronautical, weather and flight information, etc.
Current Activities – OGC Standards Program

• OGC Aviation Domain Working Group (DWG)
  – „Provide an open forum for work on aviation-related data interoperability and access, and a route to publication through OGC’s standards ladder (Discussion paper / Best Practice / Standard, and, if appropriate, to ISO status)”
  – Examples of work:
    • Requirements for Aviation metadata / Guidance on Aviation metadata profile
    • Guidance and profile of GML for use with Aviation data

• OGC Meteorology & Oceanography (Met Ocean) DWG
  – Members participating in development of AvXML-1.0
    • Joint project by WMO and ICAO
    • Basis for WXXM
    • Consists of aviation-specific information model elements, underpinned by generic weather model elements, based on OGC/ISO models
References

• OGC Documents: http://www.opengeospatial.org/standards
  – OWS-9 Aviation Architecture Report
    • https://portal.opengeospatial.org/files/?artifact_id=51823
  – OWS-9 Data Transmission Management Report
    • https://portal.opengeospatial.org/files/?artifact_id=51812

• Demonstrations: http://www.opengeospatial.org/resource/demos
  – OWS-9 Aviation:
    • http://www.opengeospatial.org/pub/www/ows9/aviation.html
  – OWS-8 Aviation:
    • http://www.opengeospatial.org/pub/www/ows8/aviation.html
  – FAA SAA Dissemination OGC Pilot
    • http://www.opengeospatial.org/pub/www/saa/index.html
OGC Aviation
Agenda

• Introduction – Nadine Alameh, OGC

• AAtS Context – Lockett Yee, North Star Group (on behalf of FAA)

• SC 206 Overview – Matt de Ris, Panasonic/SC-206 representative

• AGIE Overview – Rick Wilber, Boeing/ARINC 830/839 AGIE/MAGIC Co-Chair

• OGC Standards Overview – Johannes Echterhoff, Interactive Instruments/OGC

• Recap – Nadine Alameh, OGC

• Q&A