

# Federal NOTAM System (FNS)

## Modernizing the United States NOTAM System

Presented to: AIXM/WXXM Conference 2010

By: FAA Aeronautical Information Management

Date: May 2010



Federal Aviation  
Administration



# Federal NOTAM System (FNS)

- **Overview of FNS**
  - Concept
- **FNS Prototype Applications**
  - Approach and Description
  - Technical Use of AIXM
- **FNS Field Tests**



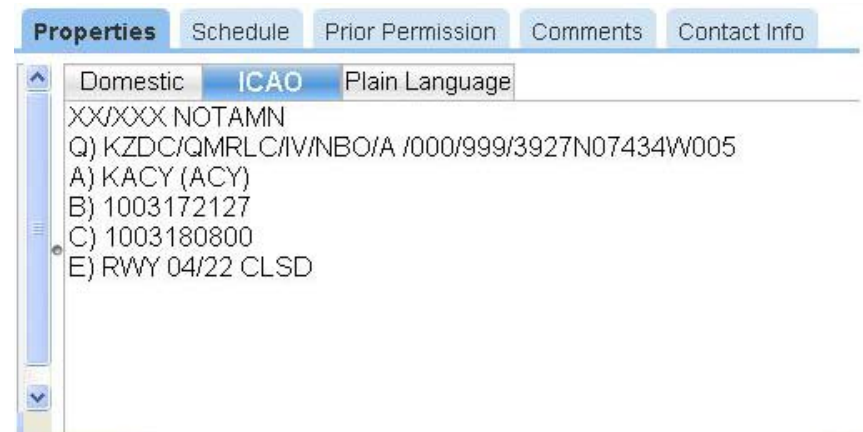
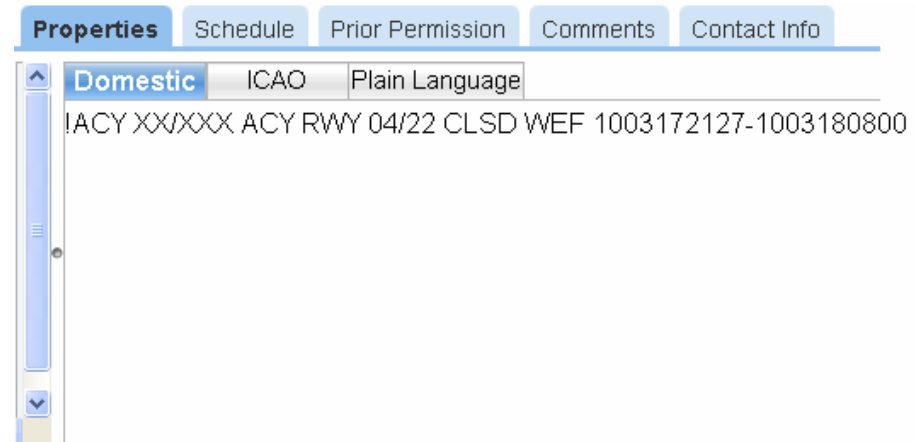
# What is FNS?

- **FAA Concept**
  - Enabling digital entry, evaluation, and dissemination of aeronautical information and improving customer's ability to manage NOTAMs
  - Implementing Business Process/Workflow to improve data integrity, management oversight, and reduce the level of effort to manage and validate aeronautical data
  - Ensuring delivery by tracking acknowledgements of disseminated NOTAMs and ensuring receipt by operational personnel at NAS facilities.
- **AIM Modernization Segment 1**
  - Anticipated Timeline
    - 2011 - 2015
  - Outcome: fully digitized NOTAMs, transition from legacy system and adoption of ICAO



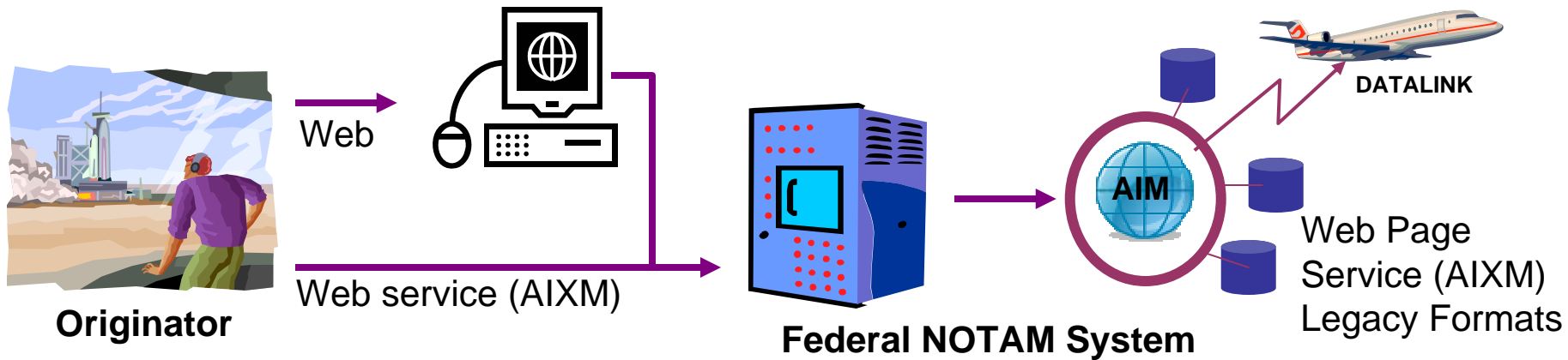
# FAA NOTAM Policy

- **Part of the FNS initiative at the FAA includes updating the FAA NOTAM policy**
- **Anticipated timeline for policy changes**
  - FAA 7930.2M Change 2: November 2010
  - FAA ICAO Policy: Spring 2012
    - FAA adoption of ICAO format



# New Concept of Operations

## FNS



### Originate NOTAMs at the Source

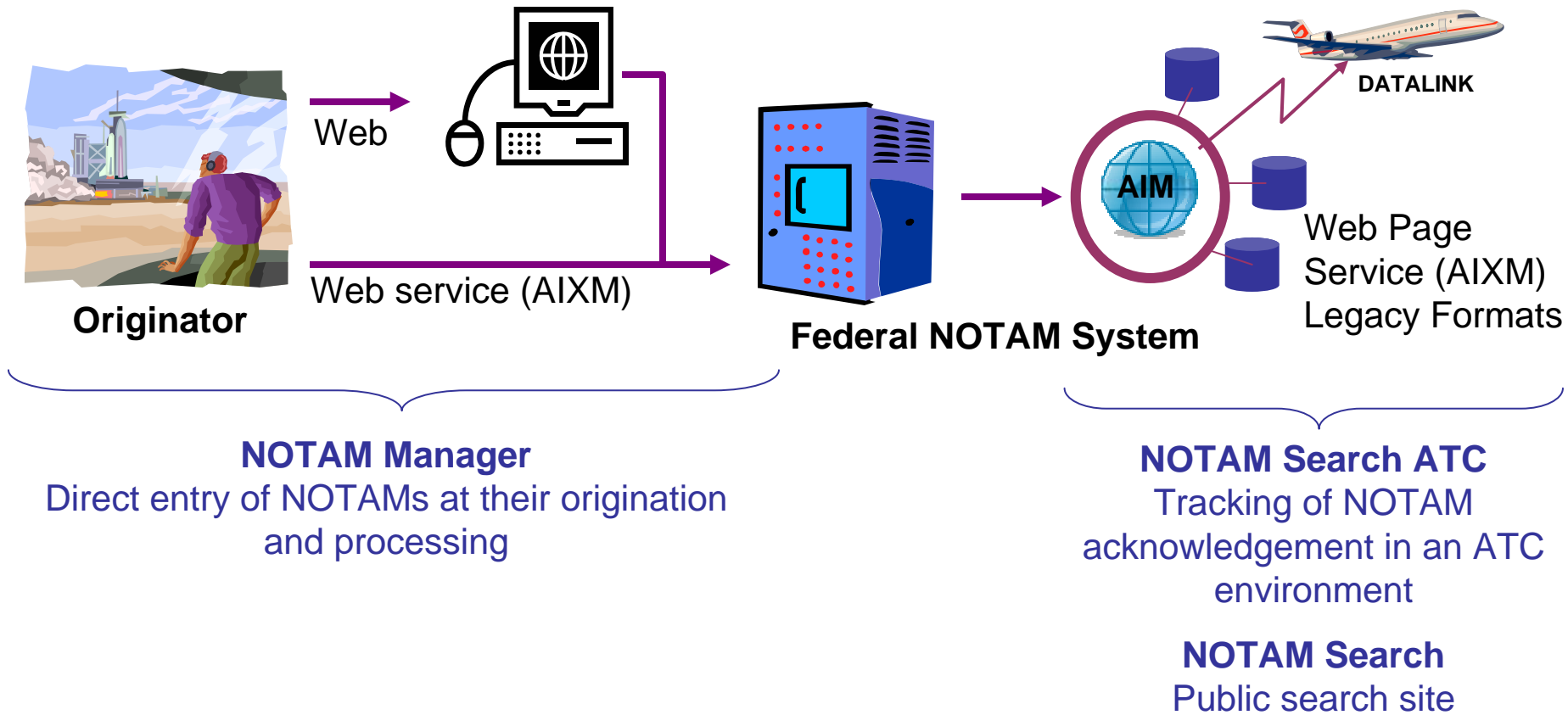
Digital Capture  
(AIXM via scenario templates)

### Validate and Publish by FAA

Integrated permanent and temporary information  
Computer readable  
Electronic distribution to customers

# FNS Prototype

- FNS addresses the collection, processing, and distribution of NOTAM information



# FNS Approach: Scenarios

- **What is a scenario?**

- A scenario describes the NOTAM condition or event that is being reported
  - Also referred to as an event specification in Europe
- A scenario is applied to a feature

## **Example:**

!EFD 03/020 EFD RWY 17R TDZ LGTS OTS



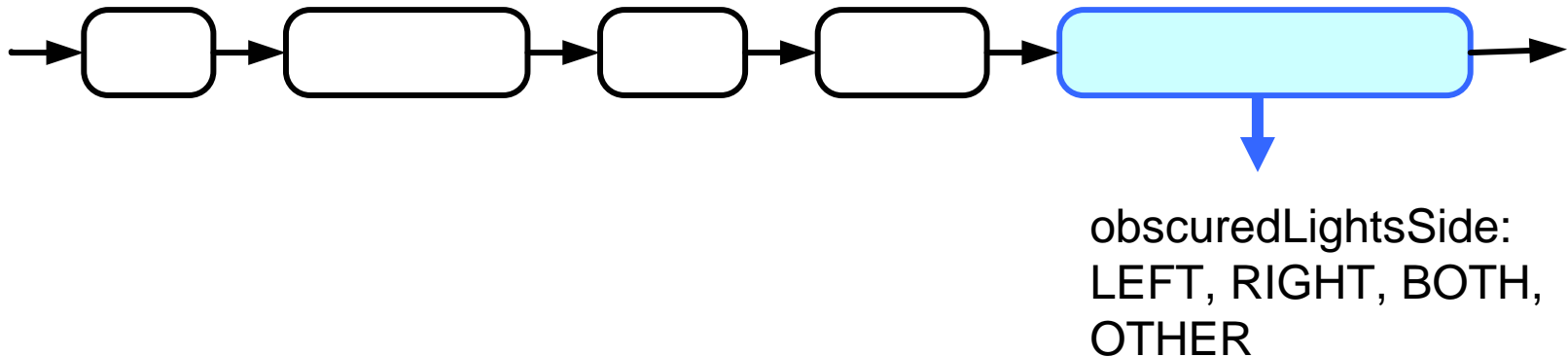


# FNS AIXM Extension

- **Currently developing an AIXM schema extension to support FNS**
  - Filling gaps identified during scenario analysis against the AIXM model
- **Expected outcome**
  - Formalized schema for System Interface documentation

# FNS AIXM Extension Examples

- **Airport Beacon/Surface Contamination**
  - Issues will be resolved with AIXM 5.1 implementation
- **Runway Lights Obscured**
  - !SVA 02/001 SVA RWY 5/23 LGTS OBSC **SOUTH SIDE** WEF 0902062026



However, FAA uses cardinal direction (NORTH, SOUTH, EAST, WEST, etc.)

# NOTAM Search

- Distribution of NOTAMs
- Public Site
  - [www.notams.aim.faa.gov](http://www.notams.aim.faa.gov)
- Air Traffic Control Site
  - Assured Delivery
  - Acknowledgement

Location	NOTAM #	Class	Start Date UTC	End Date UTC	NOTAM Condition
ACY	08 056	Airport	08/25/2008 1255		TWY H CLSD BTN TWY M AND TWY B
ACY	09 012	Navaid	09/06/2008 1717		NAV RWY 4 ILS EXPERIMENTAL ONLY FOR FAA TEST AC ONLY
ACY	09 018	Navaid	09/08/2009 2031		NAV GB1 01 S
ACY	09 050	Airport	09/22/2009 1139		TWY M CLSD TO ACFT WINGSPAN 118 FT AND ABOVE
ACY	00 672	Procedure	01/08/2010 1536		FI/T ATLANTIC CITY INTERNATIONAL, ATLANTIC CITY, NJ, ...
ACY	02 019	Navaid	02/20/2010 2354		NAV VORTAC UNMNI
ACY	03 019	Airport	03/10/2010 0258		TWY B SE SIDE HOLD SIGN AT RWY 4/22 LGTS 01 S

ATC Notifier (Federal Aviation Administration)

FAI 10/073 Rwy 2W/20W CLSD  
FAI 9/9360 FI/T FAIRBANKS INTL, FAIRBANKS, AK.  
FAI 03/979 AD CAUTION MIGRATORY BIRDS IN VICINITY OF AIRPORT  
FAI 04/070 Rwy 2R/20L FROST HEAVES S 2600 WEF 1004060822  
FAI 04/120 DAMP EAST DAMP NE COMPASS ROSE CLSD W/FC 13500/00W

There are 8 new NOTAMS  
There are 0 unread NOTAMS

Ack - View Later View Now

# NOTAM Search ATC (NSATC)

- **Users can search on:**
  - Locations using airport ID
  - Accountability
  - Geographic Location
    - Within a specified radius of a Lat/Long
    - Within a specified radius of a designator
- **Find a NOTAM based on NOTAM number or condition**

**NOTAM Search**

Search By

Accountability

Geography

Location

Locations (Example: JFK, IAD)

ACY

Restore Clear Search

Find

NOTAM Number:

Condition Word:

Clear Fields Find

NOTAM Counts

	Read	UnRead
<input checked="" type="checkbox"/> ACY	1	6
Total	1	6

# NOTAM Search ATC (NSATC)

- **Users can view NOTAM details such as:**
  - NOTAM #
  - Effective date/time
  - Facility
  - Class
  - Status
  - Translations

### NOTAM Details

## ATLANTIC CITY INTL Print

NOTAM #:	09/050	Effective:	09/22/2009 1139 UTC
Facility:	ACY	Until:	
Class:	Taxiway	Status:	Active
Amendment:			

**Domestic** ICAO Plain Language Originator

ACY 09/050 ACY TWY M CLSD TO ACFT WINGSPAN 118 FT AND ABOVE

Close

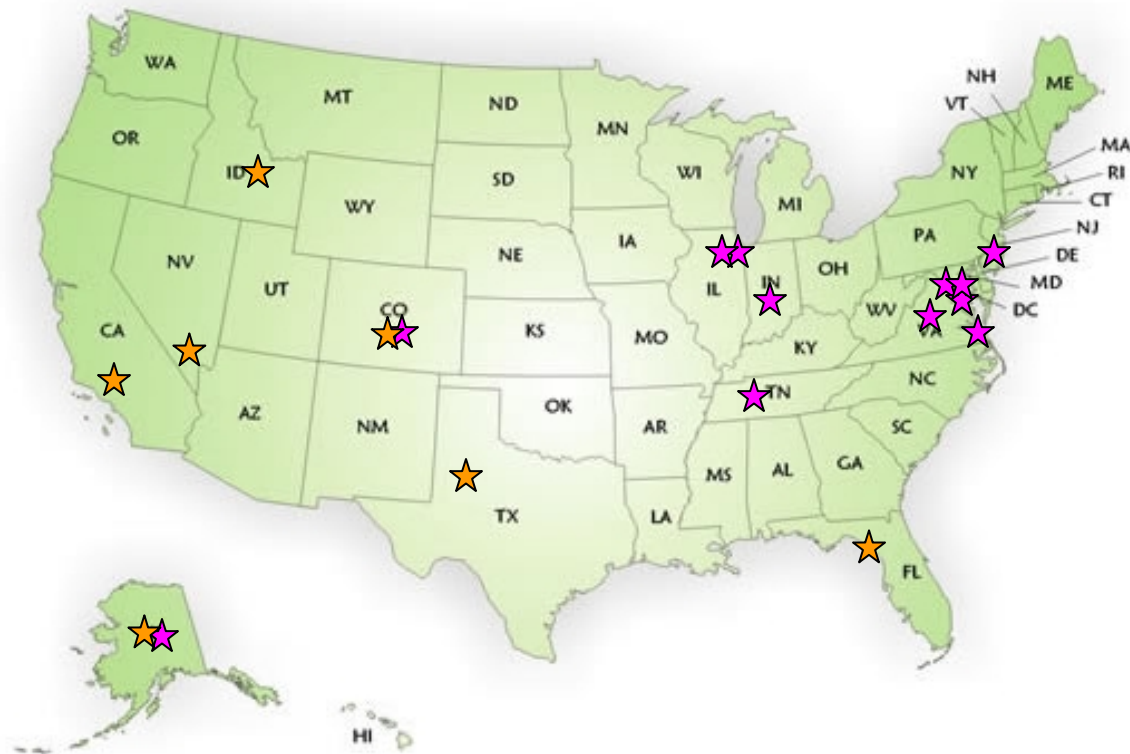
# Approach: Search Distribution

- **Currently ATC search is a user-interface based web-application that communicates with the database through a data access object layer.**
- **Future capability to add a WFS layer to provide system interface capability for search**
  - Move toward compliance with OGC web standards

# FNS Field Tests

- ★ NM test site
- ★ NSATC test site

- **Purpose: Live operational test to receive feedback on the prototype systems**
- **NOTAM Manager**
  - Schedule: 12 airports over the next year
    - Atlantic City (ACY) first airport in Spring 2010
- **NOTAM Search ATC**
  - Schedule: 7 ATC facilities over the next six months



# NOTAM Manager Roll Out at ACY

- On April 20<sup>th</sup>, 2010 at 11:14 AM EDT the first digital NOTAM in the world was issued





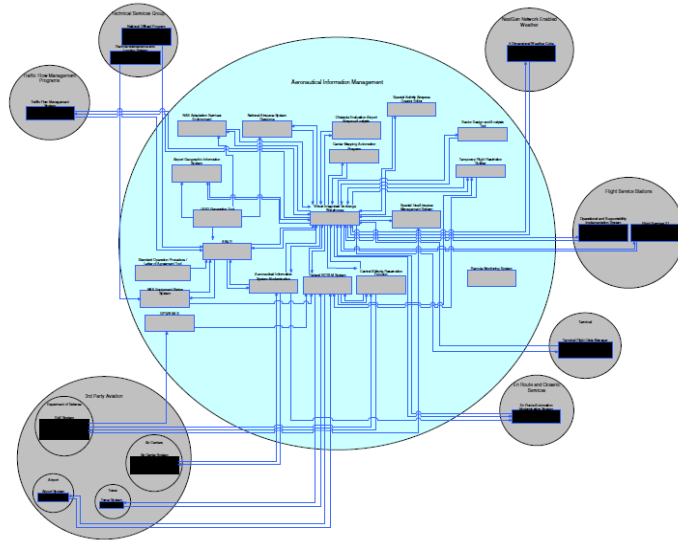
# FNS Next Steps

- **Continue and evaluate the field tests for NOTAM Manager and NOTAM Search ATC**
- **Update prototype applications to meet anticipated changes in policy**
- **Migrate to AIXM 5.1**
- **Coordinate scenarios (Event Specifications) with EUROCONTROL**

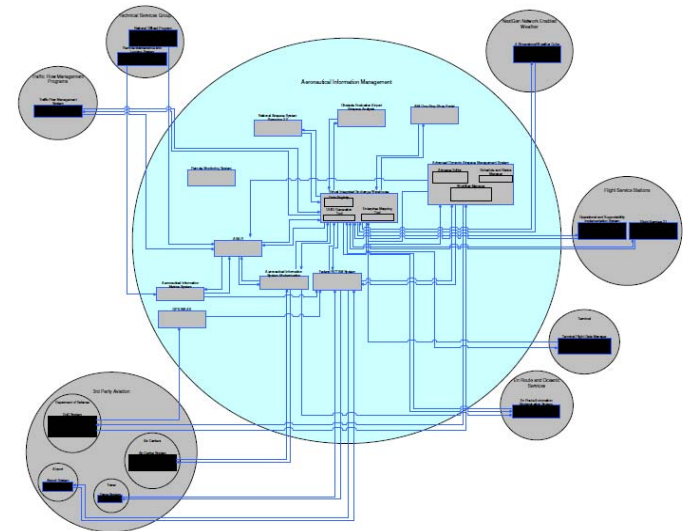


# Long-term Goals

To-Be 2014



To-Be 2018



- **Data management**

- Single authoritative source for static and dynamic data sources
- Integration with other systems (AGIS, NASR, SAMS, etc.)

# FNS Prototype Demo

- [NOTAM Manager](#)
- [NOTAM Search ATC](#)



# Questions?

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- **FNS Website and Email:**

- <http://notams.aim.faa.gov>
- [fns@faa.gov](mailto:fns@faa.gov)