Digital NOTAMs

Modernizing the United States NOTAM System

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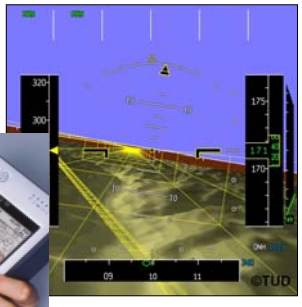
Why digital NOTAMs?

- **Demand for computer interpretable NOTAMs**
  - Better flight planning
  - Assisted situation awareness
  - Assisted navigation



ICAO NOTAMs are not good enough

A0667/07 NOTAMN
Q) MMFR/QMRLC/IV/NBO/A/000/999/1926N09904W
A) MMMX
B) 0702141700
C) 0702141800
E) RWY 05L/23R CLSD

Okay for computer

Human readable text, not possible to parse 100%

E) 08 FIRST 1000 FT CLSD

E) 35R FIRST 250 FT UNGROOVED

E) 14L/32R NORTHWEST 3000 FT CLOSED EXCEPT MILITARY

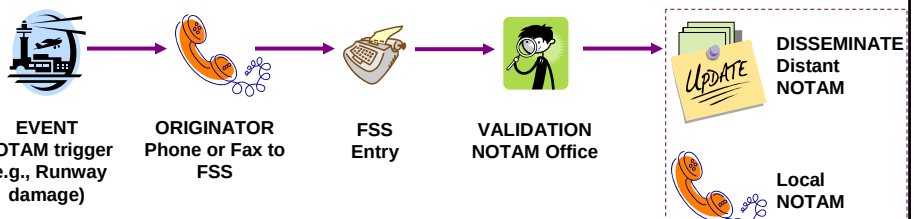
Digital NOTAM Challenges

- **Global concept of operations**
  - The data chain (Chain of Custody)
  - Quality Management

- **Common computer language**
  - Detailed descriptions of aeronautical data
  - Temporary changes

- **Leadership and transition plan**
  - Standards and practices
  - Research and development

NOTAM Concept of Operations Today



- Many points of manual intervention
- Quality management towards end of process
- Multiple distribution channels
- Human readable text delivery to customer

CUSTOMER
Read Text

Future Concept of Operations

Originate NOTAMs at the Source

Data integrity
Traceability
Encode digitally

Validate and Publish by AIM Authority (FAA)

Integrated permanent and temporary information
Computer readable
Electronic distribution to customers

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AIM* needs a common transaction model

NOTAM
Temporary change to aeronautical information

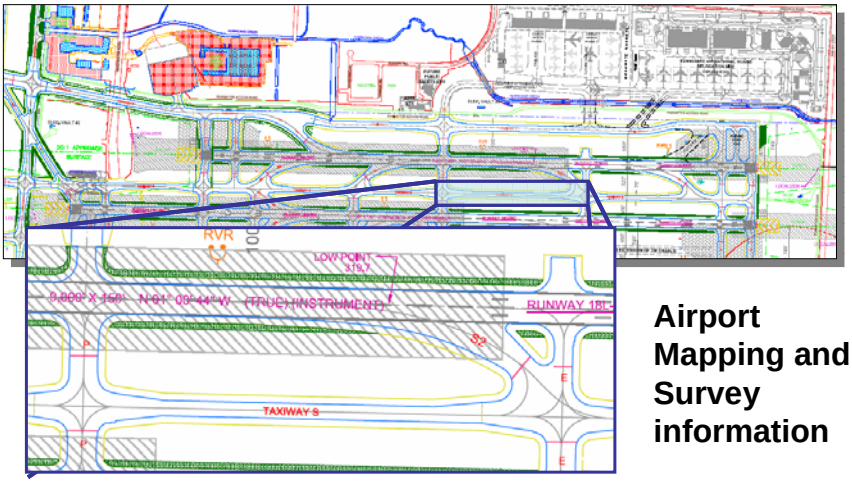
SNOWTAM, ASHTAM
Temporary change to airspace and surface conditions

Military Airspace
Temporary activation of refueling and military operating areas

Route Availability / Traffic Restriction
Temporal restriction on traffic flows and routing

AIM – Aeronautical Information Management

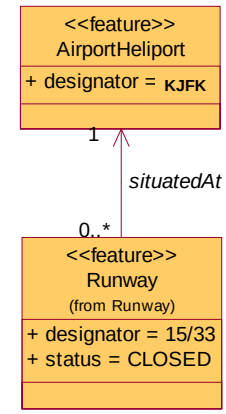
AIM needs detailed aeronautical data that goes beyond Annex 15



Airport Mapping and Survey information

Digital NOTAMs needs AIXM

- **A common aeronautical language for computers**
  - All information needed to support NOTAMs
  - Support for expressing temporary changes
  - Endorsed by ICAO and supported by FAA, EUROCONTROL, and others



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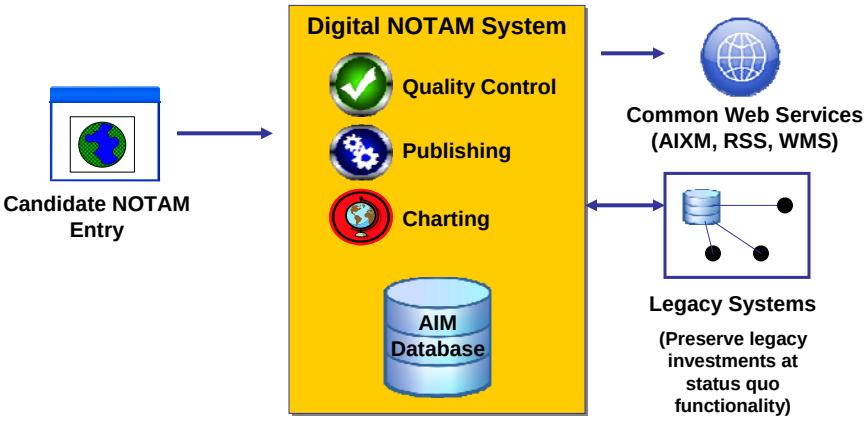
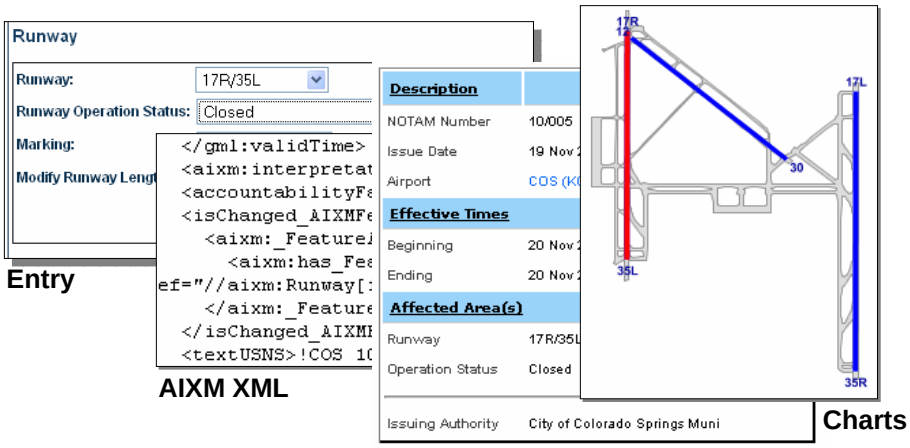
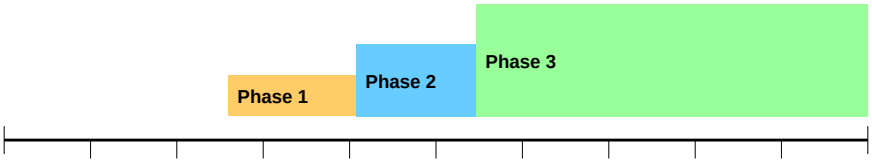
Digital NOTAM System
Research in the United States



Components
United States Digital NOTAM System



Timeline
United States NOTAM Modernization



Phase 1	**October 2007**	**Consolidated NOTAM repository** **Publish all airport NOTAMs**
Phase 2	**2009**	**Produce *ICAO compliant* NOTAMs** **Single Federal NOTAM System**
Phase 3	**2010+**	**Full digital NOTAMs**

Final Thoughts

- **The next advances in aviation safety and efficiency requires digital NOTAMs**
- **The AIM Community needs to come together on a global digital NOTAM concept**
  - Must modernize Standards and Recommended Practices
  - Must adopt Common computer language for NOTAMs (AIXM)
- **The FAA is committed to a harmonized international NOTAM system**
  - Research and implementation of digital NOTAM.