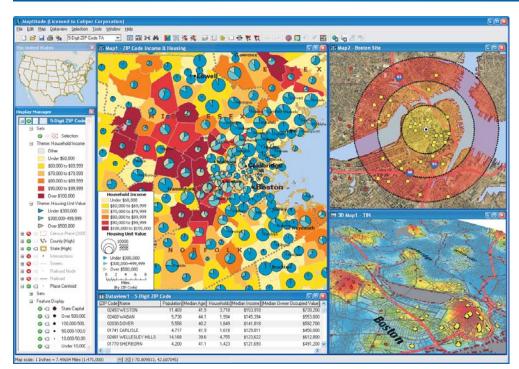


# Maptitude Geographic Information System



The Intelligent Mapping Solution for Business, Government, and Education.

#### **Increase Your Maptitude**™

Maptitude® Geographic Information System software is the intelligent mapping solution for business, government, and education. Maptitude is a powerful combination of software and geographic data that provides everything you need to realize the benefits of desktop mapping and spatial analysis with a single, easy-to-use package. With Maptitude you can:

- Create beautiful, informative map displays
- Enhance reports and presentations with maps that clearly illustrate your message
- Find geographic patterns that cannot be seen in database tables and spreadsheets
- Answer geographic questions that impact your operations
- Share geographic data with your workgroup, department, or organization

Maptitude has the richest feature set and highest performance of any mapping system. Maptitude offers much more than the limited functions of desktop mapping products, and provides many new and enhanced features that make it easier for you to create and edit maps, analyze geographic data, and connect to corporate data resources.

Maptitude gives you the tools, maps, and U.S. Census demographic data you need, plus special functions to allow you to tie in the data you use every day in your work.

Maptitude provides ways for you to use the maps you create to analyze and understand how geography affects you and your business. With Maptitude you can visualize data in new and different ways, unearth geographic patterns in your data, and convey that information in a straightforward manner.

#### Features:

- MapWizard® thematic mapping technology
- Locating (Geocoding) by address, ZIP/Postal Code, and more
- Maps at any scale
- Feature selection/ geographic queries
- GPS interface
- Customizable maps
- Statistics
- Shortest/fastest paths
- OLE support
- Built-in database engine
- Page layouts
- Band (buffer), area of influence, density grid, district, desire line, and overlay tools
- Surface analysis and 3-D mapping tools
- Native support for popular GIS files including ESRI Shapefiles, Oracle Tables, and MapInfo TAB files
- Support for images including ECW, GeoTIFF, JPEG, MrSID, orthophoto, SPOTView, and TIFF
- GISDK<sup>™</sup> programming language

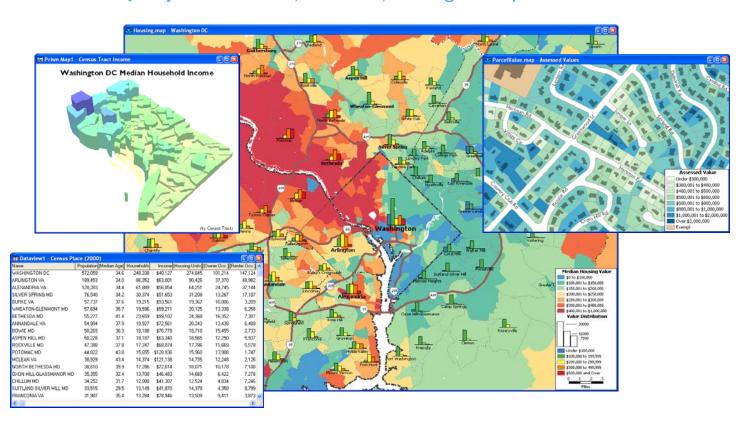
#### **Data Included:**

- U.S. Streets with address ranges
- States, counties, county subdivisions, places, ZIP Code tabulation areas, and Census tracts with detailed U.S. Census demographic data
- Highways and railroads
- Rivers and water areas
- Landmarks
- Extensive world geography



## The Easiest Way to Make Maps

Quickly create attractive, informative, and insightful maps











Map Creation: Maptitude is the best software for making maps. Maptitude brings data to life with maps that impress and inform. Answer a few simple questions and Create-a-Map Wizard™ makes a map at any scale from all the countries of the world to streets around a U.S. address, landmark, or intersection.

Maptitude provides astonishing flexibility and power so you can enhance and customize maps in numerous ways. With a few clicks of the mouse, MapWizard automatic mapping technology helps you create color and pattern maps, dot-density maps, scaled-symbol maps, and maps with integrated pie or bar charts. You can choose from a wide selection of colors, patterns, and symbols to enhance your presentation, and use editing and drawing tools to customize maps to match your needs.

Maptitude also provides a map library that contains over 100 pre-designed maps listed by category. These include thematic maps of the Census profile data by Tract, County, and State, plus attractive default maps for the United States and the world. The Map Librarian lets you open one or more of these

maps for a chosen location, allowing you to quickly analyze U.S. Census data for your area of interest. In addition, you can create map libraries to organize your own maps.

**Tables:** Maptitude lets you see the attribute data associated with map features in spreadsheet-like table from which you can easily edit values, calculate new variables, or compute statistics. You can also click on map features to see the information associated with them. You can also "tag" features, such as customers, with the distance to or the name of the nearest feature in another map layer, such as stores.

**Output:** Page layout tools help you design and create professional presentations that combine the results of your analyses into a single powerful display. With OLE, you can copy and paste maps, charts, figures, and layouts into documents, spreadsheets, and presentation software. You can print your maps and layouts on any printer or plotter, or save them to vector or raster formats. You can also save your work in a variety of formats, including HTML, JPEG, TIFF, EMF, and PNG files for use on a web page.

#### **Mapping Features:**

- Color, pattern, bar and pie chart, scaled-symbol, dotdensity, contour, and 3-D prism thematic mapping
- Map locator
- Display manager for customizing the style, visibility, and labels of map contents
- Autoscaling of layers and labels
- 100s of point styles, line styles, and area fills
- Interstate, U.S. highway, all 50 state, and many international highway shields
- Freehand map annotation tools
- North arrows and scale bars
- Pie, bar, line, area, function, and scatter charts
- Formula fields and coded fields
- Metadata support

## Map Your Own Data

#### Take a unified look at all of your data sources

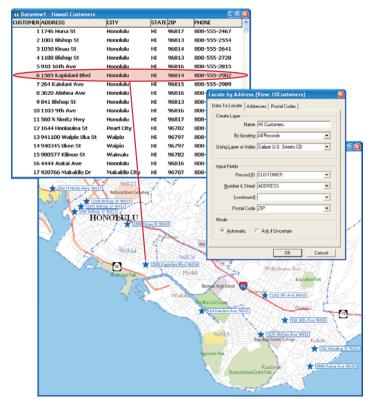
Maptitude lets you create maps using your own data. Whether you store your data in Excel worksheets, Access tables, dBASE files, or any ODBC compliant data source such as Oracle or SQL Server, Maptitude can work with your data. Create-a-Map Wizard gives you start-to-finish assistance for locating, analyzing, and mapping your data. You can also use the powerful database capabilities of Maptitude to join your data to a map layer. You can then use your data to create themes, add labels, or perform geographic analysis.

Another way to use your data with Maptitude is to locate your information on a map by locating a point feature for every record in your table. This pin mapping, or geocoding, allows you to see the distribution of your customers, facilities, and other resources. Maptitude has built-in, powerful and versatile geocoding tools, offering six methods for locating your data on a map.

**Compatible** with ArcView. MapInfo, and **Oracle Spatial**  Maptitude also supports over 50 file types and more than 100 GIS and CAD file formats allowing you to easily migrate your existing geographic data. You can map ESRI Shapefiles, MapInfo TAB files, and Oracle Spatial tables directly, or use the built-in translators to import geographic data from a variety of other software packages and public sources. This extensive library of importers and exporters is one of the largest in the industry and comes at no additional charge.

You can also use raster images such as satellite or aerial photographs directly in your maps. Maptitude includes toolboxes for quickly accessing on-line images from OpenGIS Web Map Services and Google Earth. These images can be used as a means of reference or in conjunction with the map editing tools to create or edit geographic files.

Finally, a built-in interface to Global Positioning System (GPS) devices lets you track and record your location, and build geographic databases as you work. With a GPS and a laptop, users in the field can create accurate geographic files of public utilities, corporate facilities, geographic features, and more.





### Comma-delimited text

- (csv)
- dBASE/FoxPro/X-base (.DBF) • ESRI ArcView 3.x Project
- (.APR) and Legend (.APL)
- ESRI Personal Geodatabase (.MDB)
- ESRI Shapefile (.SHP)
- Fixed-format text (.ASC)

• GPS Playback (.GPS) Mapinfo TAB (TAB)

**Direct Data Access for:** 

- Metadata (.MET)
- Microsoft Access (.MDB)
- Microsoft Excel (.xls)
- Oracle tables (.NTF)
- Oracle Version 7 (Spatial)
- Data Option) and Version 8i (Oracle Spatial) files
- All ODBC sources (such as Access, DB2, Informix, Ingres, InterBase, NetWare SQL, Paradox, Progress, SQL Base, SQL Server, Sybase)
- Raster image files: ECW, GeoTIFF, JPEG, JPEG 2000, MrSID, Orthophoto, SPOTView, and TIFF

#### Import/Export Support for (Partial List):

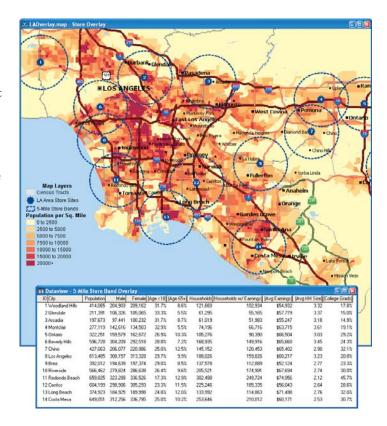
- AutoCAD (.DXF)
- Digital Elevation Models
- Digital Line Graph (.DLG)
- Enhanced Metafile (.EMF) • ESRI Export (.E00)
- ESRI Ungenerate (.LIN/.PTS)
- ETAK MapBase (.MBS)
- Google Earth (.KML/.KMZ)
- HTML
- Intergraph Design (.DGN)
- Interim Terrain Data (.SLF)
- MapInfo Interchange (.MIF)
- Portable Network Graphics (.PNG)
- Spatial Data Transfer Standard (.DDF)
- Strategic Mapping (Atlas) Boundary (.BNA)
- TIGER/Line
- USGS Land Use and Land Cover (.GIR)
- Windows Bitmap (.BMP)
- Windows Media Video

## Geographic Analysis Tools

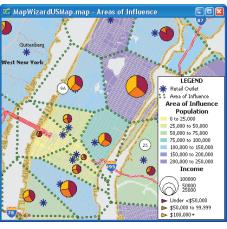
Unearth the trends and information hidden in your data

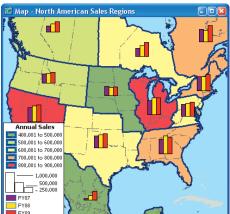
One of the best reasons to use a GIS is to unearth and analyze the geographic components of your data. You can create bands (buffers) around map features, create districts, define areas of influence, find shortest paths, create density grids, and much more. Maptitude also makes it easy to overlay and aggregate data and calculate statistics.

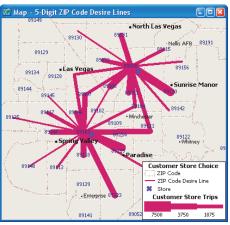
Ask and Answer Geographic Questions: Where are areas with the highest population density? How many people live within one, two, and three miles of this site? How many customers are located in this ZIP Code? What is the shortest route between delivery points? Maptitude answers these and many other types of questions. Maptitude lets you understand trends, evaluate sites, and define optimal routes. You can integrate census statistics with your own data to identify geographic characteristics that impact you and your operations. You will be amazed at how quickly you can enhance your decision making using this easy-to-use GIS tool.









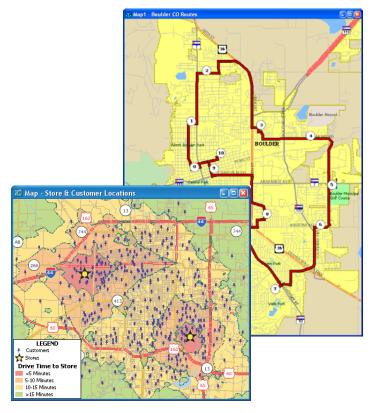


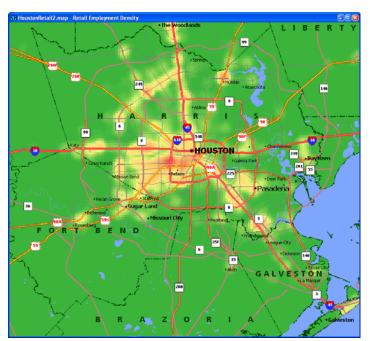
Bands: You can automatically create bands around any number of map features and then analyze the characteristics of those areas. Find out how many customers live within a certain distance of a store, compute the demographic characteristics around potential store sites, analyze the neighborhoods most affected by noise pollution from a highway, or determine accessibility to facilities.

**Areas of Influence:** You can determine the areas closest to each of your facilities by building areas of influence, then estimate the attributes within each area to determine areas that are under- or over-served.

**Districts:** Maptitude lets you merge smaller areas into districts and compute the attributes for each one. For example, you can group ZIP Codes or states together to create sales territories. Your new zones can also overlap.

**Desire Lines:** You can illustrate the flow of people or goods from point to point based on values in a dataview. For example, you could show the number of customers traveling to a store from their home ZIP Codes.





**Routes:** Maptitude identifies routes between points and generates driving directions. When a trip involves several stops, Maptitude can even help you decide the best order in which to visit them.

**Network Partitions and Network Bands:** You can divide line layers into zones or districts based on proximity to points on the network, such as drive times to stores or walking distance to schools. You can also create bands based on distance, time, or other travel costs.

**Density Grids:** Maptitude lets you visualize point data by transforming the points into a regular grid. This makes it easy to identify customer concentrations or crime hot spots. In addition, the grid can be weighted based on a value you choose. For example, you could analyze the pattern of clients around a store and weight them by the cost of their purchases, or find all retail employers and weight them by the number of jobs.

**Surface Analysis:** With Maptitude, you can analyze and display surfaces on a two-dimensional map or as a 3-D map. You can create contour maps of elevations and determine the viewshed for any location, either at ground level or at a particular height. For example, you can find areas of weak service from a transmission tower. You can also create surfaces that represent data values, such as measures of air pollution or radon, over a geographic region.

#### Geographic Analysis Features:

- Measure areas and
- Create bands by size, by value, or based on values in a network
- Create districts
- Create areas of influence
- Create density grids
- Create desire lines
- Create lines from groups of points
- Aggregate and disaggregate attribute data
- Find best routes
- Create 3-D maps, contours, viewsheds, and shortest paths over terrain
- Compute adjacency
- Locate facilities and determine service areas
- Create areas from line features or lines from area features
- Select features by condition, by value, by location, or manually
- Use multiple named, savable selection sets with unique display settings
- Generate statistics (count, sum, mean, minimum, maximum, and standard deviation)
- Partition networks



## A World of Data on Your Desktop

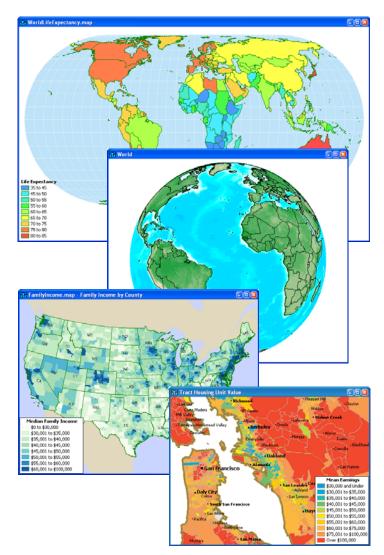
Get started right away with the extensive data included with Maptitude

Unlike other mapping and GIS packages that require users to purchase data separately, Maptitude includes extensive geographic and demographic data so that you can get started as soon as you open the box. Data are provided in a compact geographic data format that reduces data storage requirements and network traffic.

Maptitude includes the latest nationwide street data. The U.S. Streets file provided with Maptitude includes address ranges and ZIP Codes so that you can locate your data on over 43 million street segments across the entire United States.

Nationwide U.S. geographic files with updated 2006 population estimates and Census demographic, social, economic, and housing profile data let you create informative maps from the state level down to census tracts. You can also aggregate the Census data to determine the characteristics of your own districts, trade areas, or markets.

A world gazetteer lets you locate and map almost any place in the world, and digital elevation data let you create contour and 3-D elevation maps for anywhere on the globe.









#### Streets & Highways:

- Streets for the entire United States (and territories) with Address and ZIP Code ranges for geocoding
- Highways including U.S., State, and County Highways and Ferry Routes
- Major roads with travel times and speed data

#### Nationwide Boundary Files with 2000 U.S. Census Data:

- States
- Counties
- County Subdivisions (MCD/CCD)
- Metro/Micropolitan Statistical Areas (MSAs)
- Census Places (Cities)
- 3- and 5-Digit ZIP Code Tabulation Areas (ZCTAs)
- Census Tracts
- Census Demographic, Social, Economic, and Housing Profiles for States down to Tracts

#### Other U.S. Data:

- Cities and Towns
- Indian Reservations
- Points of interest including airports, hospitals, parks, restaurants, retail stores, and schools
- Landmark Areas including state and national parks, cemeteries, golf courses, and airports
- Populated Places
- Railroads
- Rivers and Water Areas
- State Plane Coordinate Zones
- Time Zones
- ZIP Codes

#### **World Data:**

- Country Boundaries
- Cities and Capitals
- Populated Places
- Place Gazetteer
- Airports, Highways, and Railroads
- Landmarks
- Elevations and Contours
- Digital Elevation Models (DEMs)
- Rivers, Lakes, and Glaciers
- Provinces for Australia, Brazil, Canada, China, Colombia, Japan, Mexico, the United Kingdom, and most of Northern Europe

## **Application Development Platform**

Leverage the power of Maptitude in your own applications

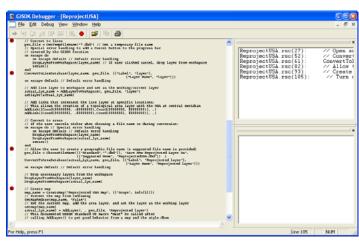
Maptitude includes the Geographic Information System Developer's Kit (GISDK). GISDK gives you the tools that you need to create a wide variety of products for delivering mapping and geographic analysis capabilities to your customers. Over 850 functions can be called from Caliper Script, a complete programming language for designing menus and dialog boxes (including toolbars and toolboxes) and for writing macros. The Caliper Script code is stored in resource files that you can edit with your favorite text editor. With GISDK you can:

- Create add-ins that extend the standard interface to provide new capabilities or that automate repeated operations
- Build custom applications that focus the user on the capabilities needed for a particular purpose by extending or replacing the standard Maptitude interface
- Access Maptitude from .NET to integrate it into a .NET desktop application
- Access Maptitude as a COM Object to add maps or analysis functions to your own programs

GISDK contains both a debugger and a compiler.

**Add-ins:** Add-ins are macros or dialog boxes that are launched within Maptitude. You can create add-ins to provide end-users with easier access to existing software functions; to add new capabilities to the GIS engine; or to create hooks to your own applications. Addins can be freely distributed to any Maptitude user without restriction.

The simplest add-ins are macros that run when they are selected by the user. A sophisticated add-in can display dialog boxes that let the user choose the settings or options to use when the macro is executed. The most flexible and powerful add-ins are custom toolboxes that provide users with push-button access to tools that you have programmed. These toolboxes look like the standard toolboxes used in all Windows applications.



**Custom Applications:** GISDK lets you create a mapping application program with a custom user interface to appeal to a particular audience. You design the menus, toolbars, toolboxes and dialog boxes, and program the application to respond to user actions in any way you want. You can even create applications that are dynamic and that adapt to the capabilities and authorization level of the user.

Custom applications are executed like other Windows programs. Add your own program icon to any program group and double-click to launch your application.

#### Accessing Maptitude from .NET or as a COM

**Object:** GISDK allows you to call mapping functions and macros from another application, written in another programming language. The .NET classes included with Maptitude allow you to access the GISDK environment from a Windows desktop application (Windows Forms) written in any .NET language. GISDK also allows you to call GISDK functions and macros from another application using COM. Maptitude can provide map, data, and geographic analysis services when accessed as a COM Object. You write your application in a programming language that can make COM calls, and when you need map services you call the Maptitude object to supply those services. If, instead, what you need is a web server application, you should use Maptitude for the Web. Contact Caliper or visit our web site for more information.



## Maptitude applications

- Banking
- Business
- Cartography
- Client Management
- Community Planning
- Crime Analysis
- Data Publishing
- Decision Support Systems
- Demographics
- Education
- Emergency Response
- Engineering
- Environmental Management
- Facilities Management
- Health Care
- Insurance Underwriting
- Land Use
- Law Enforcement
- Market Research
- Marketing
- Planning
- Public Health
- Public Safety
- Public Works
- Real Estate
- Redistricting
- Regulatory Compliance
- Retail Management
- Sales Analysis
- Site Selection
- Telecommunication
- Utilities

#### **Maptitude User Services**

Caliper provides a comprehensive program of technical support, training, and consulting services to ensure the success of your Maptitude applications. Caliper offers hands-on training classes for Maptitude in classroom settings, or on-site at your location. Our training can be customized for your specific needs and user group.

Maptitude includes comprehensive documentation with background information, step-by-step instructions, and a series of hands-on tutorials that let you try out features. On-line help with tooltips and other on-screen visual cues also make Maptitude easy to learn and use.

Caliper offers a full range of GIS implementation services. Our GIS professionals will assist you in assessing data requirements, database strategy and design, database development, and analytical modeling. Caliper also provides custom application and turnkey system development services, including web site creation.

#### **About Caliper**

Caliper Corporation is the technology leader in the development of Geographic Information System software applications. Tens of thousands of successful individuals and organizations around the world use Caliper GIS software products to enhance their operations. For more information on our complete range of GIS software products, data, and technical services, please visit our web site, WWW.CALIPER.COM.

#### New Features in Maptitude 6.0 (partial list):

- Enhanced Create-a-Map Wizard now enables start-to-finish assistance for locating, analyzing, and mapping your data.
- Enhanced default maps take advantage of new label, style, and feature display options.
- The most detailed U.S. geographic data ever included with Maptitude, including detailed streets with direction and travel time, points of interest with over 2-million named locations including commercial buildings and retail stores, and 2010 ZIP Code boundaries.
- Enhanced labeling capabilities that allow for moving, customizing, rotating, and calling out individual labels, adding halos or shadows to labels, using different colors for multi-field labels, and much more.
- New Wizard for creating districts from tables or selection sets, including overlapping, non-topological districts.
- New file support for geographic/tabular data including Microsoft SQL Server 2008 Spatial, Microsoft SQL Server Table, and GPS Exchange Format (GPX).
- Enhanced editing tools for working with non-topological area layers.

Please visit www.CALIPER.COM/MAPTITUDE/NEWFEATURES.HTM for more information.

#### **Also Available from Caliper:**

Maptitude for Redistricting<sup>™</sup> is a special edition of Maptitude that includes everything you need to build and analyze redistricting plans. For more information please visit WWW.CALIPER.COM/REDISTRICTING.

Maptitude for the Web™ has all of the tools you need to create compelling maps, plus special capabilities for designing and running interactive map applications and location-based services on the World Wide Web. For more information please visit WWW.CALIPER.COM/WEBMAPTITUDE.HTM.

**TransCAD**\* is the first and only Geographic Information System (GIS) designed specifically for use by transportation professionals to store, display, manage, and analyze transportation data. TransCAD provides an integrated set of state-of-the-art methods for solving key analytical problems in transportation planning, management, and operations. TransCAD is used extensively for transportation database development and maintenance, demand forecasting, operations management, and vehicle routing and scheduling. For more information please visit WWW.CALIPER.COM/TRANSCAD.

**Data Discs** offer a large and expanding collection of geographic and demographic data, including:

- Census Blocks
- Census Block Groups
- Congressional Districts

For more information on all of the available Data CDs and DVDs, please visit WWW.CALIPER.COM/DATACDS.

#### System Requirements: • Personal computer

- Personal computer running Microsoft Windows XP, Vista, or 7
   DVD-ROM drive
- 32MB RAM
   Hard disk with at least 340MB free space (excluding geographic and demographic data)



#### **Caliper Corporation**

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