



ICAO

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INFORMATION PAPER

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First Aeronautical Information Management (AIM), Flight Plan (FPL) Error Management and Air Traffic Services Inter-facility Data Communication (AIDC), Meeting (AIM/FPL/AIDC/1)

Tegucigalpa, Honduras, 30 October to 3 November 2017

Agenda Item 2: Updated Status on States

UPDATE ON THE FAA'S AIS-AIM TRANSITION

(Presented by United States)

EXECUTIVE SUMMARY

This paper presents an update on the Federal Aviation Administration's (FAA) migration of the legacy United States NOTAM System (USNS) to the digital Federal NOTAM System (FNS) and the lessons learned during this process.

Strategic Objectives:

- Safety
- Air Navigation Capacity and Efficiency

1. Introduction

1.1 The FAA is making progress implementing the Next Generation Air Transportation System called NextGen, an initiative to ensure the safest most efficient airspace possible for generations to come. In conjunction with NextGen, the FAA is moving forward with Aeronautical Information Management Modernization (AIMM), which introduces a single access point for trusted aeronautical information.

1.2 AIMM is being implemented in three segments (S1, S2, S3):

- S1- (2015): Digitize NOTAM and Central Altitude Reservation Function (CARF);
- S2- (2017): Improve standardization and integration of NOTAM and Special Activity Airspace (SAA); and
- S3- (in development): Enterprise integration with common operating picture across the National Airspace System (NAS) and its automation

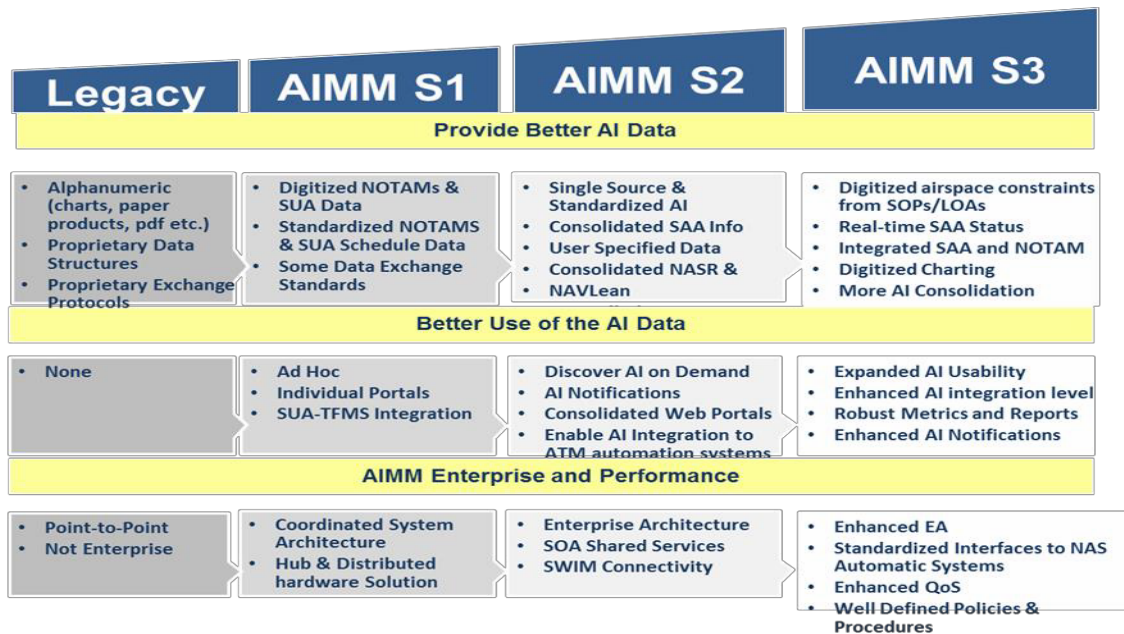
2. Discussion

AIS to AIM Background

2.1 The FAA’s Notices to Airmen (NOTAM) system is complex with numerous stakeholders entering NOTAMs with different criteria. An average month’s domestic NOTAM issuance is 145,000 NOTAMs. For 2016, the NOTAM system issued 1, 327,858 domestic NOTAMs of which 603,930 were issued internationally due to different criteria used. The United States Code of Federal Regulations (CFR) governs how the FAA functions and within that NOTAM issuance and any changes to the NOTAM system must fall within these regulatory rules. The FAA’s NOTAM Order (known as JO 7930.2) follows these general rules with more specific content including format and contraction usage, NOTAM structure and business rules.

2.2 With this background, the legacy United States NOTAM system (USNS) is migrating to the digital Federal NOTAM System (FNS), with FNS now generating around 80% NOTAMs digitally. The legacy NOTAM environment pre-2010 was not designed to handle the volume of NOTAMs that are now being issued and the automated systems that interface with the USNS. Flight operators receive all NOTAMs for airports/airspace along route of flight many may not apply to that specific flight. Operators must manually parse NOTAMs applicable to the flight based on its flight plan, aircraft and aircrew capabilities. Since 2010, legacy and improved modernization have been in use but with limitations. The need to move from an analog, text-based NOTAM system towards a digital automated system that provides timely, accurate, harmonized aeronautical data/NOTAMs in standardized formats was evident. This major change will provide digitized NOTAMs that are standardized and parsed for automated systems in an enterprise architecture with SWIM connectivity, resulting in improvements to efficiency and safety of the NAS. Challenges have been encountered and we will share these with the Task Force.

2.3 Aeronautical Information Management Modernization (AIMM) Roadmap – Multi Segment Approach:



Lessons learned (Best Practices)

2.4 During the ongoing migration the complexity of user interoperability, integration, and risks was a constant obstacle of which other challenges are noted below:

- Ensure a stable system environment exists during migration; utilize a single vendor for the effort (both software developer and tester); multiple contractors during this activity can generate confusion on roles and responsibilities, and increases risks.
- System requirements must be documented and base-lined into a final requirements document; no new requirement once the effort begins.
- Risks must clearly be identified, tracked, and mitigated as project progresses.
- FAA utilizes the Safety Risk Management (SRM) process to reduce the potential of introducing hazards into the NAS.
- Training requirements must be clearly identified, documented and verified.
- Develop a test plan with that traceability back to the final requirements document; this ensures all requirements have been addressed, tested, and verified. This also signals successful project completion.
- Identify Critical Operating Issues (COIs) that ensures tractability back to final requirements document.
- Utilize an offline test bed to run the new system on prior to implementing the “live” operational system.
- Maintain an active stakeholder engagement throughout the testing process.
- Ensure ongoing Quality Management efforts continue after system migration and sustainment.
- Consider Regulatory and Budgetary Constraints:
 - Governance/Policy
 - Budgeting/Travel
- Maintain and update a Strategic Plan on future growth.

3. Conclusion

3.1 The Task Force is invited to note the content of the paper.