ArcView StreetMap 1.1—Nationwide Street Mapping and Address Matching on a Single CD–ROM

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ArcView StreetMap 1.1—Nationwide Street Mapping and Address Matching on a Single CD–ROM

Overview

ArcView® GIS software gives you the tools you need for visualizing, analyzing, and presenting your data. The optional ArcView StreetMap™ extension to ArcView GIS provides additional capabilities that can help solve problems you encounter every day. ArcView StreetMap provides nationwide street mapping for, and the ability to locate addresses anywhere in, the United States.

ArcView StreetMap Data

The ArcView StreetMap CD includes street and landmark data for the United States in a highly compressed format. The street database was derived from Wessex Streets 6.0. Wessex Streets 6.0 is an enhanced street database based on TIGER 1997 files with improved address range information and more current five-digit ZIP Codes. Wessex Streets 6.0 contains about thirty-one million street records and is 1997 current. The data are georeferenced in latitude/longitude, six decimal degree accurate based on NAD 83 datum. StreetMap also provides a nationwide landmark data set. In total, you receive:

- World Countries
  - Countries 1995
  - Map background

- United States
  - States
  - States (detailed)
  - Cities
  - Populated places
  - Roads
  - Interstates
  - Major roads
  - Airports
  - Hospitals
  - Lakes and rivers
  - Major water bodies
  - National parks
  - Parks
  - Streets

* Wessex is a division of ESRI business partner Geographic Data Technology.
Reading directly from the CD–ROM, ArcView StreetMap automatically creates attractive local, state, regional, and even national street maps.

**What Can I Do with ArcView StreetMap?**

ArcView StreetMap solves problems associated with address and point of interest locations.

- Find an address and zoom to its location.
- Find the locations of many addresses at the same time.
- Zoom to any area in the United States to display state boundaries, roads, lakes, rivers, parks, airports, and hospitals.
- Click on any feature to display information about it.
- Perform detailed analysis of a particular area and create a customized local street data set.
- Extract any street data to a local shapefile for further analysis.

With ArcView StreetMap you can zoom to any area in the United States to display state boundaries, roads, lakes, rivers, parks, airports, and hospitals. You can click on any feature to display information about it.

Detailed analysis of a particular area can be performed by creating a customized local street data set. The data set can be used in routing applications (using ArcView Network Analyst) or to study the relationships between streets and other features using the powerful analysis capabilities of ArcView GIS.

ArcView StreetMap also provides additional Avenue™ (ArcView GIS software's object-oriented scripting language) classes and requests. Use them to customize how ArcView StreetMap data are displayed and managed in your application.

**Mapping Capabilities**

ArcView StreetMap can automatically create local, regional, state, or national street maps of any area in the United States. StreetMap will also classify, symbolize, and label map features to create attractive maps right out of the box.

The ArcView StreetMap extension introduces a new theme type called StreetMap. The StreetMap theme manages different layers, grouped into one of four levels: national, state, regional, and local. StreetMap themes read and display the compressed data right from the ArcView StreetMap CD.

StreetMap themes use predefined legends to display the data from the CD and also have predefined scale-dependent display thresholds to control how much of the data are displayed at any given scale. National and state levels display when you're viewing larger areas; regional and local levels display when you're viewing smaller areas. The more you zoom in, the more detail you see. You can retrieve detailed information about any feature by clicking ArcView GIS software's Identify tool and then clicking on the feature. The following table shows the features displayed at different scales.
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<th>Scale</th>
<th>Level</th>
<th>Features Displayed</th>
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<tbody>
<tr>
<td>1:24,000,000 or smaller</td>
<td>National</td>
<td>Major cities, interstate highways, bodies of water, state boundaries</td>
</tr>
<tr>
<td>1:23,999,999 to 1:1,400,000</td>
<td>State</td>
<td>Major cities, state capitals, interstate highways, bodies of water, parks, state boundaries</td>
</tr>
<tr>
<td>1:1,399,999 to 1:200,000</td>
<td>Regional</td>
<td>Airports, highways, primary roads, secondary and connecting roads, bodies of water, parks, state boundaries</td>
</tr>
<tr>
<td>1:199,999 or larger</td>
<td>Local</td>
<td>Airports, hospitals, highways, primary roads, secondary and connecting roads, local roads, access roads, bodies of water, parks, state boundaries</td>
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You can easily change the scale at which a particular level displays using the theme properties dialog box. You can also control how the data layers display with ArcView StreetMap. Using the ArcView StreetMap legend editor, you have the freedom to decide:

- Which layers are displayed
- The order in which layers are drawn
- Which symbols are used
- Layer names
- The number of text labels drawn

**Nationwide Address Geocoding or Address Matching**

ArcView StreetMap lets you find nearly any U.S. address easily using the software's Locate button. If the address is located, ArcView StreetMap will zoom to its location and display a graphic symbol there. Because ArcView StreetMap locates addresses using a national database, you must provide either the ZIP Code or the city and state, along with the street address.

You can also add your own table of addresses to your project. An address table should contain fields for street address, city, state, and ZIP Code. You can use a batch process to instruct ArcView StreetMap to search for your list of addresses in the database. If StreetMap is unable to locate some addresses due to incorrect spelling or other errors, options such as spelling sensitivity or minimum match score can be relaxed. You can also manually correct address errors using an editor dialog box. When you have completed the address match, you can add a theme of points to your view.

**Working with a Particular Area: Creating Shapefiles**

You will often want to work with a specific area in a StreetMap theme. For example, you may be developing a geocoding application that deals with a particular city, or you may want to use ArcView GIS software's analytic capabilities to study the relationship between city streets and other information. With the ArcView StreetMap extension, you can create local street shapefiles of any area in the United States. The shapefile format stores the location, shape, and attribute information of geographic features.
Once created, these shapefiles contain address range and road category information based on Wessex Streets 6.0 street data.

Creating Custom Applications with Avenue

Should you require more control over data display and address geocoding in your StreetMap theme, you can create and run Avenue scripts. ArcView StreetMap comes with Avenue classes and requests that let you build your own StreetMap applications.

Using Avenue, you can

- Add or remove custom levels or layers. For example, you could write a script that adds a fifth level called neighborhood. It could be visible at scales larger than 1:100,000 and show such features as parks, schools, churches, and major buildings. You could also write a script that adds a river layer to the regional and local levels.

- Set the scale at which a layer is visible. For example, the state detail level contains urban interstates that are visible when the scale is between 1:23,999,000 and 1:1,400,000. You could make urban interstates visible only when the scale is between 1:10,000,000 and 1:1,400,000.

- Change the text size and font used to label a layer.

Supported Platforms

The ArcView StreetMap extension is available for Windows operating environments (NT, 95, and 3.1 or higher) and requires ArcView GIS 3.x software.

For More Information

To purchase ArcView GIS and the ArcView StreetMap extension, or to obtain additional information on ESRI's GIS software solutions, please contact your local distributor or ESRI.

- Telephone: 1-800-447-9778
- E-mail: info@esri.com