Aeronautical Information Services

Flight Information Exchange Model

Presented to: ATIEC
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FIXM Evolution

**FIXM v1.0**
- ICAO 2012 ATS – FPL message
- GUFI (Globally Unique Flight Identifier)

**Flight and Flow Management**

**FIXM v2.0**
- ICAO 2012 ATS
- ICAO 2012 AIDC messages
- TFM (Strategic)
- Airport CDM
- ANSP-ANSP boundary crossing

**FIXM v3.0**
- ICAO 2012 ATS
- ICAO 2012 AIDC messages
- TFM (Strategic)
- Airport CDM
- ANSP-ANSP boundary crossing

**FIXM v4.0**
- ICAO 2012 ATS
- 4D Trajectories
- Messaging Package
- Aligned with draft FF-ICE/1 requirements

**ICAO Provisions**
- Global Applicability

**Surface data**
- 4D Trajectories

**4DT**
FIXM v4.0

FIXM Development Focus Moving More Towards Addressing Implementation/Usability Issues

Objective

• In Support of Flight & Flow Information for a Collaborative Environment Step 1 (FF-ICE/1)

Inputs from the Operational Community

• ICAO Documents
• Operational Scenario Narrative
• User Recommendations
FIXM v4.0 – Cont.

Capabilities

• The ability to communicate the operational acceptability of a flight plan
• The ability to communicate constraints affecting a flight
• The ability to describe a 4-D Trajectory (and associated performance data) for a flight
• The ability to more fully describe the capabilities of a flight
• The ability to send “what if” queries before committing to a flight plan change
• The ability to send ASP-specific information (using extensions)
FIXM v4.0 Includes

**FF-ICE/1 Support**

- Definition of flight data elements in support of FF-ICE/1 requirements
- Incorporation of a new messaging package for enabling the creation of the FF-ICE/1 messages
- Optimization of route and 4D-Trajectory data structure
FIXM v4.0 Includes – Cont.

- Cleaner and unambiguous core information that is harmonized and applicable at global level
- Greater alignment with ISO standards (e.g., ISO 19103) and AIXM 5.1
FIXM v4.0 – Cont.

- UML Model
- XML Schemas
- Support Documents
- Available on:
  - https://www.fixm.aero/
Next Steps

• [2017] FIXM version 4.1 (TBC)
  – Continue to support any new requirements from ICAO Provisions
  – Address feedback from early FIXM v4.0 users
  – Consider integration of GML (TBD)
  – Recommendations from FIXM community
FIXM Implementation/Demonstrations

- **Operational Users:**
  - Traffic Flow Management (TFMS) (FAA)
  - SWIM Flight Data Publication Services (SFDPS) (FAA)

- **Demonstrations:**
  - SESAR SWIM Global Demo
  - Mini-Global II Demonstrations (FAA)
  - Mini-Global I Demonstration (FAA)
  - Interoperability Cross Atlantic TrialS (ICATS) (SESAR)
  - Jumpstart (EUROCONTROL)
  - Airport CDM Extension (EUROCONTROL)
  - OGC – OWS – 12 (FAA, EUROCONTROL, OGC)
FIXM Participants
Questions