# Maptitude Mapping Software 2013 Review

## Maptitude Review

### The Good

Large feature set; easy to use. Excellent support of Office apps; new tools create maps that display sales or service territories; best drive-time tool; updated demographic data includes Census estimates; competitively priced.

### The Not So Good

A little expensive for an Office-style product (though inexpensive for a business mapping application); requires 4GB minimum disk space; lacks a ribbon interface.

### The Verdict

This excellent map-based business data analyzer is a smart addition for any organization running Windows and Office who wants to do geographic analysis.

## Summary

Nearly every business needs maps, whether to see where your customers and competitors are, to assign the route your salespeople follow when they call on clients, or to create maps of service areas for your franchisees. And that's why Maptitude makes good sense for businesses. It's packed with demographic data, plays well with Microsoft applications, and is easy enough for the geographically challenged to use. But this business mapmaker and data analyzer isn't free; in fact, at US$695, it costs more than Microsoft Office. However, Maptitude is the best business mapping application for workplaces running Windows, and is actually much cheaper than the majority of competing offerings.

# Business Geographic Treats

Recently, on my way to a business lunch in an unfamiliar city, I pulled up Google Maps on my smart phone and entered the restaurant address. Instantly, a map appeared on my screen, and after adding my starting location, I quickly navigated to a street view with a route map showing how to travel to the meeting. (*We didn't try this on an iPhone, but finding landmarks such as restaurants using Apple Maps has been well discussed elsewhere, see http://betanews.com/2012/10/02/apple-maps-disaster-hurts-iphone-5-sales/).*

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Amazingly, digital maps have become a routine and important part of our daily lives. You can thank players such as Google Maps, Microsoft Bing Maps, MapQuest, and NOKIA Maps. They have successfully popularized the use of maps via their simple web-based interfaces that seamlessly access geographically referenced "big" data. But today's mapping software far exceeds the simple programs that produce directional maps.

Even before these nifty location-based tools, years of development in digital cartography and data resulted in a global geospatial industry now worth up to $270 billion per year (http://google-latlong.blogspot.com/2013/01/mapping-creates-jobs-and-drives-global.html). One element of this sector is the Geographic Information Systems (GIS) software market.

Also known as business geographics, GIS programs portray demographic and market data on a map to aid in estimating trade area population for retail stores, uncovering target neighborhoods for marketing, analyzing prospective business locations, and routing deliveries. Users, however, complain that GIS systems are expensive, confusing, and difficult to use. For organizations dependent upon geographic analysis, GIS can bear a high price tag: tens of thousands of dollars in software, data acquisition, and personnel costs for dedicated staff.
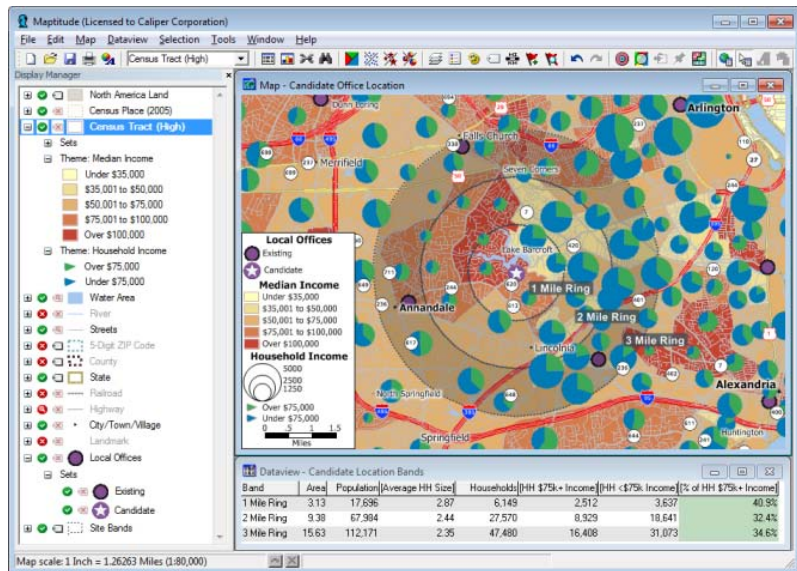
Fortunately, at least one software vendor, Caliper Corporation, recognizes that everyone uses maps in some way and that many organizations need to analyze data spatially. Caliper also realizes that most business users don't want to become mapping experts, they just want to produce ring studies, thematic "heat" maps, and a range of other informative map displays without unnecessary complexity. In response, Caliper has created mapping software you can easily incorporate into day-to-day operations with minimal expenditure.

Caliper's Maptitude is a cost-effective, professional mapping software product with a focus on usability. Maptitude enables organizations to leverage their location-based data to improve decision making and planning, while limiting expenditure through a competitively-priced solution.

# Bringing Mapping to the Table

Mapping software layers information, just as if you were using transparencies with a projector for a presentation. The layers can show addresses, boundaries, and also satellite or aerial imagery. The result is a single window containing multiple databases and spreadsheets displayed as a visually appealing map.

Though some of the analytical capabilities of Maptitude may require reference to the User Guide, or the viewing of a video or



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free training webinar (see Maptitude Video Tutorials), most of the tools in Maptitude are accessible straight out of the box. Caliper includes wizards that guide you through the creation of maps of various demographic variables and also from tables of your own data. This makes it easier for novices to map and analyze their target variables.

# Smorgasbord of Features

If you need software only to plan trips or to add a map or two in a final report, you probably don't need Maptitude. Sure, it scopes out efficient routes between locations and draws detailed maps, down to the street address level in the United States and many other countries. But what Maptitude excels at is as a professional grade mapping program that allows you to fully utilize the power of geographic analysis.

Maptitude includes more features and data than most other products and is arguably the least expensive, yet serious, mapping tool available for Windows users. At only US$695 it is priced well below its more expensive competitors.

You can use any of your own geographic, tabular, or GPS (global positioning system) data. Given a spreadsheet or database file that is full of name, address, and sales information, Maptitude can automatically locate (or geocode) your addresses. The resulting maps can be displayed in a wide variety of ways, with the ability, for example, to use company logos for each location along with automatic text labeling that identifies each point.

Maptitude's strongest suit is as a graphical planning and analytical tool for small-, medium-, and enterprise- sized businesses. The end user can ask questions such as, "Where are the high-income neighborhoods with two working parents?" This question is answered by filtering the map and layering variables so that matching locations are displayed.

Maptitude is excellent at allowing you to create territories or service areas. You can interactively choose from any boundary layer such as ZIP Codes or Counties, or you can import a table of pre-defined territories, and you can even interactively draw and modify your own regions. When building your areas you can see a running total of your target audience assigned to each zone, such as specific age groups or income brackets.

Drive-time zones are another powerful tool. They display the approximate distance you can travel within a specified time frame from a central point, say your business locale, which is very useful for analyzing a customer base. The developers of Maptitude also claim that the drive-time rings produced are the most geographically accurate of those in any mapping software, taking into account individual streets in the calculations of those locations that can be reached within the time or distance specified. In our tests, the drive


Photo illustration ©Caliper Corporation

time zones certainly had a more natural and reasonable appearance, especially in comparison with the "starburst" or "grid" rings seen in other products.

In addition, you can create circular rings around a point in order to estimate the population surrounding a location. Other advanced features include 3D visualizations, hot-spotting, site location models, and travel route planning.

Maptitude runs on Windows, while Maptitude for the Web applications are accessible via browser-based interfaces on PCs or mobile devices. Maptitude maps can be printed on any installed printer. In addition, maps can be shared in many formats such as PDF, JPEG, and Bitmap, allowing you to publish your results via Microsoft Office for example. Your maps and data can also be shared as Google Maps Documents, allowing interaction and querying via a free Google Maps account, or via the free Google Earth tool.

## Gourmet Data

A basic global map is provided with every Maptitude license, allowing you to view your data anywhere on Earth and to map your locations by coordinate, manually, or by any populated place (village/town/city). Every Maptitude license also includes one free detailed Country Package of your choice. Each Country Package provides a wealth of data, including an up-to-date street layer with addresses for pin-mapping (geocoding) and travel time information for computing routes and drive-time rings. Also included are Postal/ZIP Codes, political boundaries, building footprints for many urban locations, railroads, and comprehensive named landmarks that range from public facilities to commercial buildings including shops, restaurants, and retail stores. The quality of the included NOKIA Maps is considered among the best in the industry (see Nokia Has Better Maps than Apple and Maybe Even Google) and justifies the cost of the entire Maptitude product. The USA Country Package for Maptitude always includes up-to-date ZIP Codes, Census boundaries (such as Tracts, Counties, MCDs, MSAs, and States), and roads.

## A La Carte Demographics

Maptitude incorporates a plethora of information. Among the more than 400 data items available by USA ZIP Code are (take a deep breath) population, age, marital status, education, race, income, housing value, rentals vs. owners, business data (employees, payroll, types of establishment), Rural-Urban Commuting Areas, and more. Caliper also sells Census data broken down to individual city blocks (pricing is here).

This wealth of included data allows you to build maps that illustrate everything from income to education distribution. (The identically priced editions for countries outside the USA include similar local data where available.) Of course, you can create maps from your own data, either from scratch or by using data from Excel or Access for example.
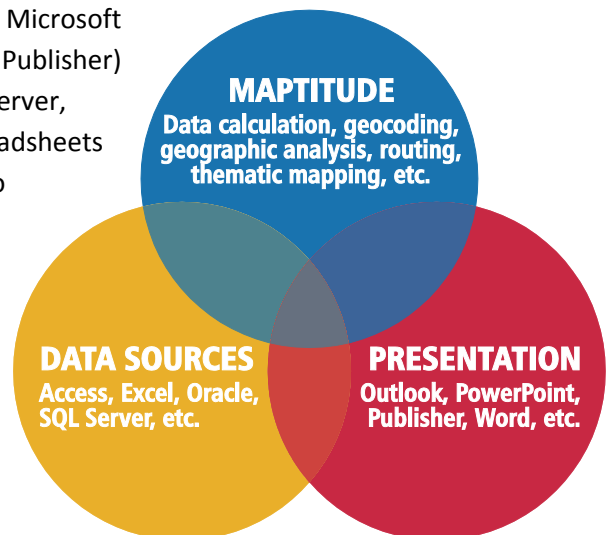
Maptitude lacks certain estimates, such as on sales of consumer goods by ZIP Code. However, Maptitude does include future year demographic projections, items such as consumer expenditure, and hundreds of fields of social, housing, and economic data from the 2011 ACS and 2010 U.S. Census, down to the ZIP Code and Census Tract level. Any data quibbles take little away from Maptitude's value as the only serious mapping tool at this price level.

## Pairs Well with Office

You'll get the most out of Maptitude using it alongside Microsoft Office (Word, Excel, Access, Outlook, PowerPoint, and Publisher) as well as with many popular databases (Oracle, SQL Server, more…). Maptitude interacts with Office, can link spreadsheets and databases to a map, and exports maps and data to documents, spreadsheets, and slide presentations.

Maptitude's appearance ties in nicely with the rest of Microsoft's business apps, right down to the background shading that highlights toolbar icons. Once you've selected a map, it fills your monitor for easy viewing, and the Maptitude toolbars make it easy to look up a location, highlight routes, and launch the program's various wizards.

**MAPTITUDE**
Data calculation, geocoding, geographic analysis, routing, thematic mapping, etc.

**DATA SOURCES**
Access, Excel, Oracle, SQL Server, etc.

**PRESENTATION**
Outlook, PowerPoint, Publisher, Word, etc.

But what makes Maptitude noteworthy, aside from its low price compared to similar products, is how easy the program makes it to perform queries and display data on a map. Maptitude lets you create a broad variety of thematic maps, including heat, dot-density, pie- and bar- chart, ranged-fill, and bivariate maps. And its built-in tools make it easy to generate attractive map displays. I was most impressed by Maptitude's clean overall design. The program not only packs in a lot of powerful features but also has nicely designed dialog boxes that make it unexpectedly easy to access that power. Witness the program's Map Wizards, which automatically select the type of analysis and display you're most likely to want.

## Voracious Disk Eater

Maptitude creates and opens complex maps fast, three seconds or less on a 4GB PC, but certain operations can use up disk space and CPU resources. In addition, the software and data installation exceeds 4GB, which can make product downloads from the Caliper Online Store quite time consuming (up to an hour in our case). However, Maptitude did not chew up so much processing power on our Windows 7 test machine that other applications froze or locked up.

In fact, Maptitude runs as a 32-bit or 64-bit application on 32-bit or 64-bit Windows 8, 7, Vista or XP. The many advantages of a 64-bit Maptitude include: the ability to save to much higher resolution images; the capability to use more memory than the previous 4GB 32-bit limit; and being able to open/import files via 64-bit Microsoft Office (e.g. Excel and Access).

## Conclusion

Maptitude provides an excellent way to extend the capabilities of business analysts. Despite the extensive functionality, a casual user can easily learn Maptitude. In most instances the software will automatically do the right thing to accommodate novice users, while providing experienced users with the flexibility to customize analyses and results. Maptitude is a capable mapping package and should handily meet the needs of all but the most esoteric applications.

While I highly recommend Maptitude for its ease of use and extended capabilities, knowing how you wish to incorporate maps and geographic analysis into your organization will help you determine how best to utilize the software. Regardless, you cannot go wrong with Maptitude. The price is certainly right.

## About Caliper

Caliper Corporation develops state-of-the-art Geographic Information Systems (GIS) software. With a focus on usability, Maptitude is designed to be a cost-effective, professional mapping software product. Maptitude enables organizations to leverage their location-based data to improve decision making and planning, while minimizing expenditure through competitively priced solutions.

Caliper is a privately held corporation and is a leading developer of mapping, redistricting, transportation, and GIS software.

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