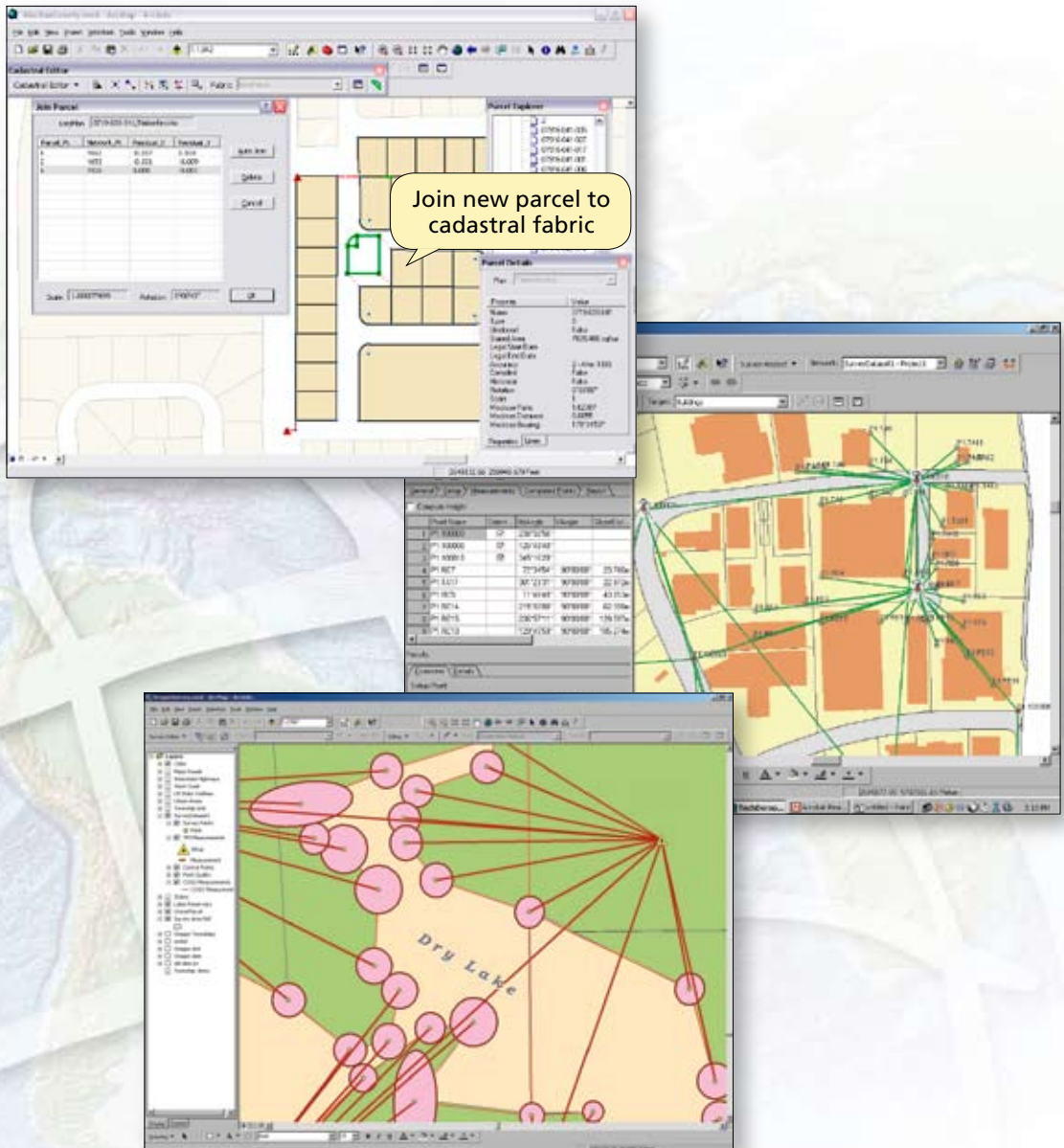


Includes Cadastral Editor

# ArcGIS® Survey Analyst

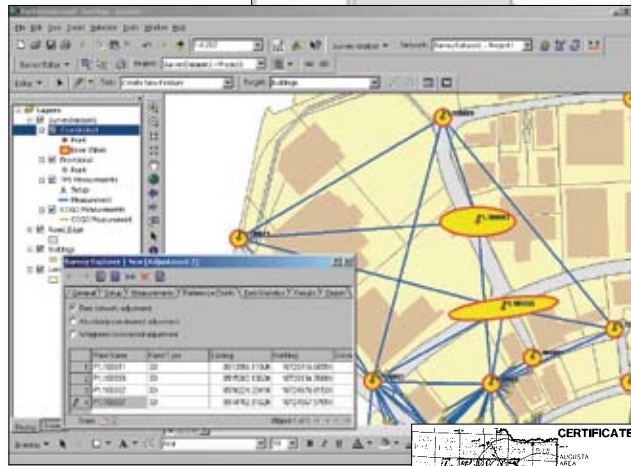
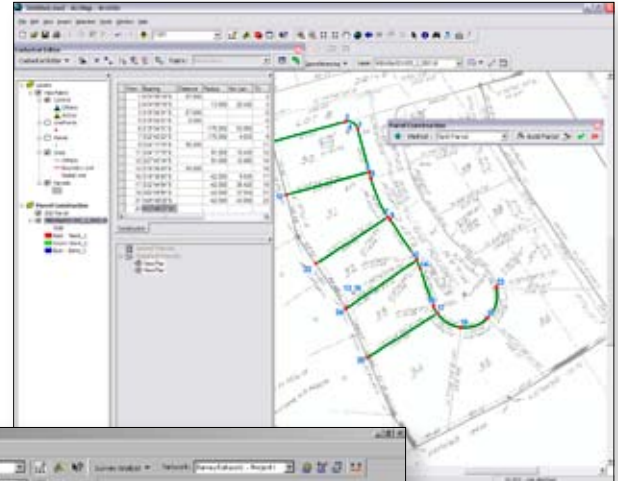


# ArcGIS Survey Analyst

ArcGIS® Survey Analyst is an ArcGIS Desktop extension that provides tools to surveyors and geographic information system (GIS) professionals to create and maintain survey and cadastral data in ArcGIS. It gives surveyors the ability to centrally locate, process, and manage their data, enabling them to work more efficiently. It allows GIS professionals to manage and continually enhance the accuracy of their data using survey methodologies.

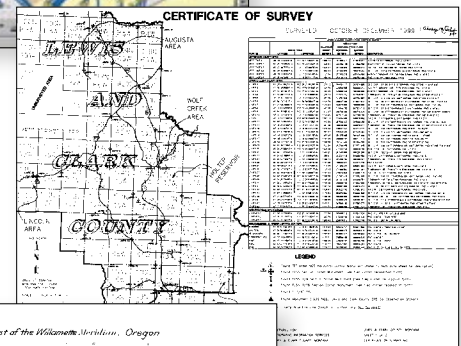
## With ArcGIS Survey Analyst, You Can

- Reduce the time needed to maintain parcels while increasing the accuracy of cadastral data and related GIS features.
- Maintain parcel data (including record information from deeds and survey plans) in a cadastral fabric dataset. The fabric delivers a seamless coverage of your parcel boundaries and associated survey control free of gaps and overlaps.
- Create accurate parcel and subdivision data via direct data entry of the record information using specialized coordinate geometry tools. Track the history of all fabric changes.
- Use the survey (least squares) adjustment feature to accurately and incrementally update your fabric with each new survey plan. In parallel, you can also adjust related GIS layers such as building footprints, roads, and easements.
- Create, edit, and manage GIS features based on survey measurement data and survey procedures.
- Integrate survey measurements into a GIS database using field observations and survey data collector files.
- Manage and process survey data with a set of comprehensive tools.
- Store survey measurements, points, and computations in a GIS database for future analysis and reuse.
- Perform coordinate geometry computations.
- Perform survey computations such as traverse and least squares adjustments using the original raw observations.
- Create custom importers and tools using a standard development environment.

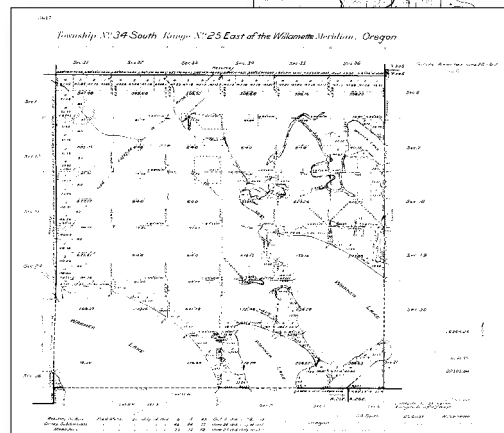


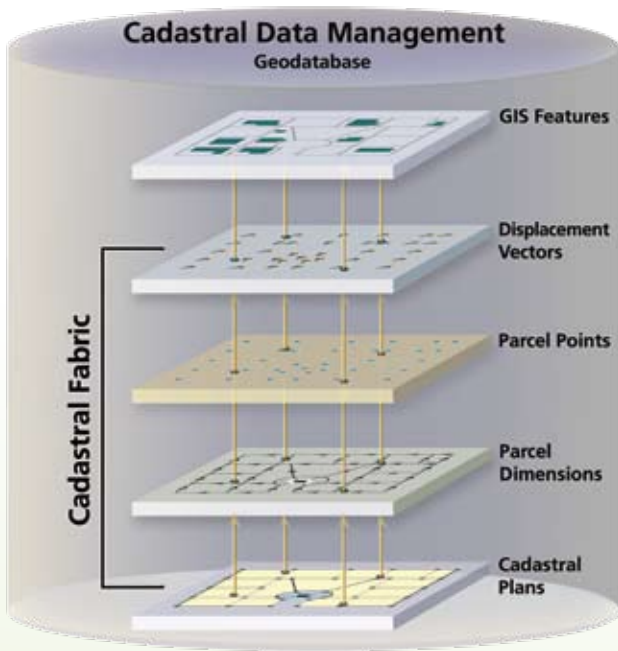
Import, manage, and analyze survey data.

Build new parcels from record measurements with the cadastral editor.



Add data to ArcGIS Survey Analyst from various sources.





### What is a cadastral fabric?

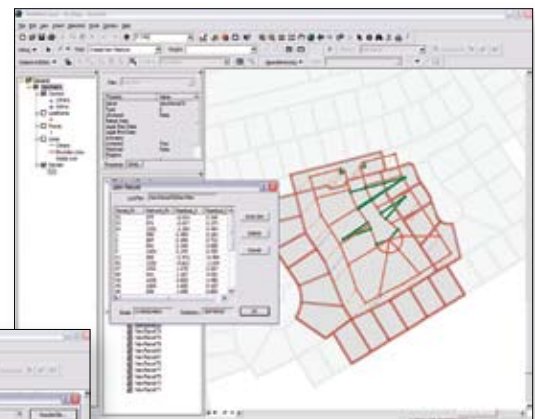
A cadastral fabric is a representation of the survey record for an area of land. It is a continuous surface of connected parcel record measurements or dimensions. Parcel boundary line dimensions in the cadastral fabric match the dimensions on the survey record, and multiple dimensions can be stored for each parcel line. Dimensions in the cadastral fabric are added to reflect an addition in the survey record—for example, a parcel split or resurvey will contribute new and possibly updated record measurements. Parcels, and the data associated with parcels, that are edited or replaced by new survey records are retained as historic, thus always preserving the original survey record.

### New Cadastral Data Workflow

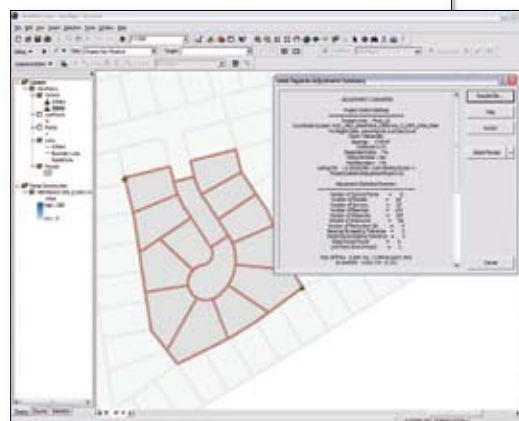
Using ArcGIS Survey Analyst, you gain the advantage of a new workflow for managing cadastral data. The new cadastral management workflow enables parcel record measurements and dimensions (represented as fabrics) to be used to update existing map-based parcel frameworks. This includes applying a series of tools for coordinate and boundary entry, record and survey data entry, cadastral data management, and least squares adjustment.

This workflow is made possible because of a new data model—called cadastral fabric—that supports a topologically integrated data structure composed of parcels, boundary lines, parcel corners, and control points. This new model provides the tools to capture the accurate data on survey plans and deeds to improve the accuracy of data in a GIS.

Using the cadastral management workflow, related GIS data is adjusted using the displacement parameters calculated by the fabric's least squares adjustment. All history of adjustment is tracked in the database. In addition, it includes methods and workflow tools for cadastral jobs, for example, incrementally updating the cadastral or parcel fabric and related data as new surveys are added to the system.



*Residual information is automatically displayed as newly constructed subdivisions are joined to the cadastral fabric, allowing you to see how well the new parcels fit prior to a least squares adjustment.*



*Least squares adjustments can be applied to the cadastral fabric to incrementally improve accuracy.*





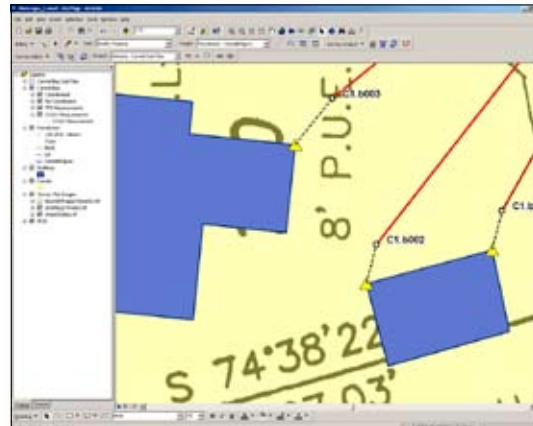


## Managing Survey Data

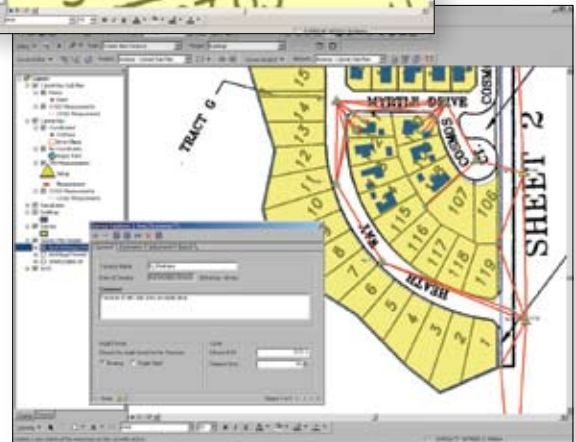
ArcGIS Survey Analyst uses standard survey computations (traverse, least squares adjustments, etc.) to maintain survey data in an integrated database. By allowing feature linking and adjustment in the same application environment, ArcGIS Survey Analyst facilitates the incremental improvement in the survey database and in GIS feature location quality. This allows survey data to control the location of feature classes in GIS.

Measurements normally collected in electronic or paper field books can now be imported and managed in a database within a survey project. Bearings and distances along boundaries, angles and distances along circular curves, and measurements acquired from field sketches can be stored and managed as measurements in the survey dataset using coordinate geometry (COGO) computations.

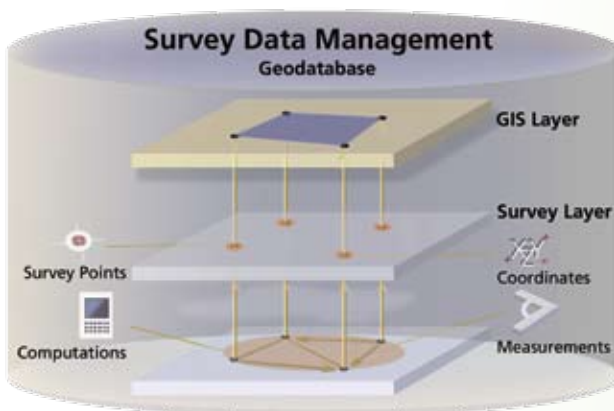
The survey dataset/survey projects methodology of organizing data allows users to structure survey datasets in the manner that makes the most sense for their organization. A project may be anything from a field control survey to a topographic survey.



*Link GIS features to survey points.*



*Use standard survey computations to determine GIS coordinates.*



*A centralized data system allows you to share data with your entire enterprise.*

## What is a survey dataset?

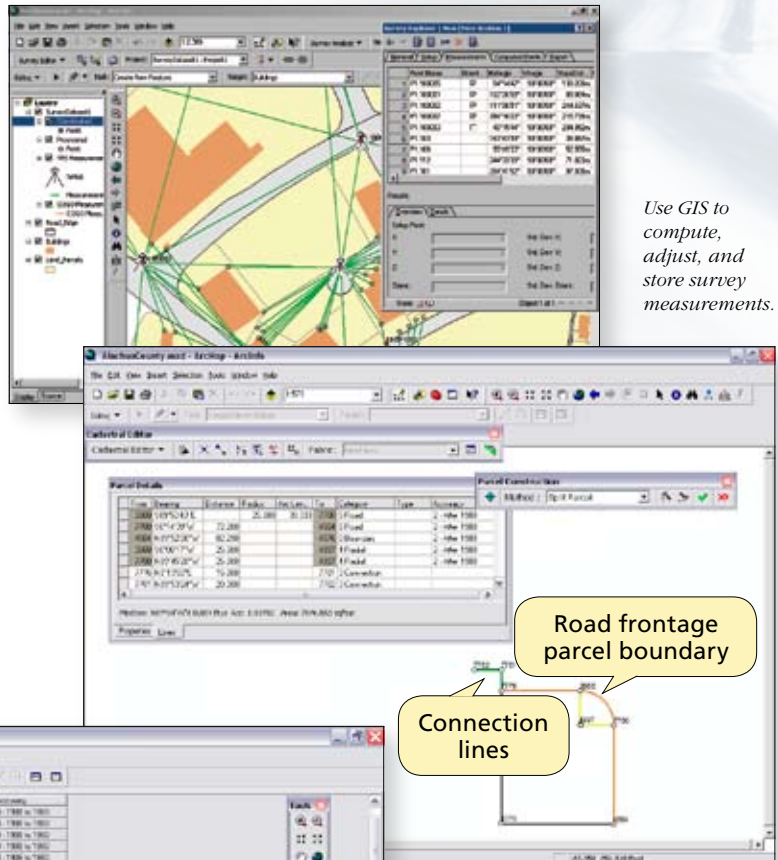
A survey dataset is a comprehensive database of survey information and can be managed as an integrated layer with traditional GIS layers in a geodatabase. The information contained within a survey dataset is a collection of computations, measurements, and survey points that are shared within a predefined geographic area. A survey dataset provides a framework of survey points to the geodatabase for use as control on the geometry of features in feature classes.

## Benefits to the Surveyor

ArcGIS Survey Analyst allows surveyors' work to be used extensively in an integrated manner within a GIS framework. With ArcGIS Survey Analyst, surveyors can store measurements (distance, angle, etc.) and coordinates in the survey layer or the cadastral fabric. Now, survey work can be held in a continuous database supporting a GIS system for complete spatial data management and analysis.

## Benefits to the GIS Analyst

ArcGIS Survey Analyst allows GIS analysts to improve the accuracy and value of their systems. Coordinates computed from accurate survey information allow GIS users to link features to survey points and adjust the features to surveyed locations—improving the spatial quality of GIS features. This can be an incremental process in which features with survey data can be improved over time as new information becomes available. Core ArcGIS tools also provide the ability to position new features from the surveyed point locations defined by ArcGIS Survey Analyst.



Use GIS to compute, adjust, and store survey measurements.

Road frontage parcel boundary

Connection lines

Work with parcels in a cadastral fabric for better data management and analysis.

To learn more about ArcGIS Survey Analyst, visit [www.esri.com/surveyanalyst](http://www.esri.com/surveyanalyst).



## ESRI

380 New York Street  
Redlands, California  
92373-8100 USA

Phone: 909-793-2853  
Fax: 909-793-5953  
E-mail: [info@esri.com](mailto: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](http://www.esri.com)

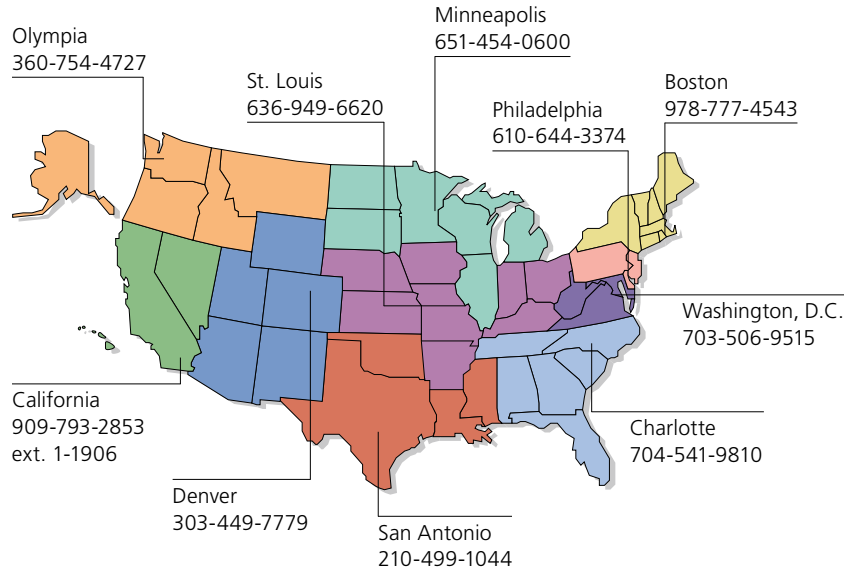
Locate an ESRI value-added reseller near you at

[www.esri.com/resellers](http://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](http://www.esri.com/distributors)

## ESRI Regional Offices



## ESRI International Offices

Australia  
[www.esriaustralia.com.au](http://www.esriaustralia.com.au)

Hungary  
[www.esrihu.hu](http://www.esrihu.hu)

Portugal  
[www.esri-portugal.pt](http://www.esri-portugal.pt)

Belgium/Luxembourg  
[www.esribelux.com](http://www.esribelux.com)

India  
[www.esriindia.com](http://www.esriindia.com)

Romania  
[www.esriro.com](http://www.esriro.com)

Bulgaria  
[www.esribulgaria.com](http://www.esribulgaria.com)

Indonesia  
[www.esrisa.com.my](http://www.esrisa.com.my)

Singapore  
[www.esrisa.com](http://www.esrisa.com)

Canada  
[www.esricanada.com](http://www.esricanada.com)

Italy  
[www.esriitalia.it](http://www.esriitalia.it)

Spain  
[www.esri-es.com](http://www.esri-es.com)

Chile  
[www.esri-chile.com](http://www.esri-chile.com)

Japan  
[www.esrij.com](http://www.esrij.com)

Sweden  
[www.esri-sweden.com](http://www.esri-sweden.com)

China (Beijing)  
[www.esrichina-bj.cn](http://www.esrichina-bj.cn)

Korea  
[www.esrikr.co.kr](http://www.esrikr.co.kr)

Thailand  
[www.esri-th.com](http://www.esri-th.com)

China (Hong Kong)  
[www.esrichina-hk.com](http://www.esrichina-hk.com)

Malaysia  
[www.esrisa.com.my](http://www.esrisa.com.my)

United Kingdom  
[www.esriuk.com](http://www.esriuk.com)

Finland  
[www.esri-finland.com](http://www.esri-finland.com)

Netherlands  
[www.esrinl.com](http://www.esrinl.com)

Venezuela  
[www.esri-ven.com](http://www.esri-ven.com)

France  
[www.esrifrance.fr](http://www.esrifrance.fr)

Northeast Africa  
202-516-7485

Germany/Switzerland  
[www.esri-germany.de](http://www.esri-germany.de)  
[www.esri-suisse.ch](http://www.esri-suisse.ch)

Poland  
[www.esripolska.com.pl](http://www.esripolska.com.pl)



No. GS-35F-5086H