

MapInfo® Vertical Mapper™

Transform point data into continuous surfaces or grids, which can be thematically mapped to visualise trends and queried to reveal relationships between multiple grid layers -
WHATEVER YOUR INDUSTRY, WHATEVER YOUR SIZE ...

Mobile Telecommunications – Position Base Station Transceivers More Effectively

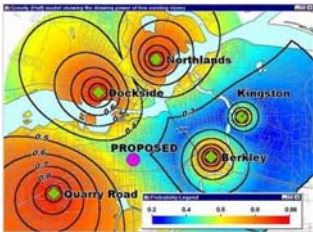


BUSINESS PROBLEM: Enormous infrastructure costs associated with the installation of a mobile telecommunications system make it critical for service providers to determine the optimum location for transmission towers.

SOLUTION: Vertical Mapper can manage multi-dimensional data effectively to generate answers to complex site location decisions. The application can determine point-to-point visibility, locate target markets, and compare coverage maps to forecast demand grids as well as perform other routines that help wireless service providers manage their networks in a cost-efficient manner.

RESULT: Radio frequency engineers use the information in view-shed maps generated from a 4/3 earth curvature correction model and existing digital elevation files to make better tower site selections.

Retail – Improve The Gravity Modelling Of Store Locations

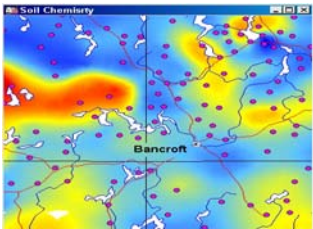


BUSINESS PROBLEM: A chain of specialty food stores has five suburban locations in one city and each has enjoyed record sales since opening. The company is interested in opening a new city centre store but wants to estimate revenue potential and determine how the proposed location would affect existing stores before proceeding.

SOLUTION: Vertical Mapper can create a gravity model based on data collected by telephone surveys and customer response forms. The model calculates the relative influence of each store location on the surrounding population, how the addition of a new store would affect the existing locations, and projected sales volume of the new store.

RESULT: The gravity model indicates that a new city centre store would draw too much business away from three of the existing stores. The chain decides not to risk their current success and instead focus on ways to strengthen their relationship with the customers in the city centre.

Insurance – Increase The Accuracy Of Analysing Risk Events

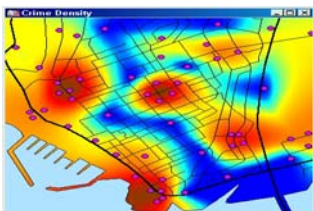


BUSINESS PROBLEM: A residential and commercial insurer that specialises in underwriting buildings and contents policies needs to visualise and analyse data readings of rainfall captured by meteorological stations and the levels of land contamination measured by geological surveys. Understanding the impact of these 'perils' on current and future policyholders will enable the insurer to save money.

SOLUTION: Vertical Mapper can interpolate large quantities of point data and produce a continuous grid surface that 'fills in the gaps' between non-continuous points. This enables underwriters to analyse the amount of rainfall and level of land contamination by commonly used geographical regions such as postal boundaries.

RESULT: The results highlight significant numbers of existing policyholders whose premiums are too low. Increasing these rates will financially cover the risk or force the policyholder to seek a competitive quote, thus enabling the insurer to minimise the level of risk in their book. Additionally, the insurer can now target areas where risk is low and offer money saving premiums.

Crime Mapping – Identify Crime Hotspots More Accurately



BUSINESS PROBLEM: A police constabulary plan to implement a campaign to reduce the number speeding offences committed in their area. They need to understand the location of accident hotspots and whether any clustering speeding fines exists.

SOLUTION: Vertical Mapper creates a time series view of accidents and speeding offences over a one-year period from the individual geocoded data points. Weighting is used increase the significance of a point based on the severity of the accident. The data is analysed on a rolling hourly basis as well as a day-by-day basis

RESULT: Key locations now have speed cameras installed and increased levels of police patrols to deter potential offenders.

MapInfo ® Vertical Mapper ™

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MapInfo ® Vertical Mapper ™, which integrates seamlessly within MapInfo Professional ®, allows you to create grids or continuous surfaces from point data so you can display, manage, analyse and interpret spatial information. Vertical Mapper features one of the most powerful suites of tools and unique prediction capabilities available to edit, analyse and visualise grids.

What Does Vertical Mapper Do?

Vertical Mapper transforms point data into continuous surfaces, or grids, which can be thematically mapped to visualise trends and queries to reveal relationships between multiple grid layers and features one of the most powerful suites of tools available to edit, analyse and visualise grids. Features include:

- Grid Creation
- Grid Visualisation
- Grid Analysis
- Grid Editing
- Grid Aggregation

GRID CREATION

Use Vertical Mapper to create a grid in four ways;

- **Interpolation** - Estimate grid cell values based upon surrounding data points.
- **Modelling** - Estimate grid cell values based upon a surrounding point file where the resultant grid does not have the same data units as the original points.
- **Vector To Grid Conversion** - Converts vector regions into a grid.
- **Importing** - Convert commonly used grid formats including ArcGrid ASCII Export, ASCII Classified Grid, RCR-500, DTED, CDED, GeoSoft, MONA, UK Ordnance Survey Grid, USGS DEM and SDTS

GRID VISUALISATION

Vertical Mapper provides ways of modifying the display of a grid – from changing the colours to rendering in 3D.

- **Modifying Grid Colours** - Customise the colour scheme by adding colour inflection points, modifying the colours, adding relief shading and creating legends.
- **Contouring** - Generate contour maps by threading lines through a grid at specific intervals.
- **Cross Sections** - Graphically visualise the changes in grid values along a line or polyline.
- **3D Viewing** - Render grids in 3D. Control every aspect of the scene, such as viewing angles & image draping.

GRID ANALYSIS

Vertical Mapper offers you five different ways to analyse a grid – from simply inspecting a value at a location to performing complex queries on one or more grids.

- **Point Inspection** - Query locations on a map to obtain each location's grid value.
- **Region Inspection** - Calculate statistics on grid values that fall within a given region.
- **Mathematical Calculations** - Perform mathematical calculations on grids to modify or filter the information in a single grid or generate new grids from two or more existing grids.
- **Grid Query** - Perform complex queries on a single grid or on multiple grids to determine where two or more variables are coincident.
- **Viewpoint Analysis** - You can perform two types of viewpoint analysis on elevation grids – viewshed analysis and point-to-point analysis - to determine the degree of visual exposure specific locations have with surrounding areas.

GRID EDITING

Vertical Mapper gives you two versatile tools to make alterations to a grid

- **Grid Trimming** - Trim a smaller portion of a larger grid by simply selecting a polygon from the map to trim
- **Changing Projections** - Use the Grid Reproject Tool to convert a grid from one map projection to another.

GRID AGGREGATION

Automatically reduce the number of points in a point file. Typically used when there are too many points to efficiently process into a grid surface. Data aggregation can also be used to eliminate coincident points and to pre-smooth highly variable data. Unique to Vertical Mapper, this utility can calculate and append statistical information to each aggregated point. This provides you with valuable insight into the aggregation process.