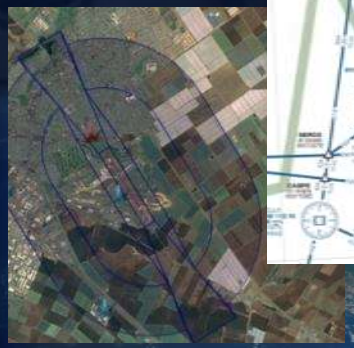
Esri Aeronautical Solution



Esri
Airports GIS Overview

Terri Morganson

May 10, 2012

Overview Agenda

- General GIS Overview
- Esri Resources
  - Esri Website
  - Aeronautical Solution Resource Center
  - ArcGIS Online
  - Airports GIS Package
    - Description
    - Demo video

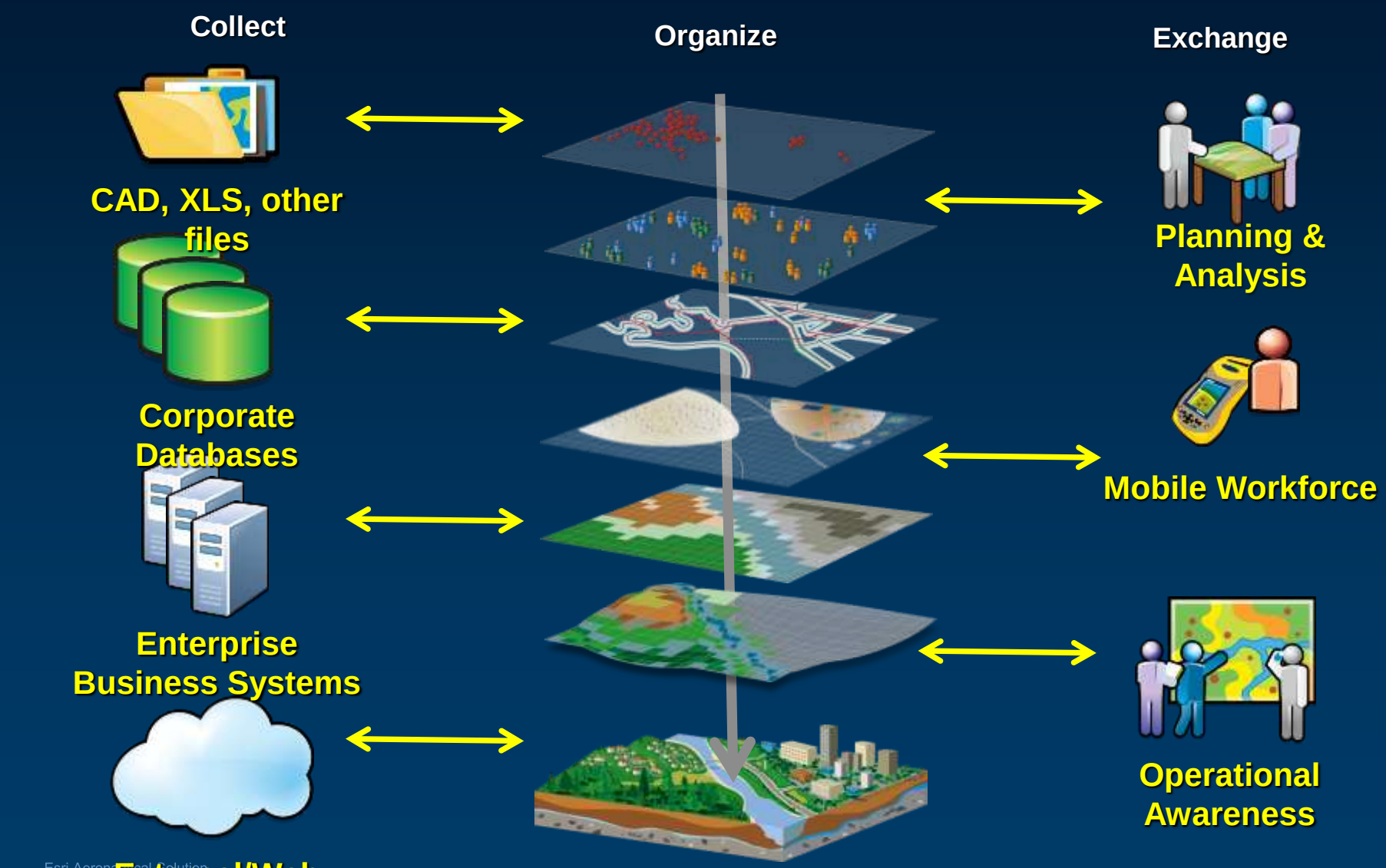
GIS Overview

A Complete Definition of GIS

Data Management	Analysis	Field Mobility	Visualization	Citizen Engagement
Managing, editing & integrating authoritative GIS data	Transforming data into actionable information	Getting information into and out of the field	Disseminating information to the organization through maps, interfaces & reports	Communicating directly with stakeholders and enlisting their participation

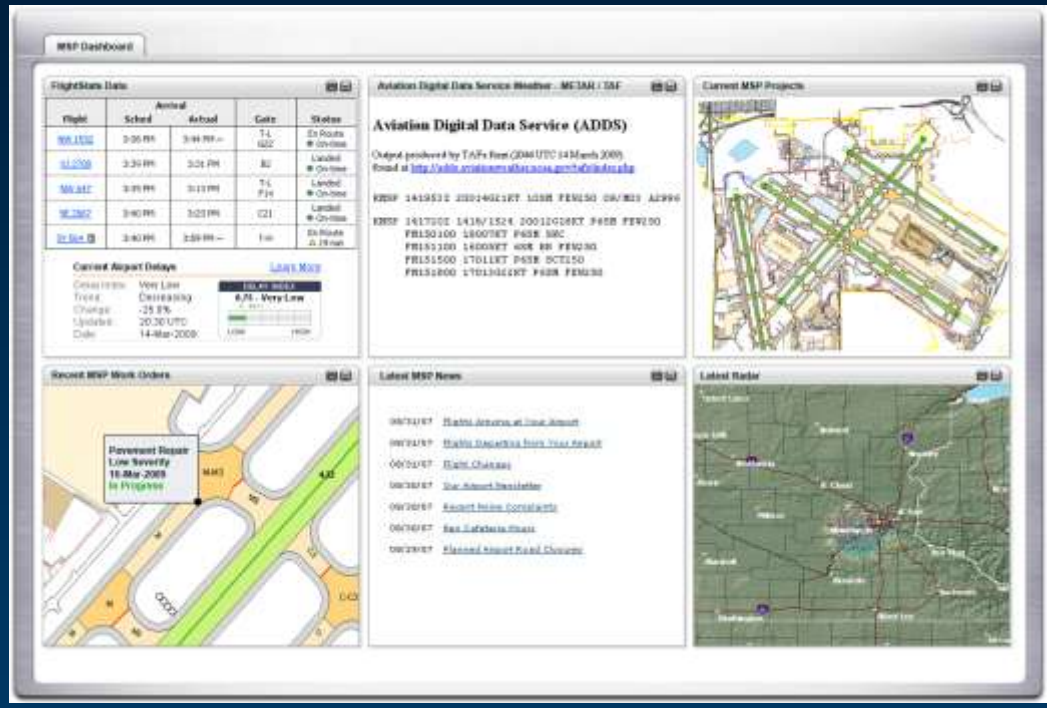
Aviation, Safety, Project Delivery, Environmental, Asset Management. . .

Data Management

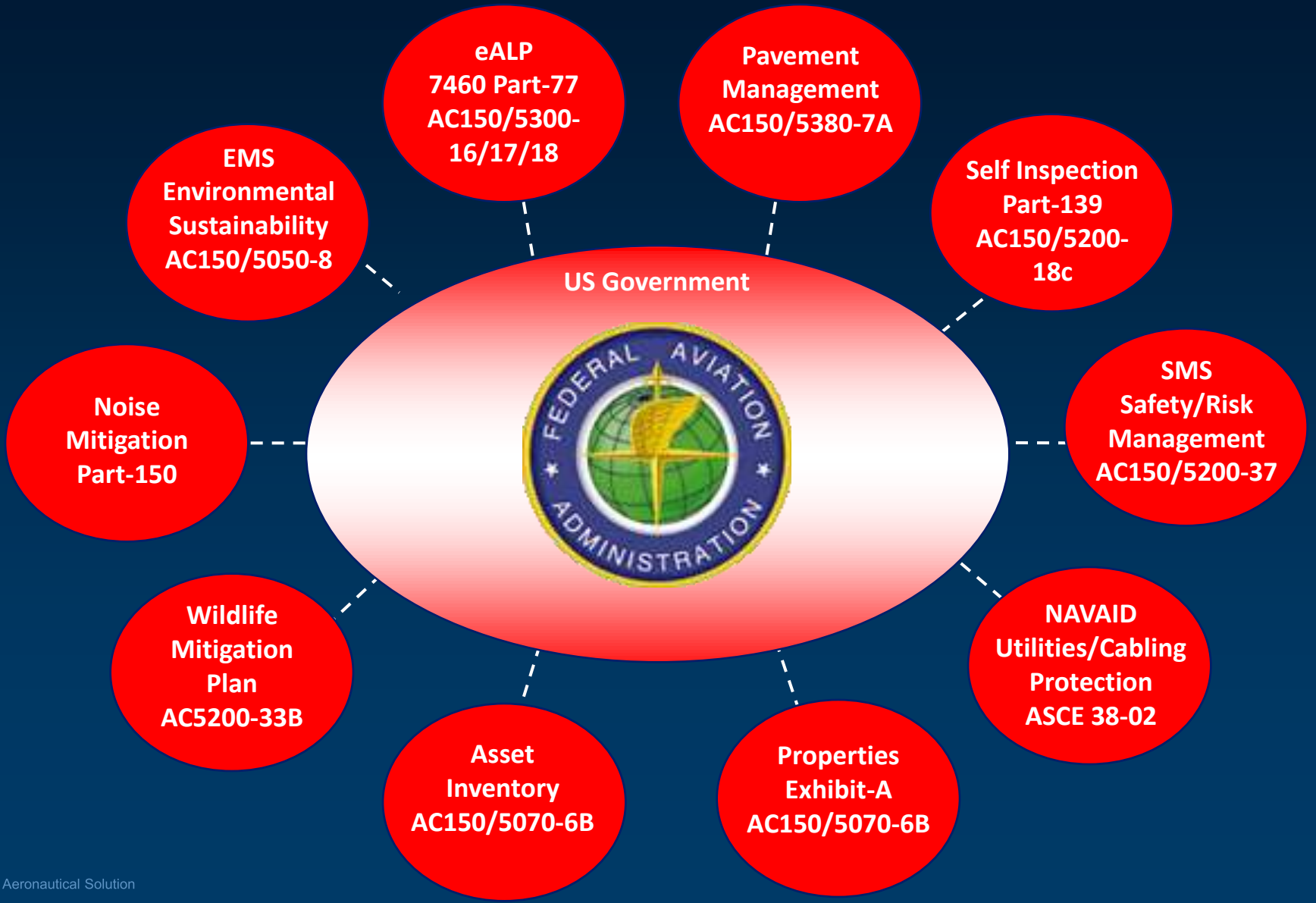


Information for Effective Decision Making

- Need Access to Information From Different Management Systems
- Inability to Share Information from Legacy Systems
- Need for Current and Accurate Information



Compliance


eALP
7460 Part-77
AC150/5300-16/17/18
Pavement Management
AC150/5380-7A
EMS
Environmental
Sustainability
AC150/5050-8
Self Inspection
Part-139
AC150/5200-18c
US Government
FEDERAL AVIATION ADMINISTRATION
Noise
Mitigation
Part-150
SMS
Safety/Risk
Management
AC150/5200-37
Wildlife
Mitigation
Plan
AC5200-33B
NAVAID
Utilities/Cabling
Protection
ASCE 38-02
Asset
Inventory
AC150/5070-6B
Properties
Exhibit-A
AC150/5070-6B

Better, Faster, Cheaper

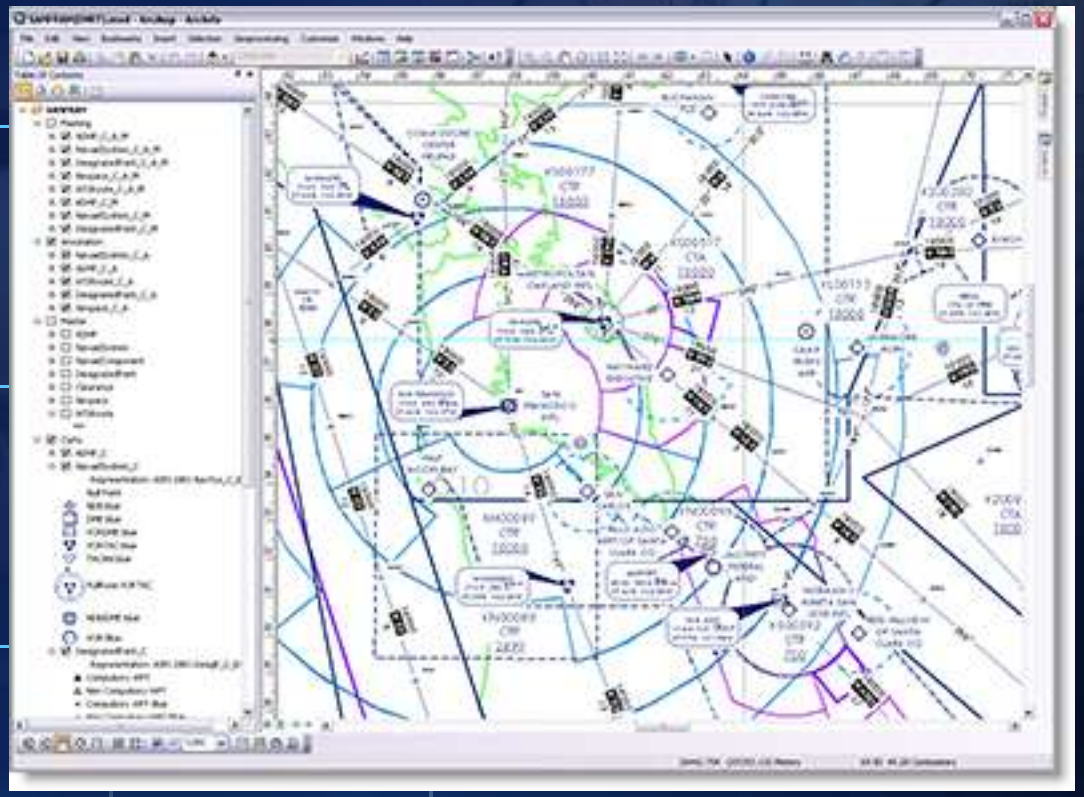
- Maximize Billing Opportunities
- Improve Security and Emergency Response
- Improve My Operational Performance
- Reduce Information Collection Costs
- *Enhanced Competitive Advantage*

How are airports using GIS ?

- Terminal management
- Property management & Land acquisition
- Airspace management
- Flight tracks and Noise complaints
- Airport layout
- Snow removal
- Planning
- Pavement management
- Traffic Modeling
- Facilities & Utility management
- Construction Management
- Security
- Environmental Compliance
- Maintenance
- Approach & Transition zones
- Public information
- Lease tracking
- Emergency response

Application Areas

Esri Resources



Aeronautical Organizations

Overview
Success Stories
Brochures/White Papers
Events
Demos

Partner Solutions

Related Resources
Newsletter
Connect with Others
Community Maps Program
Ask Our Experts

Esri Aeronautical Solution

Esri's Aeronautical Solution provides a platform to manage aeronautical data and rapidly produce high quality charts.
Learn More

Civil and military organizations must quickly produce aeronautical information for safer navigation. Esri technology can help these agencies maintain, control, and disseminate data that meets their rigorous requirements.

Solutions for Aeronautical Organizations

With Esri technology, you can

- Create, visualize, analyze, and share information with others who depend on highly accurate, authoritative data Automatically update charts through your organization's AIS to reduce data latency, redundancy, and errors.
- Produce a wide range of charting products, including *International Civil Aviation Organization (ICAO)* compliant charts, from a central database.
- Spanish airports and air navigation streamline aeronautical charting with ArcGIS.
- Share data using the *Aeronautical Information Exchange Model (AIXM)*.
- Readily share your information through mobile and web applications

Improve Your Workflow

Esri technology allows you to implement an effective workflow for data collection, management, production, and delivery.

Esri Aeronautical Solution

Overview
Airports GIS
Key Features
Demos
Chart Gallery
What You Get
Brochures/White Papers
Common Questions
System Requirements
Success Stories
Pricing

Free 60-Day Trial

What's New at 10

Training Available for ArcGIS for Desktop 10

Get up to speed on ArcGIS 10 with instructor-led training. Watch free live training seminars and recorded seminars online.

Latest Release

See what's new in Aeronautical Solution.

Overview

Esri Aeronautical Solution provides a true GIS-based platform to manage aeronautical data and rapidly produce high-quality charts that adhere to industry- and organization-specific requirements. With Esri Aeronautical Solution, civil and military agencies, commercial airlines, and chart producers can create, maintain, and use standard aeronautical products based on the latest digital data.

With Esri Aeronautical Solution, you can

- Significantly reduce chart production time by managing and generating aeronautical charts from a central database-driven system.
- Produce charts to your cartographic specifications from the database, including International Civil Aviation Organization (ICAO)-compliant charts.
- Add value for customers by supporting custom requests.
- Share data within the aeronautical community using the Aeronautical Information Exchange Model (AIXM).
- Enhance data quality through the direct loading of digital changes and automated change-verification workflow management.

Airports GIS Now Available

Aeronautical Solution supports the Instrument Approach Procedure (IAP).

Esri Aeronautical Solution

Overview
Airports GIS
What You Get
How Do You Get It
Key Features
Demos
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What You Get
Brochures/White Papers
Common Questions
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Free 60-Day Trial

Airports GIS

What You Get

The Esri Aeronautical Solution—Airports GIS tools and templates use a free and ready-to-use -18B geodatabase template provided by the FAA. This eliminates costly and time-consuming database design and helps to ensure consistency and compliance with -18B requirements. Also included is detailed, easy-to-use documentation outlining configuration and getting started with the solution information.

Key capabilities available with the Esri Aeronautical Solution—Airports GIS Package include:

⊞ Show/Hide All Capabilities

- ⊞ Preconfigured map product templates
- ⊞ A single integrated workflow management application
- ⊞ Automated data validation tools
- ⊞ Preconfigured -18B data editing templates
- ⊞ Automated tools for creating and visualizing obstacle surfaces

As the Airports GIS program continues to evolve, Esri will continually expand and update its support for this mandate. New tools and templates will be offered via download from the Esri Resource Center.

Preconfigured map product templates.

What's New at 10

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Get up to speed on ArcGIS 10 with instructor-led training. Watch free live training seminars and recorded seminars online.

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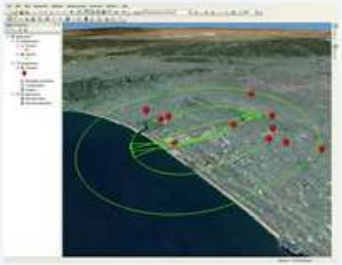
Airports GIS

How Do You Get It

If you are a current Esri Aeronautical Solution user, simply download the Airports GIS Package from the Aeronautical Solution Resource Center.

If you are interested in obtaining the Esri Aeronautical Solution or have other questions regarding the Airports GIS package, please contact the Esri Aeronautical Team at aero@esri.com.



Now airports can easily generate obstacle surfaces in iterative "what if" planning scenarios.

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Esri Aeronautical Solution

Aeronautical Solution
Help
Forum
Gallery
Videos
Ideas
System Requirements
Installation Guide

Get Support

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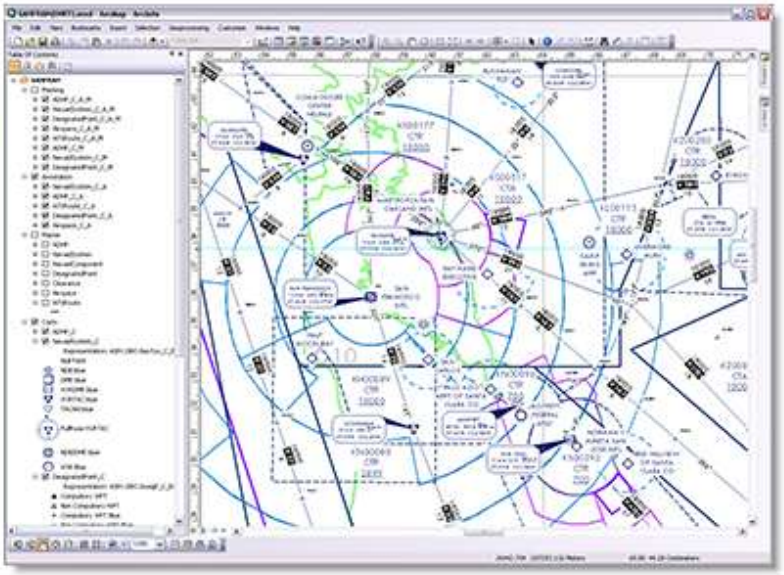
Airports GIS is a program mandated by the FAA that requires U.S. airports and their consultants to submit accurate and high-quality GIS data that will be subjected to rigorous quality checks as part of the review process. Esri Aeronautical Solution - Airports GIS Package includes tools, templates and workflows specifically developed to assist airports and their consultants in meeting the data requirements set forth by this program.

To learn more about the Aeronautical Solution, see What is the Aeronautical Solution?

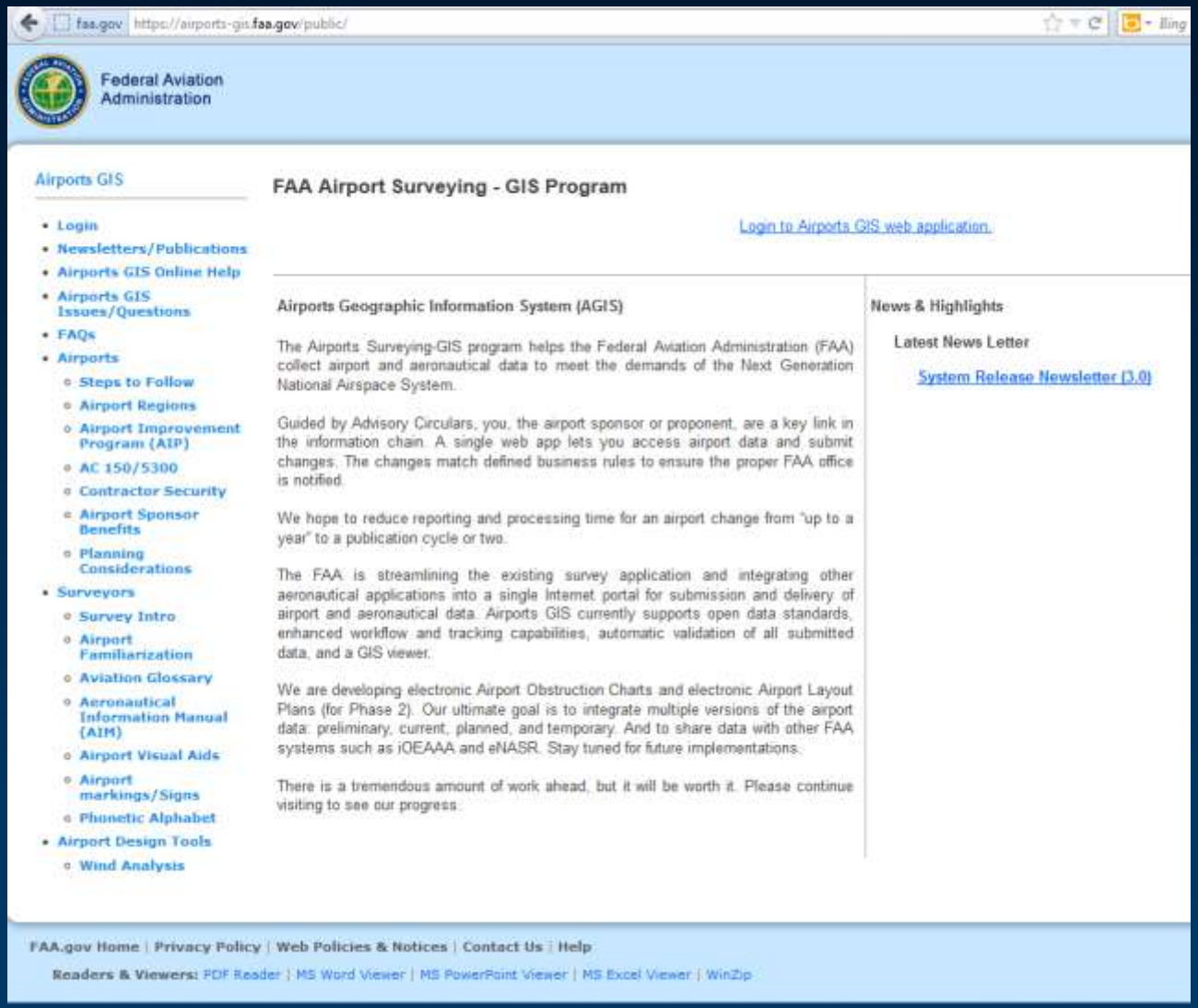
Click here, to request a fully functional 60 day trial of Esri Aeronautical Solution.



Helpful Resources:

- What's new in Aeronautical Solution 10?
- Take a quick tour of the Aeronautical Solution
- FAQ's

FAA's Airport GIS Program



A Good Impetus to Start Esri Airport GIS Program

Esri Aeronautical Solution

Aeronautical Solution

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Forum

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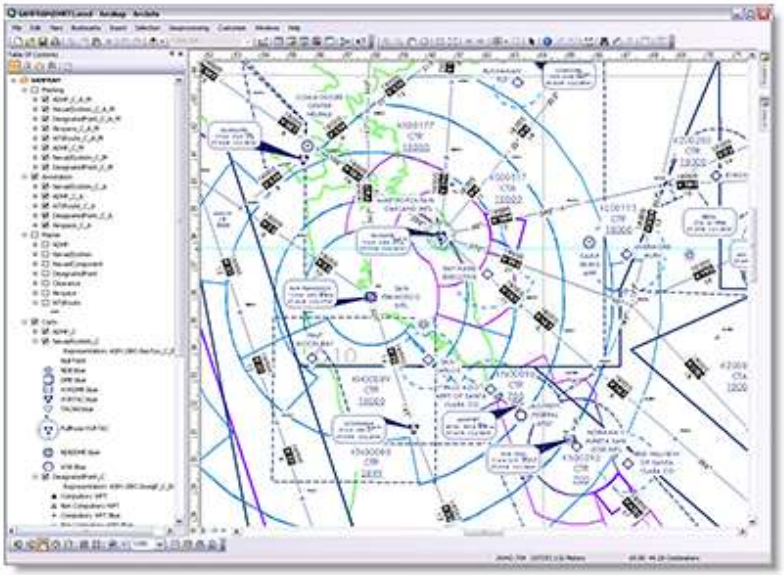

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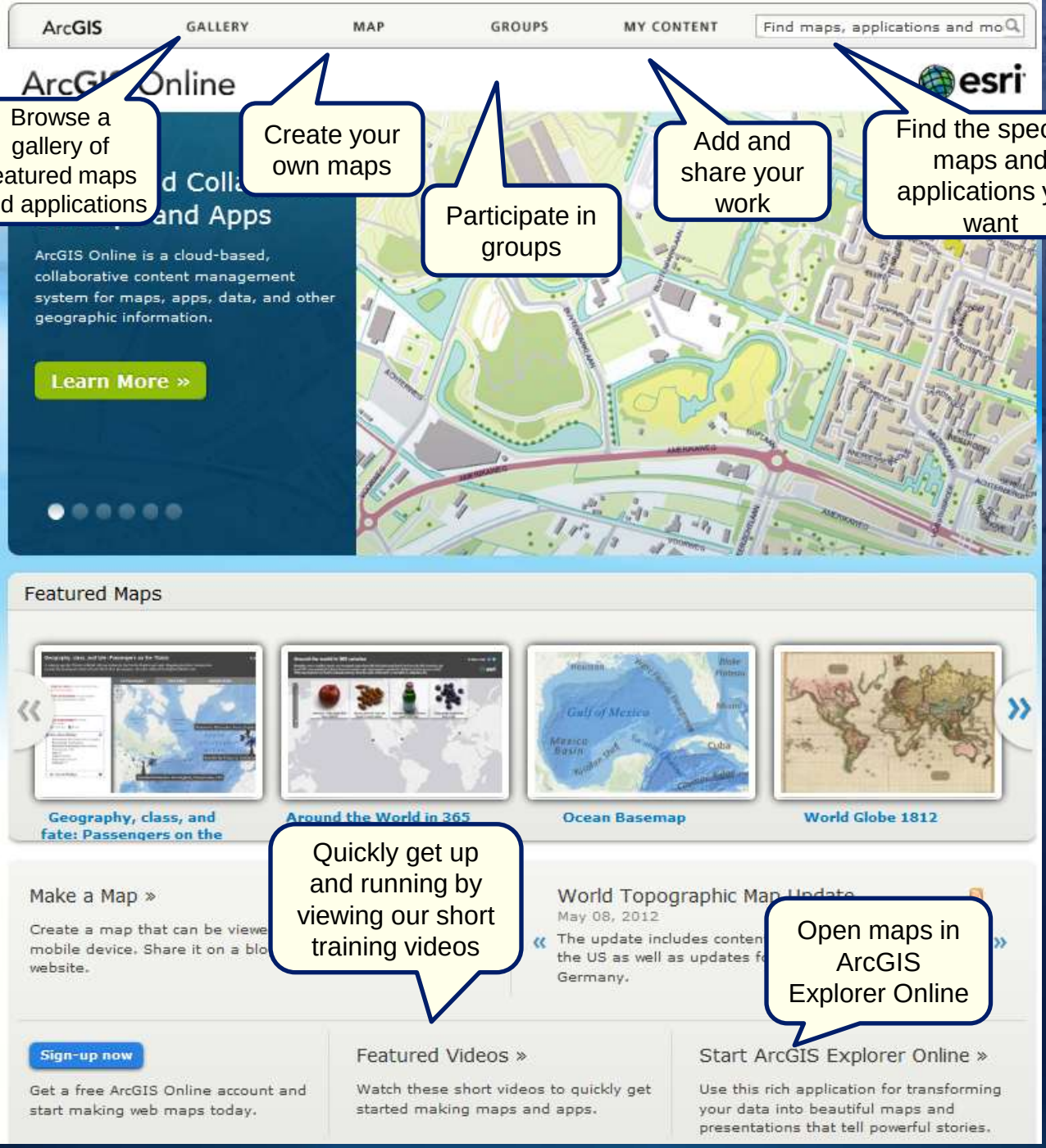
ArcGIS
GALLERY
MAP
GROUPS
MY CONTENT
Find maps, applications and mo
esri
Browse a gallery of featured maps and applications
Create your own maps
Participate in groups
Add and share your work
Find the specific maps and applications you want
and Apps
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mobile device. Share it on a blo
website.
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May 08, 2012
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the US as well as updates f
Germany.
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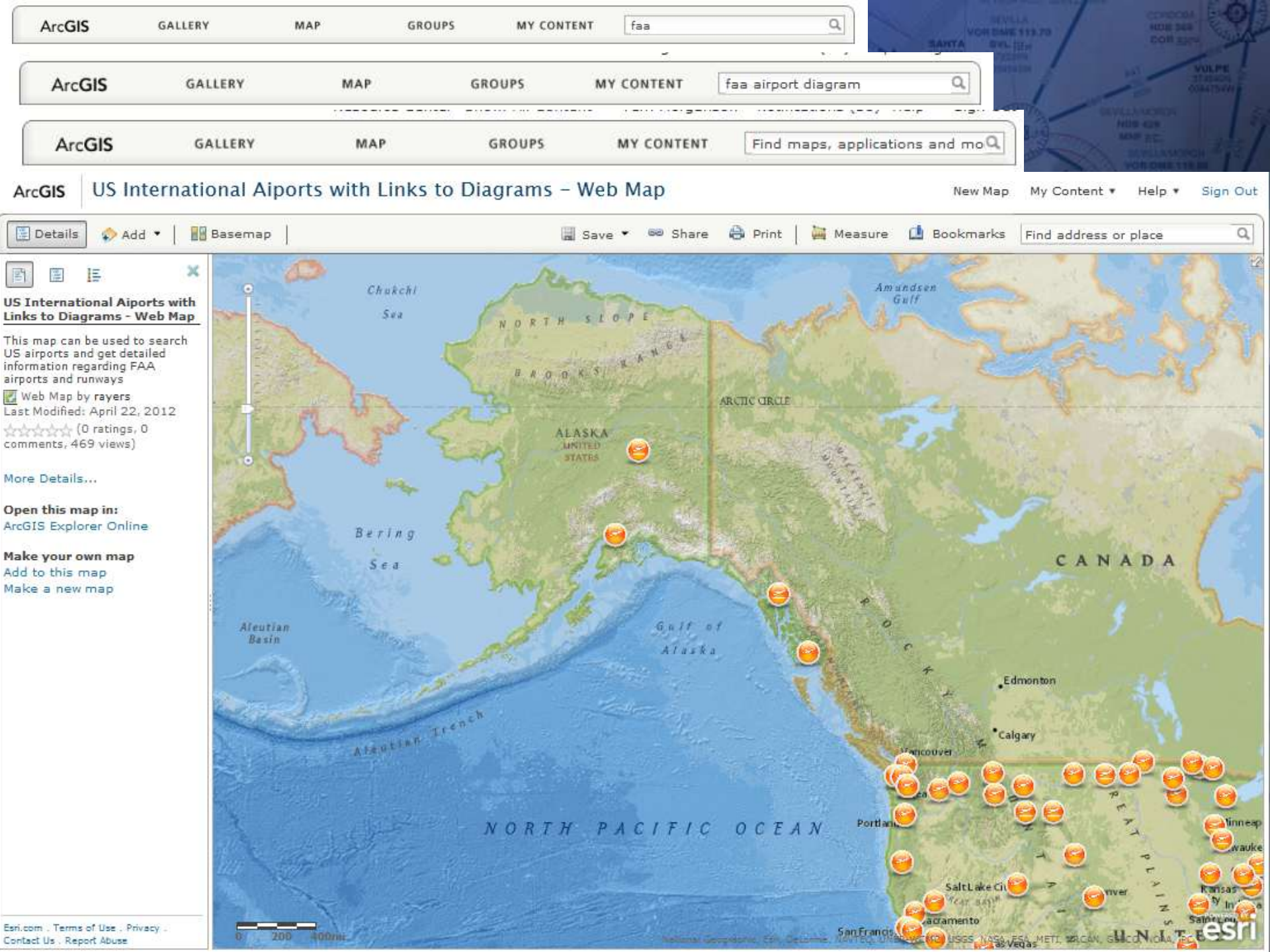
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faa airport diagram
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US International Aiports with Links to Diagrams – Web Map
New Map
My Content
Help
Sign Out
Details
Add
Basemap
Save
Share
Print
Measure
Bookmarks
Find address or place
US International Aiports with Links to Diagrams - Web Map
This map can be used to search US airports and get detailed information regarding FAA airports and runways
Web Map by rayers
Last Modified: April 22, 2012
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Add to this map
Make a new map
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Chukchi Sea
NORTH SLOPE
BROOKS RANGE
Amundsen Gulf
ARCTIC CIRCLE
ALASKA
UNITED STATES
Bering Sea
CANADA
Aleutian Basin
Gulf of Alaska
Aleutian Trench
Edmonton
Calgary
NORTH PACIFIC OCEAN
Portland
Salt Lake City
Sacramento
San Francisco
0 200 400mi
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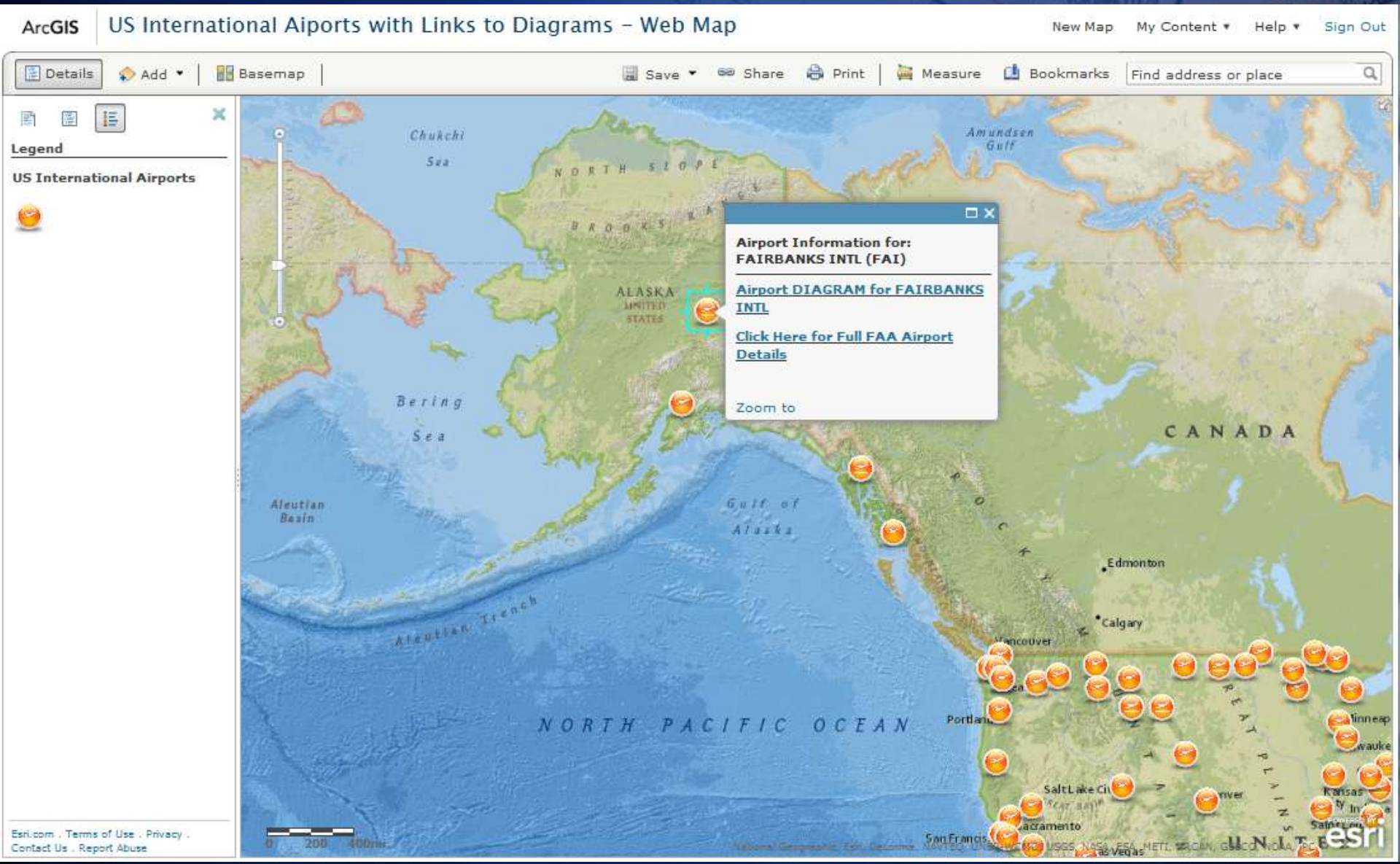
ArcGIS
US International Aiports with Links to Diagrams – Web Map
New Map
My Content
Help
Sign Out
Details
Add
Basemap
Save
Share
Print
Measure
Bookmarks
Find address or place
Legend
US International Airports
Airport Information for:
FAIRBANKS INTL (FAI)
Airport DIAGRAM for FAIRBANKS INTL
Click Here for Full FAA Airport Details
Zoom to
Chukchi Sea
Amundsen Gulf
NORTH SLOPE
BROOKS RANGE
ALASKA
UNITED STATES
Bering Sea
CANADA
Aleutian Basin
Gulf of Alaska
Aleutian Trench
Edmonton
Calgary
NORTH PACIFIC OCEAN
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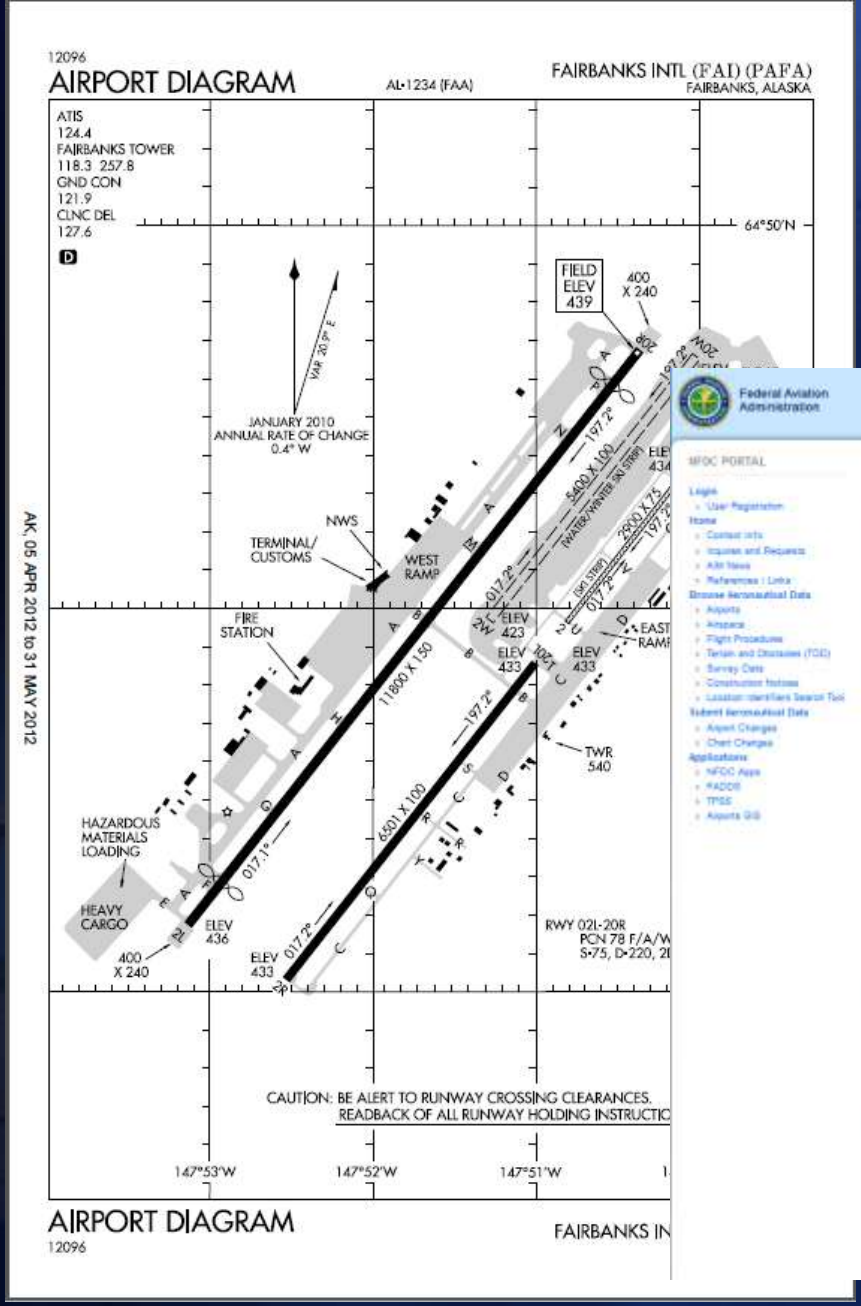
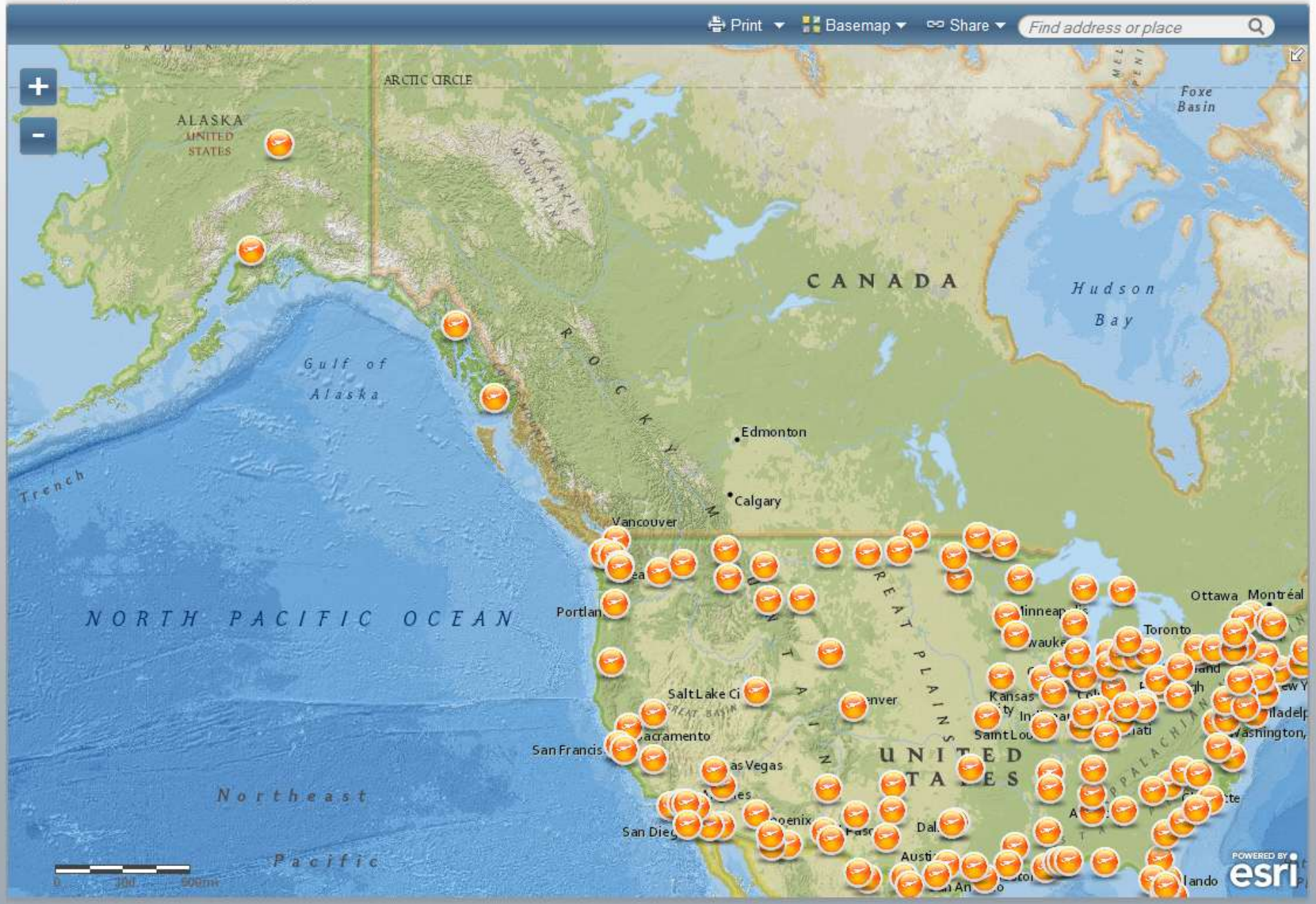
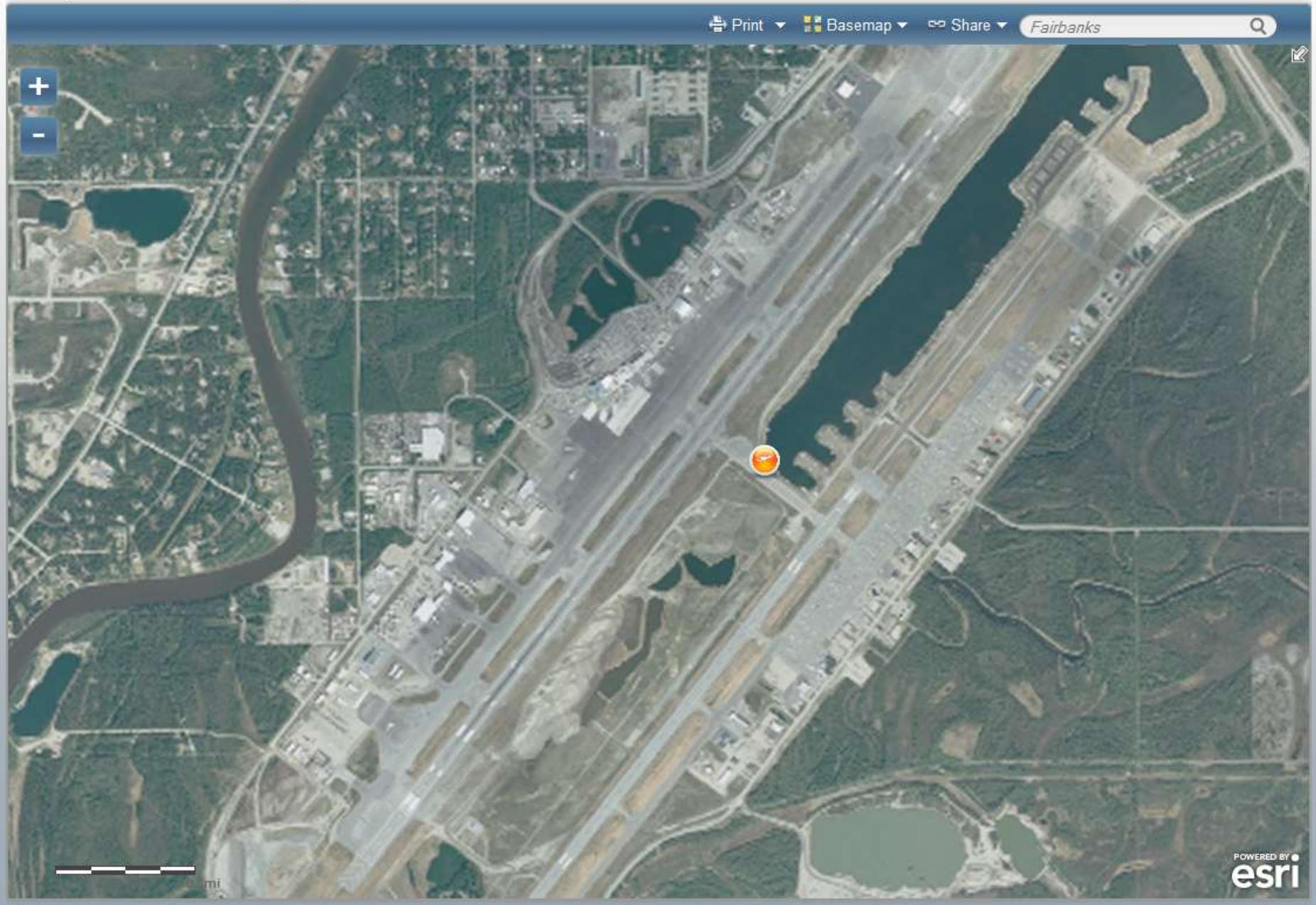

12096
AIRPORT DIAGRAM
AL-1234 (FAA)
FAIRBANKS INTL (FAI) (PAFA)
FAIRBANKS, ALASKA
ATIS
124.4
FAIRBANKS TOWER
118.3 257.8
GND CON
121.9
CLNC DEL
127.6
64°50'N
FIELD ELEV 439
400 X 240
VAR 20° E
JANUARY 2010
ANNUAL RATE OF CHANGE
0.4° W
NWS
TERMINAL/ CUSTOMS
WEST RAMP
FIRE STATION
11800 X 150
5400 X 100
WATER/WINTER SKI STRIP
2900 X 75
SKI STRIP
ELEV 423
ELEV 433
ELEV 434
EAST RAMP
TWR 540
6501 X 100
HAZARDOUS MATERIALS LOADING
HEAVY CARGO
ELEV 436
400 X 240
ELEV 433
RWY 02L-20R
PCN 78 F/A/W
S-75, D-220, 2
CAUTION: BE ALERT TO RUNWAY CROSSING CLEARANCES.
READBACK OF ALL RUNWAY HOLDING INSTRUCTIO
147°53'W
147°52'W
147°51'W
AIRPORT DIAGRAM
FAIRBANKS IN
12096
AK, 05 APR 2012 to 31 MAY 2012

Federal Aviation Administration
NFDC Portal Home
NFDC PORTAL
FAIRBANKS INTL
FAI (PAFA)
Airport Operations
Airport Contacts
General Remarks

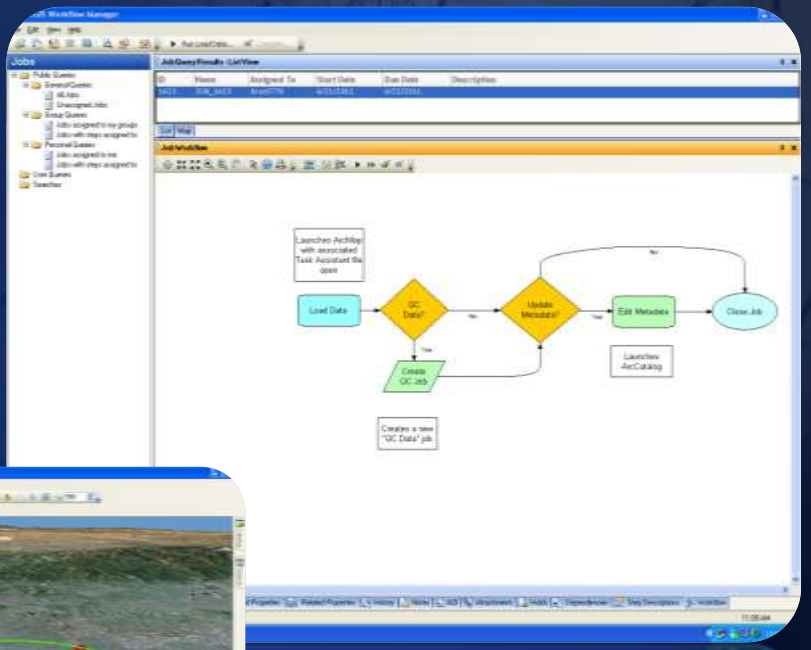
Airports w/ Diagrams

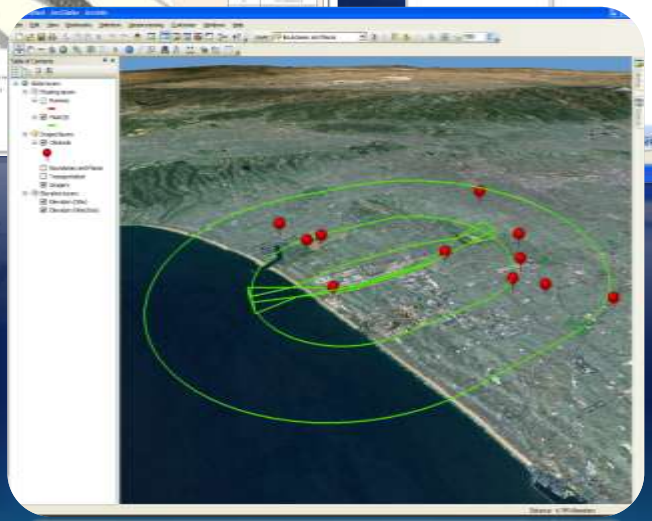


Airports w/ Diagrams



Esri Aeronautical Solution – Airports GIS Package

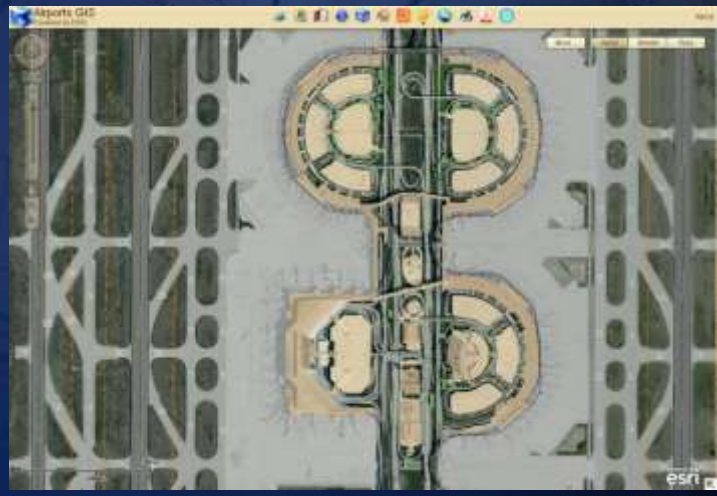




esri

Airports GIS Package Objectives

- **Tailored GIS capabilities supporting FAA requirements**
- **Configurable and Extensible**
- **Agile Development and Deployment Pattern**



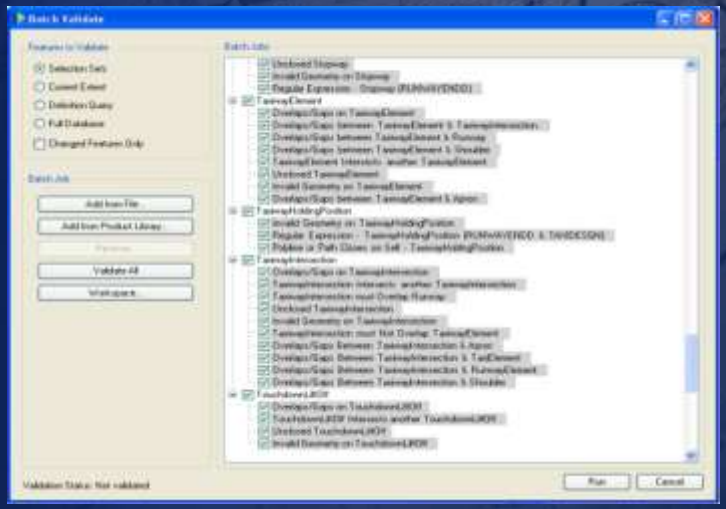
Airports GIS Package Highlights

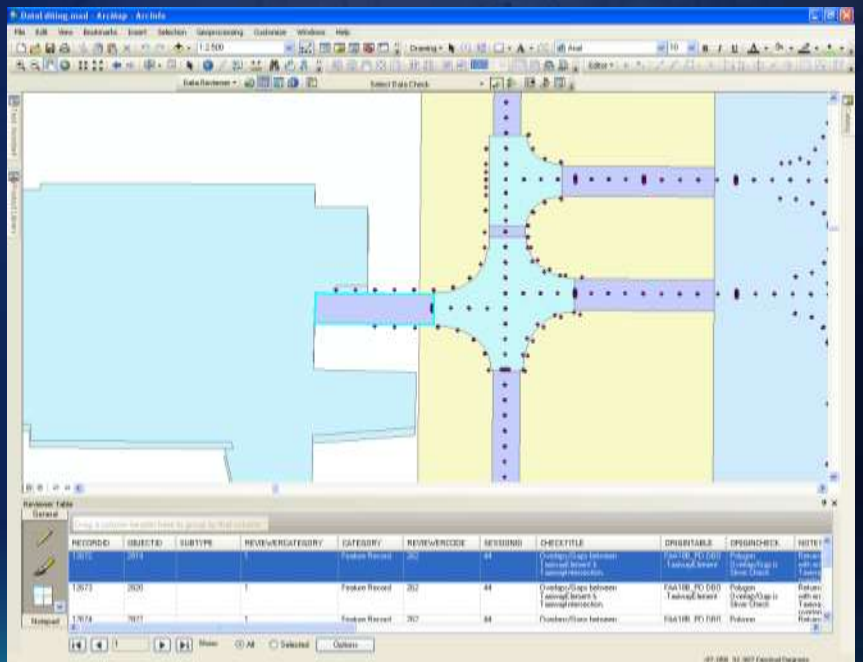
- Improved Data Quality
- Workflow-based Operations
- Preconfigured Map Products
- 18B Template-based Editing Environment
- Automated Obstacle Identification Surface Tools
- Uses FAA Provided 18B Geodatabase Template

Improved Data Quality

Submit Quality Data to FAA – Faster Acceptance and Less Rework!

- **Automated Tools for -18B Data QC Processes**
- **Preconfigured and Customizable -18B Rule Base Provided**
- **Document QC Review Processes**
- **Report Quality Information**

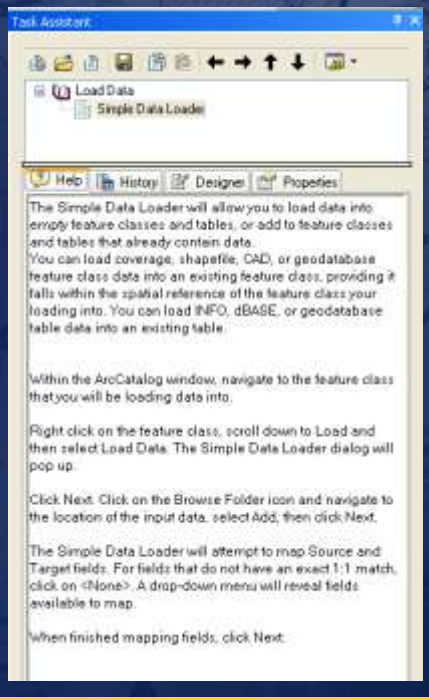


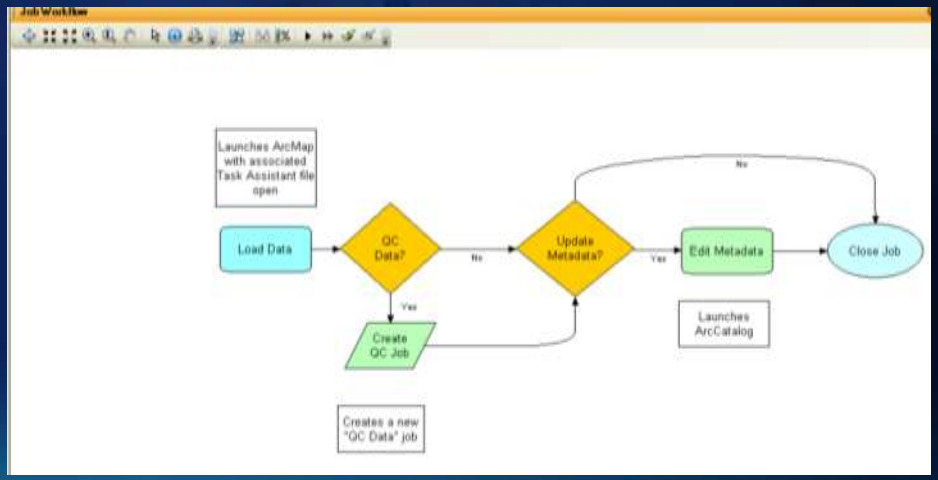


Workflow-based Operations

Standardize Your Best Practices – Structured, Repeatable and Efficient

- Manage GIS and Non-GIS Tasks
- Simplifies Software Tools with Automation
- Stores Transaction History of Data Maintenance
- Sample Airports GIS Workflows Provided

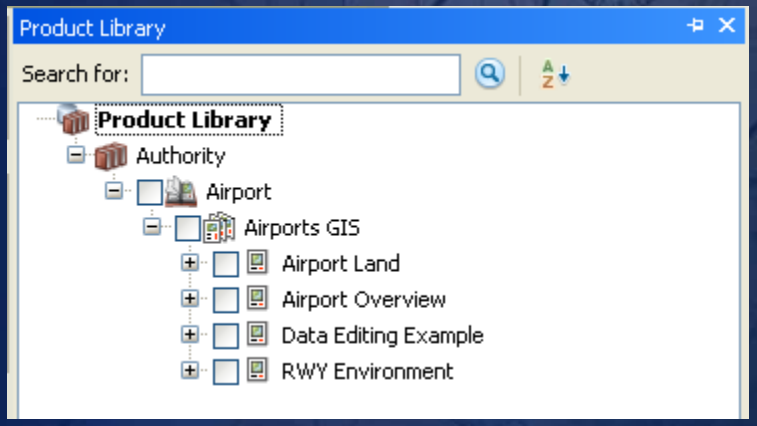


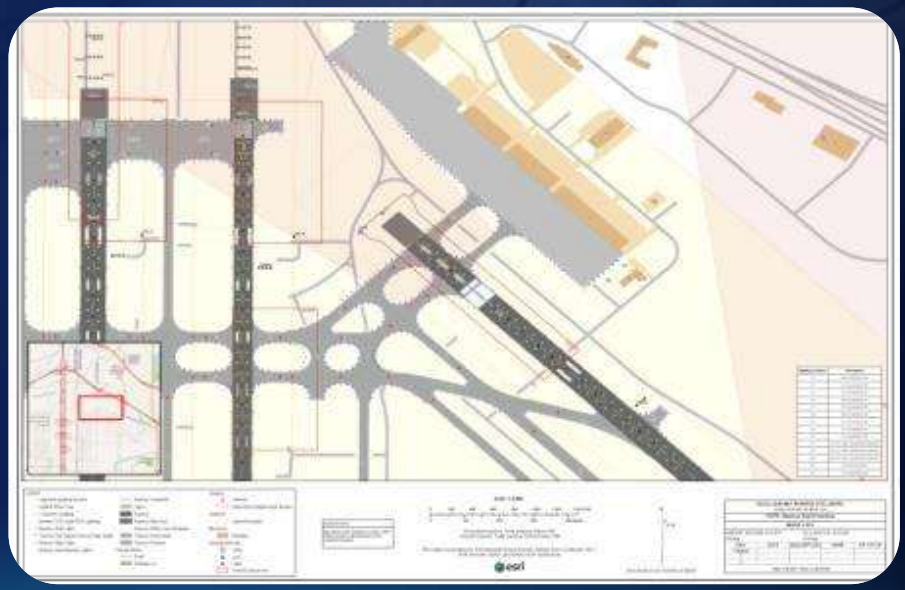


Preconfigured Map Products

Use Out-of-the-Box or Customize to Your Requirements

- Enhanced Cartography
- Supports Your Planning and Operations Activities
- Sample Product Library for Efficient Creation & Management

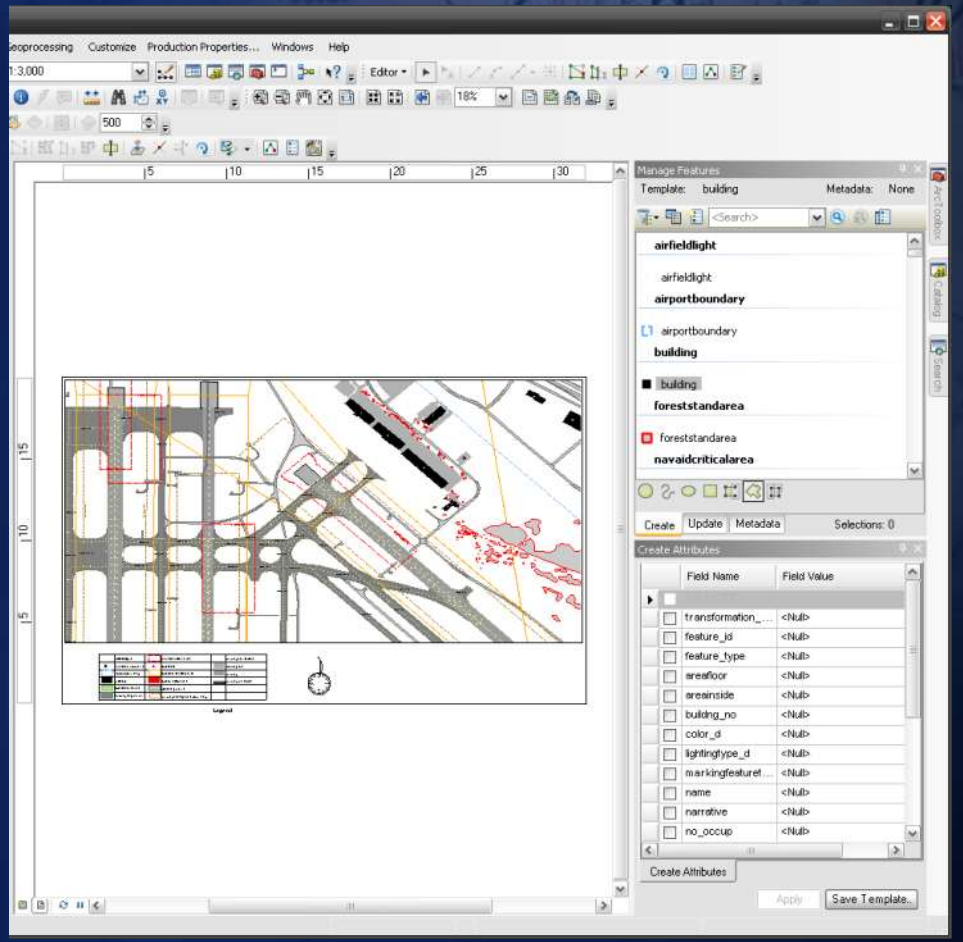




Template-based Editing Environment

Simplified Data Creation and Editing Experience

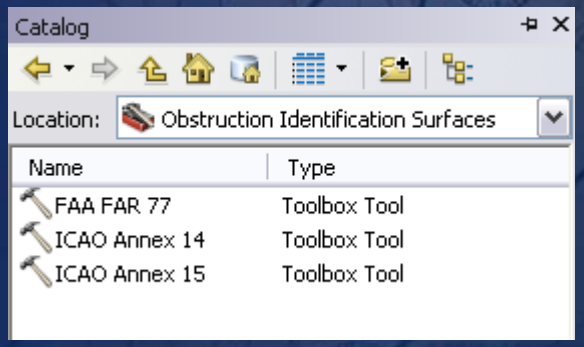
- Preconfigured -18B Editing Templates
- Integrated Spatial and Attribute Editing Interface
- Coded Value Domains
- On-the-Fly Business Rule Validation

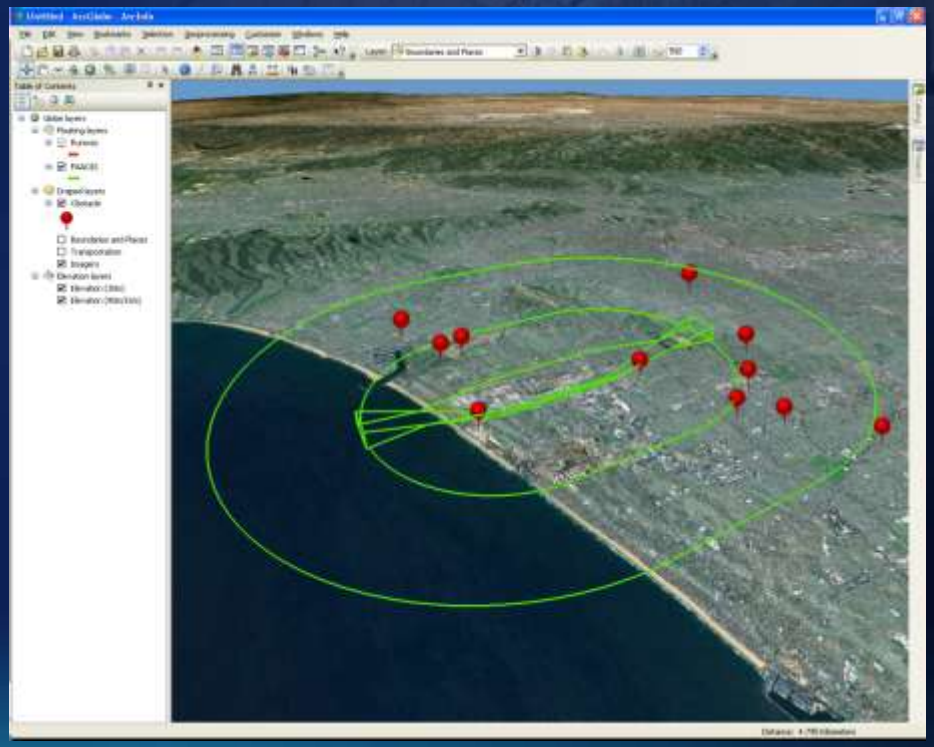


Obstacle Identification Surface Tools

Automated and Efficient

- **Support Domestic and International Specifications**
  - **FAR Part 77**
  - **ICAO Annex 14 &15**
- **Parameter-based feature construction**
- **Use on the Desktop or Deploy as a GP Service**





Esri Aeronautical Solution – Airports GIS Package

Demo Video

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