Federal NOTAM System (FNS)

Harmonization Efforts with the International Community

Presented to: NOTAM System Interface Stakeholder Meeting
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International Digital Harmonization

Key Concepts:
- Establish a set of international standards and specifications for exchanging digital information
- Data-centric operations that ensure:
  - The quality of the aeronautical information required by modern air navigation and ATC systems
  - The efficiency and the cost effectiveness of the system
  - Real time information
Digital NOTAM Concept

• **Digital NOTAM Definition:**
  – A dataset that contains NOTAM information in a structured format
  – Fully interpreted by an automated system **without** human interpretation

• **Digital NOTAM Characteristics:**
  – Geo-referenced
  – Temporal
  – Linked to static data
  – Transformable
  – Query enabled
  – Electronically distributable
Digital NOTAM Requirements

• In order to encode NOTAM information digitally, the information must:
  – Be modeled and specified in a data exchange format
    • AIXM 5
  – Adhere to rules and guidelines to harmonize the encoding of different categories of NOTAM events
    • Digital NOTAM Event Specification
Digital NOTAM Event Specification

• Collaboration between the FAA, EUROCONTROL, ECAC Member States, airlines, & industry

• Focus Group meets several times a year

• Tasks include:
  – Develop standards for NOTAM events

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Event Specification Overview

• Defines the rules for harmonized encoding of NOTAM information as AIXM data sets

• Document intended primarily for system developers

• Goal: To enable the interoperability of the different systems that produce, transform, transmit and consume Digital NOTAM data
Event Specification Approach

• **Identify categories of events**
  – An event is a situation that affects one or more aeronautical features
  – Examples: temporary obstacle at the airport, ad-hoc restricted area, runway closure, etc.

• **For each type of event, the documentation specifies the:**
  – Minimum required data
  – Business rules
  – Names for the user interface fields
  – AIXM mapping
  – Conversion rules for text NOTAMs

• **Provide Digital NOTAM Event Specifications in increments based on usage and user priority**
Event Specification Approach

- The document also includes:
  - General requirements:
    - Baseline data, data synchronization, etc.
  - AIXM event schema for NOTAMs
  - Data encoding rules
  - XML encoding examples
Event Specification Timeline

• **Increment 1:**
  – Posted on the AIXM Forum for public review on August 5.
  – Events include: special activity area, navaids, AD/RWY/TWY closure, obstacles, airport surface contamination, etc.
Event Specification Timeline

• **Increment 2:**
  – The International Digital NOTAM Focus Group will begin working on Increment 2 in November
  – Events include more events related to airport operations such as runway partial closure, taxiway limited usage, ILS, etc.
Updating ICAO Annexes

• ICAO Aeronautical Information Services – Aeronautical Information Management Study Group (AIS-AIMSG)
  – Established in March 2008
  – Develop a global AIS-AIM strategic roadmap
  – Develop Standards and Recommended Practices
AIS to AIM Strategic Roadmap

1. **Consolidation – now/ongoing:**
   1. Quality, AIRAC, WGS-84, electronic terrain and obstacle data

2. **Going digital - began Nov 2009:**
   1. Introduce database-driven processes
   2. Aeronautical information conceptual model guidance developed

3. **Information management – begin Oct 2011:**
   1. Meet Global ATM requirements
   2. Quality assured new products and services
   3. Development of Standards (Already underway)
   4. Implementation of Standards
   5. Performance and business driven
Digital Harmonization Benefits

- Efficient exchange of information between operational systems
- Automated processing of information
- Display customized for end user

Result:
- Enable the machines that assist the specialists to provide a common and accurate view of the aeronautical 4D environment
What’s Next?

• Continue Collaboration with EUROCONTROL and the international community on AIXM and Digital NOTAM Event Specifications
  – Event Specification Increment 2
  – Update ICAO Annex 15 for AIXM 5
Summary

• Increase safety, efficiency and capacity of the National Airspace System with the use of digital information

• Continue to work with the international community to adhere to a common standard for digitized Aeronautical Information
Questions?

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• **FNS Website**