

Map Analysis Package Calculator (MapCalc)

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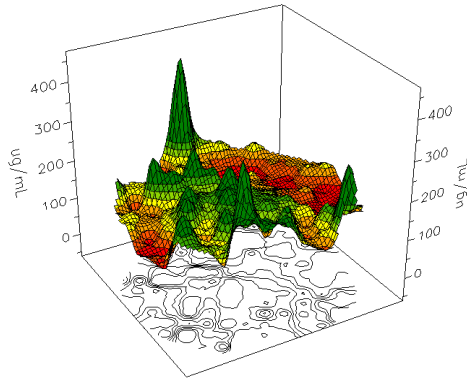
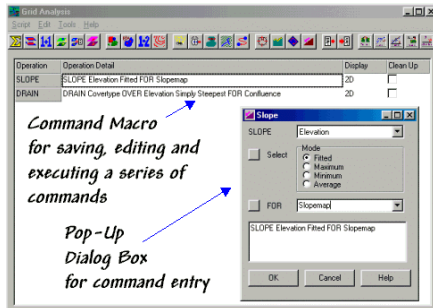
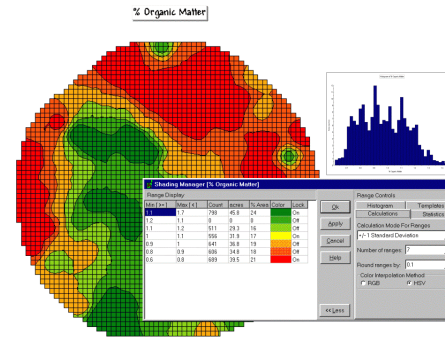


Image registration, on-screen digitizing and GPS link provide for direct encoding of map. **Display** capabilities include 2-D grid and contour maps, 3-D surfaces with draped variables, vector overlay and a variety of summary reports, tables and charts. Integrated modules seamlessly link MapCalc's advanced map analysis capabilities with the thematic mapping and geo-query tools of desktop mapping systems such as MapInfo and ArcView.

MapCalc is a comprehensive set of grid-based tools for advanced analysis and display of spatial information. The system has several basic forms—
 ◊stand-alone Windows/NT/2000 version ◊integrated modules for leading desktop GIS systems ◊variety of application programs such as SoilRx for precision farming ◊a library of ActiveX controls and development environment for development partners

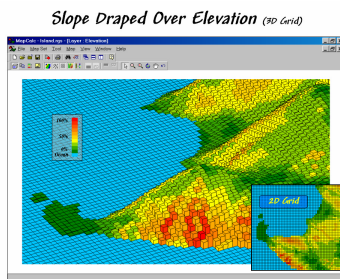
Import/export modules enable exchange of data with most vector/raster GIS data formats, databases and spreadsheets.



An intuitive graphical **user interface** provides direct access to individual operations through familiar dialog boxes with Window standard pull-down lists, command buttons, slider bars, text boxes and icons. A powerful **macro builder** enables users to easily generate, edit and reuse command sequences as GIS models. As commands are specified through the dialog box, a macro language automatically creates grammatically correct English sentences that are linked to a flowchart of the processing steps. Users simply

interact with the flowchart to interpret and modify criteria for alternative conditions and scenarios.

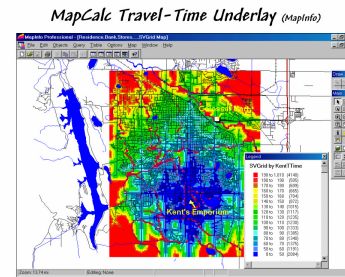
The powerful modeling capabilities of MapCalc are divided into two broad classes—spatial statistics and spatial analysis. **Spatial Statistics** tools investigate statistical patterns and relationships among maps. They include...



- ◊Descriptive Statistics
- ◊Normality Tests
- ◊Point Density Maps
- ◊Geographic Trend Analysis
- ◊Spatial Interpolation
- ◊Spatial Autocorrelation
- ◊Scatter plots and variograms
- ◊Residual Analysis
- ◊Error Mapping
- ◊Coincidence Statistics
- ◊Change Surfaces
- ◊Comparison Tests
- ◊Spatial Correlation and Dependency
- ◊Multivariate Regression
- ◊Clustering
- ◊Map Similarity

Spatial Analysis tools derive new maps based on spatial context, patterns, surface configuration, proximity, connectivity and flows. They include...

- ü *Geographic Search*
- ü *Weighted Proximity Analysis*
- ü *Slope and Aspect*
- ü *Visual Exposure*
- ü *Optimal Path*
- ü *Local, Regional & Map-Wide Overlay*
- ü *Nearby Neighbor Summary*
- ü *Edge, Shape and Pattern Characterization*
- ü *Narrowness*
- ü *Logical, Ranking, Rating and Mathematical Combination*
- ü *Confluence Surfaces*
- ü *Probability and Propensity Analysis*
- ü *Travel-Time Surfaces*
- ü *Competition Analysis*



MapCalc by Red Hen Systems, Inc.

...advanced grid-based map analysis in PC environments


Educational, Professional and Developer versions of the software are under development at Red Hen Systems (<http://www.redhensystems.com/>). The **Professional Version** is a complete stand-alone system for commercial use that contains an extensive set of grid map management, analysis and display. The **Developer Version** contains a library of the MapCalc ActiveX/COM objects and a development harness for integrating MapCalc capabilities into other software packages. The **Professional** and **Developer** versions will be available in early 2001.

An **Educational Version** is available in both student and instructor forms...

Want to learn about grid-based analysis and GIS modeling?

...but have limited time and access to complex and specialized software.


MapCalc Educational Materials



...designed for student PC use

- ✓ MapCalc for students Version 2
- ✓ MapCalc applications/exercises
- ✓ Surfer Tutorial Version 7
- ✓ Surfer tutorial exercises
- ✓ Concepts in GIS slide set (gCON)
- ✓ Map Analysis text
- ✓ Precision Farming text
- ✓ Single seat educational license

US\$21.95



...designed for computer lab use

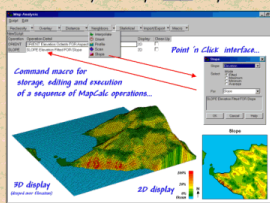
- ✓ Multi-Seat educational license for all of the Student version materials, plus...
- ✓ Materials for one-day workshop on grid-based map analysis
- ✓ Materials for introductory course on GIS modeling
- ✓ PowerPoint lecture sets
- ✓ Lab exercises in surface modeling, spatial statistics and map analysis

US\$495

"GIS Modeling is as different as it is similar to traditional mapping and spatial database management."

The **MapCalc** system includes capabilities for...

- ✓ Windows/NT/2000
- ✓ Advanced Spatial Statistics and Map Analysis operations
- ✓ Interactive 2D & 3D display
- ✓ Import/Export for leading desktop GIS systems
- ✓ Point 'n Click user interface
- ✓ Command Macro builder
- ✓ Advanced capabilities yet VERY easy to use...



...materials developed by Joseph K. Perry, author of Beyond Mapping & Spatial Reasoning with over 20 years of GIS teaching experience

...stop by the Red Hen Systems booth for information and a demonstration of the MapCalc educational materials for students and instructors, or visit our website at

www.redhensystems.com

Student Tutorial Version (CD) with MapCalc and Surfer* Tutorial systems, Exercises/databases, application demos and text; 100x100 configuration; single seat license for educational use only; US\$21.95 plus shipping.

Instructor Version (CD) with all of the above plus lecture PowerPoint's, additional exercises, one-day workshop and full introductory course materials; multiple seat license for single computer lab; educational use only; US\$495.00 plus shipping.

**Surfer is a popular surface-modeling package by Golden Software, Inc. It is bundled with the educational versions of MapCalc and provides complementary exercises in spatial interpolation and graphical presentation of surface maps. For more information on Surfer, link to <http://www.goldensoftware.com/frames/surferframe.htm>*



An *evaluation copy of MapCalc* is available for download at...
<http://www.redhensystems.com/>