

# Digital NOTAM Submission Working Group

## Minutes October 12, 2007 Meeting (#1)

### Attendees

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## Briefings

1. Brett Brunk (FAA AIM; Program Manager for the Digital NOTAM Project) provided an introductory briefing and discussed the Working Group charter.
2. Vinod Vallikat (CGH, Project Manager for the Digital NOTAM Project) provided an overview of the proposed NOTAM submission work flow for digital NOTAMs.
3. Alex Yoon (EDS, Architect for the Digital NOTAM Project) provided an overview of the web services architecture of the Digital NOTAM system.
4. Tony Rubiera (CNAC, Data Analyst for the Digital NOTAM Project) provided a summary of the D NOTAM and ICAO NOTAM categorizations he has performed in preparation for the design of a NOTAM data model in AIXM.

Discussion during these briefings is summarized in the following sections of these meeting minutes.

## Discussion

The issues discussed have been grouped into the following categories:

- 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 AirportsGIS
- 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

For the sake of brevity and cohesion, this summary is not chronological: the same topic may have been discussed by one or more participants at various times during the meeting.

## ***NOTAM entry authentication and authorization***

Mention was made that it is important to specify who will be able to author a NOTAM in the Digital NOTAM System. The conclusion from this discussion is that the current system of having the facility that has been authorized to author NOTAMs authenticate its personnel should be continued. This policy enables specific individuals at a facility to have the authority to author NOTAMs. The term used for how the current system manages authoritative entry is 'site level authorization.'

Mention was made about Service Level Agreements and Memorandums of Understanding. There was no conclusive mention if there will be the need for an SLA and/or an MOU for the Digital NOTAM System to authenticate NOTAM authoring facilities.

Currently, NOTAM authors are assigned two-character initials (operator ID as defined in the USNS database). It is possible for an authorized NOTAM author to enter a NOTAM under the current system by using telephone, fax, or email. The example mentioned described a scenario where the manager of an airport would call from home late at night to issue a NOTAM for an emergency condition.

The current system is designed to balance operational needs and security. The current system is inherently insecure yet allows considerable leeway for airport managers to be able to issue NOTAMs to meet immediate safety concerns at their respective facilities.

Mention was made that author initials could be a required field for NOTAM entry in the Digital NOTAM System.

Conclusion was the Digital NOTAM system can be accessed using a username and password with communication secured through SSL. It was discussed the NOTAM issuing authority (airports) will be provided a system level username and password, with the responsibility of authenticating individual users resting with the corresponding issuing authority. The name of the user authoring the NOTAM will also be included in the message sent to the Digital NOTAM system to provide an additional level of traceability.

## ***NOTAM liability***

A question was posed about who will be responsible for the information in a NOTAM from the perspective of legal liability. The current system places all responsibility on the NOTAM author. The consensus opinion is that the same will be true for the Digital NOTAM System. The FAA will continue to be the authoritative source for NOTAM regulations, but as is the case today, the FAA will not be legally liable for errors made by the NOTAM author.

### ***NOTAM timeliness***

Mention was made that the current separation between Field Condition Reports (FCRs), Local NOTAMs, SNOWTAMs, and other NOTAMs is a result of the timeliness constraints of the current system. If the Digital NOTAM system was able to offer a faster response for entry and retrieval of NOTAMs, it was mentioned that some safety issues that are currently addressed as FCRs could become NOTAMs.

### ***Information overload***

Mention was made that once Local NOTAMs become D NOTAMs in the near future, the total number of NOTAMs that will receive a wide dissemination will increase considerably. There is currently the issue of a large number of NOTAMs requiring review because of poor categorizations, and poor selection for delivery to the concerned parties. Mention was made that the collapsing of Local and D NOTAMs could accentuate this problem.

### ***Interaction between airlines and the Digital NOTAM System***

Mention was made that there are current safety conditions that are addressed by airlines that are not currently NOTAMs and should be.

### ***Potential difference between information entered and information displayed***

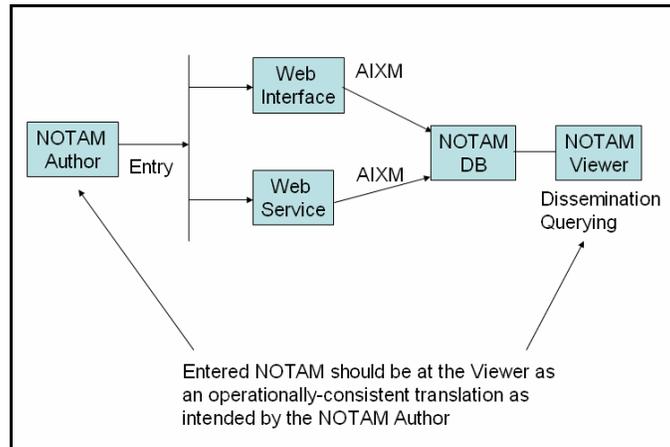
The Digital NOTAM System is expected to provide two interfaces for submitting NOTAMs: a web application and a system interface (web service). The system interface is independent of what software is used at the airport authority as long as the information is provided in the acceptable AIXM format.

The importance of consistency between what is seen by the aviation community viewing the NOTAM and the NOTAM author was brought up. The consensus opinion at the meeting was the translation services provided by the Digital NOTAM system should be operationally consistent with the information entered by the NOTAM author. It was agreed upon that the preview capability provided by the system which allows for viewing the interpretation of the NOTAM before it is submitted should help solve this issue.

This could be more than just translating and previewing NOTAM. This is an issue of using a consistent terminology for NOTAM related data. The issue is consistency in how NOTAMs are displayed between the Digital NOTAM System, systems like Passur, USNS, and DINS.

The user interface that the NOTAM viewer uses can have its own unstructured text interpretation of the AIXM business rules used to define the NOTAM. The NOTAM author could potentially enter the same NOTAM, that will be encoded by any component (the web interface for small airports and any number of proprietary Web Services) and have more than one interpretation of this NOTAM at the User Interface available for the NOTAM viewer. The consensus opinion at the meeting was that the translation of the

AIXM message at the User Interface needs to be operationally consistent with the NOTAM entered by the author. Below is a diagram for this issue.



### ***Selective display of NOTAMs to appropriate users***

Mention was made that, currently, all NOTAMs that are associated with a flight plan are delivered as part of the pilot debriefing. Mention was made that an important improvement to the current system would be a more focused delivery of NOTAMs. This point will be noted and considered while querying section is designed. The current focus of the working group is NOTAM submission.

### ***NOTAM format delivery***

Mention was made that AIXM can be used to deliver NOTAMs in US, ICAO, and graphical formats.

### ***Role of AirportsGIS***

A question was posed about the role the AirportsGIS project will play in helping the Digital NOTAM System deliver information that is currently not available in NASR or any of the other FAA databases. Mention was made that this role is at this point undetermined.

### ***NOTAM archival capability***

A question was posed about the need to refer to archived NOTAMs. Archived NOTAMs are currently used by airports to answer Freedom of Information Act (FOIA) requests, airline requests, accident investigations, and for reconstructing weather events (e.g. snow storms).

### ***NOTAM author access and IT implementation issues***

After an extended discussion, the consensus view is that the use of https (http message wrapped in the Secure Socket Layer, or SSL protocol), and username and password are sufficient. Mention was made that operational and policy issues should lead in the discussions of this working group, and that the specific IT implementation issues, once defined by the working group, should be the subject of meetings in which IT personnel from all NOTAM stakeholders are present.

### ***Ability to enter NOTAMs for new AIM features***

The use of a baseline in AIXM is intended to enable the verification of user entry information about aeronautical features. For example, if the user enters a runway, an obstacle, or an ILS, these features should be compared to the baseline data to verify that they are accurately characterized in the NOTAM. Mention was made that there is no baseline for a new runway, an obstacle that is not in any of the U.S. government databases, or a newly-commissioned ILS.

### ***NOTAM revision and cancellation***

Mention was made that there is the possibility of time elapsed between cancelling a NOTAM and issuing a revised NOTAM for the same safety issue. Mention was made the Digital NOTAM System needs to be able to issue the revised NOTAM without any time elapsing between the effectivity of the revised NOTAM and that of the NOTAM it cancels.

### ***Audit of old NOTAMs***

Mention was made that the Digital NOTAM System should audit its NOTAMs to eliminate NOTAMs with long validity periods. Mention was made that there is need for better FAA policy for airports on how to maintain NOTAMs that have been valid for a long time.

### ***User interface definitions***

Mention was made that the type and format of the information required from the NOTAM author needs to be defined. For example, if latitude and longitude are required for an obstacle, it may be important to require the position to be at the center of the obstacle. For the case of a building near the runway, it may be important to choose one of the side walls or a corner as the safest reference point.

### ***Virtual Meetings***

Mention was made about having a virtual meeting, but some of the participants felt it will be more productive to have face-to-face meetings

### ***Use of free text for extenuating circumstances***

Mention was made on requiring free-form text entry for those cases that cannot be digitized. It was also discussed that this option should be designed in such a way that the user gets to use only in extreme situations. This latter feature should discourage the use of free text for all but those extenuating circumstances for which it is required.

### ***AIXM versioning***

Mention was made on how upgrades of newer versions of AIXM will be handled. This issue will require additional discussion in the future and should be relegated to the IT requirements meeting(s).

### **Action Items**

- IT deployment issues are postponed until after operational and policy issues have been defined by the working group
- User interface definitions require additional discussion
- Ability to enter NOTAMs for new aeronautical features requires additional discussion
- NOTAM author access validation requires additional discussion

### **Next Meeting**

The next meeting is scheduled for Wednesday, December 5, 2007, in Washington, DC.