

# *Global Harmonization Through Collaboration*

## AIXM - CCB

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**Federal Aviation  
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### AIR TRANSPORTATION INFORMATION EXCHANGE CONFERENCE - (FEATURING AIXM, WXXM AND FIXM)

August 28, 2012 - August 31, 2012  
NOAA Auditorium and Science Center  
Silver Spring, Maryland



# Proposed Agenda



Air Transportation Information  
Exchange Conference - (featuring  
AIXM, WXXM and FIXM)

- AIXM CCB status
- AIXM CCB Charter
  - Present, discuss, approve
- Registration process
- AIXM 5.1.1
  - Potential changes
  - Planning
- AIXM 5.2
  - Potential changes
  - planning



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# AIXM CCB Status



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# CCB Charter



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## AIXM Change Management Charter

### Article 1 – Objective

- 1.1. The further evolution of the Aeronaical Information Exchange Model (AIXM) shall be managed in the interest of the largest number of AIXM stakeholders ("Stakeholders").
- 1.2. A Change Control Board ("CCB") with international participation is therefore established, in relation with a Change Control Advisory Board ("CCAB"), both acting under the provision of this Change Management Charter ("Charter").
- 1.3. The objective of this Charter is to support the aeronaical information needs of the AIXM user community and of the larger aviation community through a disciplined, inclusive, and transparent approach to developing and approving new AIXM versions.
- 1.4. The AIXM evolution will be aligned with the evolution of other ATM information domain models (MET, Flight, etc.) and with a potential global ATM information reference model, when established/deployed.

### Article 2 – The Change Control Board ("CCB")

#### 2.1. Tasks

- 2.1.1. The CCB is the primary body that decides on the further evolution of the AIXM. The CCB schedules the publication of new versions and gives a final approval to the set of changes to be included in new versions.
- 2.1.2. The CCB ensures the transparency of the change management process for all Stakeholders.
- 2.1.3. The CCB ensures the possibility to contribute in the change management process for all Stakeholders.
- 2.1.4. The CCB is responsible for the AIXM maintenance and evolution, which includes both the model and the associated documentation (e.g. Temporality Concept, UML to XSD Conversion, Business Rules, etc.)
- 2.1.5. The CCB may also issue and/or endorse implementation guidelines for new AIXM versions, such as:
  - a) a list of new operational (data encoding) capabilities that are supported by a new AIXM version, thus enabling stakeholders to take informed decisions on their need to migrate an existing system to the new version;
  - b) a proposed implementation timeline, thus facilitating the synchronization between the different system upgrades, which is necessary for preserving the interoperability of these systems;
  - c) mapping guidelines between previous versions and the new version, in particular when changes in the model result in a complete restructuring of a concept;
  - d) sample data sets.

Version 0.8 (25-AUG-2012)



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# Registration process



- CCB
  - See link on <http://www.aixm.aero>
  - One representative per organisation/company (or Department for very large organisations)
  - No deadline, you are welcome at any time!
- CCAB
  - Eurocontrol and FAA will contact organisations/groups as indicated in the Charter to seek participation in the CCAB
  - SEP-OCT 2012

## AIXM Forum & Wiki

### Forum | **AIXM**

- ▶ Join the AIXM Forum
- ▶ Visit the AIXM Forum
- ▶ Visit the AIXM Wiki

## AIXM 4.5

- To download content for the previous version of AIXM (AIXM 4.5), please visit its website:
  - ▶ [AIXM 4.5](#)

## Maintenance and Evolution

- AIXM 5 was initially developed by the US Federal Aviation Administration (FAA) and the European Organisation for the Safety of Air Navigation (EUROCONTROL) with support from the international community.



- The further evolution of the AIXM shall be managed in the interest of the largest number of AIXM stakeholders. A Change Control Board ("CCB") with international participation is therefore established.

- ▶ [AIXM CCB](#)

# AIXM 5.1.1



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- Minor Release
  - UML model - no changes to classes, attributes, associations
    - Migration from RationalRose (IBM) to EA (Sparx)
    - Possibly, improvements of definitions
  - XML Schema improvements/corrections, e.g. gml:identifier for <<objects>>
  - Associated documentation corrections/improvements?



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# AIXM 5.1.1



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- Planning:
  - All candidate issues identified by end October 2012
  - Change Proposals defined by end November 2012
  - Review period until end 2012
  - Report to CCAB beginning of January 2013
    - INCLUDING A CANDIDATE RELEASE
  - Publication FEB 2013
    - UML model
    - XML Schema
    - Other documentation updates
    - Mapping guidelines and XSLT scripts AIXM 5.1.1 <-> AIXM 5.1



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# AIXM 5.1.1



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- Migration to EA (Sparx)
  - Version 8.0
  - Instead of Rational Rose (IBM)
  - Includes UML model and UML to XSD scripts (also for extensions)
    - Drafts available
    - Requires detailed checking against AIXM 5.1 MDL/XSD
      - Manual process -> volunteers are welcome!
        - » GoogleDocs for tracing the verification process, class by class
  - Sparx offer:
    - “standards contribution license” for CCB Members
  - Expected difficulty: how to preserve order of XML elements that correspond to associations?



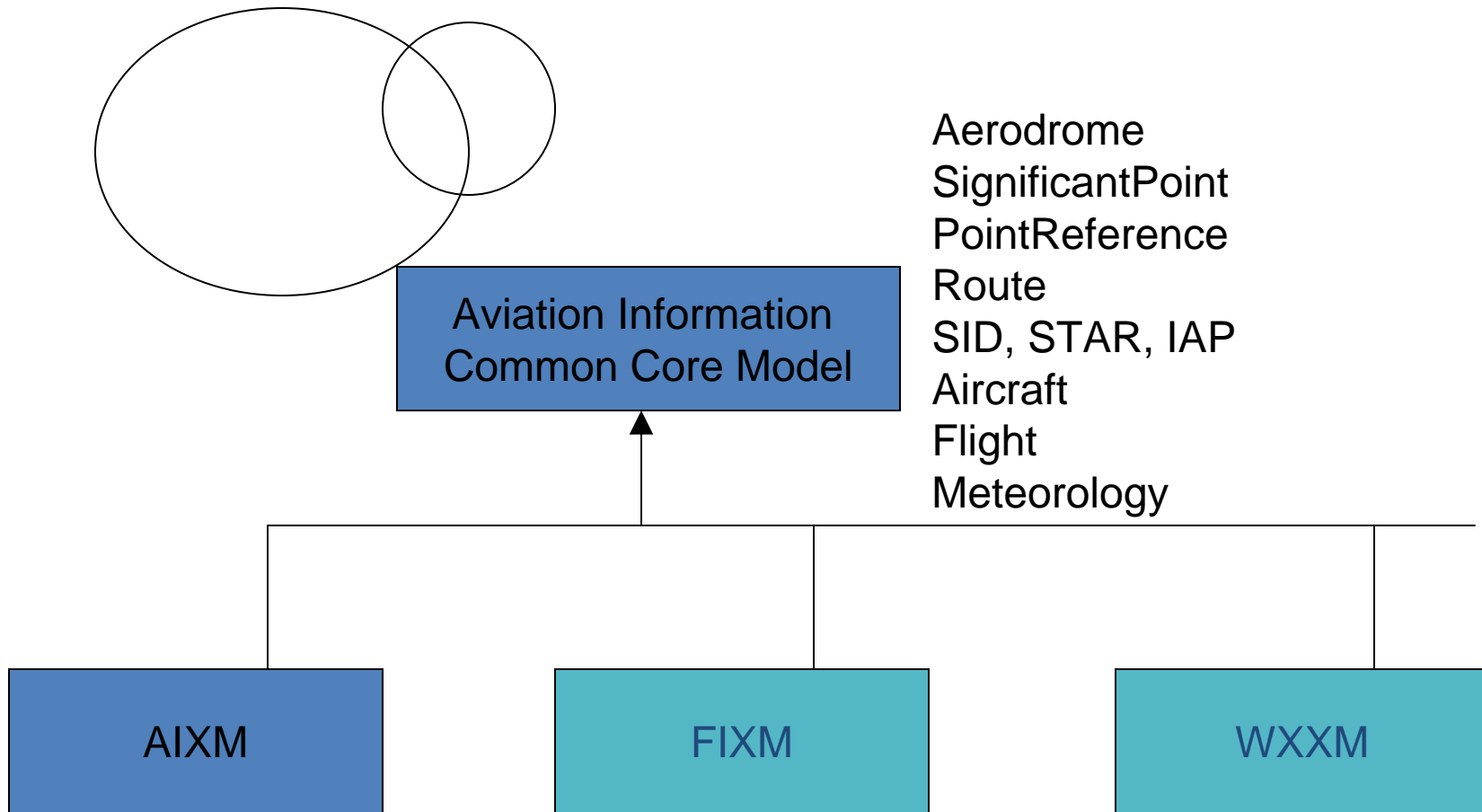
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# AIXM 5.1.1



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# AIXM 5.1.1



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- Other potential changes
  - bug corrections
    - See known issues list on Wiki
    - Note.propertyName does not allow “ARP” and “\_”
  - gml:identifier for <<object>>
  - allow empty AIXM\_BasicMessage
  - Temporality document
    - Clarify time intervals : is end time included/excluded?
    - Clarification in the excluded elements of Timesheets
    - Other issues?



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# AIXM 5.2



- Regular update
  - backwards compatible with AIXM 5.1 (deprecation instead of simple removal)
  - allow new classes, properties, associations where **operationally** required
  - Including mapping rules to AIXM 5.1
  - eventually mapping code (XSLT) provided as part of the release



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# AIXM 5.2



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- Planning:
  - All Change Proposals defined by end September 2013
  - Publication of Candidate Release by end 2013
  - Review period until end February 2014
  - Report to CCAB beginning of March 2014
  - Publication April 2014
    - UML model
    - XML Schema
    - Other documentation updates
    - Mapping guidelines and XSLT scripts AIXM 5.1 <-> AIXM 5.2
    - List of new capabilities and implementation timeline recommendation



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# AIXM 5.2 – Potential changes



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- Airport model
  - alignment with ED 99/ DO 272 – version C
  - signs
  - runway entrance/status lights
  - “Runway ahead” marking
  - EMAS
  - passenger terminal
  - Surface contamination model update
  - PCN missing value for tire pressure
- Free route airspace
  - Routes with variable upper/lower limits
  - “Offset” flying on routes
- Seaplane landing area model refinement
  - Missing association AirportHeliport to SeaplaneLandingArea



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# AIXM 5.2 – Potential changes



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- Magnetic variation as <<object>>
- SATVOICE address type
- MET products in Services Model
- Moving obstacles
- Channel spacing in RadioCommunicationChannel
- Surveillance model refinement
- Airspace class on Airspace Volume



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# AIXM 5.2 – Potential changes



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- Procedures Model
  - “procedure altitude” ?
  - MET equipment
  - RNP data block adjustments
  - Recommended navaid
  - Alternative terminations for a procedure leg
  - unclear meaning of the  
ObstacleAssessmentArea.gradientLowHigh attribute



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# AIXM 5.2 – Potential changes



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- Alignment with FIXM/WXXM
  - Use ISO standard for units of measurement
  - Refer to FIXM “Aircraft” and “Flight” capabilities instead of local AircraftCharacteristics and FlightCharacteristics classes
  - Refer to WXXM class (?) instead of local Meteorology class
- Other
  - Notes to allow images?



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# Contact Information



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