

## SuperGIS Spatial Analyst 2.0

### Specification Description

#### Spatial polygon analysis

- Distance function is supported, and it contains the following analyses:
  - ❖ Straight line analyst: Contains three types of calculation methods, straight distance, allocation and direction.
  - ❖ Cost weight analyst: Can generate cost distance chart, cost back link chart and cost allocation chart.
  - ❖ Shortest path analyst
  - ❖ Corridor analyst
- Density function is supported, which is performed using either Simple or Kernel.
- Interpolation is supported, which includes Inverse Distance Weighted (IDW) and trend, allowing users to use the sample point data to estimate the data for a continuous surface.

#### Terrain analysis

- Viewshed function is supported, allowing users to analyze by importing a known point or and selecting a point on the map by mouse.
- Slope analysis is supported, where the display methods include degree, radian and percentage.
- Aspect analysis is supported.
- Curve analysis is supported, providing three analysis methods: Normal, Profile and Plan.
- Isopleth analysis is supported.
- Cut/Fill analysis is supported.
- Hillshade analysis is supported, allowing users to set up the azimuth and altitude.
- Cross Section illustration is supported.

#### Image data statistics and processing

- Re-sampling of raster layers is supported. It provides three sampling methods: Nearest Neighbor, Bilinear and Cubic.
- Ten statistics are provided for Cell Statistics, Zonal Statistics and

Neighborhood Statistics: majority, minority, maximum, minimum, average, median, standard deviation, range, sum and variance.

- When using the Neighborhood Statistics, users can use rectangle, circle, annulus and wedge-shapes to select neighborhood extent.
- A calculator function is provided, allowing users to compile statistics on the raster data for logical and mathematical calculations.
- Users can perform image combination using the calculator function to obtain the results of image clipping.
- Raster to Vector data conversion is supported.
- Vector to Raster data conversion is supported.
- Image filter function is provided. It has many functions, including low-frequency filter, high-frequency filter, linear probing, edge enhancement, and so on.
- Image Reclassify function is supported.
- Legend settings for raster data are supported.
- Mask setting for raster data is supported.

#### Raster data toolset

- Enables users to create raster data from point, polyline, polygon vector layers by four methods: constant, normal, random and text.
- Conversion of raster data to text files is supported.
- Various analysts are provided in the Toolset :
  - ❖ Distance Analyst
  - ❖ Conditional Analyst
  - ❖ Extract Analyst
  - ❖ Local Analyst
  - ❖ Neighborhood Analyst
  - ❖ Zonal Analyst
  - ❖ Generalize Analyst
  - ❖ Math Calculate

#### Support file format

- Vector files in GEO (SuperGeo GEO Format) and Shapefile formats are supported.
- Raster data in LAN and GeoTiff formats are supported.

### User interface and environment

- Can only be used on the Desktop SuperGIS platform.
- In accordance to the extensions of SuperGIS COM structure.
- User interface available in both Chinese and English.
- Complete Chinese and English user manuals.

### System requirements

- CPU: Pentium II 266 or above
- RAM: 256MB or above
- Operating system: Windows 2000/Windows XP/Windows 2003 /Windows Vista