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Technical Workshops | July 13, 2011

# Using ArcGIS for Intelligence Analysis

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# Workshop Goals

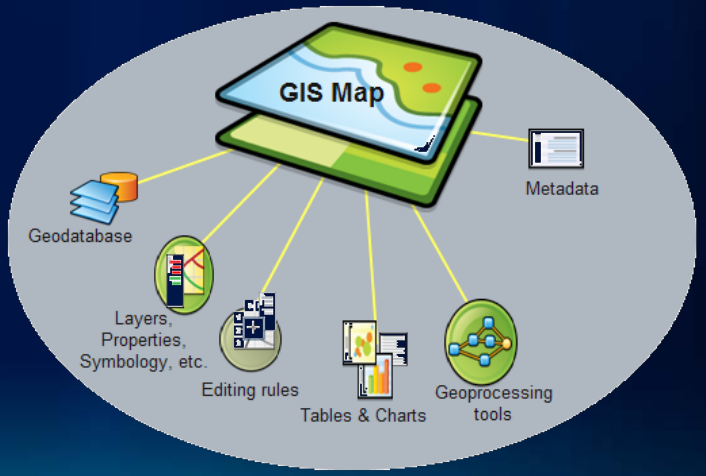
- Discuss ArcGIS as an Enterprise system for Defense and Intelligence
- Discuss the Geographic Approach as a methodology to support intelligence analysis
- Discuss new workflows at 10 that are useful for analysis
- Explain using the ArcGIS Portal approach to support collaboration across the community
- Demonstrate ArcGIS Explorer online as a powerful application for building and sharing intelligence reporting
- Describe what's coming in 10.1 for Defense and Intelligence

# The ArcGIS System

Easier
More Powerful
and Everywhere

# Maps in a GIS

- Maps are how you
  - Compile information
  - Find patterns
  - Derive new information using analysis
  - Communicate plans and ideas
  - Get status reports



# For finding patterns

- Maps are used to discover and investigate patterns
  - Population characteristics
  - Location/Timing of Events
  - Charts of frequency/type of incidents

- GIS maps for patterns include:
  - Layers with useful symbology
  - Tools and templates for graphs/reports
  - Useful Animation

# For deriving new information using analysis

- Maps are used to derive information using analysis
  - Examining possible cause/effect of incidents
  - Examining the impact the terrain has on an operation

- GIS Maps for Analysis include
  - Analytic models and documentation
  - Layer and other elements for presenting results
  - Source information for analysis

# The Geospatial Approach…A Methodology

**The Geospatial Approach parallels the workflow of Intelligence Analysts**

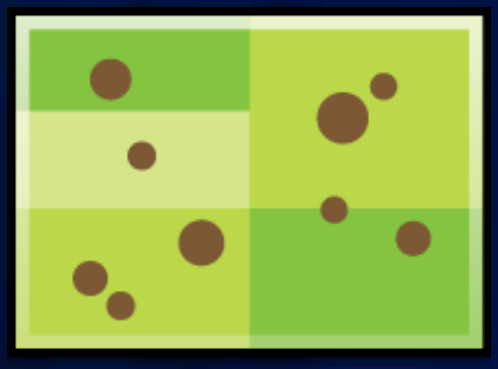
# Step 1: Framing the Question

- What is the intelligence problem I am working on?
- Where am I focused– a region, a country, an urban area or a battlefield?
- Is there something about the place that I need to understand for better context?
  - Terrain
  - Demographics
  - Government facilities
  - Transportation networks
  - Industrial locations

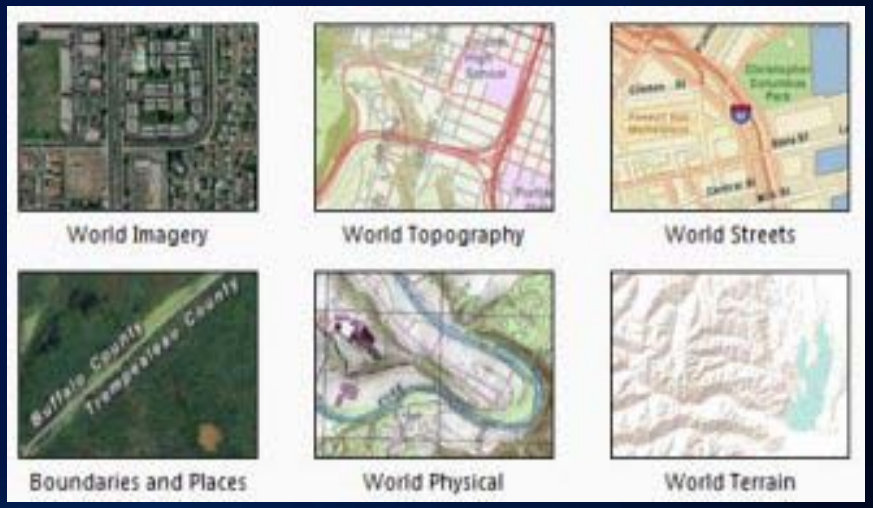
# Step 2: Find Data and Tools

Web maps

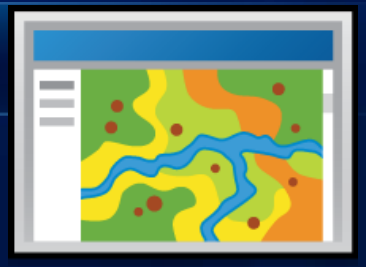
Basemaps for Reference



Database Files



# Step 3: Examine the Data

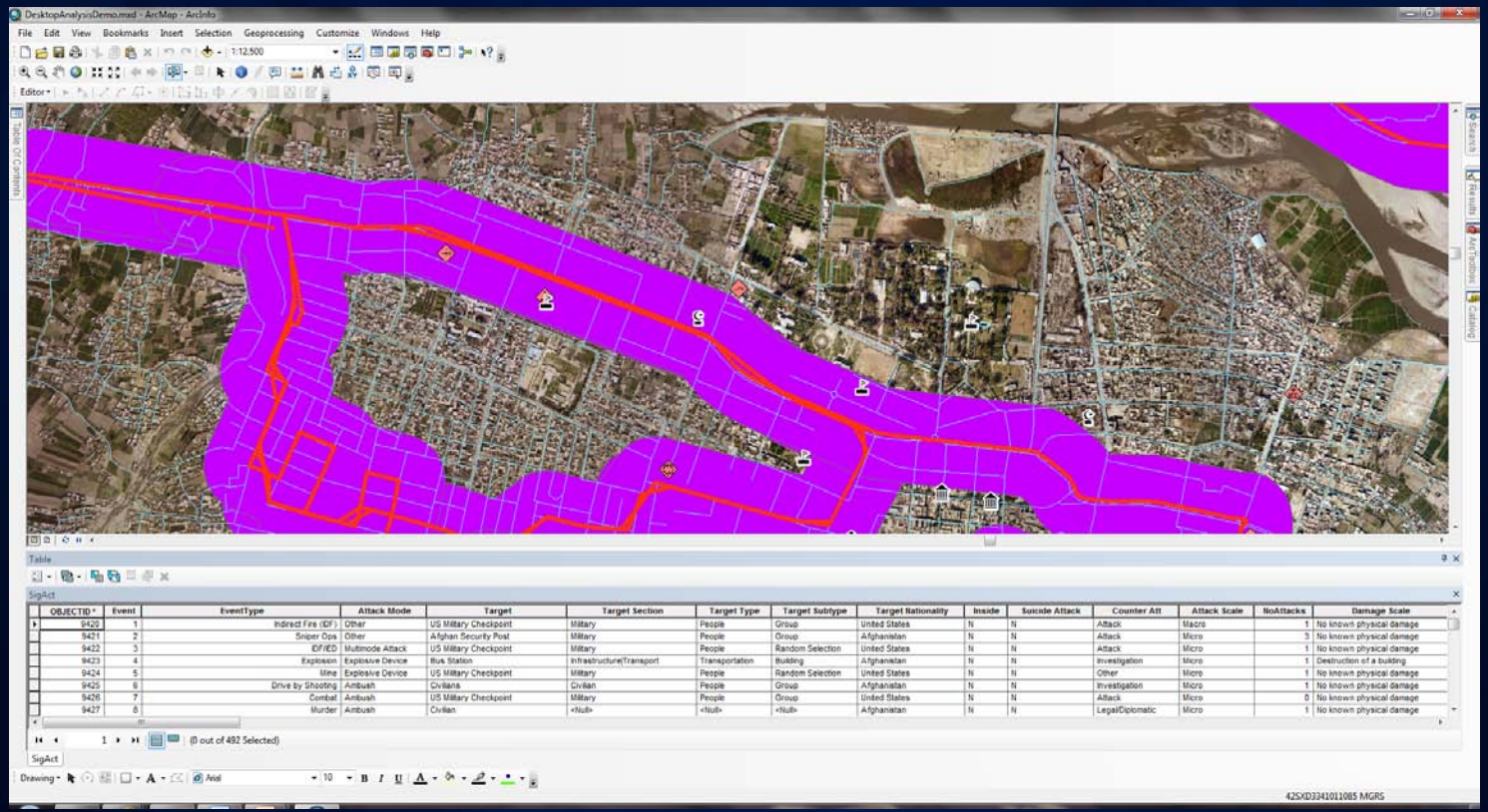


## USA Soil Survey

This map features the Soil Survey Geographic (SSURGO) by the United States Department of Agriculture's Natural Resources Conservation Service. It also shows data that was developed by the National Cooperative Soil Survey and supersedes the State Soil Geographic (STATSGO) dataset published in 1994. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships, and county natural resource planning and management. The user should be knowledgeable of soils data and their characteristics. The smallest scale map shows the Global Soil Regions map by the United States Department of Agriculture's Natural Resources Conservation Service.

The web map combines with the soil survey with the terrain basemap and a hydro overlay layer for reference purposes. This basemap is ideal for display of thematic data such as the soil survey map, providing a neutral terrain background with an overlay layer for reference purposes.

# Step 4: Analyze the Data



# Step 5: Sharing and Presenting

# Demonstration

# Road ahead: 10.1

- Sharing tools and results with Geoprocessing Packages
- Live Mode for near-real time updates to features
- Mensuration tools for imagery analysis
- Geoprocessing tools for matching digital photos to GPS points by time stamp

# Additional Resources at the conference

- Defense Showcase
  - ArcGIS for the Warfighter area
  - Demo Theater
    - ArcGIS for the Warfighter demo
      - Wednesday 1200-1300
      - Wednesday 1700-1800
      - Thursday 1200-1300

- Technical Workshops in this room (26A)

1200-1300 Creating Basemaps for Defense and Intel

1330-1445 Using ArcGIS for Military Planning and Operations

1515-1630 Using ArcGIS for Imagery Analysis

# After this conference…

- Defense and Intelligence Resource Center
  http://resources.arcgis.com/
  - Blog
  - Forum
  - Defense and Intelligence guide book
- ArcGIS.com: http://www.arcgis.com/home/
- Support: http://support.esri.com/en/

# Workshop Evaluation

**www.esri.com/sessionevals**

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