Pitney Bowes MapInfo

DATA SHEET

# Vertical Mapper™ v3.5

## for Spatial Visibility and Analysis

GAIN DEEPER LOCATION INSIGHT USING GRID-BASED ANALYTICS

## Benefits

- Create continuous surfaces from point data
- Create density maps from themes containing point features
- Create contour, slope, and aspect maps and relief shading of these surfaces
- Create raster buffers based on distance from vector data
- Perform queries and calculations on multiple grids simultaneously
- Perform single or multi-site modelling and analysis
- Perform grid classification, display and more
- Append values from grids to your point, line and region data.

### OVERVIEW

Grids represent data that vary continuously from one location to another, such as elevation, temperature or average family income. You can take partial data or point data and extrapolate to a more complete picture. By analysing data in a grid format, users can easily view constantly changing data variables in relation to location by thematically mapping the data with colour or relief shading, or by layering and comparing the data mathematically with other grid themes to determine unique or hidden relationships. Vertical Mapper provides robust grid generation, display and analysis capabilities.

Use Vertical Mapper to:

- Create 3D topographical maps to better understand how developments such as industrial parks or landfills will impact the surrounding neighbours
- Leverage gravity model techniques to understand how a new store or office location may cannibalise existing establishments
- Compare coverage maps to forecast and model network capacity, such as channel, frequency use and bandwidth utilisation for communications firms

### INTRODUCING VERTICAL MAPPER v3.5

Enjoy new access from our MapBasic® programming language to automate repeatable tasks and processes. Multiple sample-applications provide a fast, easy start to leverage Vertical Mapper functionality in your everyday work.

With support for our latest native file format (.tab) enhancements, users will appreciate the expanded capabilities of the new Vertical Mapper file access library, including:

- Access to very large geographic objects with tens of millions of nodes
- Time and Date field type support
- Access to all MapInfo Professional® supported datums and projections

**ADDITIONAL NEW FEATURES:**

- Convenient software development kit (SDK) to add custom functionality or automate repeatable tasks
- New Grid Smoothing capability which helps manage file sizes of complex grid data as well as numerous fixes and improved functionality of many existing capabilities.
- Windows® Vista operating system support
- Simplified installation and deployment options

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- Generate soil chemistry maps from samples for natural resource exploration
- Relate elevation from a terrain model to a set of households or buildings in an insurance company to understand portfolio risks from flooding.
- Correlate several large data sets spatially such as average household income and high blood lead levels or cell phone signal strength and population density

MapInfo Vertical Mapper has a wide range of analytical tools that allow you to reveal trends in data; for example, a centre for disease control can track the migration of an influenza virus across a region. Another asset is the software's unique prediction capabilities, whereby you can specify a test location and MapInfo Vertical Mapper will identify areas with statistically similar attributes. This means complex tasks such as analysing all of the demographic and geographic variables used to locate a new retail outlet are reduced to a couple of mouse clicks. Derive new insight by turning your data investment into compelling, meaningful information to give your business the upper hand.

## Create Grids

Vertical Mapper features modelling tools and a full suite of interpolators based on all standard estimation principles that enable you to build continuous surfaces, or grids, from existing point files or unmapped tables, regardless of data type. Easy-to-use wizards help novice users achieve meaningful answers while experienced mappers can adjust advanced settings to obtain more sophisticated results.

Vertical Mapper includes six grid algorithms:

- Triangulated Irregular Network (TIN) with smoothing
- Inverse weighted distance function
- Natural Neighbour
- Rectangular (Bilinear) interpolation
- Kriging
- Custom Point Estimation

In addition, Vertical Mapper includes modelling options for:

**Location Profiler**—computes and averages the distance to a series of points from anywhere within a map area

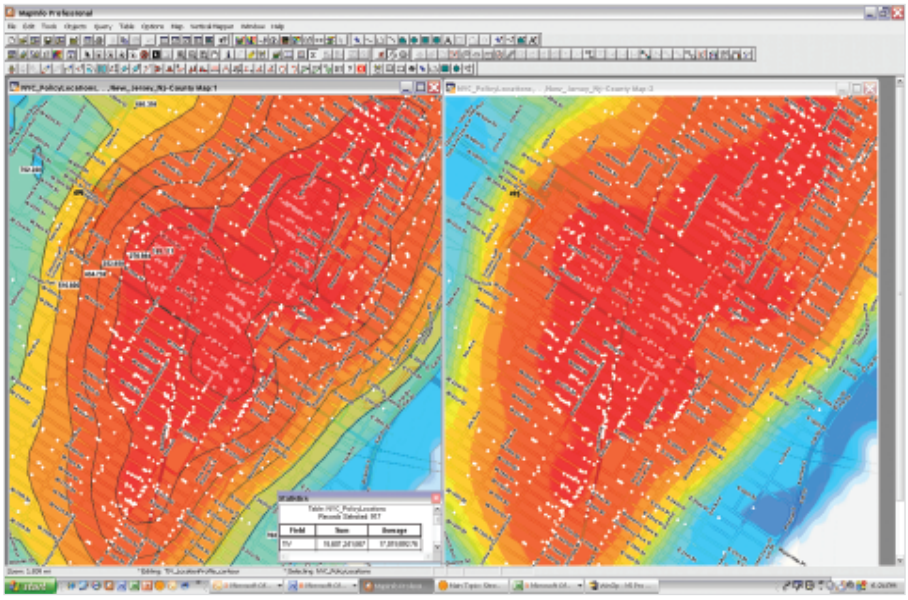
**Trade Area Analysis**—for single or multiple areas

## Display Grids

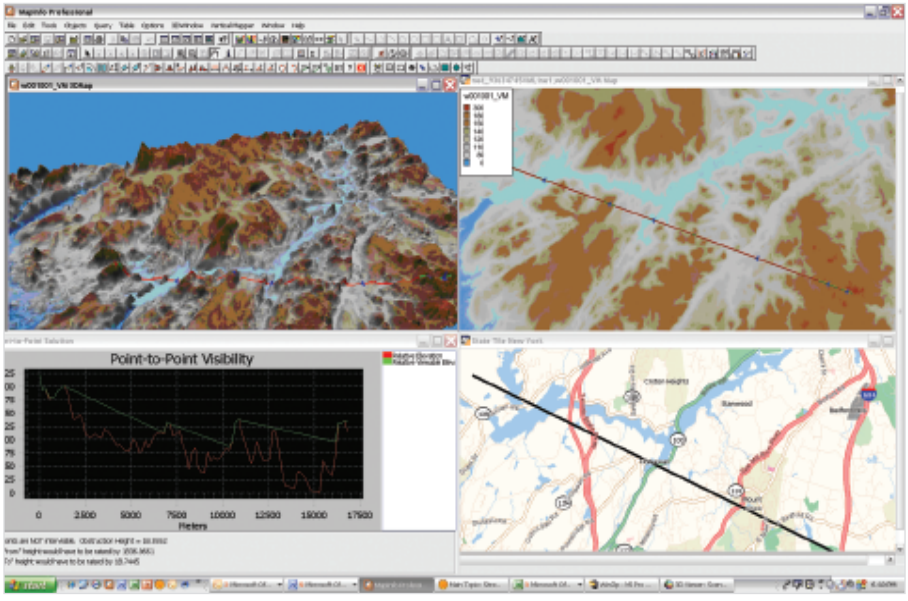
Visualize trends in spatial information easily. Vertical Mapper grid colour settings define data variations and dynamic 3D rendering tools let you bring data to life. View multiple grids within the same scene, apply drapes to any open grid, and determine the degree of transparency for both grids and drape files. Vertical Mapper gives you a wealth of display options to generate impressive and intelligent data representations.

## Analyse Grids

Enter a whole new world of geographic analysis made possible through grid technology. Whether you need to query and compare multiple layers of information, use complex mathematical expressions to create derivative grids, or perform line of sight analysis with the ViewShed function, Vertical Mapper has robust spatial analysis capabilities that help you gain new insight from your data.



*Convert grid data to region objects to perform location analysis.*




*Combine several continuous layers to determine the best line of sight locations for planning and analysis.*

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Some functions you can apply to your grid data are:

- Overlaying one grid on another and applying a mathematical function (e.g. Subtract one grid with elevations from one data to a grid of the same area after land has been removed to calculate the volume of soil removed)
- Calculating steepness of slope or the direction the slopes are facing in a grid
- Showing cross sections (e.g. What is the shape of the terrain from point A to point B?)
- Gaining a 3D perspective view of the terrain with optional overlay of imagery
- Performing natural neighbour (Voronoi) analysis to understand categorical data such as soil type
- Profiling related data for identifying groupings of customers or areas of high crime

When you need to calculate point density, two methods are available:

**Square area**—points totaled for each square of a grid

**Smoothing**—density expressed as a normalized value between zero and one

Vertical Mapper's custom point estimation feature allows you to specify the calculation of points within a radius, including sum, minimum, maximum, average and more.

Vertical Mapper also supports the creation and manipulation of classified grids (GRC data), including the modification and merging of class structures.

## Specifications

**Operating System Support**

- Win 2000 SP4
- Win XP Professional SP2
- Win XP Home SP2
- Windows® XP (64-bit) running in 32 bit mode
- Windows® Vista (Ultimate)


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