

# Welcome, Summary and Policy Assessment

## Industry Requirements for Digital NOTAM Submission

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Federal Aviation  
Administration



# Welcome and Introductions

- **Second meeting of the Digital NOTAM Submission Working Group**
  - Provide information on Digital NOTAM efforts
  - How to enable direct, electronic submission of candidate NOTAMs
- **Introductions**
  - Brett Brunk - AIM Architecture and Planning, FAA
  - Digital NOTAM Team
    - Vinod Vallikat, CGH
    - Steve Cai, EDS
    - Tony Rubieria, CNA
  - EUROCONTROL
    - Eddy Porosnicu, Specialist in AIM
    - Scott Wilson, Contractor for EUROCONTROL
    - Andre Nathaus, University of Darmstadt, Germany



# Agenda

- Introduction
  - Purpose
  - Review of last meeting
  - Policy assessment
- Information actions from previous meeting
  - Temporality – expressing information about temporary and permanent changes
  - Metadata – recording credentials and contact information
- Status of Digital NOTAM – demonstration
  - EUROCONTROL xNOTAM trial
  - FAA Digital NOTAM submission and UI preview
- Concept of Operations
- Encoding NOTAMs digitally
  - Events, Actions and Conditions
- Technical specifications
- Final discussion and wrap up



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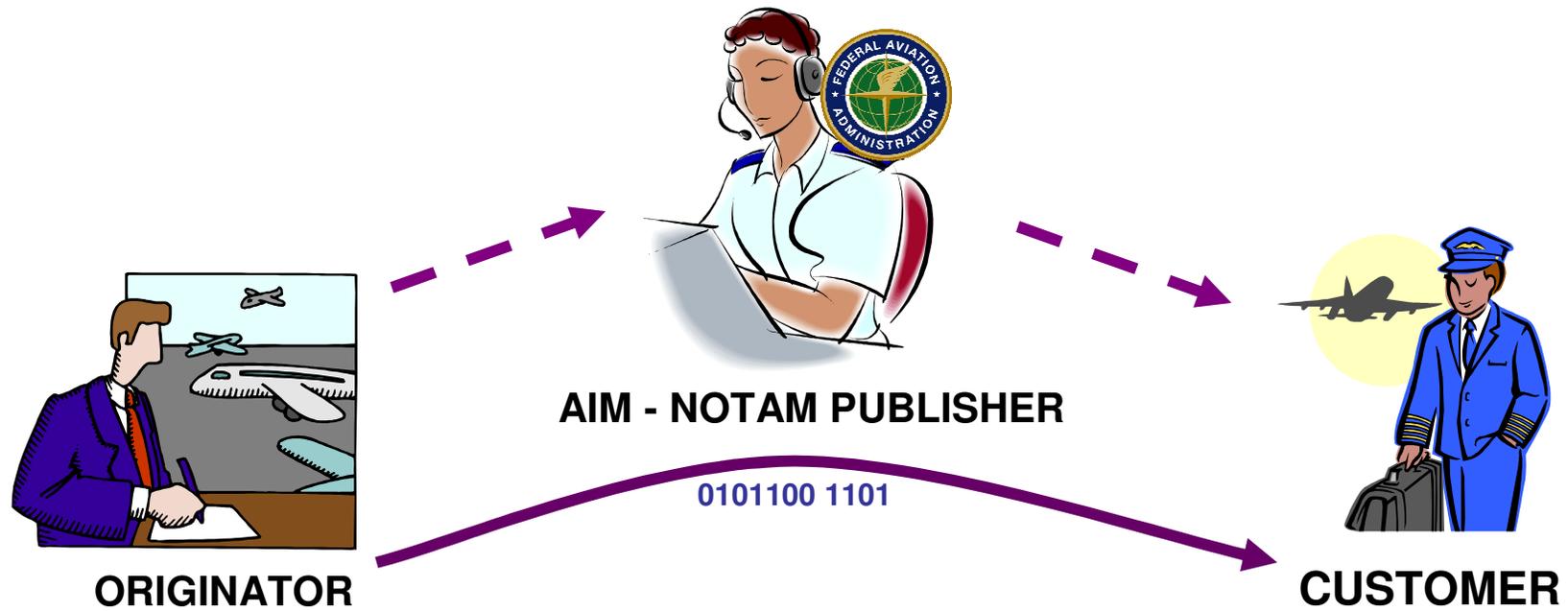


# Digital NOTAM Goals

- **Radically improve the quality of NOTAM**
  - Ensure NOTAM intent is accurately encoded
  - Ensure NOTAM submitted = NOTAM received
  - Ensure NOTAM are encoded the same way every time
- **Streamline NOTAM processing**
  - Reduce the time between NOTAM submission and publication
  - Reduce NOTAM rejections due to quality problems
- **Enable customer benefits**
  - Provide digital NOTAM output to enable computer systems to fully leverage NOTAM information
  - Enable customers to receive NOTAMs when and how they need it



# Why Digital NOTAM submission



**Quality starts at the beginning**

# *Digital NOTAM Submission Working Group* **Mission**

**The mission of DNSWG is to work with our stakeholders to develop specifications, as well as workflow, security and other operational requirements for submitting digital data about temporary changes to aeronautical resources to the Digital NOTAM system.**



# *Digital NOTAM Submission Working Group*

## **Scope**

- **Interface specifications**
  - Data model, AIXM
- **Business process and workflow specifications**
  - Submission, Pre-submission check, Error Checking, Feedback
- **Security, Network and Authentication specifications**
  - Data integrity, authorization, certification
- **Risk and safety management**



# *Digital NOTAM Submission Working Group*

## Process

- **Open forum**
  - Proceedings and recommendations published at
    - [Nfdc.faa.gov/digitalnotam](http://Nfdc.faa.gov/digitalnotam)
    - [www.aixm.aero](http://www.aixm.aero)
- **Industry participation**
  - Active working group
  - Monthly coordination
    - Both virtual and live meetings
  - Results will be available publicly even if you do not participate
- **Outcome focused**
  - Implement-able recommendations and specifications
  - Target date – March 2008



# *Digital NOTAM Submission Working Group*

## **After the working group**

- **FAA intends to**
  - Develop web services based on working group specifications
  - Coordinate demonstrations and trials focused on digital submission of airport changes
  - Full deployment as part of overall NOTAM Realignment strategy
- **International coordination with AIM Concept**
  - EUROCONTROL, FAA and international partnerships



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# DNSWG #1 – Oct 12, 2007

- **Documented at**
  - Nfdc.faa.gov/aimnews
  - [www.aixm.aero](http://www.aixm.aero)
- **15 Participates**
  - Airlines, Airports, Dispatchers, FAA, US Military
- **Covering**
  - Introduction and Purpose
  - Proposed workflow
  - Architecture
  - ICAO NOTAM categorizations



# Discussion topics

- NOTAM entry authentication and authorization
- NOTAM liability
- NOTAM timeliness
- Information overload
- Interaction between airlines and the Digital NOTAM System
- Potential difference between information entered and information displayed
- Selective display of NOTAMs to appropriate users
- NOTAM format delivery
- Role of Airport GIS
- NOTAM archival capability
- NOTAM author access and IT implementation issues
- Ability to enter NOTAMs for new AIM features
- NOTAM revision and cancellation
- Audit of old NOTAMs
- User interface definitions
- Virtual Meetings
- Use of free text for extenuating circumstances
- AIXM versioning



# Major conclusions and future work

## System access and IT specifications

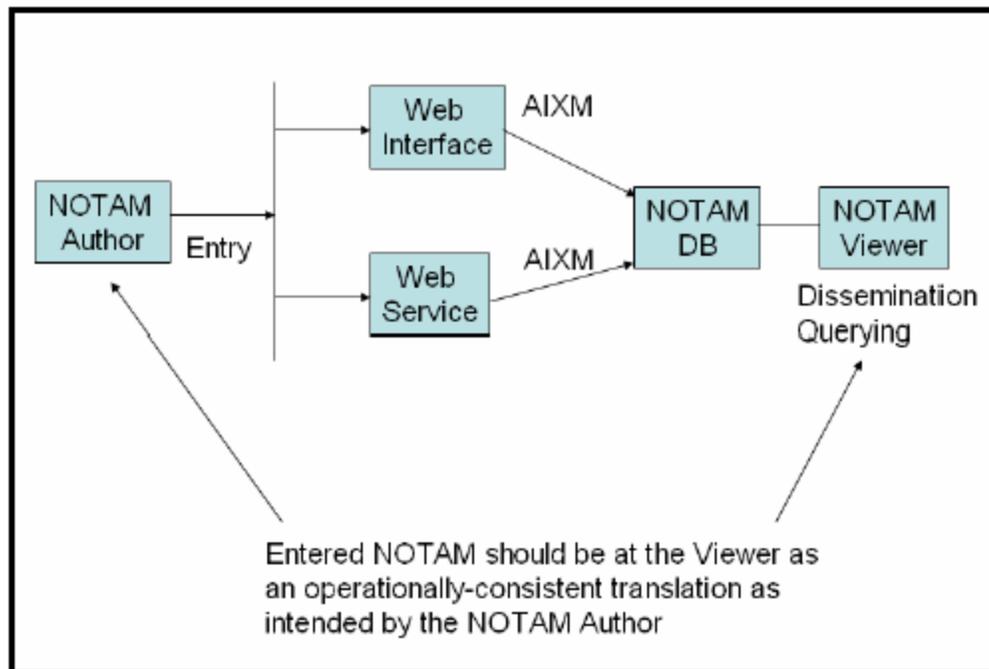
- Delegated to FAA for review by technical experts
- Username and passwords
- Secure web (https)
- SOAP web services
- Aeronautical Information Exchange Model (AIXM 5)



# Major conclusions and future work

## Information consistency

- **Encoding manual and event lists**



# Major conclusions and future work

## Concept of Operations

- **International concept of operations**
- **Information management**
  - Creating new features
  - Synchronization
  - Use of free text



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# FAA Order 7930.2 NOTAM Manual

## Future Digital NOTAM Observations

- NOTAM manual specifies NOTAM entry by Flight Services
  - **The NOTAM manual references to Flight Services would have to be made generic to any authorized user.**
  - **Already has been recommended to be changed and has been approved by the NOTAM Realignment workgroup.**
- The United States NOTAM System (USNS) collects, formats, and disseminates NOTAMs
  - **This can be further clarified in the 7930.2 by a chapter on input of digital NOTAMs, since there is no mention of digital NOTAMs at the present time.**
  - **If this is done, then the input process should be shown in this same area of the manual.**
- Procedurally, a chapter on data input from the Airport Operators or their designated representatives would have to be addressed in the NOTAM manual.
- Coordination with the Airports division for an AC on this subject would be necessary.
- ICAO formatting or Digital Input via a template needs to be inserted in this same chapter.



# FAA Order 7930.2 NOTAM Manual

## Future Digital NOTAM Observations

- While automation may give the users the capability of viewing NOTAMs in different formats, these will have to be shown or addressed in the NOTAM manual.
- A statement as to what office is responsible for the USNS is necessary.
- What is the policy to follow regarding questions relating to input of data, quality control procedures, automation questions, help desk queries, cancellation issues etc.
  - **Major Issue and the details are important**
- The latest copy of ICAO Annex 15, NOTAM format, would also be advised
  - **Cannot lose track of the importance of ICAO formatting in relation to digital NOTAMs/database coordination etc.**



# FAA Order 7930.2 NOTAM Manual

## Summary of thoughts on Digital NOTAM

- **Data Base synchronization is important and our policy needs to identify if we will have one database or several etc.**
- **How it will be maintained and who will be responsible needs to be pointed out in our policy.**
- **ICAO formats and Digital formats**
  - Near term and future
  - We do not want to have separate tracks on these subjects if possible
  - Encoding specifications and examples
- **Operational Support**
  - **Quality Assurance** will be an important issue in any policy statements
  - Help desk or something similar would also need to be addressed



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# Final discussions

- **Key issues to be investigated**
  - Encoding manual
- **Next steps and events**
  - All materials and meeting minutes published
    - [nfdc.faa.gov/aimnews](http://nfdc.faa.gov/aimnews)
    - [www.aixm.aero](http://www.aixm.aero)
  - Next stakeholder meeting
    - April 3, 2008, Washington DC
      - Encoding manual
      - Interactive user interface mock-up
      - Draft release of Interface Control Document
      - Draft release of Concept of Operations

