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
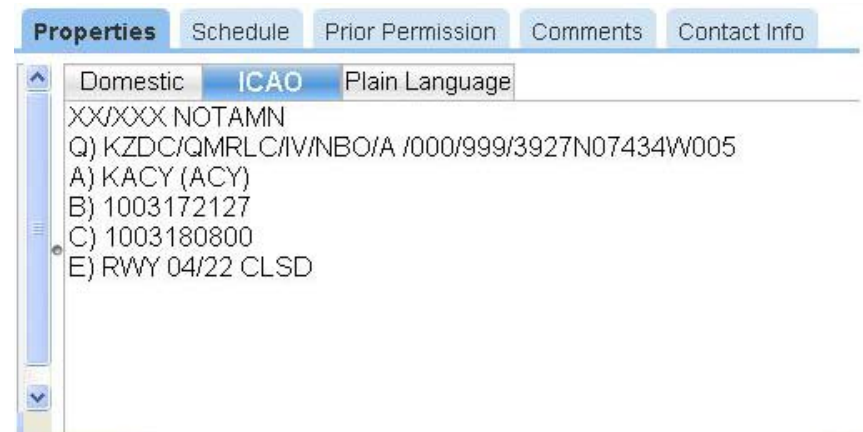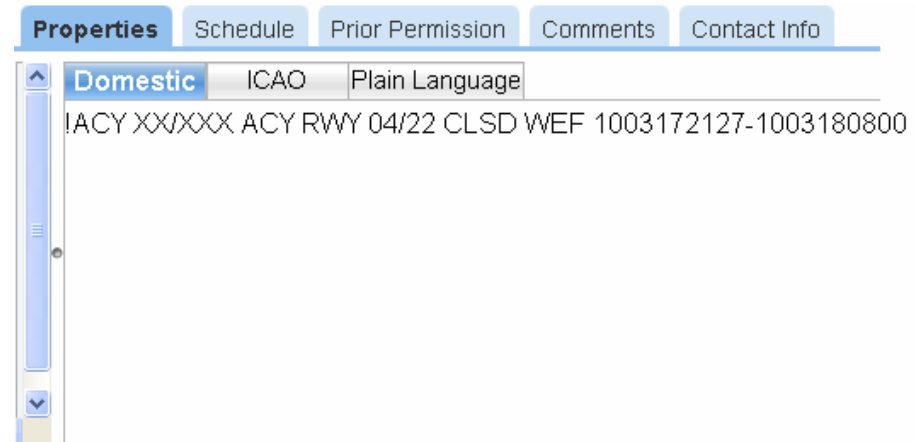
- **FNS Field Tests**

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
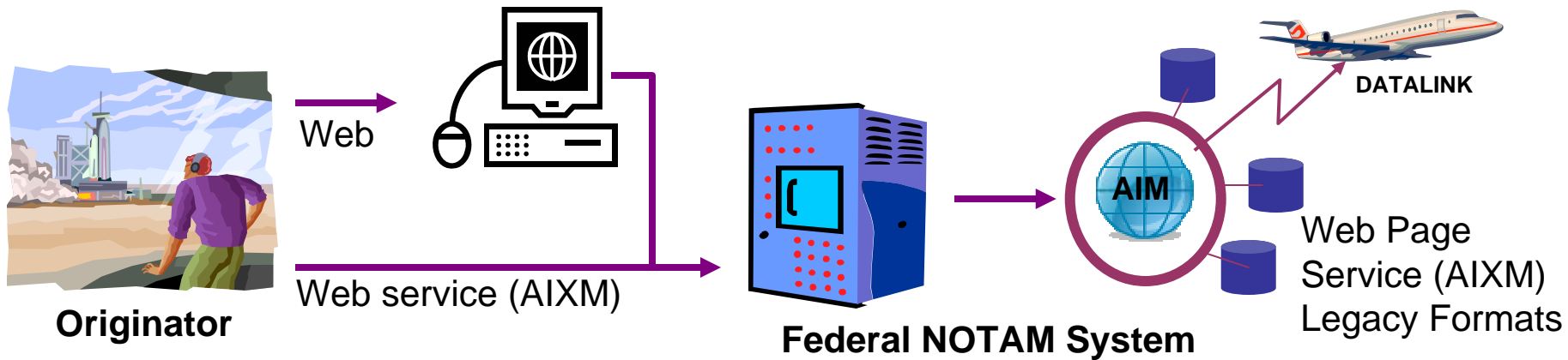
FAA NOTAM Policy

- **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

Properties | Schedule | Prior Permission | Comments | Contact Info

Domestic | ICAO | Plain Language

!ACY XX/XXX ACY RWY 04/22 CLSD WEF 1003172127-1003180800

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```
XX/XXX NOTAMN
Q) KZDC/QMRLC/IV/NBO/A /000/999/3927N07434W005
A) KACY (ACY)
B) 1003172127
C) 1003180800
E) RWY 04/22 CLSD
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New Concept of Operations FNS

Web

Web service (AIXM)

Originator

Federal NOTAM System

AIM

DATALINK

Web Page Service (AIXM) Legacy Formats
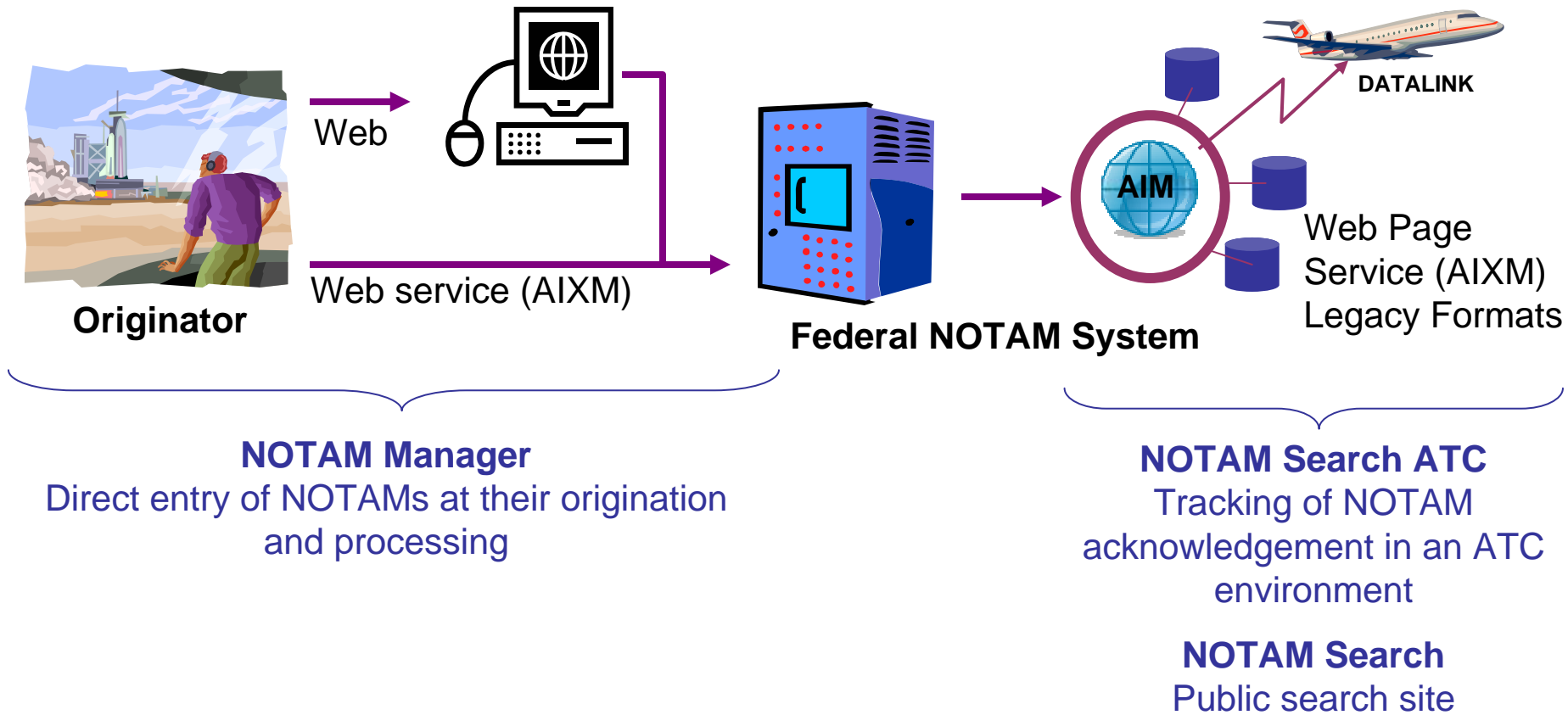
Originate NOTAMs at the Source

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**

Originator

Web

Web service (AIXM)

Federal NOTAM System

AIM

DATALINK

Web Page Service (AIXM) Legacy Formats

NOTAM Manager
Direct entry of NOTAMs at their origination and processing

NOTAM Search ATC
Tracking of NOTAM acknowledgement in an ATC environment

NOTAM Search
Public search site

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

Scenario Mapping to AIXM

- **Map every element of each scenario to AIXM 5.0 feature attributes**
- **Must identify any gaps in the core AIXM model**
  - Gap analysis will lead to an extension to AIXM
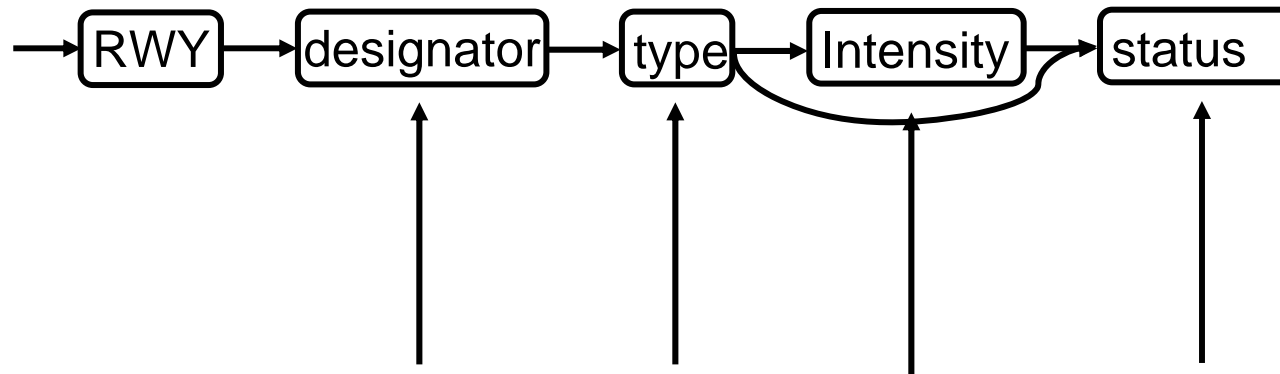
Example: !EFD 03/020 EFD RWY 17R TDZ LGTS OTS

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

obscuredLightsSide:
LEFT, RIGHT, BOTH, OTHER
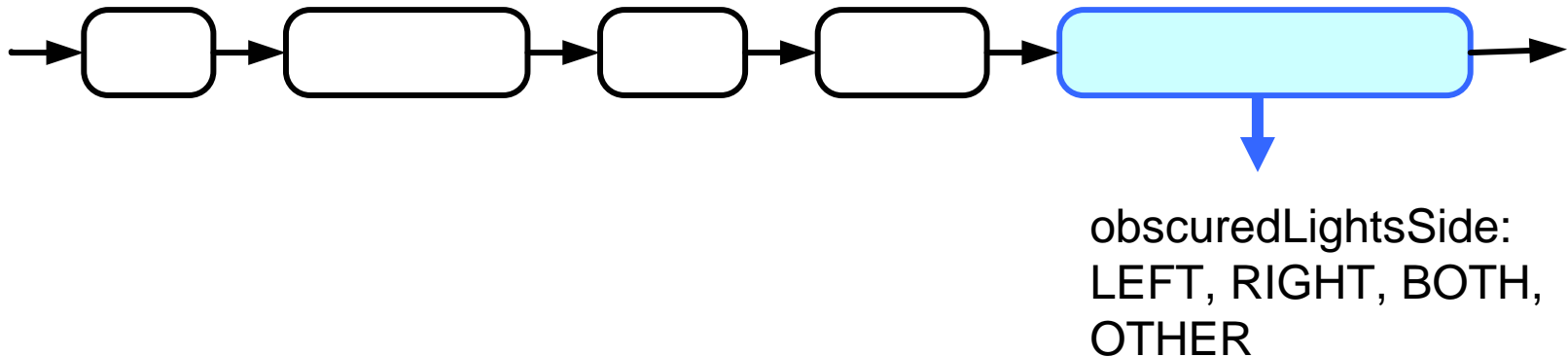
However, FAA uses cardinal direction (NORTH, SOUTH, EAST, WEST, etc.)

NOTAM Search

- **Distribution of NOTAMs**

- **Public Site**
  - www.notams.aim.faa.gov

- **Air Traffic Control Site**
  - Assured Delivery
  - Acknowledgement

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 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**

IACY 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

- **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
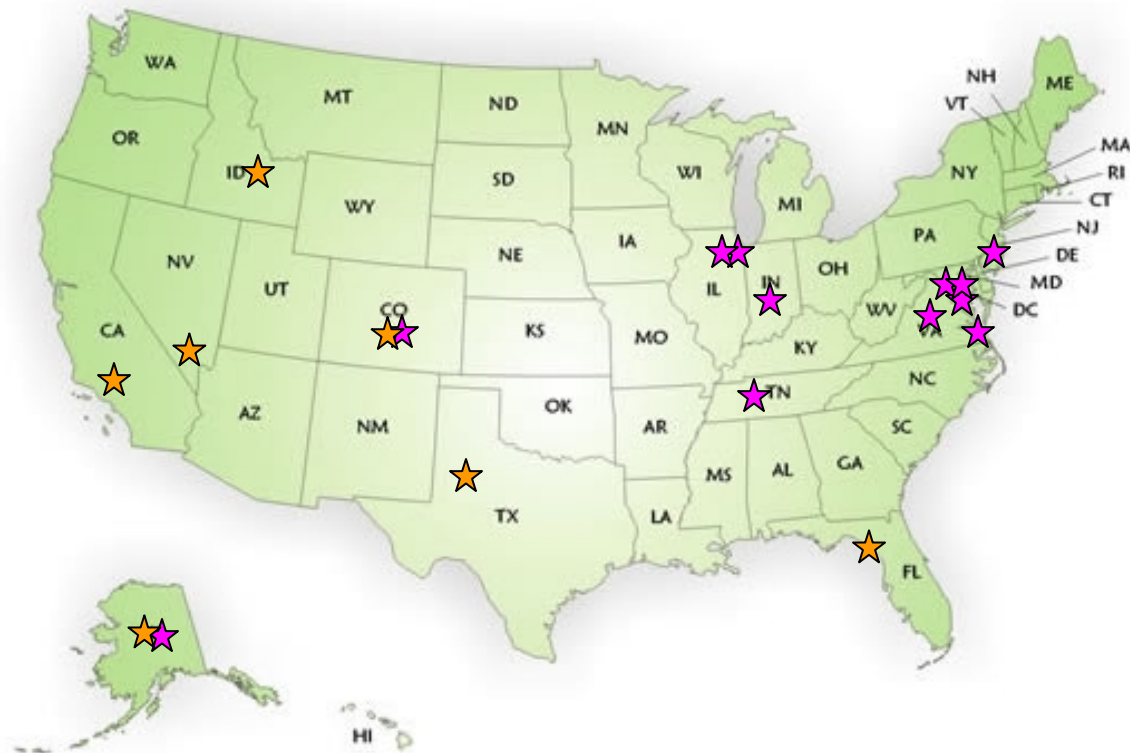
NOTAM Manager Roll Out at ACY

- **On April 20th, 2010 at 11:14 AM EDT the first digital NOTAM in the world was issued**
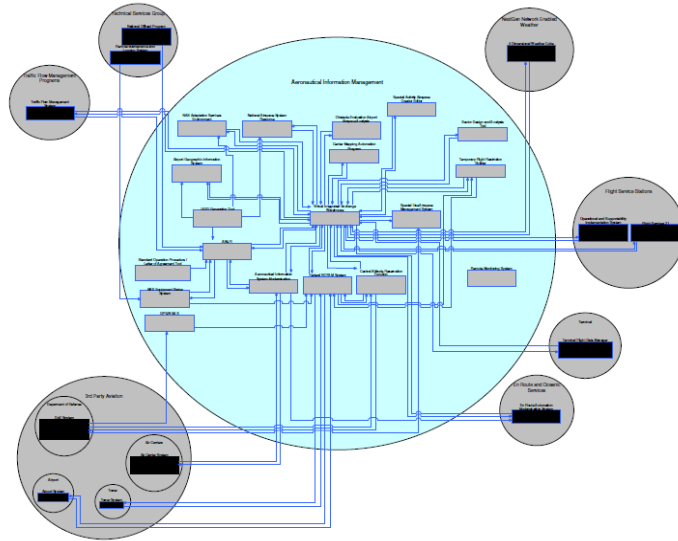
FNS Next Steps

- **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**

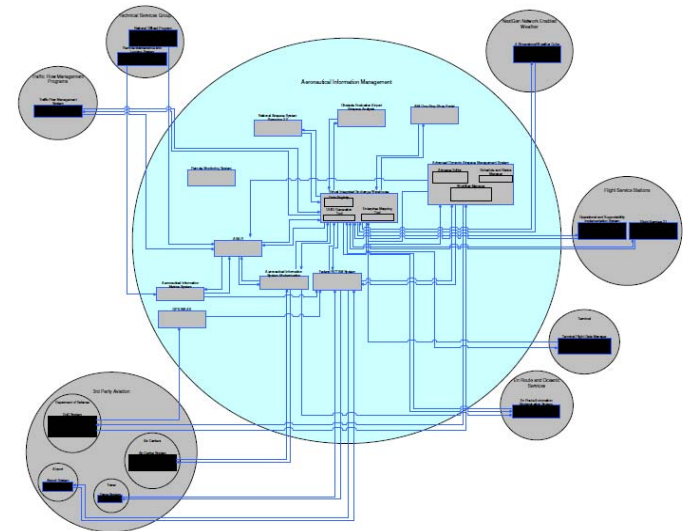- **Coordinate scenarios (Event Specifications) with EUROCONTROL**

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@faa.gov