ArcGIS® Defense Solutions

GIS Tools for the Defense and Intelligence Communities

ArcGIS ESRI

ESRI

ArcGIS® Defense Solutions

GIS Tools for the Defense and Intelligence Communities

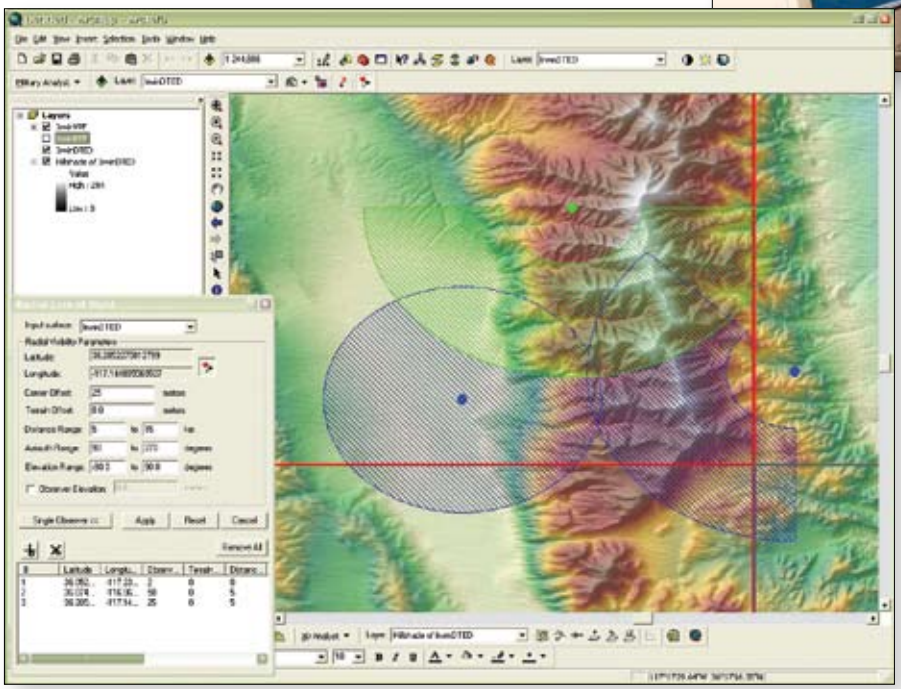
ESRI® ArcGIS® Defense Solutions products consist of ArcGIS Military Analyst, Military Overlay Editor (MOLE™), and Grid Manager. Geointelligence analysts and military planners use ArcGIS Defense Solutions to create workflows, processes, and symbology, which allow decisions to be executed more precisely and rapidly than ever before.

GIS for Defense and Intelligence

Geographic information system (GIS) technology is a critical part of the information technology infrastructure for defense and intelligence. It integrates data from intelligence, surveillance, and reconnaissance to create spatially aware databases (geodatabases) across multiple networks. Spatial context and relationships between sensors and other battlespace entities and actions are maintained within these geodatabases, providing an integrated platform for military planners, intelligence analysts, and decision makers to better understand common operational and tactical situations.

ArcGIS Defense Solutions Are Used By

- Military planners and commanders
- Intelligence analysts
- Defense mapping agencies
- Terrain analysts
- Facility, environmental, and infrastructure managers
- System integrators
- Developers



ArcGIS Defense Solutions products, such as MOLE, facilitate a collaborative environment for military planning and problem solving.

ArcGIS Defense Solutions are a key component of the following application areas:

- Command and Control
- Battlefield Management
- Intelligence Gathering
- Mission Planning
- Incident Planning and Response
- Search and Rescue
- Defense and Intelligence Geospatial Analysis
- Modeling and Simulation

ArcGIS Defense Solutions

ArcGIS Military Analyst

ArcGIS Military Analyst is a desktop extension with display and analysis tools that meet the demands of the collaborative defense environment for systems to be networkcentric, reusable, and inherently scalable. With ArcGIS Military Analyst, you can create, query, analyze, and display spatial data in a variety of formats. Use ArcGIS Military Analyst to integrate spatial data with other relevant defense data, conduct battlefield planning, analyze digital terrains, and conduct cross-tile line-of-sight (LOS) and viewshed assessments.

Military Overlay Editor

Military Overlay Editor (MOLE) is a set of COM components for developers to create custom applications that support Department of Defense (DoD) MIL-STD-2525B and NATO's APP-6A specifications. MOLE allows you to easily create, display, and edit military symbology in your maps. It enhances the effectiveness of your command and control (C2) and mission applications by combining the spatial analysis capabilities of ArcGIS with common warfighting symbology.

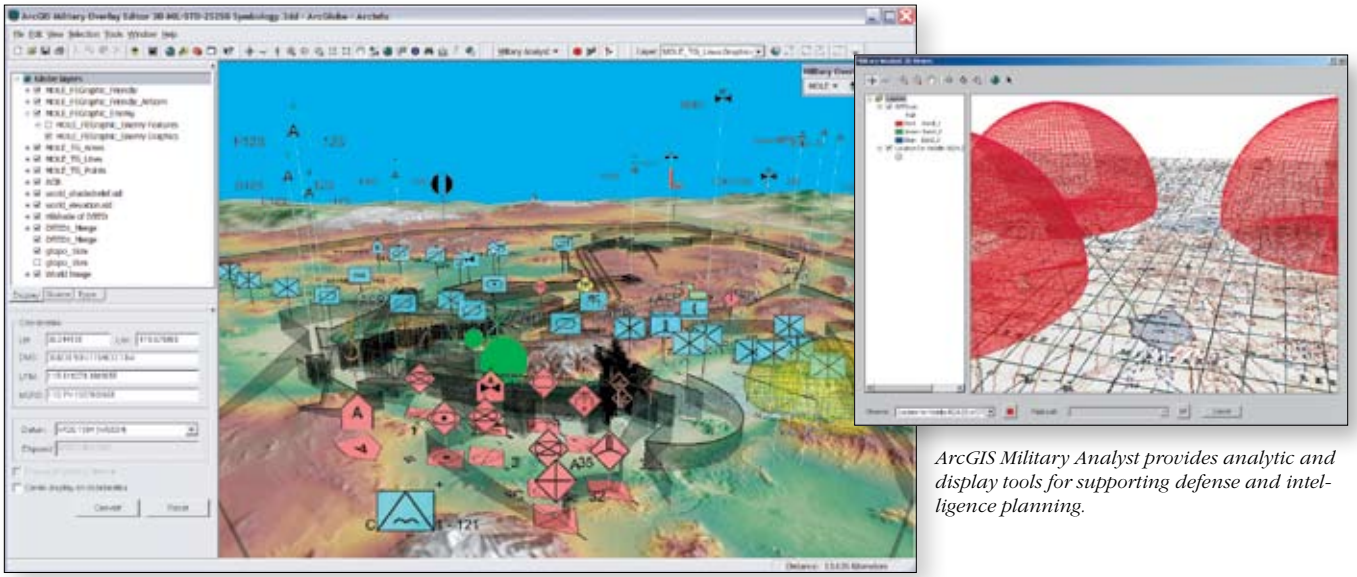
Grid Manager

Grid Manager is a suite of tools that allows the creation of multiple grids, graticules, and borders for a variety of map products.

Developer Tools

ArcGIS Military Analyst tools can also be accessed through Microsoft® VBA, which is included with ArcGIS. ArcGIS Military Analyst, customized with any COM-compliant language, allows a user to build new applications that deliver highly sophisticated military solutions, especially when combined with the optional ArcGIS Spatial Analyst and ArcGIS 3D Analyst™ extensions. The ArcGIS Military Analyst API is compatible with applications created in ArcGlobe™ (an application within ArcGIS 3D Analyst), ArcGIS Engine, and ArcGIS Server running Windows®, Solaris™, and Linux®.

	Supported Platforms		Required Software		Optional Extensions	
	Windows	Linux	ArcInfo, ArcEditor, or ArcView	ArcGIS Engine	ArcGIS Spatial Analyst	ArcGIS 3D Analyst
ArcGIS Military Analyst	x		x		x	x
ArcGIS Military Analyst API	x	x		x	x	x
Grid Manager	x		x			
Military Overlay Editor (MOLE)	x	x	x			



ArcGIS Military Analyst provides analytic and display tools for supporting defense and intelligence planning.

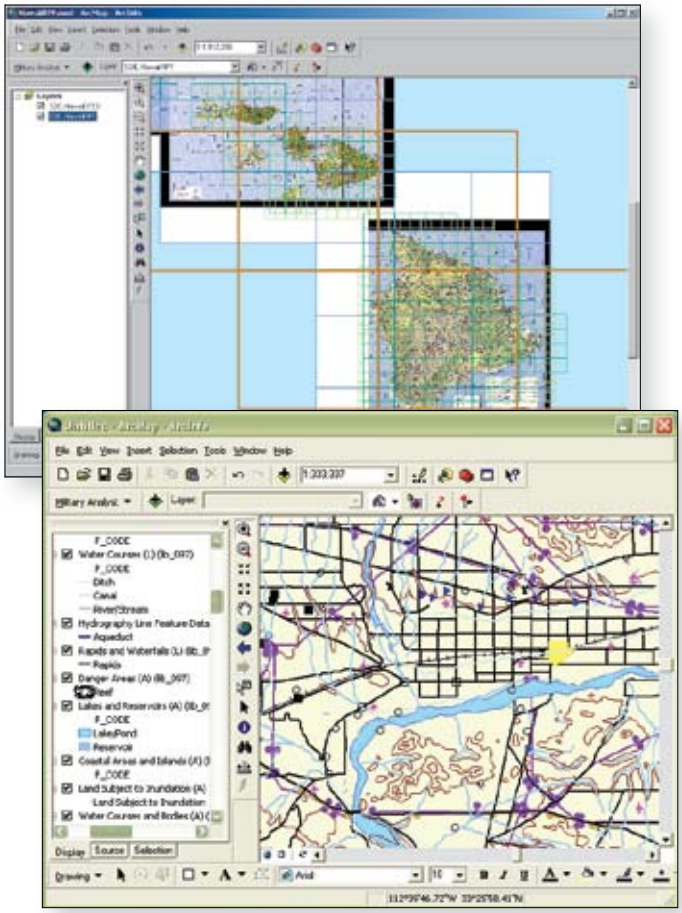
Using ArcGlobe (an application within ArcGIS 3D Analyst), MOLE supports 3D warfighting and tactical symbols not available in the standard MIL-STD-2525B specification. Billboarded symbols always face the viewer, and the tactical graphics are extruded for clarity.

ArcGIS Military Analyst

GIS Tools for Raster, Vector, and Elevation Data Analysis

ArcGIS Military Analyst provides a single source to visualize, manage, and analyze your defense and intelligence data.

ArcGIS Military Analyst maximizes the use of Department of Defense geospatial data products by directly reading and rendering vector and raster products.



Raster Map and Vector Map tools support the visualization of various military data types and defense data standards.

As an extension to ArcGIS Desktop (ArcInfo®, ArcEditor™, and ArcView®), ArcGIS Military Analyst can take advantage of the editing, visualization, and geospatial analysis frameworks of ArcGIS. In addition, custom applications can be created using ArcGIS Engine and ArcObjects™.

ArcGIS Military Analyst offers full customization using COM interfaces, on-the-fly projection of raster and vector data, and a suite of display and analysis tools.

Display Tools

Military map data products come in a wide variety of scales and formats. For effective use with today's powerful GIS platforms, ArcGIS Military Analyst data management tools allow military planners to visualize a multitude of defense data types.

Military Analyst Catalogs

Military Analyst catalogs arrange, manage, and display standard military products in raster, vector, and grid formats. These include Raster Product Format (RPF) products, Vector Product Format (VPF) products, and Digital Terrain Elevation Data (DTED) files.

RPF

With ArcGIS Military Analyst, RPF data products are shown at the appropriate scale so users can display multiple raster datasets simultaneously. In addition, this extension supports all raster types supported by ArcGIS and can access raster data stored locally or in an enterprise server.

RPF products include Compressed ARC Digitized Raster Graphic (CADRG) and Controlled Image Base (CIB).

VPF

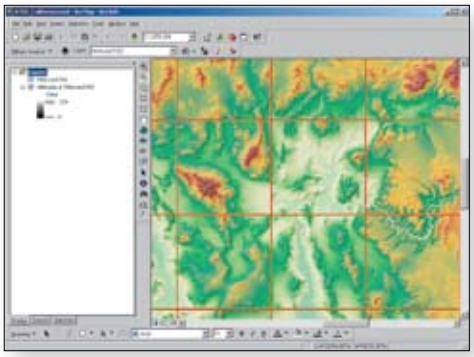
For VPF data, display is scale dependent, showing the right product at the right scale. Display includes support for GeoSym standard symbology. VPF catalogs can be used in conjunction with the other Military Analyst catalogs to create meaningful map displays that help users understand the geography they need to analyze.

VPF products include Vector Map (VMap), Urban Vector Map (UVMap), and Digital Nautical Chart (DNC).

DTED

ArcGIS Military Analyst DTED catalogs* are used to display and merge DTED files. Using DTED catalogs, the applicable DTED tiles can be automatically managed, selected, and merged into a single image. A hillshade may be applied for ease of display and interpretation. Once DTED is brought in and merged, the resultant file is a raster image that can be used in subsequent analytic applications.

*ArcGIS Military Analyst DTED catalog tools require the ArcGIS Spatial Analyst extension.



The DTED tool creates, manages, and merges DTED tiles for interpretation and display within ArcGIS.

Analysis Tools

ArcGIS Military Analyst includes a suite of analysis tools specifically designed for defense and military problem solving. These tools range from terrain analysis to geodesy. They are organized for quick use/reuse in toolbars and drop-down menus.

Coordinate Tool

The Coordinate tool supports coordinate display and conversion for data in Military Grid Reference System (MGRS), decimal degrees, and degrees/minutes/seconds. Analysts can also use the Coordinate tool to find and zoom to specific coordinate locations. The Coordinate tool works with ArcGIS Desktop and extension applications such as ArcGlobe.

Conversion Tools

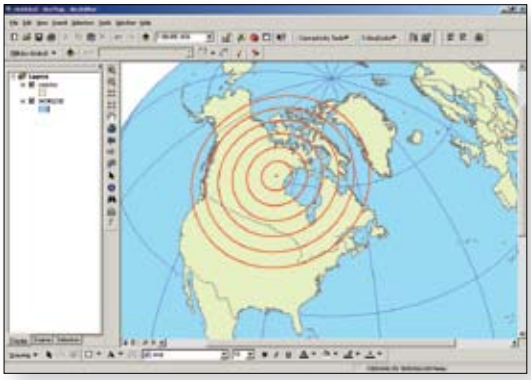
Conversion tools enable batch coordinate conversion, streamlined data preparation, and workflow loading. Batch conversion can use feature classes, shapefiles, or DBF tables. A VPF To Feature Class tool allows for selective or bulk creation of features from standard VPF products.

Terrain Tools

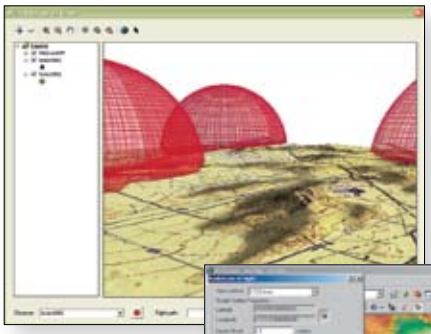
Used for visibility analysis (LOS and viewshed) and threat analysis, the terrain tools make mission-planning functions and analysis possible. Use these tools to calculate the highest point, lowest point, hillshade, and radial or linear line of sight. The terrain tools require the ArcGIS Spatial Analyst and ArcGIS 3D Analyst extensions.

Geoprocessing Tools

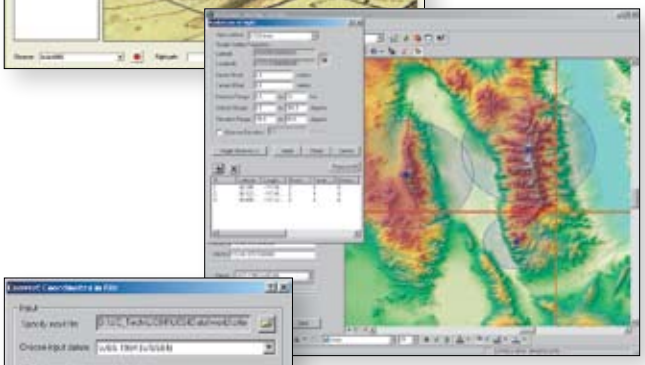
ArcGIS Military Analyst also provides a series of geoprocessing tools that import a variety of formatted files and create feature classes. Text files, spreadsheets, or table data can be used to create lines, geopolylines, ellipses, and polygons. There are also geoprocessing tools to create and load data into ArcGIS Military Analyst catalogs. All these tools can also be used in ModelBuilder™ and with ArcGIS scripting.



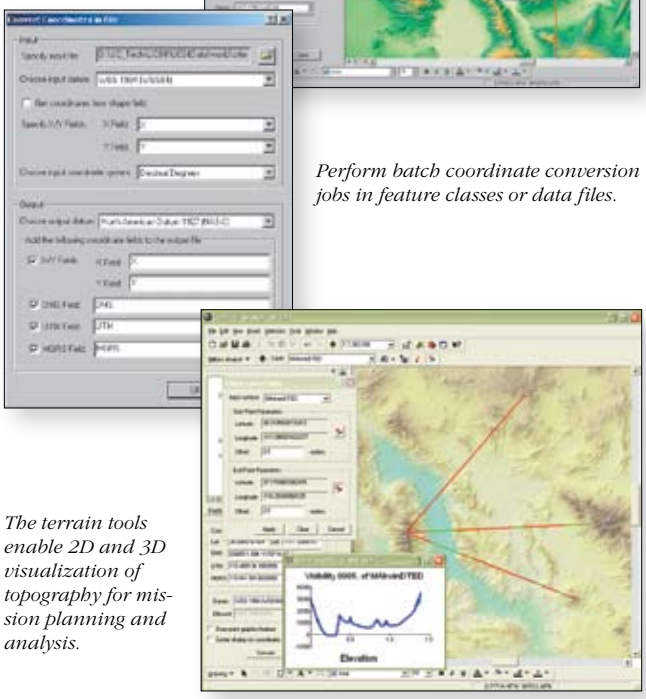
The Geodesy tools allow you to calculate great circle routes, rhumb lines, lines of bearing, and range rings.



2D and 3D visualization provides greater insight from spatial data.



Perform batch coordinate conversion jobs in feature classes or data files.



The terrain tools enable 2D and 3D visualization of topography for mission planning and analysis.

Geodesy Tools

The geodesy tools allow users to interactively create great circles and rhumb lines. With the Geodesy Calculator, users can specify two coordinates and generate a great circle route, a rhumb line, or a geodesic route. The Geodesy Calculator also computes bearing, azimuth, distance, and the end coordinate. The Range Ring tool allows users to create geodetically correct concentric ellipses at user-specified intervals anywhere on the globe.

For more information about ArcGIS Military Analyst, please visit **www.esri.com/militaryanalyst**.

Military Overlay Editor

GIS Tools for Creating, Editing, and Displaying Military Symbology

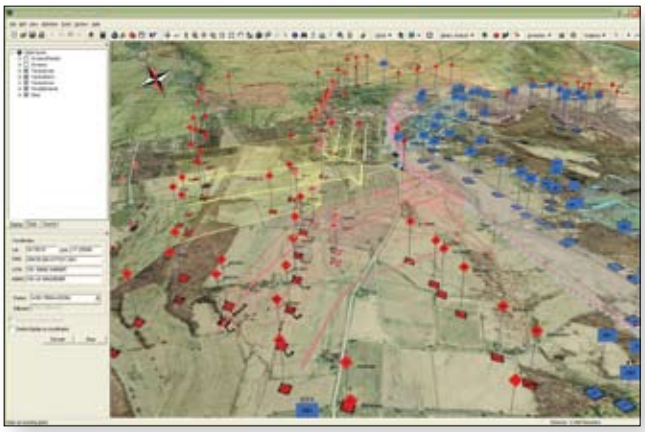
Military Overlay Editor (MOLE) allows you to easily create, display, and edit military symbology in your maps.

MOLE provides support for warfighting symbology (point, line, and polygon) in accordance with MIL-STD-2525B and NATO's APP-6A specifications.

With MOLE, you can

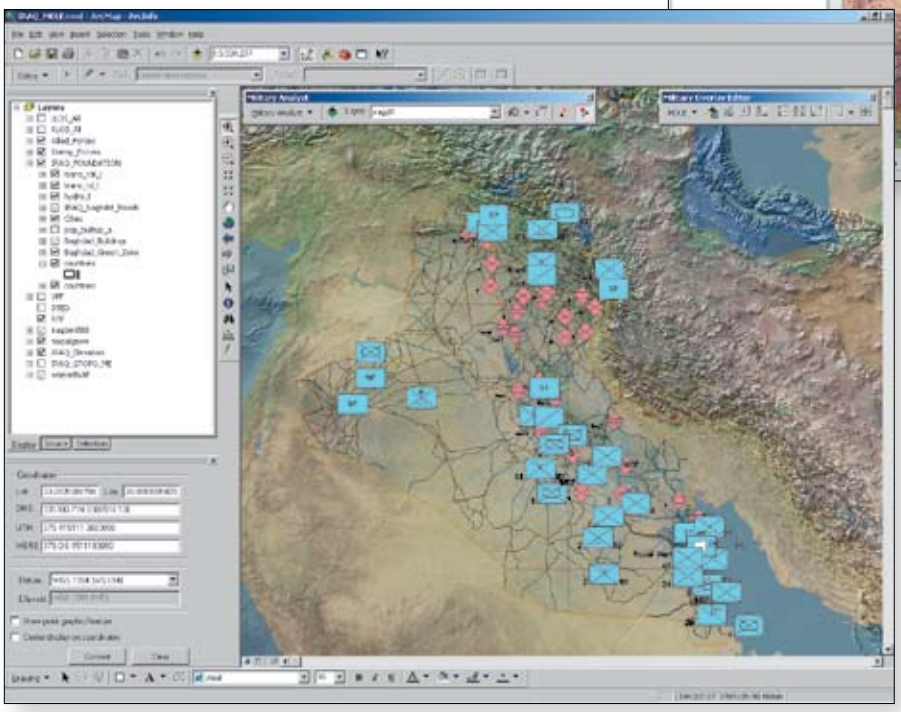
- Add geographic data while composing and positioning unit symbols.
- Perform automatic leadering, stacking, and decluttering of symbols.
- Import, locate, and display order of battle databases.

™



MOLE provides MIL-STD-2525B symbology for defense and intelligence mapping and visualization.

MOLE enables other applications, such as ArcGlobe, ArcGIS Engine, and ArcGIS Server, to take advantage of military symbology in creating custom applications. MOLE is supported on Windows 2003 and XP (Home Edition and Professional), Sun™ Solaris, and Linux.



MOLE supports the entire MIL-STD-2525B specification and is fully integrated with other ArcGIS extensions including ArcGIS Military Analyst.

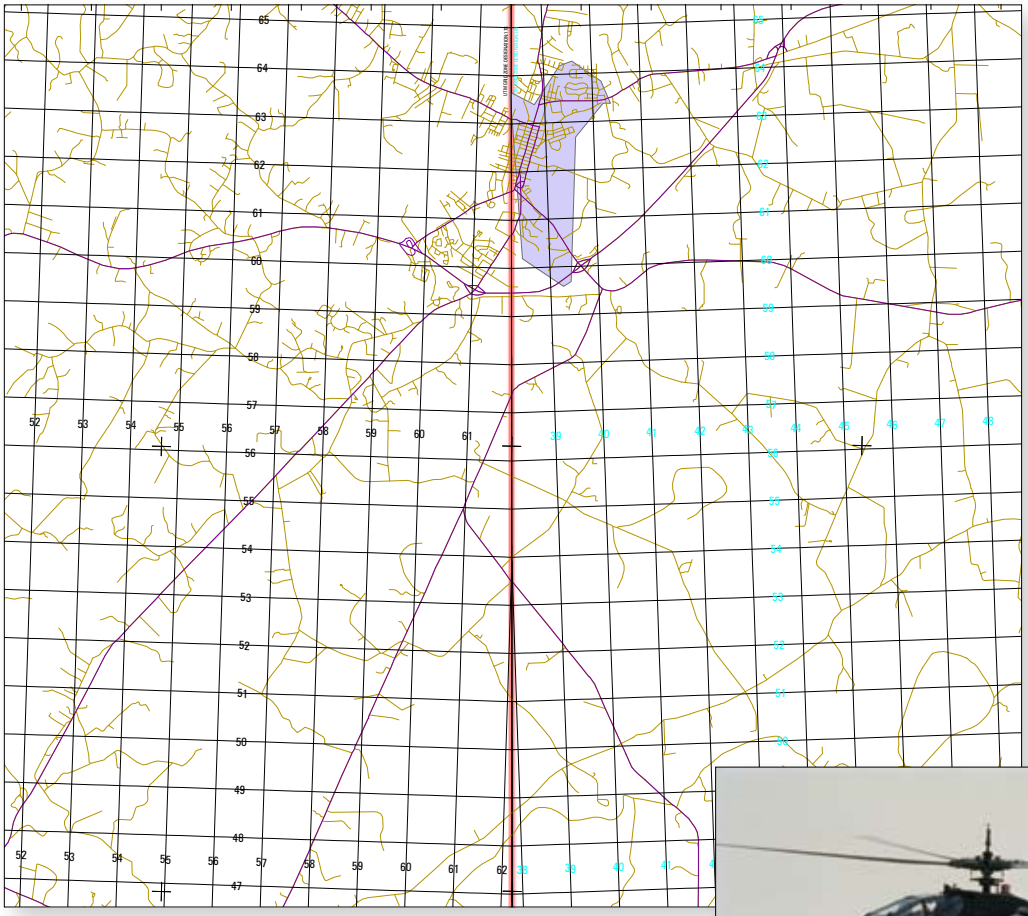
For more information about MOLE, please visit www.esri.com/mole.

Grid Manager

GIS Tools for Creating Grids, Graticules, and Borders

Grid Manager is a suite of tools that allows the creation of multiple grids, graticules, and borders for a variety of map products.

Grid Manager consists of Grid Designer, Grid Creation Wizard, and the Add Grid Data and Grid Layout View tools. The grids that are produced contain geographic location indicators based on user-specified shapes, scales, coordinate systems, and units.



Grid Manager allows the creation of specialized graticules, such as universal transverse Mercator (UTM) zipper zones, where two zones converge.

Availability

ArcGIS Defense Solutions are available at no cost to ArcGIS users with current software maintenance agreements. Qualified users who want ArcGIS Defense Solutions products may download them from www.esri.com/mildownload.

More Information

For more information about GIS for defense and intelligence, please visit www.esri.com/defense-solutions.

ESRI
380 New York Street
Redlands, California
92373-8100 USA

Phone: 909-793-2853
Fax: 909-793-5953
E-mail: info@esri.com

For more than 35 years, ESRI has been helping people make better decisions through management and analysis of geographic information. A full-service GIS company, ESRI offers a framework for implementing GIS technology and business logic in any organization from personal GIS on the desktop to enterprise-wide GIS servers (including the Web) and mobile devices. ESRI GIS solutions are flexible and can be customized to meet the needs of our users.

For More Information

1-800-GIS-XPRT (1-800-447-9778)

www.esri.com

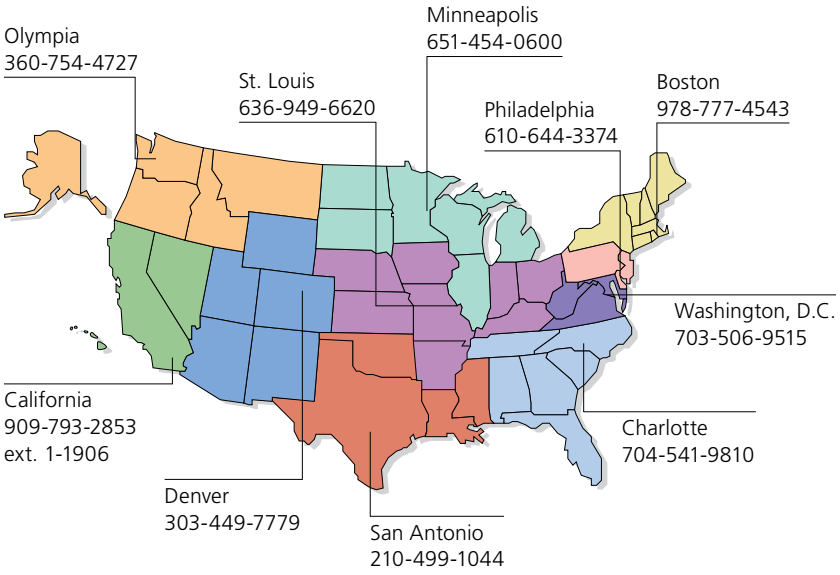
Locate an ESRI value-added reseller near you at

www.esri.com/resellers

Outside the United States, contact your local ESRI distributor. For the number of your distributor, call ESRI at 909-793-2853, ext. 1-1235, or visit our Web site at

www.esri.com/distributors

ESRI Regional Offices



ESRI International Offices

Australia
www.esriaustralia.com.au

Belgium/Luxembourg
www.esribelux.com

Bulgaria
www.esribulgaria.com

Canada
www.esricanada.com

Chile
www.esri-chile.com

China (Beijing)
www.esrichina-bj.cn

China (Hong Kong)
www.esrichina-hk.com

Eastern Africa
www.esriea.co.ke

Finland
www.esri-finland.com

France
www.esrifrance.fr

Germany/Switzerland
www.esri-germany.de
www.esri-suisse.ch

Hungary
www.esrihu.hu

India
www.esriindia.com

Indonesia
www.esrisa.com.my

Italy
www.esriitalia.it

Japan
www.esrij.com

Korea
www.esrikr.co.kr

Malaysia
www.esrisa.com.my

Netherlands
www.esri.nl

Northeast Africa
www.esrinea.com

Poland
www.esripolska.com.pl

Portugal
www.esri-portugal.pt

Romania
www.esriro.ro

Singapore
www.esrisa.com

Spain
www.esri-es.com

Sweden
www.esri-sgroup.se

Thailand
www.esrith.com

Turkey
www.esriturkey.com.tr

United Kingdom
www.esriuk.com

Venezuela
www.esriven.com

GSA Federal Supply Schedule
No. GS-35F-5086H

109679
5M6/08sp

Printed in USA