

Military Tools for ArcGIS an Overview

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Agenda

What we will cover

- Overview of Defense Solutions
- Military Tools for ArcGIS
- Demonstration
- What's next

Defense Solutions

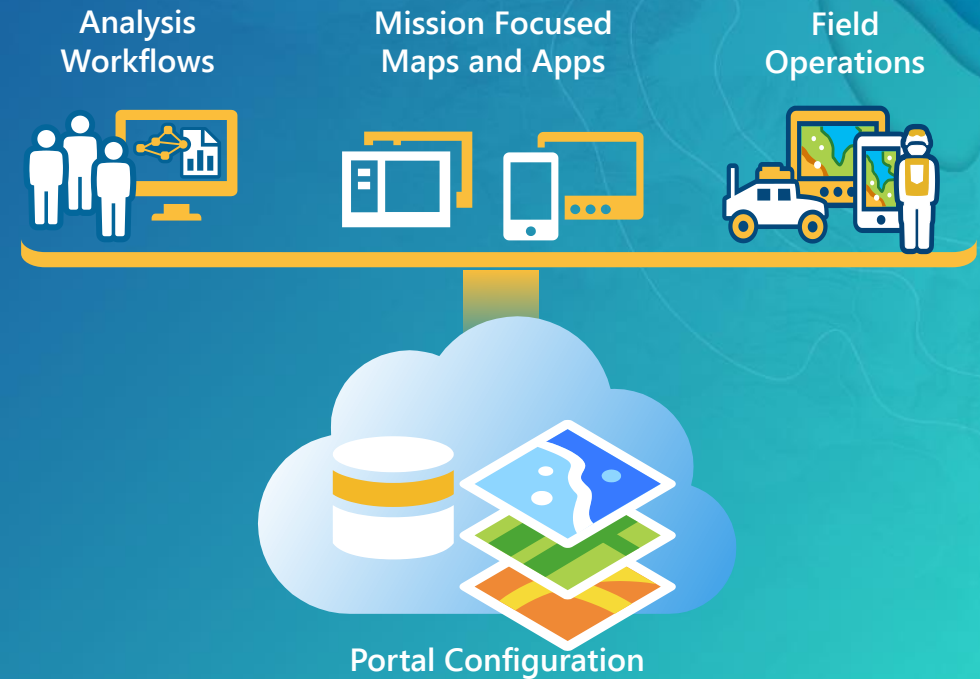
Overview



Overview of Defense Solutions

Esri solutions for defense customers

- Over 50 maps, apps, and tools
 - Configurable and extensible
 - Freely available and fully supported
- Best Practices
 - Supporting standards and military specifications
 - Industry-driven requirements
- Mission-focused workflows
 - Command and Control
 - Intelligence operations and analysis
 - Operational readiness



Delivered via solutions.arcgis.com

Overview of Defense Solutions

Flexible capability and deployment



Web



Mixed



Desktop



Overview of Defense Solutions

Who do we support

- Intelligence Analyst
- Geospatial Analyst
- Imagery Analyst
- CI/HUMINT
- SIGINT Analyst
- Planners
- Staff Officers
- Decision Makers



Overview of Defense Solutions

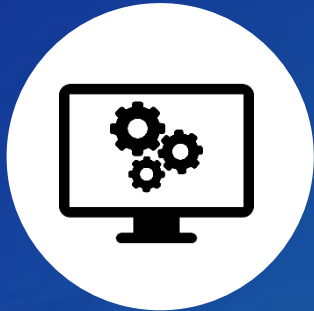
Our mission is to help you

- Deliver maps and applications quickly throughout your organization
- Stay current with future releases / avoid legacy technology
- Deploy a geospatial platform that can be leveraged by many
- Leverage the collective knowledge of the entire community
- And do this with ... less staff, budget, and technical expertise

Overview of Defense Solutions

Flexible capability and deployment

Military Tools for ArcGIS

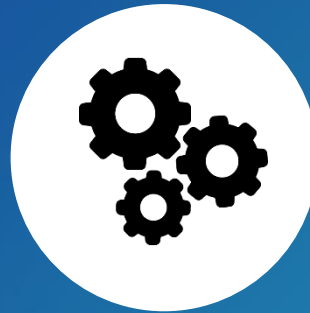


Coordinate Conversion
Military Symbol Editor
Distance and Direction

...

*Available on media and
as a single download*

Templates

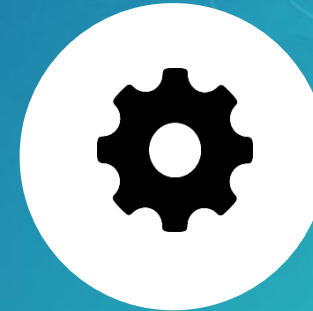


Visibility and Range
Military Overlay
Incident Analysis

...

Available as Downloads

Individual Tools



Line of Sight
Bomb Widget
Coordinates

...

*Available as Downloads
and on GitHub*

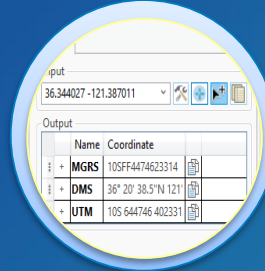
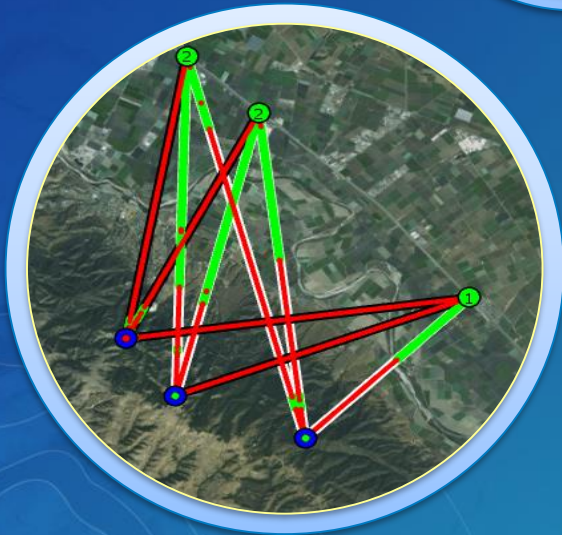
Military Tools for ArcGIS



Military Tools for ArcGIS

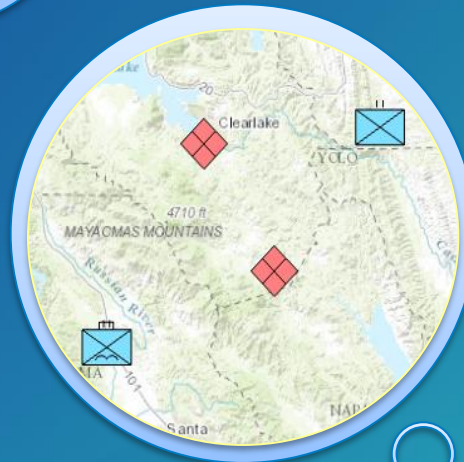
Components

Visibility analysis



Coordinate
Conversion

Distance and Direction calculations



Military Symbol Editor

Military Tools for ArcGIS

Functionality across the platform



ArcMap
Add-ins



ArcGIS Pro
Add-ins



Toolboxes



Widgets
App Templates
Apps



Coordinate Conversion

Coordinate Conversion

Quickly convert between coordinate types

- Input coordinates using
 - Keyboard
 - Map cursor
- Convert between several formats
 - MGRS
 - DD, DMS, and more
- Format a coordinate to your specification
 - 11SMS8472718799
 - 11S MS 84727 18799
- Multiple way to copy one or many formats
- Flexible coordinate handling
- Import / export coordinates

Coordinate Conversion

Input: 32 42 07.60N 117 09 55.40W

Output:

	Name	Coordinate
-	MGRS	11SMS8472718799
	GZD	11S
	Grid Sq	MS
	Easting	84727
	Northing	18799
+	MGRS2	11S MS 84727 18
+	DD	32.706836N 117.
+	DDM	32° 42.4102'N 11
+	USNG	11SMS8472718799
+	UTM	11S 484727 3618

List:

- 32 42 24.61N 117 09 46.64W
- 32 42 56.56N 117 09 49.91W
- 32 42 52.72N 117 09 06.57W
- 32 42 32.38N 117 10 15.26W
- 32 42 25.59N 117 09 25.15W

Clear All Import Export

Coordinate Conversion

Input: 10S 713917 4094436

Output:

MGRS: 10SGF1391794436

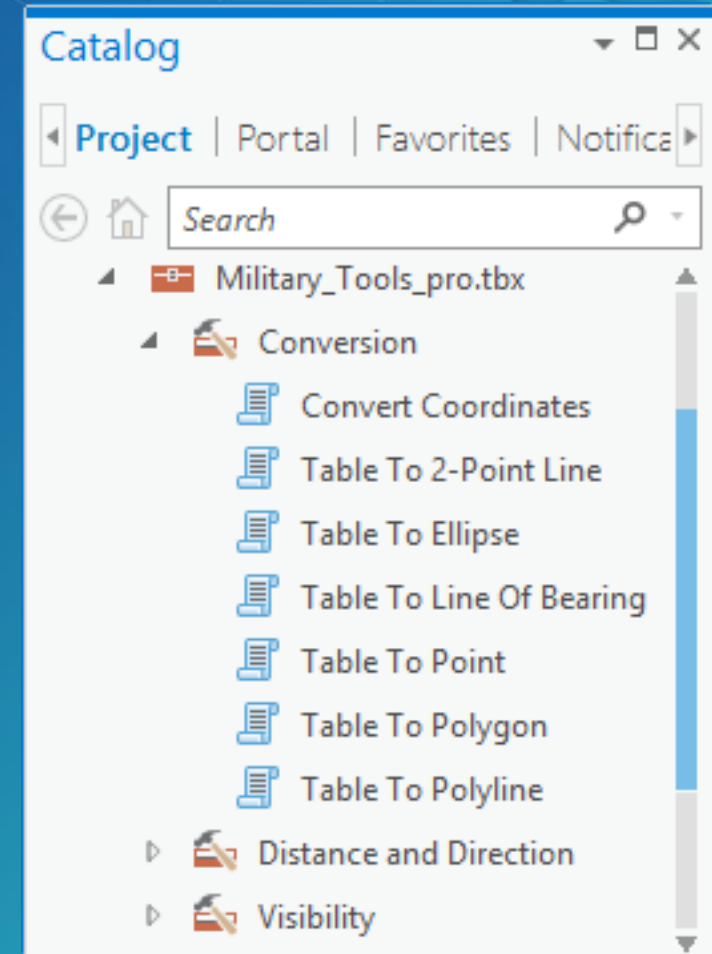
DMS: 36° 58' 18.2666"N 120° 35' 48.7458"W

DD: 36.971741N 120.596874W

Coordinate Conversion

Using Geoprocessing to convert coordinates

- Input tables or feature classes
- Convert any supported format
- Script tools
 - Standalone python scripts or
 - Use inside a model with other tools
- Import based on tables
 - Table to 2-Point Line
 - Table to Ellipse
 - Table to Line of Bearing
 - Table to Point
 - Table to Polygon
 - Table to Polyline



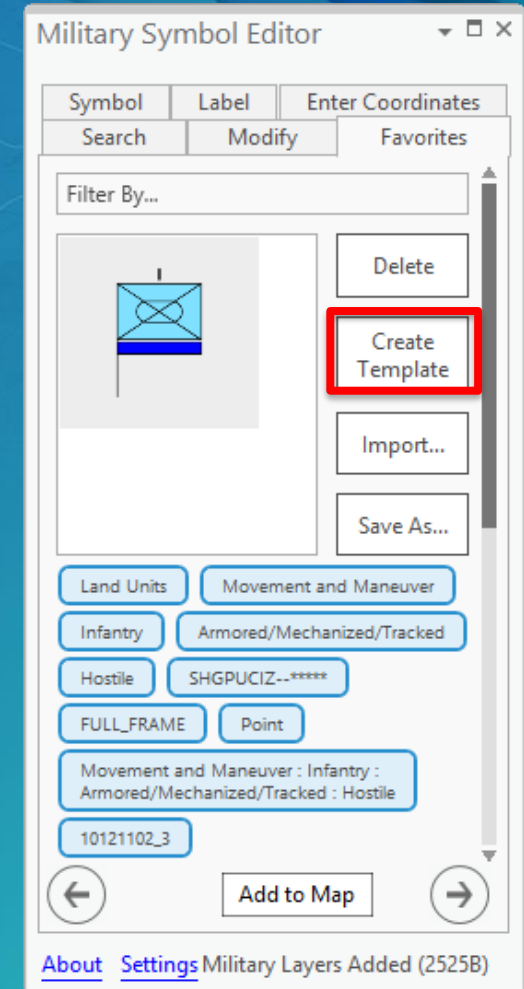
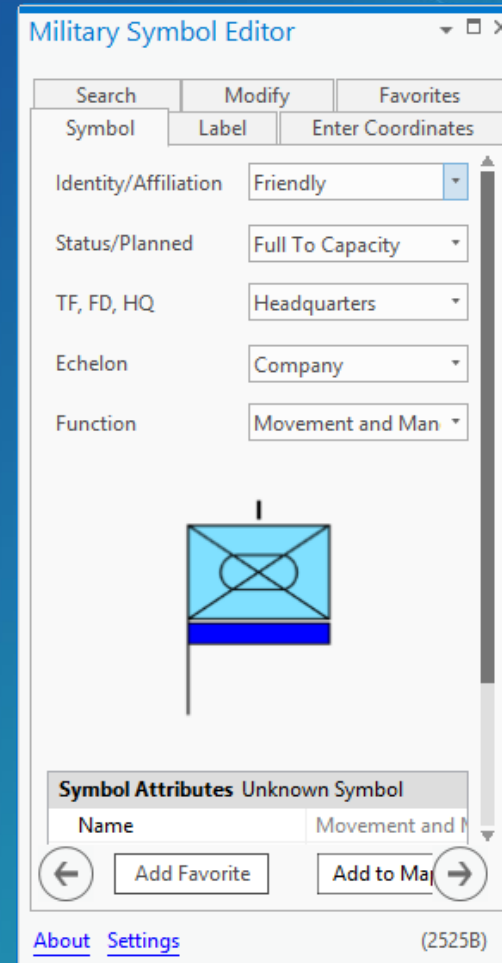


Military Symbol Editor

Military Symbol Editor

Easily create military symbols by searching symbol attributes

- Support multiple standards
- Schema-based approach to military symbology
- Create/modify symbols using attribute driven drop-downs
- Add text modifiers
- Choose what to do with your symbol
 - Save to favorites
 - Add to Map
 - Coordinate placement
- Import/export favorite symbols
- Create feature templates for symbols





Distance and Direction

Distance and Direction

Geometry creation in one location

- Create geodesic graphics and features
 - Lines
 - Circles
 - Ellipses
 - Rings
- Distance of travel based on capability
- Save graphics with attribute information

Distance and Direction

Line Circle **Ellipse** Rings

Ellipse Type
Semi

Center Point
16UCG4663979623

Axis
Major
250
Minor
100
Units
Kilometers

Orientation
Angle
55
Units
Degrees

Clear Graphics Save As

Distance and Direction

Line Circle **Ellipse** Rings

Ellipse Type
Semi

Center Point
28.868327N 107.163451W

☐ Create Ellipse Interactively

Axis
Major (Radius)
100
Minor (Radius)
25
Unit
Kilometers

Orientation Angle
45 Degrees

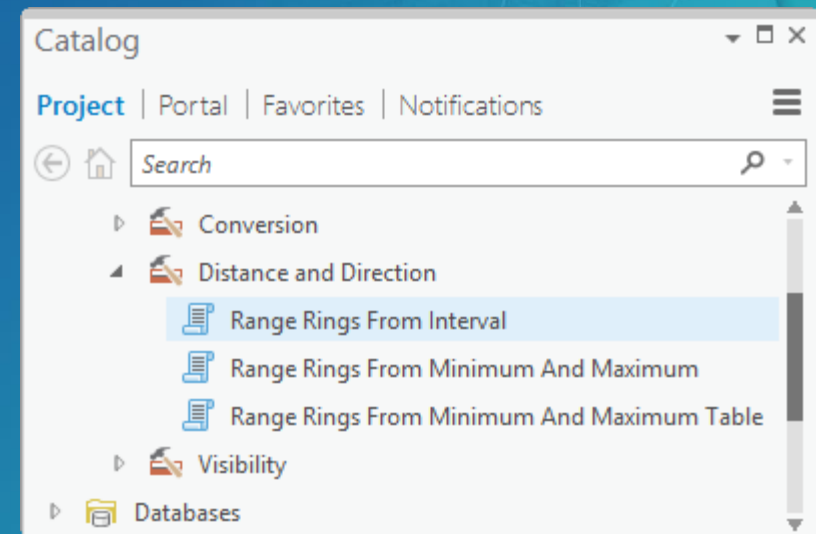
Warning: Graphics generated using the ellipse tool are not geodetic

OK Clear Graphics

Distance and Direction

Use Geoprocessing to create Distance and Direction features

- Create Range Rings based on parameters
 - Given interval
 - Minimum and maximum distances
 - From a table





Visibility

Visibility

Quickly answer visibility questions

- Find answers to visibility questions
 - Field of view from a given observer(s)
 - Find visible points along a straight line of sight

Visibility

LLOS RLOS

Input Surface
ElevationUTM_Zone10

Observer Points
10SEF1373342151
10SFF2650309139
10SFF1638323355
10SFF0819031066

Target Points
10SEF1831139982
10SFF3180429620
10SFF2529837572

Height Above Surface
Observer
2
Target
0
Meters

Cancel OK

Visibility

Observer Location
30.977702N 111.382201W

Field of View
90

☐ Use miles for bearing angles

Observer Height
2 Meters

Min Observable Distance
0 Kilometers

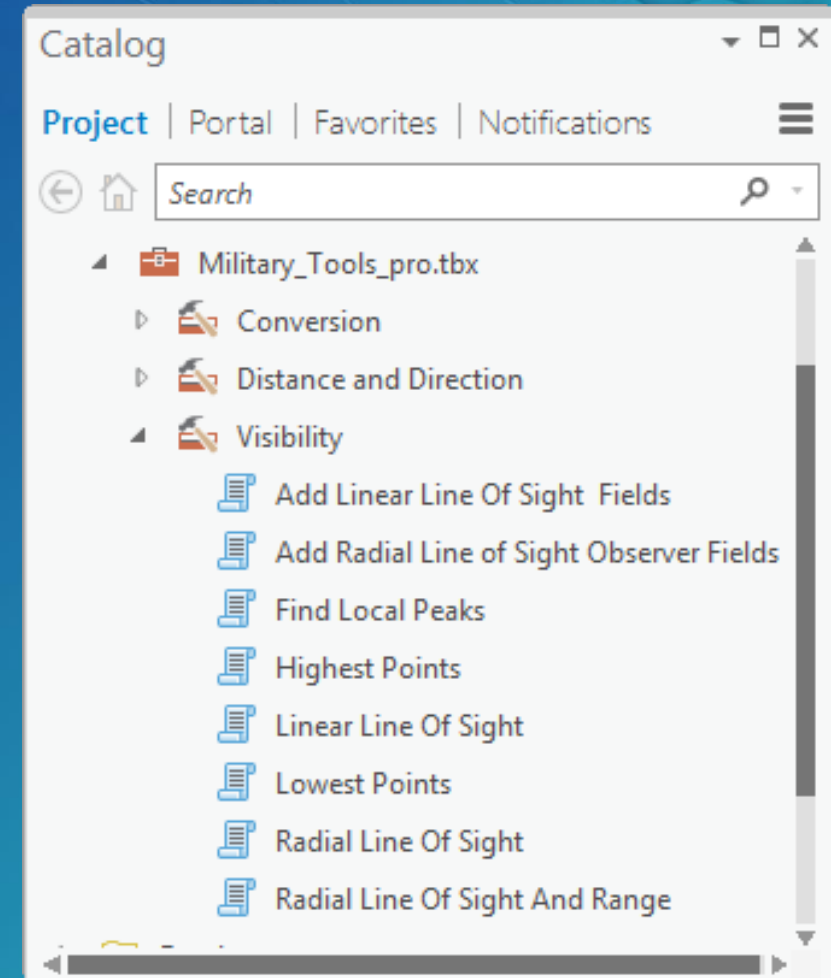
Max Observable Distance
3

Create Clear

Visibility

Quickly answer visibility questions

- Find answers to visibility questions
 - Linear Line of Sight
 - Radial Line of Sight
- Answer questions about terrain
 - Highest Points
 - Local Peaks
 - Lowest Points

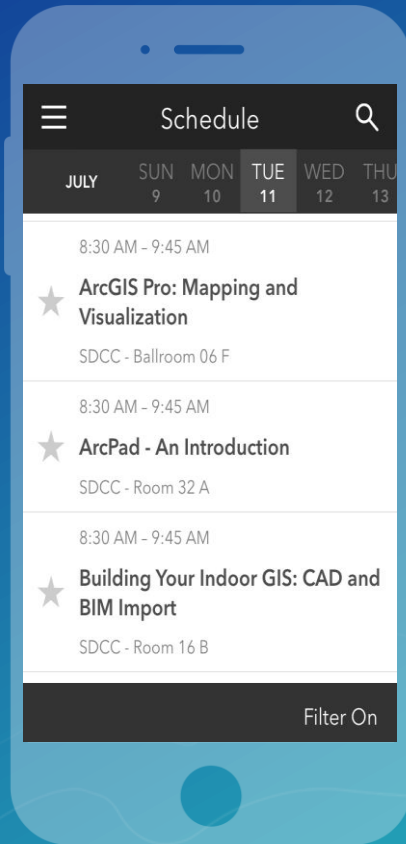


Please Take Our Survey on the Esri Events App!

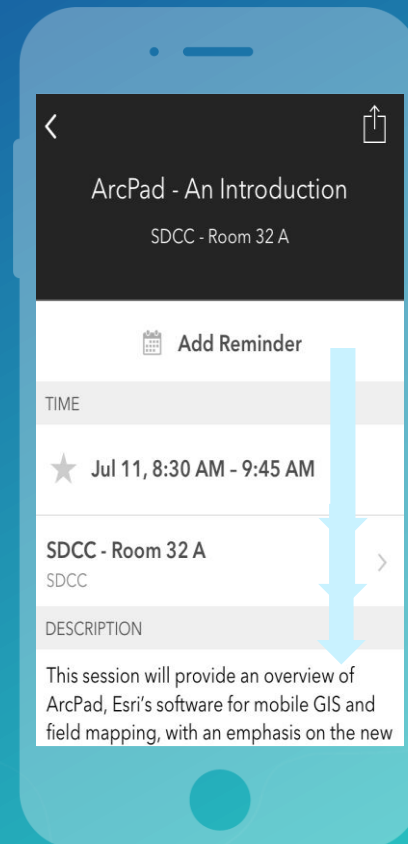
Download the Esri Events app and find your event



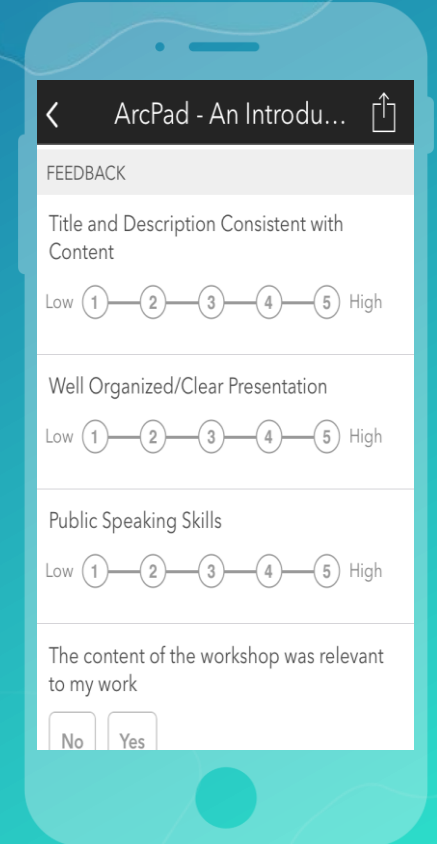
Select the session you attended



Scroll down to find the survey



Complete Answers and Select "Submit"





Questions



esri

THE
SCIENCE
OF
WHERE