# SuperGIS Desktop Quick Start Help

# 1

# Installation Guide

This chapter tells you how to authorize and start your SuperGIS Desktop 10.

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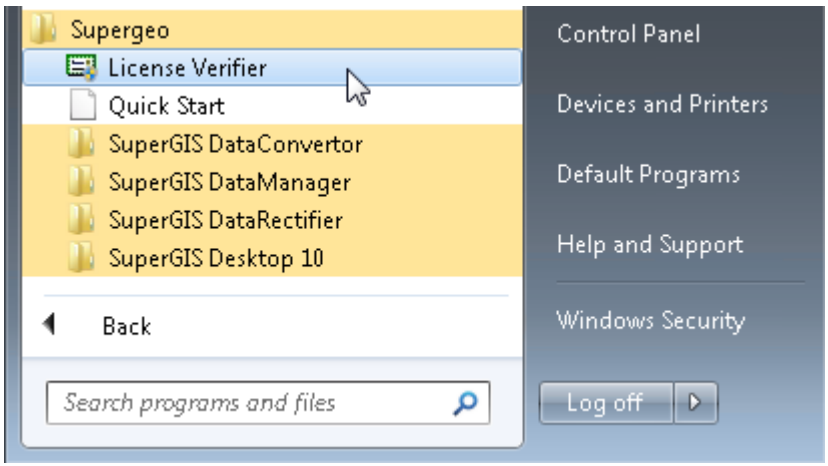
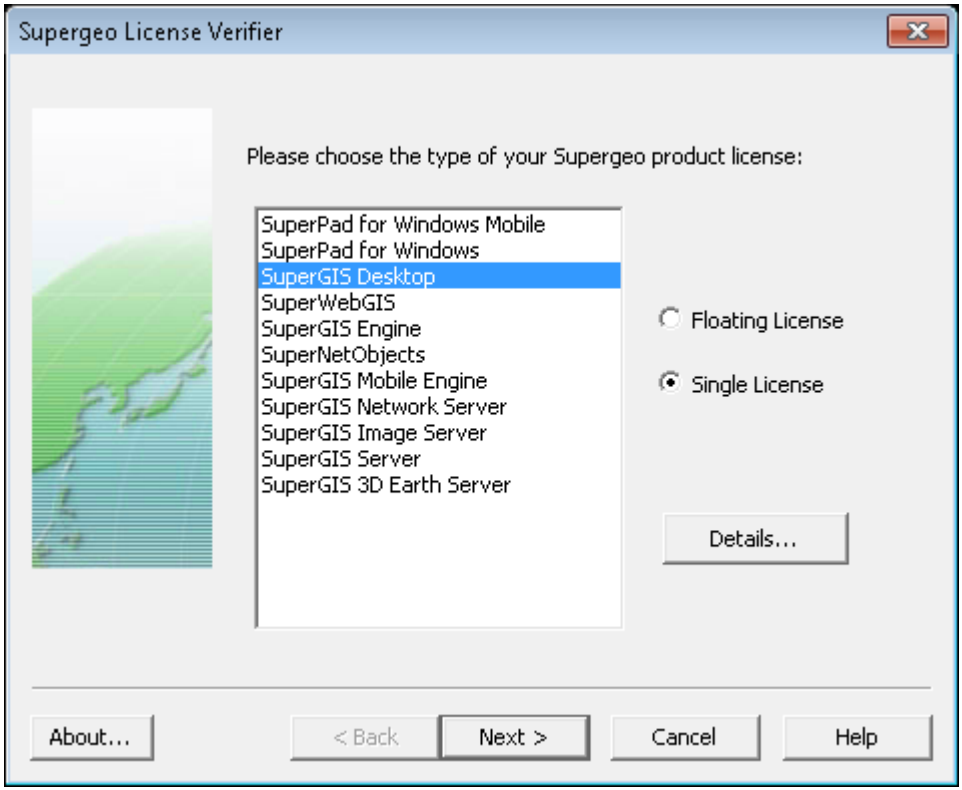
## 1.1 Authorizing

To open **Supergeo License Verifier** dialog, click **Start** > **Programs** > **Supergeo** > **License Verifier**.




In **Supergeo License Verifier** dialog, select **SuperGIS Desktop 10** and **Single License**, and click **Next**.




Choose the item "**Input serial number to get license file from Supergeo**", enter the serial number in the edit box and click **Finish**. The license will be authorized successfully while **"Receiving license file succeeded"** dialog box shows up.

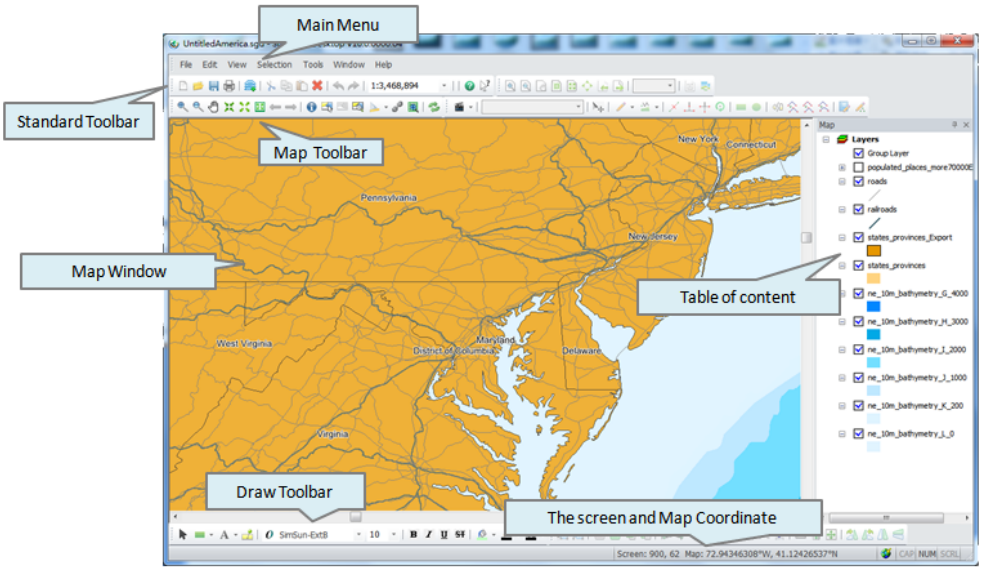
**NOTE**: To see more information of license authorization, please view the **Installation Guide** within **Documents** in the installation CD. If you choose to license SuperGIS Desktop with USB License Key, please refer to the **USB License Key** tab within the **Documents** in the installation CD.

# 2

# User Interface Guide

This chapter introduces the user interface of SuperGIS Desktop 10 and tells you how to modify the interface to an appropriate one.

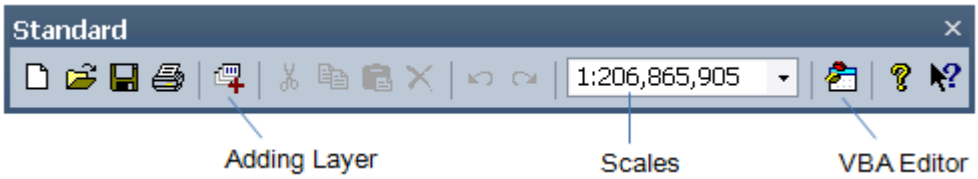
## 2.2 User Interface Guide



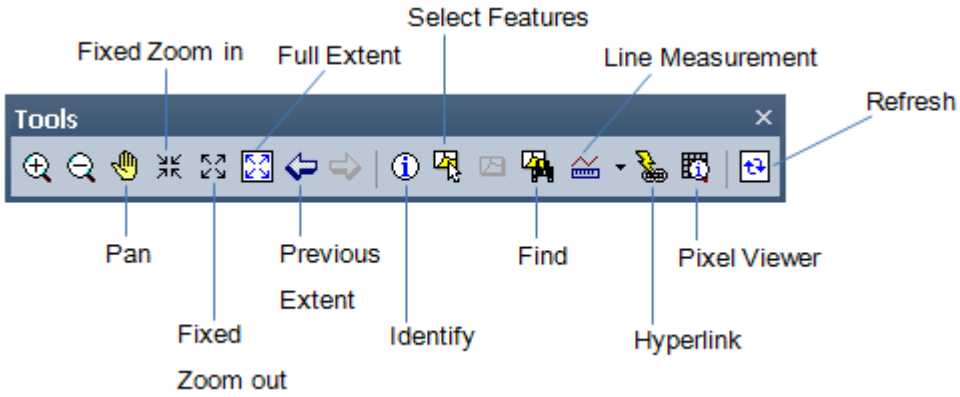

## 2.3 Commonly Used Toolbar

Commonly used toolbars are introduced in this section.

**Standard Toolbar**: The toolbar used to manage files and the main window. With Standard Toolbar, users can open and save files, add new layer and set scales.




**Map Toolbar**: provides tools for map browsing. For instance, there are "Zoom in/out" tools for browsing and "Find" tool can query attribute data so users have better understanding about the spatial data.




**NOTE**: To know more toolbars, please refer to **Commonly Used Toolbar** section of **Overview of SuperGIS Desktop** chapter in SuperGIS Desktop 10 User Guide.

## 2.4 Context Help

To know how a tool works, please click on the Standard Toolbar, move the mouse cursor ( ) to the tool and click the tool. You will see a description of the tool showing on the screen.

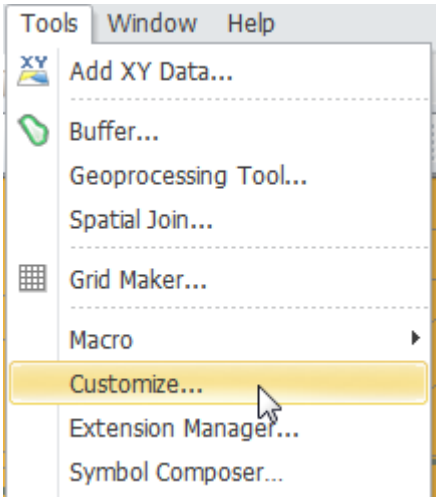
**NOTE**: To know more tools, please refer to **Context Help** section of **Overview of SuperGIS Desktop** chapter in SuperGIS Desktop 10 User Guide.

## 2.5 Customize

### Open Customize Dialog Box

Users can modify user interface and the window of SuperGIS Desktop 10 flexibly. To do so, please click Tools on the Standard Toolbar > **Customize** to open customize dialog box. Function tabs on the customize dialog box include **Commands**, **Toolbars**, **Keyboard**, **Options**, **Buttons**, **Scale List**, **Local** and **Lock**. In the following paragraph, Scale List and Locale tabs will be elaborated. To know more

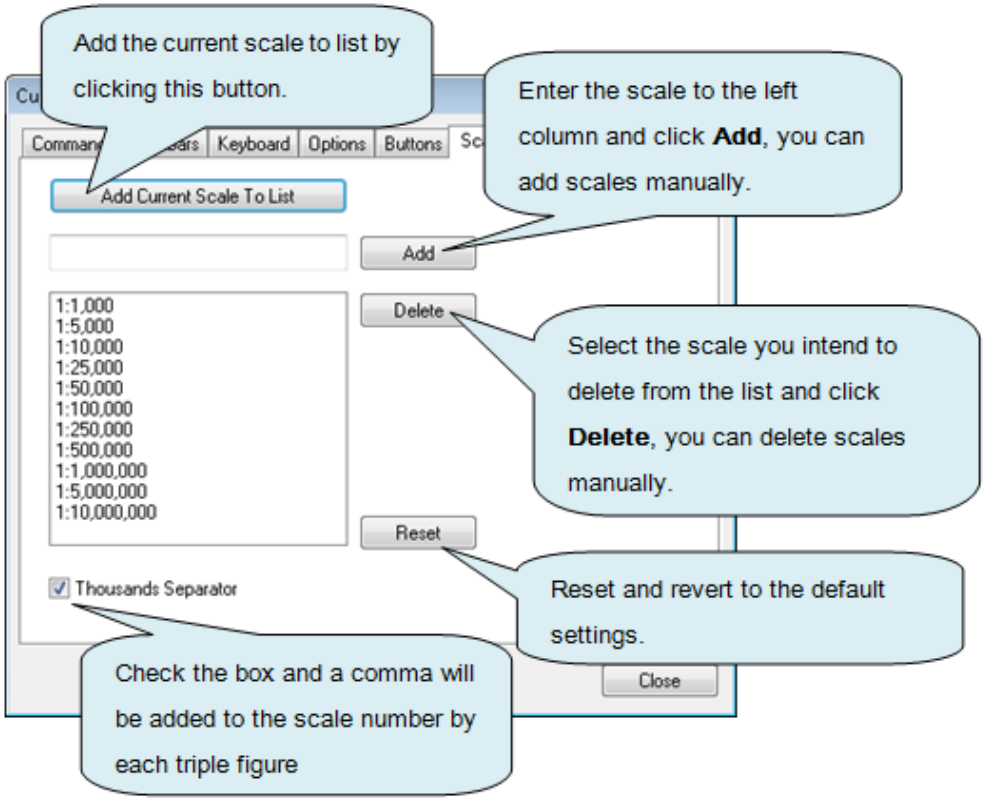
details, please refer to **Customizing SuperGIS Desktop 10** chapter in SuperGIS Desktop 10 User Guide.




▲ Utilize customization functions to meet your requirements.

## Customize Scale List

**Scale** drop-down menu on the standard toolbar shows the current scales and other built-in scales that are used to view the map at different scales. If you need more scales, you can open **Customize** dialog box and add the scale you want to the scale list after switching to **Scale List** tab, and click **Close** after finishing all the configuration.




## 2.6 Locale

SuperGIS Desktop 10 provides multiple-language user interface. To configure locales, please open **Customize** dialog box and select the locale within **Locale** tab. After finishing the configuration, please click **Close**, and all the configuration saved. To manipulate SuperGIS Desktop 10 with the selected locale, please restart SuperGIS Desktop while you see the message **"You must restart the program to make the change of language take effect**."

**NOTE**: To know more elaborations, please refer to **Customizing SuperGIS Desktop 10** chapter in SuperGIS Desktop 10 User Guide.

# 2 User Interface Guide

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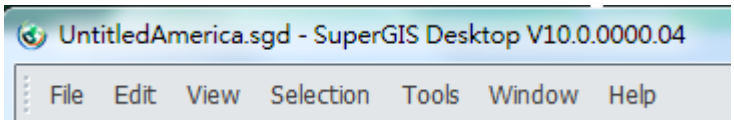
## 2.1 Main Menu




**File**: File saving and opening, map printing and exporting, and SuperGIS Desktop 10 closing, etc.

**Edit**: Map feature editing and finding, layer adding and map screen printing.

**View**: Map view and layout view switching, spatial bookmark settings, toolbar settings and the SuperGIS Desktop 10 interface settings.

**Tools**: SuperGIS Desktop 10 analysis tools utilizing, including Charts, Add XY data, Grid Maker, Geoprocessing Tool and Buffer.

**Selection**: Feature selection tools and selection settings.

**Window**: Overview, Magnifier and Viewer functions are included. Data Content displaying or hiding.

**Help**: Online manual, user guide and version information of SuperGIS Desktop 10.

# 3

# Create and Visualize a Map

SuperGIS Desktop 10 enables users to add spatial data and create maps. In this way, spatial data can be displayed in a visualized way, experts from diverse domains can comprehend these data more easily and have more effective communication with each other.

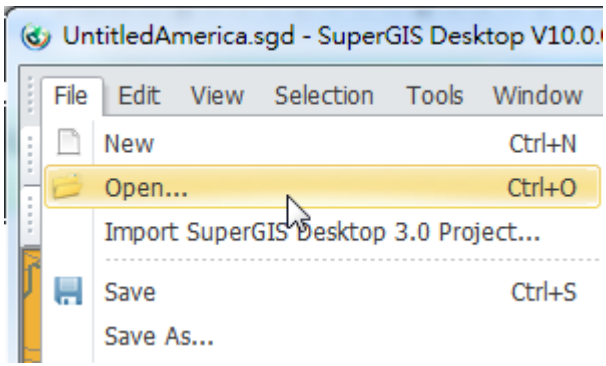
# 3 Create and Visualize a Map

SuperGIS Desktop 10 enables users to add spatial data and create maps. In this way, spatial data can be displayed in a visualized way, experts from diverse domains can comprehend these data more easily and have more effective communication with each other.



## 3.1 Open a Project

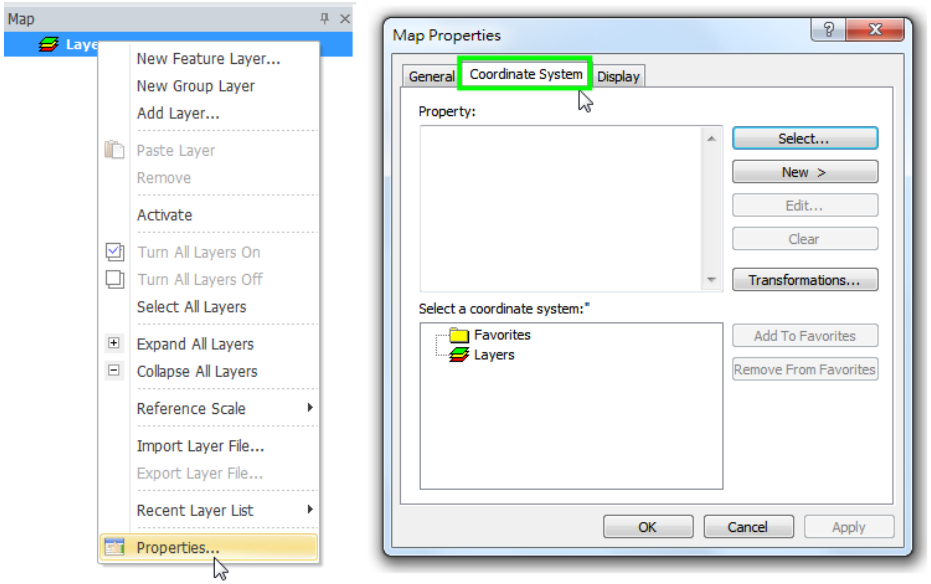
After starting your SuperGIS Desktop 10, you can click **File** > **Open** to select the project you intend to open on SuperGIS Desktop according to the file path.




### Configure Coordinate

If you need to start with a new project, we suggest that you configure the coordinate system of layer set before adding layers. In this way, layers employing different layers can be overlaid and displayed on map exactly, and the default map coordinates would be configured as **Unknown**. If no coordinate system is defined in advance, the one of the first layer using coordinate system will be specified as the coordinate system of

layer set. To set coordinate system, please right click on the layers, select **Properties** and switch to **Coordinate System** tab.



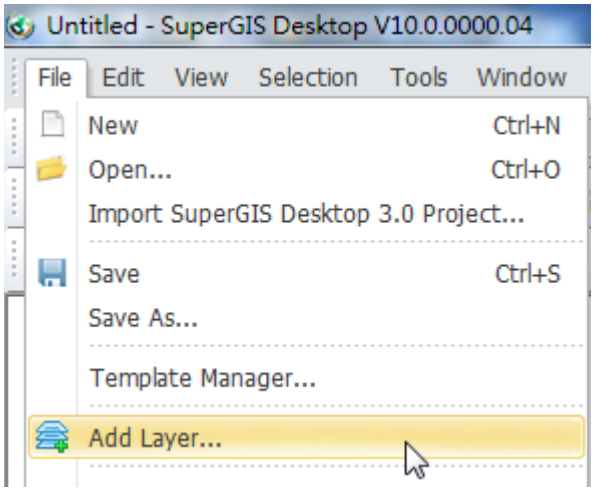

You can specify coordinate system by selecting any one on the list or adding a new one or the current coordinate system. It happens all the time that users neglect to define coordinate system in advance. However, the inappropriate cofiguration of coordinate system causes errors to display and analyze spatial data. Therefore, we suggest that users define coordinate system ahead of time to avoied causing errors of map displaying and data analyzation.

**NOTE**: To see more elaborations of coordinate system configurations, geographical projections and projected coordinate systems, please refer to **Setting Coordinate System** section in **SuperGIS Desktop 10 User Guide**.

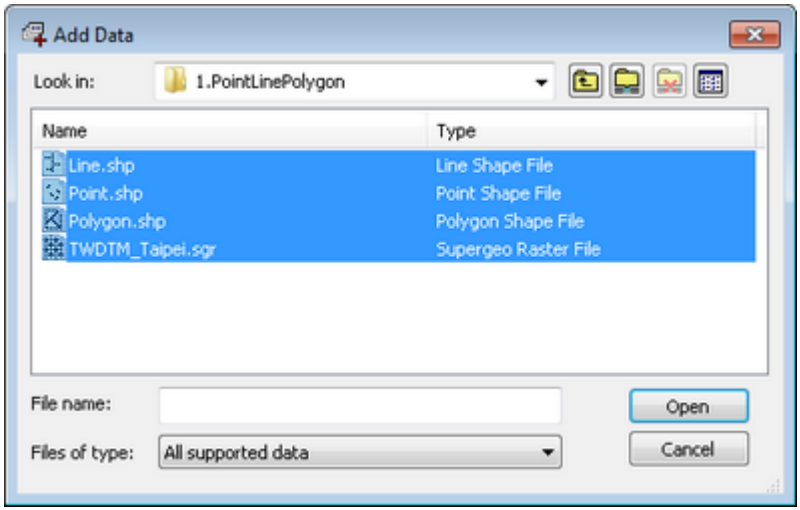
## Add Layers and Tables

Spatial information describes the physical locations and distributions of objects and objects' properties. While using SuperGIS Desktop 10, users can add feature layers, raster layers and XLS file in Excel format by clicking  . To do so, please click **File**

> **Add Layer**, or click on **Standard Toolbar** directly to open **Add Layer** dialog box.




In **Add Data** dialog box, users can select a single or multiple files at the same time, and the selected layers will be displayed on map subsequently after users clicking the **Open** button.

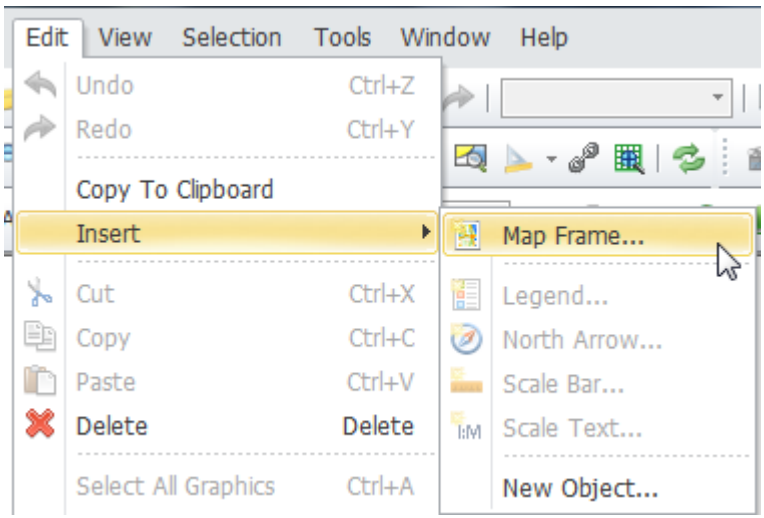


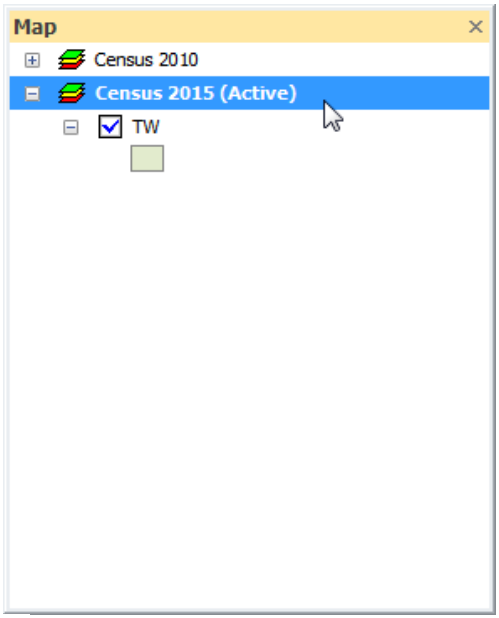
## Add A Layers

To enrich map information, SuperGIS Desktop 10 supports each map to contain multiple layers. In layout view, the contents of multiple map frames can be shown together so that a map presents the map data of several areas at different scales.

SuperGIS Desktop 10 supports multi-frame. Each map frame works independently, having extent, scale and layers of its own. Besides, the different map frames can be dynamically switched.

Users can click **Edit** > **Insert** > **Map Frame** to add a new layers in Data Content. Each icon represent different layers. If you see two icons, it means that there are two layers in Data Content.






▲Besides, users can right click on any layers to configure the selected layers as the activate one.

And the manipulations of layers remain the same for users to use new layers. To add layer into layers, please click  icon.

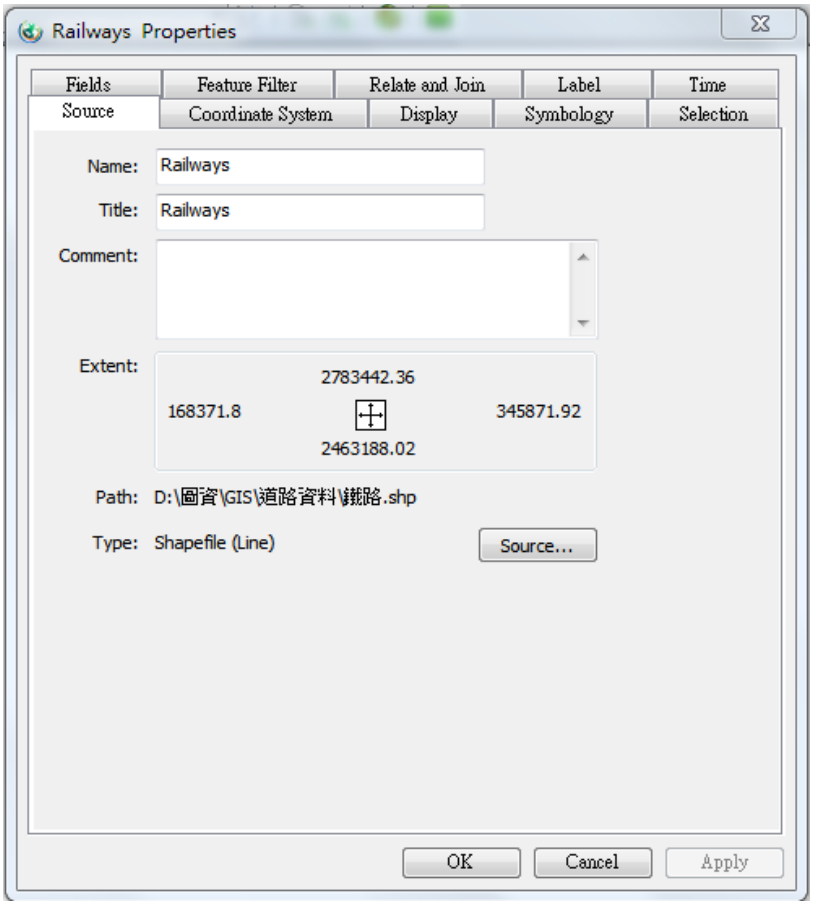
**NOTE**: In addition to feature layer and raster layer, SuperGIS Desktop 10 also supports to add image pyramids layers. To see more and elaborate layer settings, please refer to chapter Setting and Managing Layers in **SuperGIS Desktop 10 User Guide**.

## 3.2 Manage Layers

This section mainly presents how to set and edit each layer and how to manage the layers. In Data Content, sequence of layers represent represents the order in which they are displayed on map. To reorder the layers, please drag or double-click the layers. To remove the layers, please right-click on the layer in Data Content and select **Remove** in its drop-down menu. Users can configure layer properties through tabs within “the layer” Properties dialog box. Please refer to the following paragraphs:

## Layer Properties Dialog Box

To open layer properties dialog box, please right-click on the layer name in Data Content and click **Properties**…




There are many tabs in the Layer Properties window, each tab is used to configure specific property of the layer. Take feature layer for example. Names and functions of the tabs within Layer Properties window are:

| Tab Name | Tab Function |
|---|---|
| Source | Set layer name and its path, and add comments. |

| | |
|---|---|
| Coordinate System | Select, create, and edit the coordinate system. |
| Display | Set display of the layer, including Visible Scale, Reference Scale, showing Map Tip or not, Transparency, etc. |
| Symbology | The classifications of data in the layer, used to set Symbol Type, Symbol Source Field, Symbol Color, etc. |
| Selection | Enable features to be selectable or not, and specify style for the selected symbol. |
| Fields | Show fields and set hyperlinks of the layer. |
| Feature Filter | Allow users to create query expression and decide whether to display the filtered features on the map. |
| Relate and Join | Set how the attribute table is related or joined with other attribute table |
| Label | Set the display of the labels, such as to show or not to show labels, to specify which field content as text label, to set font and color of the text symbol. |

**NOTE**: Properties of raster layer is different to what of feature layer. The example here introduce properties of feature layer only.

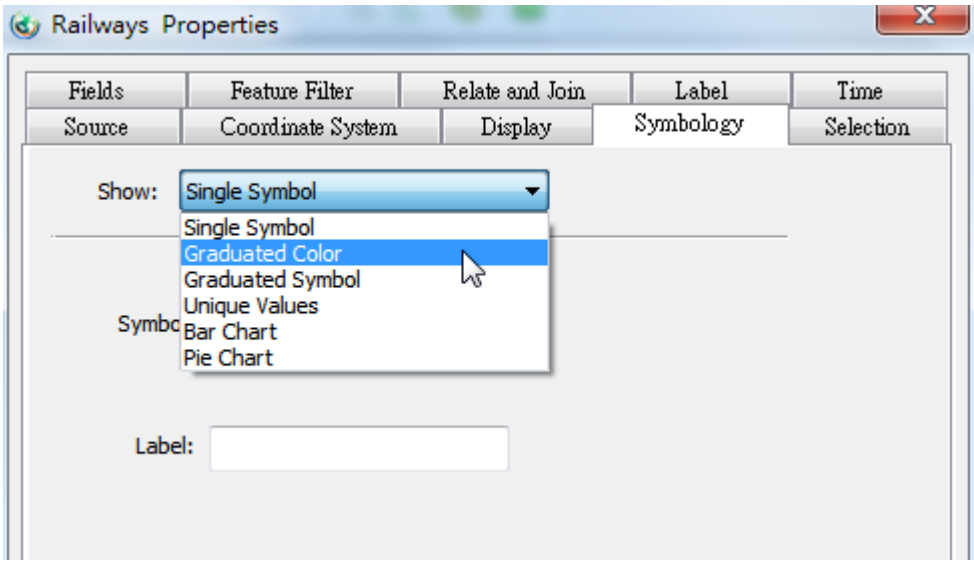
## Configure Symbology

Appropriate symbology benefit map intelligibility and readers' willingness to read the map. With SuperGIS Desktop 10, you can choose different symbols or colors to enrich your map.

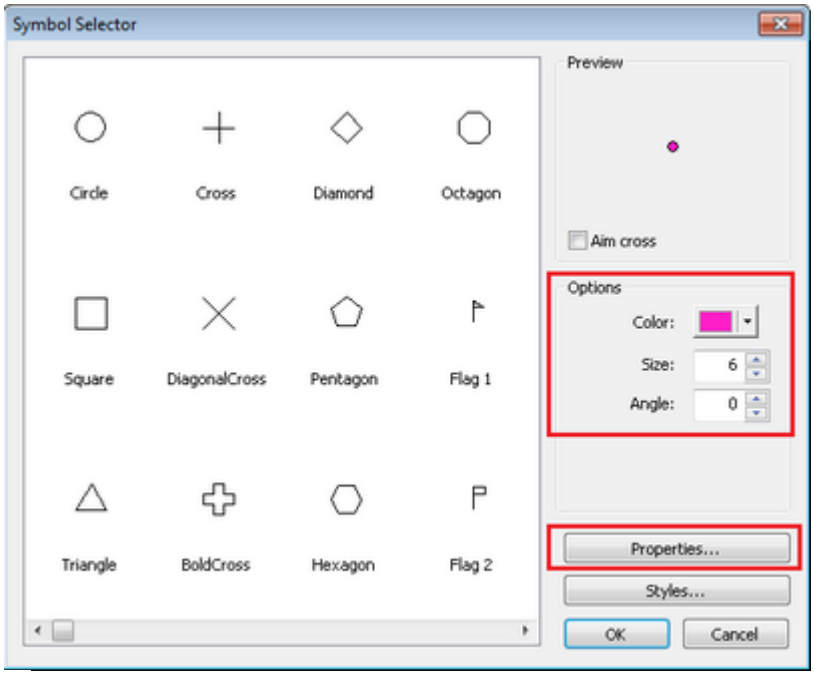

- Configure Symbol and Color of Symbology 23
- Symbol Composer 24

### Configure Symbol and Color of Symbology

Users can choose diverse presentations of symbols in the layer properties dialog box. SuperGIS Desktop 10 supports various presentations of symbols, including Single symbol, Graduated Color, Graduated Symbol, Unique Values, Dot Density, Bar Chart, Pie Chart and Gradient Color. Each type of layer can be appropriately presented with specific presentation of symbol. For example, Graduated Color can be employed on polygon layer to present properties of different area, Graduated Symbol can be employed on point layer to accentuate differences among features, and Bar Chart can be employed to present data with multiple properties. By utilizing different presentations of symbols, the data properties can be presented on GIS more utterly.




SuperGIS Desktop 10, equipping with diverse built-in symbols and symbol colors, supports users to select symbol and modify symbol color and size. To modify symbols, please click on the layer symbol in Data Content, switch to **Symbology** tab to select presentation of the symbol and modify symbol color and size. To set advanced configuration of the symbol, please click **Properties...** in **Symbol Selector** dialog box.




▲In **Symbol Selector** dialog box, users can modify symbol outline and the outline color.

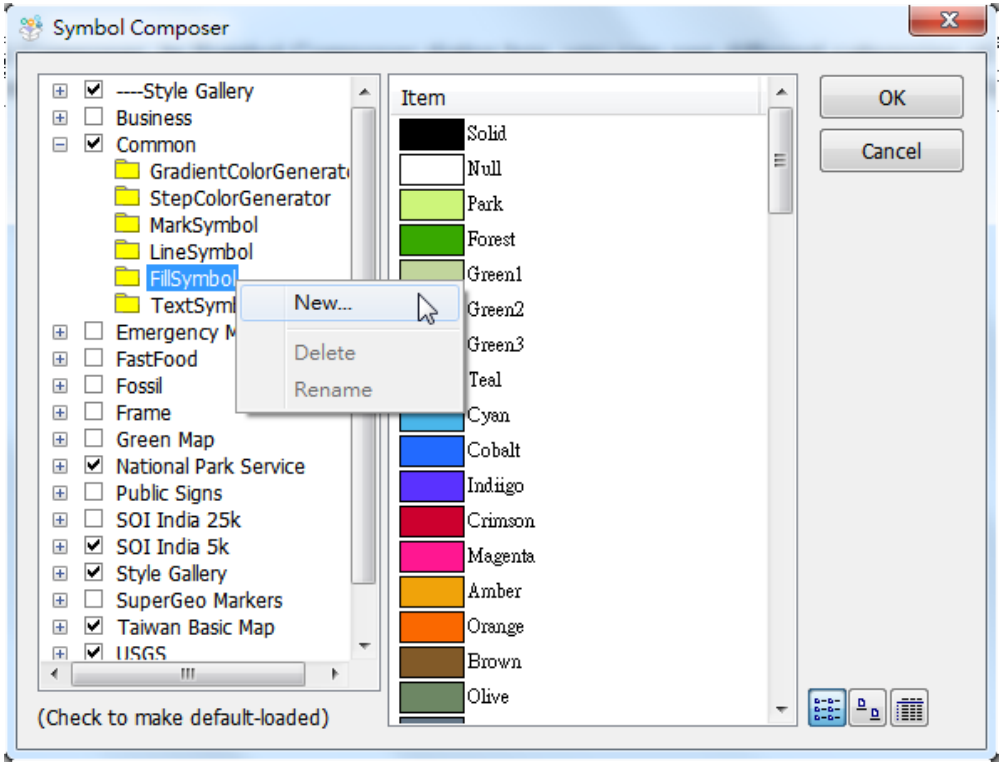
To know more configurations on layer symbols, please refer to paragraph **Setting Symbology** in SuperGIS Desktop 10 User Guide.

### Symbol Composer

Add New Symbols

In addition to **Symbology** tab, **Display** tab within the layer properties enables users to configure layer transparency, Contrast and Brightness. Besides, users can also utilize **Symbol Composer** to create exclusive symbols or add, modify, rename, delete the existing symbols and gradient colors. Users can follow the step below to open and use **Symbol Composer**:

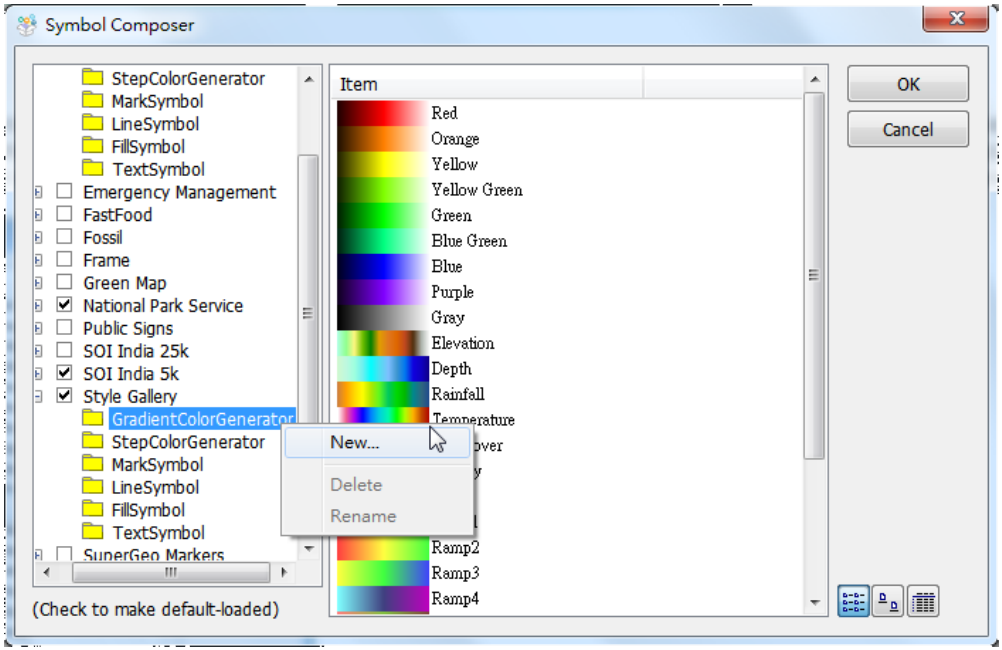
Click **Tools** in main menu > **Symbol Composer** to open Symbol Composer. In Symbol Composer dialog box, you can see different categories of symbols. Commonly used symbols are in files contained within the categories with check mark. Each file is sorted by its type like point, line, and polygon and so on. Right-clicking on any file enables users to add new symbol in it.



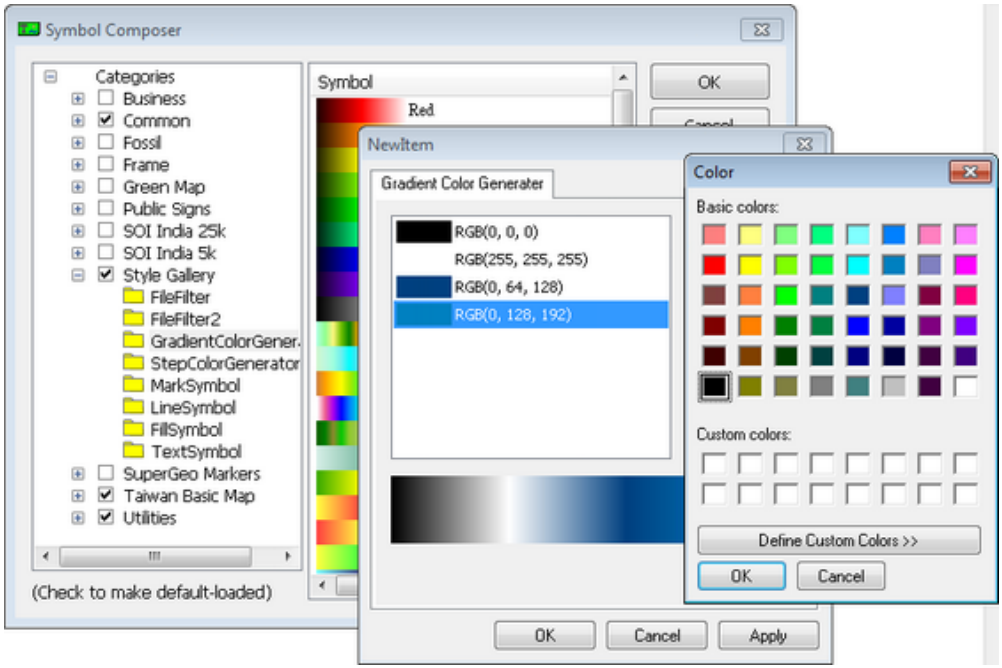

▲ Add a new symbol in file FillSymbol

Add Gradient Color

With **Symbology** tab in the lay properties dialog box, users can configure Stretched Color and Graduated Color for color combination of the layer. In addition to the diverse graduated colors and stretched color built in Symbol Composer, users can add new gradient colors through Symbol Composer. To do so, please select Gradient Color Generator file, right-click on **Gradient Color Generator** and click New > Gradient Color Generator to configure the new item.




In **NewItem** dialog box, users can click  to add color, reorder the sequence of colors by  and  , and delete the selected color by  . Clicking **OK**, all the configurations will be accomplished.

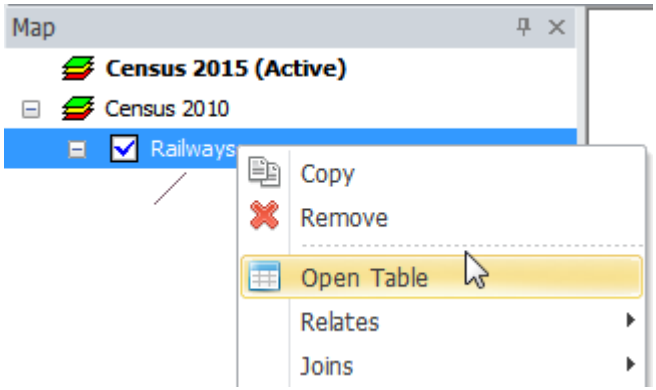



▲ Add new color(s) into the gradient color list.

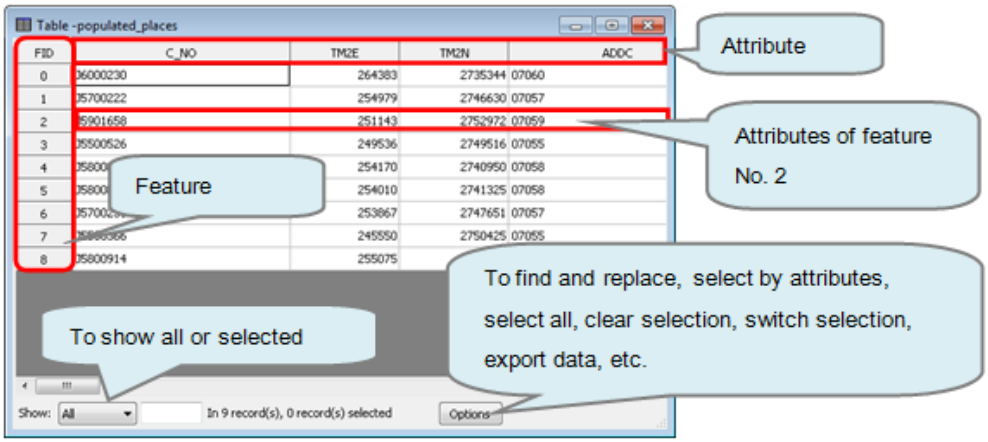
In addition to adding new symbols, users can also modify symbol size in Symbol Composer. SuperGIS Desktop 10 supports both graduated colors and stretched colors. To know more relevant content, please refer to chapter **Symbol Composer** in SuperGIS Desktop 10 User Guide.

## 3.3 Manage Layer Attributes

Each feature contains relevant attributes recorded in attribute table of the layer. The attribute table of feature layer is designed as DBF for SuperGIS Desktop 10 users and can be opened with Excel by dragging. To view attribute table on SuperGIS Desktop 10, please right-click on the layer name listed in Data Content and select **Open Table**.

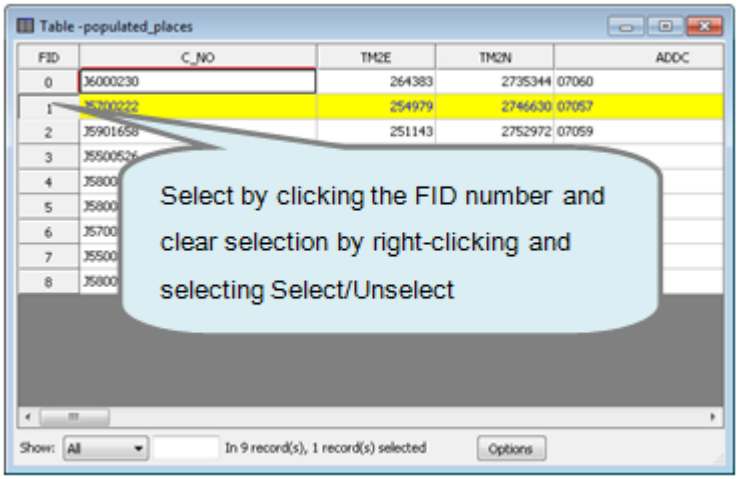



Users can view field content of the feature after opening the attribute table. Please refer to the picture below for elaborations of attribute table:




## Select Specific Feature

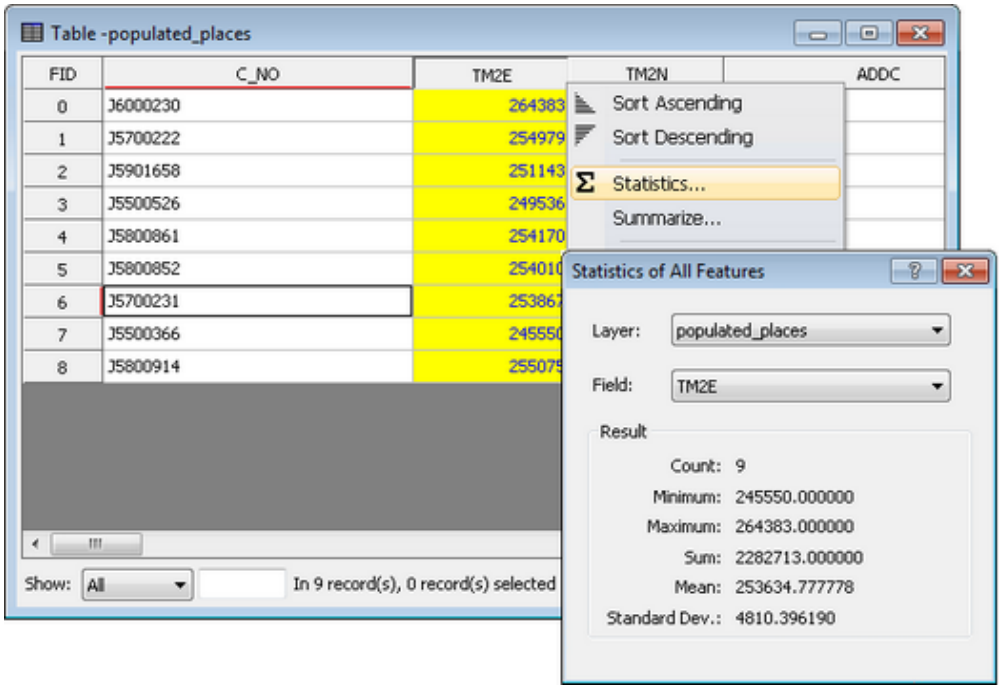
Users can select the specific feature by selecting its attributes. After selecting attributes od the feature, users can view the corresponding feature on map.




Besides, features can be selected through spatial query. To see more elaborations, please refer to section **Selecting Features** within chapter **Querying Map** in SuperGIS Desktop 10 User Guide.

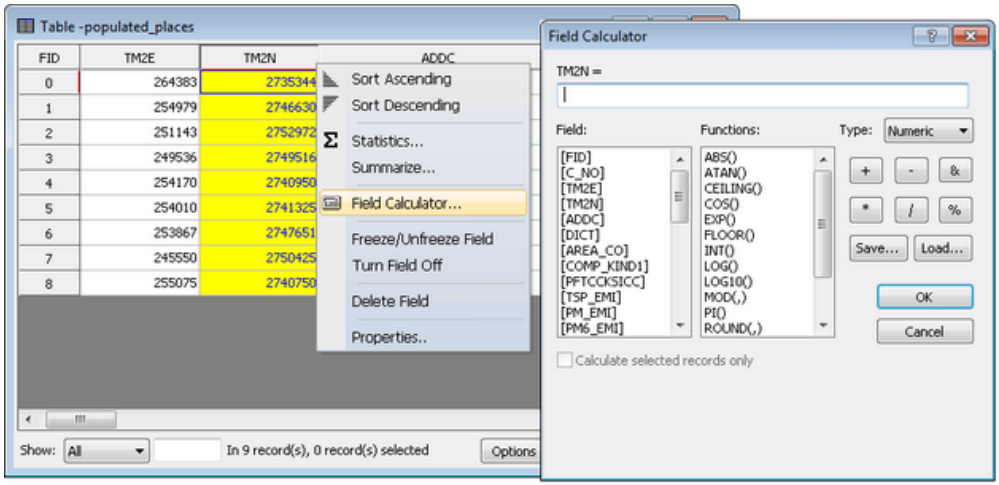
## Statistics of Attributes

Right-click on the field name and click **Statistics...** to open Statistics of All Features dialog, you can view the staitistics result including Count (counts of features), Minimum, Maximum, Sum, Mean abd Standard Deviation.




## Field Statistics

Field Calculator enables users to do calculation of a certain attribute. For example, you can calculate population density of a city through **Field Calculator** with data of population and the city area. To use field calculator, please right-click on the field name and click Field Calculator. SuperGIS Desktop 10 provides users with various mathematic functions.




**NOTE**: SuperGIS Desktop 10 also provides diverse functions for users to manage attributes flexibly, such as Freeze/Unfreeze Panes in Excel, Filter by attribute categories, etc. To know more on attributes management, please refer to chapter **Managing Attributes** in SuperGIS Desktop 10 User Guide.

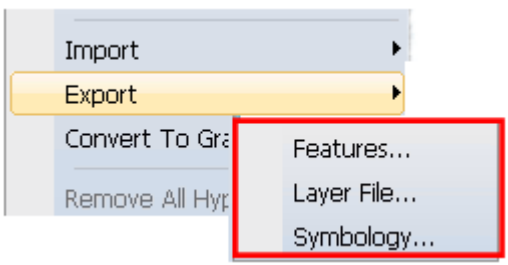
## 3.4 Export Spatial Data

With SuperGIS Desktop 10, users can export the configured layer as a new layer or export the configured attributes as attribute table. The following paragraph introduces how to export layer and its attribute table.



### Export Layer File

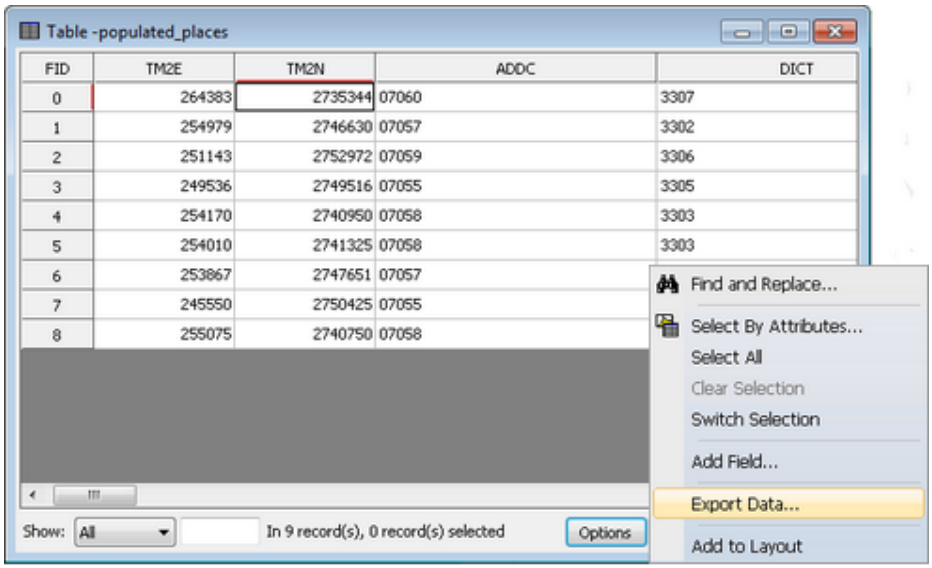
please reight-click on the layer name and click **Export**. Subsequently, you can choose to export features, layer file or symbology. If you export layer file, all the settings of the layer like scales, symbols, colors and so forth will be kept in existance. It means that all the settings of the layer will be maintained



while you import the layer file. On the contrast, if you choose to export features, layer symbols and colors will be adjused by SuperGIS Desktop 10 at random, and the layer scales will be modified according to settings of the new project, too.

## Export Attribute Table

SuperGIS Desktop 10 also supports to export attribute data in DBF or TXT. To do so, please open the attribute table ,click **Options** and **Export Data**. And you can export data after specifying its format and storage folder.




**NOTE**: This paragraph introduces how to export feature layer and its attribute table only. But SuperGIS Desktop 10 supports to import/export raster layer and its attributes as well. To know the differences of importing/exporting between feature layer and raster layer, please refer to paragraph **Exporting Image Layer** in SuperGIS Desktop 10 User Guide.

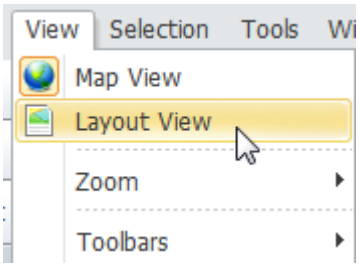
# 3.5 Export the Map

Before exporting the map, you are supposed to modify feature sequences and specify the presentation of the features. Section 3.5 will tell you how to modify configurations of exporting map in brief.

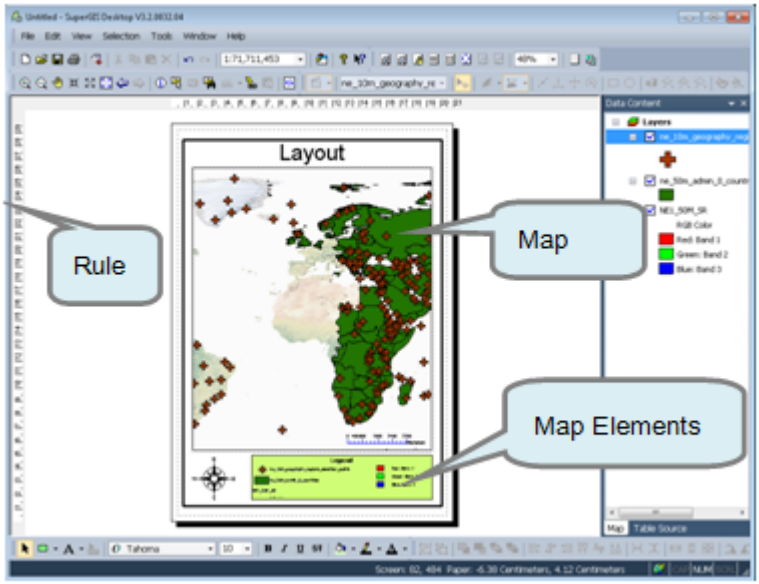


## Turn to Layout View

To edit the map layout, you should turn the map view to layout view. Please click **View** > **Layout View**.

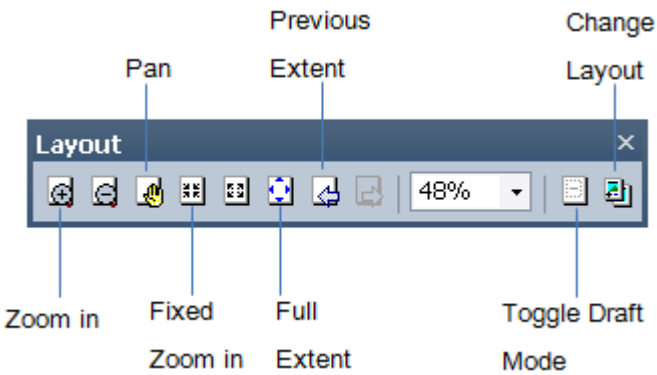


## Sample of The Map Layout




## Layout Tools

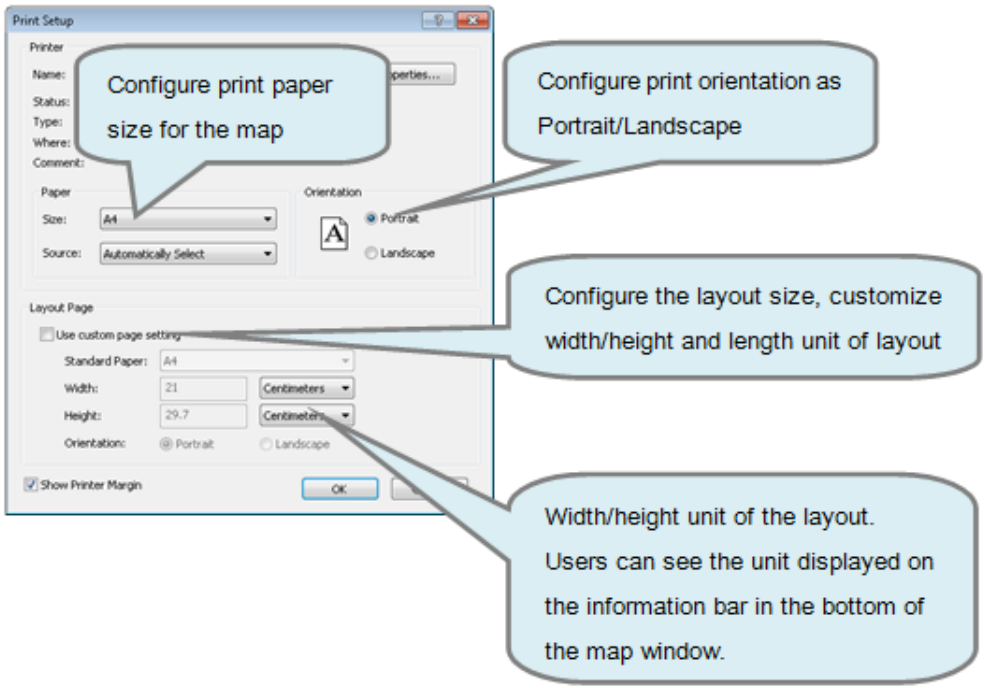
Layout tools work only in layout view window.



## Configure the Print Setup

### Print Setup

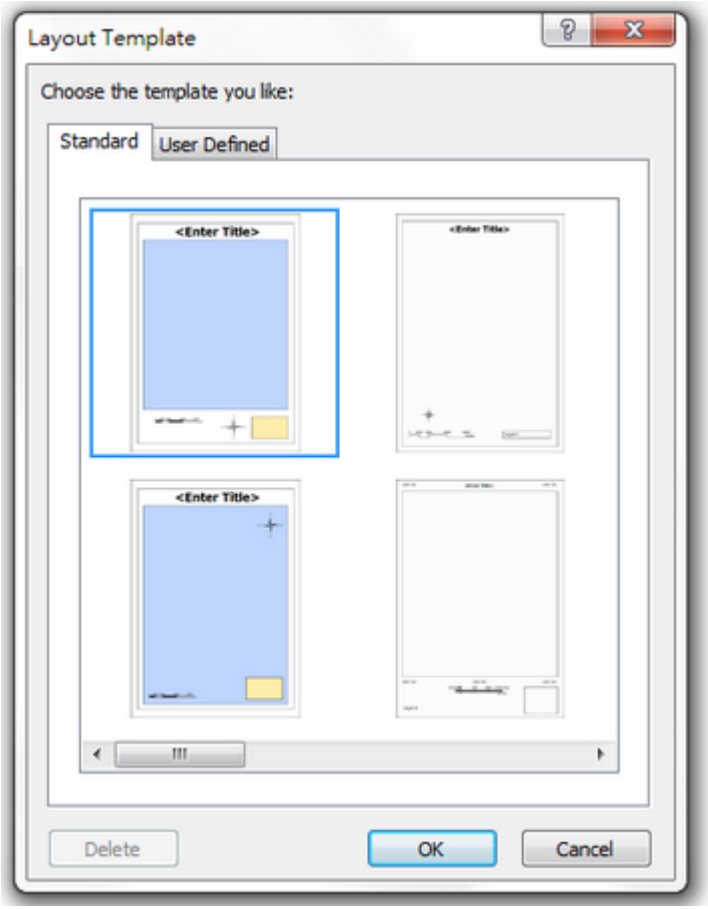
Before printing the map layout, users need to define the map format and size ahead of time. To do so, please click **File** > **Print Setup**, or right-click on the blank on the map window and click **Printer Setup** to open Print Setup dialog box and configure the print setup.




**NOTE**: Configurations of layout will be saved with the map in the project. Afterwards, users can open the project and print the map layout with the configurations.

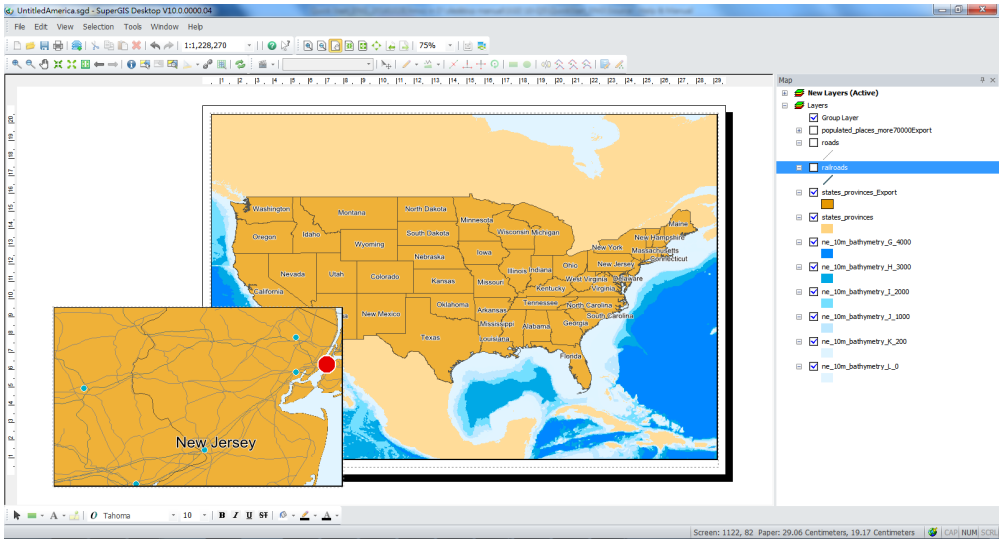
### Edit Layout Template

Users can click  on layout toolbar to choose the layout template built-in SuperGIS Desktop 10.



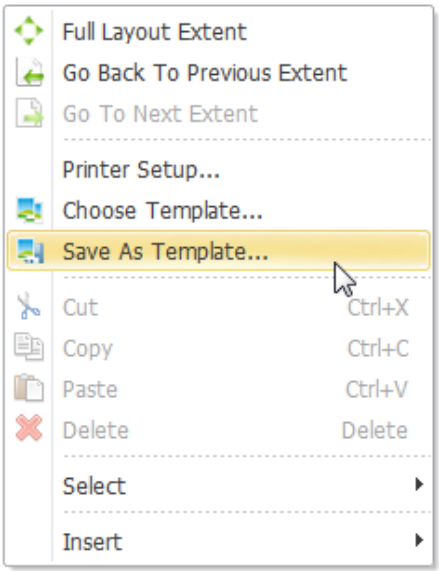

### Customize Layout Template: Map Frame

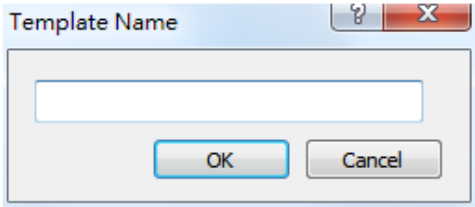
To display more map information on one map or show the spatial data of offshore islands additionally on map, you can configure a viewer window to enrich the map information. To do so, please insert map frame and add new layers ahead of time, and switch to the layout view. Subsequently, you can see two map frames in the map window. To pan map frame, please move the cursor to the target frame and drag the frame to the specified position.




## Save the User Defined Template

Users can define templates according to what they require and save the user defined template for subsequent usage. To save user defined template, please right-click on the blank in the map window, select **Save As Template** and enter the template name.




## Map Elements

Map elements reveal significant information of a map and assist readers in viewing and comprehending the map. General map elements include Map Title, Scale Bar, Scale Text, North Arrow and Legend. Follow steps below to add map elements:

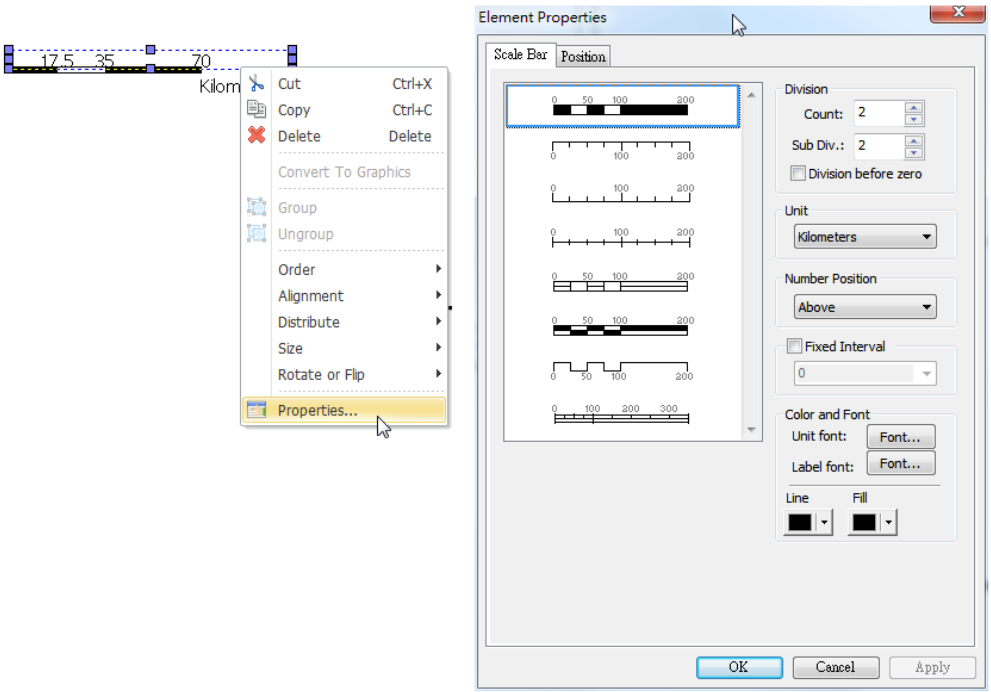


### Map Title

Users can utilize the **Select Graphics** tool (  ) on Drawing Toolbar to click a **text object** > **Properties** or double-click on the element to open **Element Properties** dialog box. In Element Properties dialog box, users can modify the text and position of the map layout title.

## Scale Bar

Scale bar on map assists users in comprehending the relation between the real distance of two points and the distance on a map, and also enables users to measure distance and area on map. To modify the scale bar, please utiilize the **Select Graphics** tool ( ) to double-click on the scale bar object, or right-click on the scale bar object and select **Properties...,** to open the **Element Properties** dialog box of the scale bar.

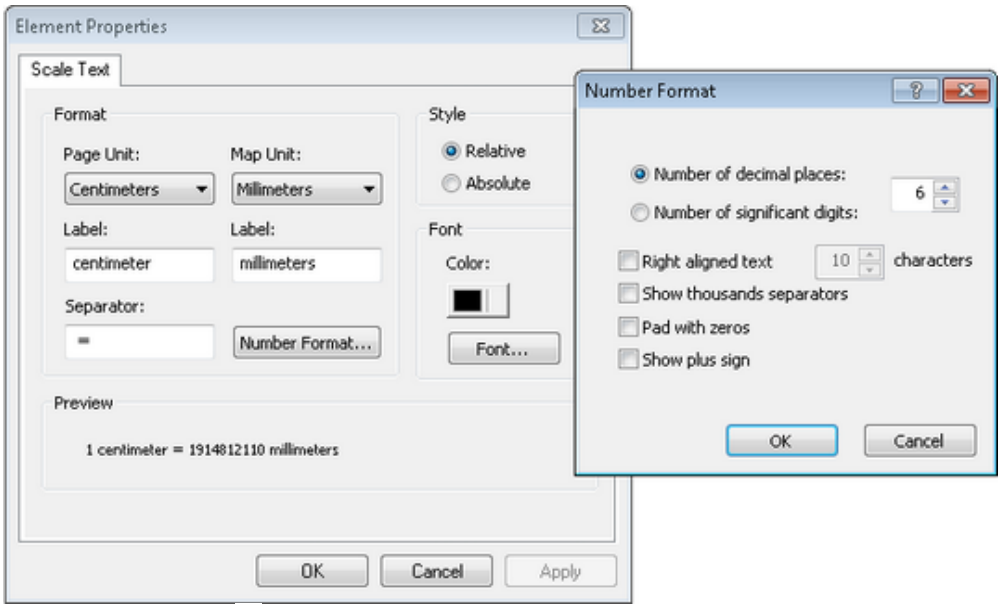



In the Element Properties dialog box, users can modify scale division. The scale division configuration is used to define units proportional to the map's scale, and the Sub Division configuration is used to divide the defined unit into another proportional unit. With scale division and sub division configuration, map readers can utilize map scales in different units to measure a distance or an area on a map. Besides, users can also modify the unit and the unit number position of the map's scale. The unit number can be placed above or below the scale bar.

**NOTE**: If the scale bar is deleted accidentally, you can right-click on blank in the map window and click **Insert** > **Scale Bar...** to insert a scale bar.

### Scale Text

Just like scale bar, scale text is used to show defined units proportional to the map's scale. To insert scale text, please click **Edit** > **Insert** > **Scale Text**, or right-click on **blank in the map window** > **Insert** > **Scale Text**.




▲ Edit Scale Text Properties

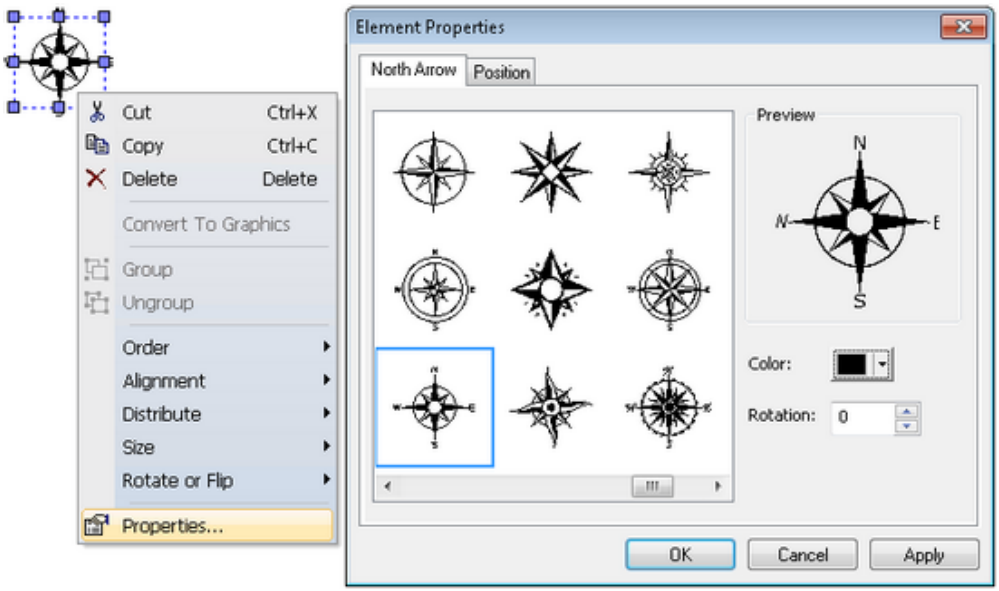
Users can choose to show scale text as **relative scales** or **absolute scales** in the Element Properties dialog box of scale text. Relative scales mode shows scale text with two different units (e.g., 1 centimeter = 100 meters.) Absolute scales mode shows scales text with the same units and separates scale texts with a colon (e.g., 1: 10000.) Users can modify the scale text format through **Format** configurations in Element Properties dialog box of Scale Text.

### North Arrow

SuperGIS Desktop 10 provides various built-in north arrows for users to edit the layout map.

To open Element Properties dialog box of north arrow, please utilize the **Select Graphics** tool ( ) to double-click on the north arrow object, or right-click on the

north arrow object and select **Properties...,** to open the **Element Properties** dialog box of the north arrow.




▲ Edit North Arrow Style

SuperGIS Desktop 10 provides users with various styles of north arrow in Element Properties dialog box of north arrow. Besides, users can change color of the north arrow through **Color** configuration and rotate the north arrow through selecting rotation value or entering the rotation value by **Rotation** configuration. Users can see the defined north arrow with selected style, color and configured rotation value in **Preview**. To accomplish north arrow configuration, please click **OK**.

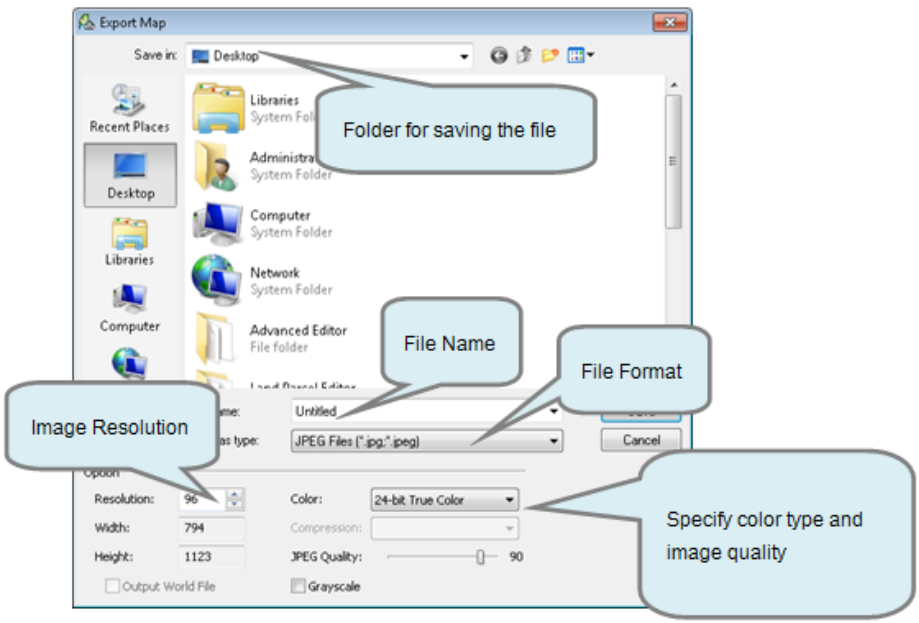
### Legend

Legend is a map element in layout view. The **Element Properties** dialog box of legend is used to configure and edit the legend on map layout. Through configurations within Element Properties dialog box of legend, users can determine whether to show title and content of the legend, which layers to be displayed as legends and legend styles. To open the Element Properties dialog box of a new legend and insert a new legend simultaneously, please right-click on blank in the **layout map window** > **Insert** > **Legend**. To open the Element Properties dialog box of an existing legend, please double-click on the target legend.

With the Element Properties dialog box, you can edit legend title, legend layers, legend background and spacing configurations including title/items, columns, layers, etc. The Background configuration enables users to change legend background by clicking the background icon and selecting background style in Symbol Selector dialog box.

## Export Map and Configure the Map Quality

After all the configuration of the layougt are accomplished, users can export the map as map file. To do so, please click **File** > **Export Map** to open Export Map dialog box to specify the file type, image resolution (pixel), file quality and format.



# 4

# File Management

Sources of spatial information come from diverse aspects. This chapter apprise users of the categories of spatial data and how to utilize file management configuration within SuperGIS Desktop 10, so that users can manage their spatial data like raster data and vector data with ease.

# 4 File Management

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## 4.1 File Format

With Chapter Three, users know how to import spatial data, run attributes statistic and draw a map. In addition to mapping, SuperGIS Desktop 10 provides more functions, including editing, managing spatial data and employing spatial information to analyze phenomenon.

GIS simplifies and sort spatial data as two models - raster data and vector data. Raster data is the spatial data model defining space as arrays of equally sized cells. Each cell stores attributes which are used to represent features with continuous data, including surface elevation, rainfall distribution, and temperature distribution and so on. Raster data is also employed to store substantial image file for it can effectively diminish the data size.

Vector data represents geographic features in points, lines and polygons. Point data are usually used to present distribution of unique features like buildings and animals. Line data are often used to present linear features, such as rivers, roads and tubes, etc. Polygon data are used to present a scope or an area. However, areas in different scales will be presented with different features. For instance, cities are displayed as points on world map while a single city is presented as a polygon on the city map.

SuperGIS Desktop 10 supports diverse raster and vector data formats:

| | |
|---|---|
| Vector Data | GEO, SHP, MIF, DXF, GML, DWG ,DGN. |
| Raster Data | SGR、MrSID、GeoTIFF、BMP、GIF、JPG、JPG2000、ECW、PNG、LAN、GIS |

## 4.2 SuperGIS DataManager

SuperGIS DataManager is capable of assisting users in managing spatial data files. On SuperGIS Desktop 10, you can click **Tools** > **SuperGIS DataManager** to open SuperGIS DataManager window. With SuperGIS Datamanager configuration window, you can manage raster/vector data file and add new files. SuperGIS Desktop 10 now also supports Feature Class and Personal Geodatabase.

### Feature Class

Feature Class is a collection of geographic features, and each geographic feature is comprised of geometries with the same type such points, lines and polygons. By right-clicking on the folder icon > New > Feature Class, users can add a new layer in point, line or polygon type.

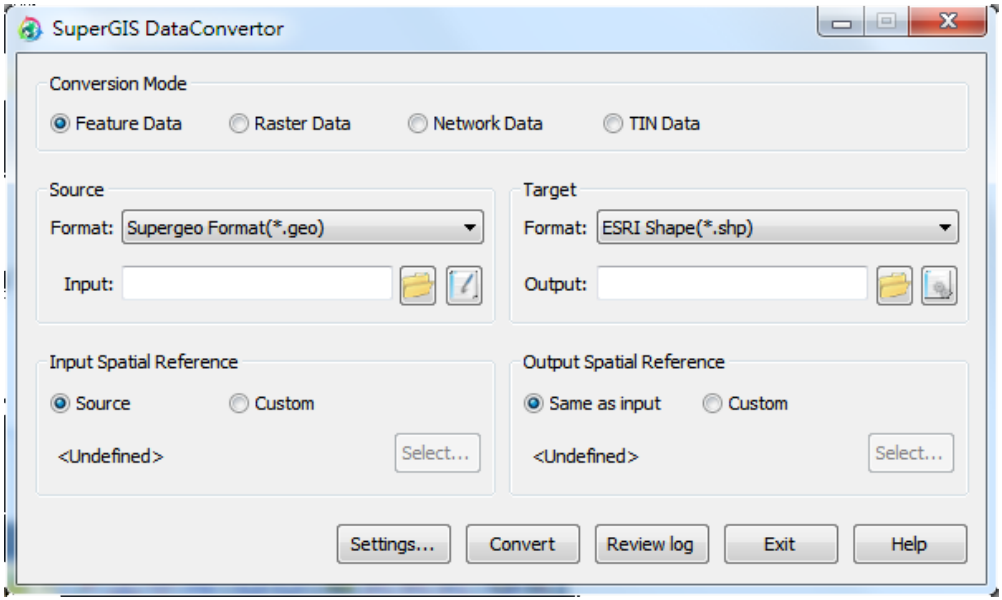
### Personal Geodatabase

A geodatabase that collects point, line and polygon data. Files stored in one Personal Geodatabase share the same coordinates and enable users to edit attributes with ease.

To read more elaboration on how to manage files with SuperGIS DataManager, please refer to the user guide attached within SuperGIS DataManager.

## 4.3 SuperGIS DataConvertor

On SuperGIS Desktop 10, users can click Tools > SuperGIS DataConvetor, or Start > Programs > Supergeo > SuperGIS DataConvetor, to open SuperGIS DataConvetor configuration window. With SuperGIS DataConvetor configuration window, users can convert a specific vector data format into another format, or convert line features into route data.




**NOTE**: To read more elaboration on how to manage files with SuperGIS DataConvetor, please refer to the user guide attached within SuperGIS DataConvetor.

# 5

# Editing Functions

Editing functions supports users to draw a new map and modify features on map. Most feature modification, including adding a new feature, panning, copying, pasting and deleting features and editing feature's nodes and feature's attributes, rely on editing functions. This chapter tells users how to edit features directly on map or by features' attributes, and provides descriptions of editing functions usage and configuration tricks.

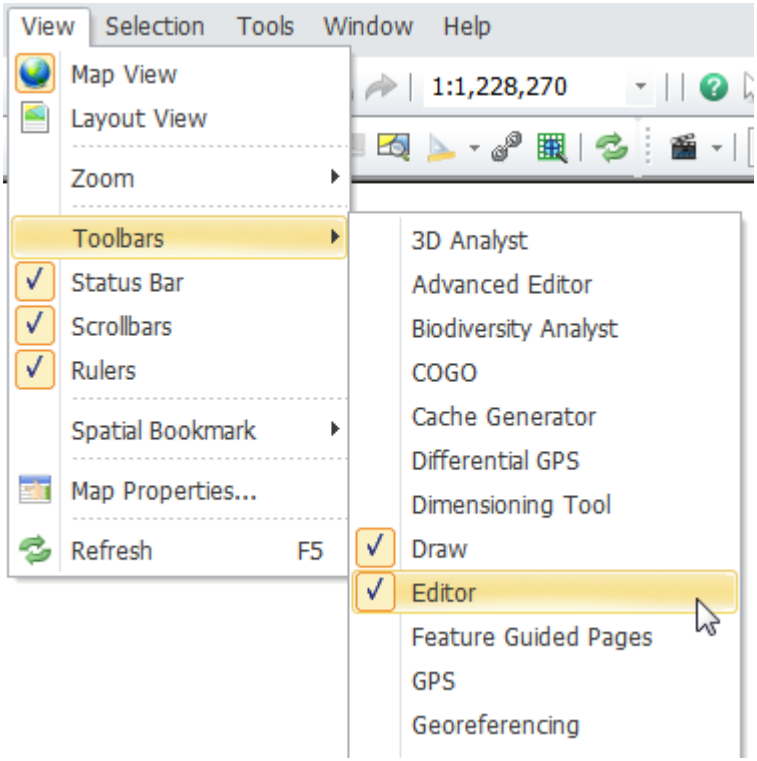
# 5 Editing Functions

Editing functions supports users to draw a new map and modify features on map. Most feature modification, including adding a new feature, panning, copying, pasting and deleting features and editing feature's nodes and feature's attributes, rely on editing functions. This chapter tells users how to edit features directly on map or by features' attributes, and provides descriptions of editing functions usage and configuration tricks.



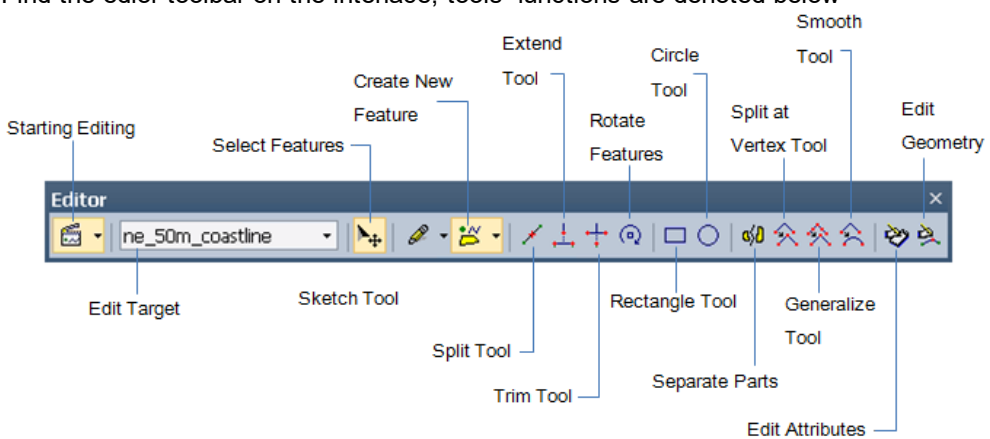
## 5.1 Overview of Editor Toolbar

Follow steps below to start Editor: **View** > **Toolbars** > **Editor**.




▲ Start Editor

Find the edior toolbar on the interface, tools' functions are denoted below :

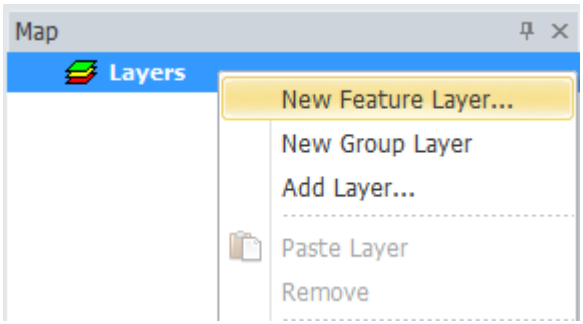


# 5.2 Edit Layer

## Edit Feature

### Add A New Layer

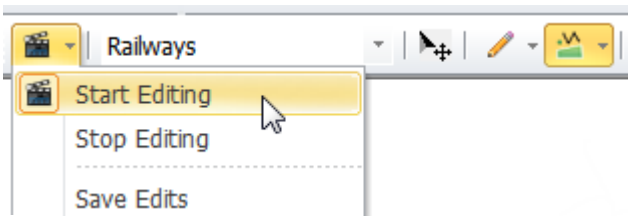
To create and edit a new layer, please right-click on the group layer and select **New Feature Layer** or add by SuperGIS DataManager. Users can refer to steps recorded in section paragraph **Feature Class** within section **SuperGIS Datamanger** of chapter File Management in SuperGIS Desktop 10 User Guide. And the feature layer should be added into Data Content for subsequent editing steps.




▲ Add New Feature Layer

### Start Editing

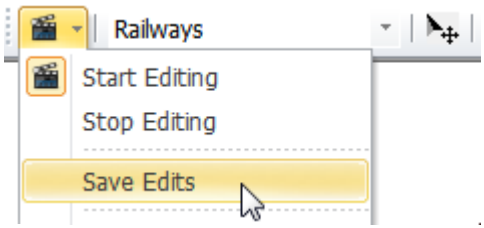
Please notice that users can only select and query attributes of the selected features before starting editing. To add a new feature, modify and edit features, you need to start editing ahead of time. To start editing, please click **View** > **Toolbars** > **Editor**, click icon and choose the layer you intend to edit.




▲ Choose the layer you intend to edit feature on it.

By utilizing  (Select Features), users can select a single or multiple feature(s) and employ Cut, Copy, Paste, Delete functions within the Standard Toolbar to edit the selected feature(s). Please notice that while using Copy and Paste functions to paste a new feature, the pasted feature will be overlaid on the one you copy. Therefore, you need to select and pan the pasted feature to the specific position by mouse cursor.

To save and stop the edits, please click the drop-down menu of (start editing) > **Save Edits** > **Stop Editing**.



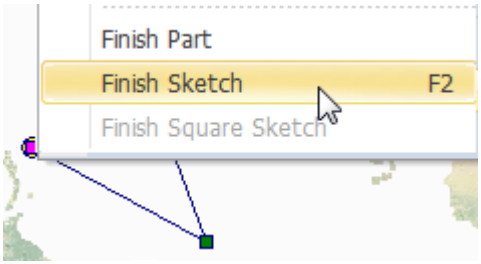

▲ Start Editing, Stop Editing and Save Edits

### Add New Feature

Users can add new features in point, line and polygon on layers according to the layer type. Please notice that you can only add features whose type correspond with the layer type. For example, points can be added on point layer only; lines can be added on line layer only; and polygon can be added on polygon layer only.

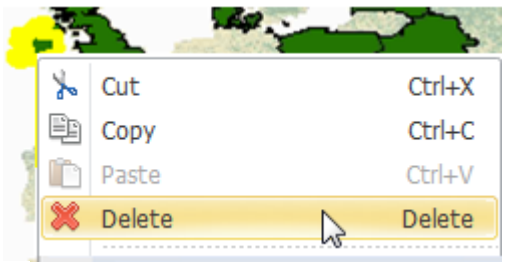
To add a new feature in point, please employ  (Sketch Tool) ahead of time and see the mouse cursor changed into graphic. Subsequently, click on the specified position on the map to add new point features.

To add a new line feature, please utilize mouse cursor to click on map. The first clicking is used to create the start node of a line while the second clicking is used to create the end node. Users need to finish sketch to accomplish a new line feature. To do so, please double-click on the end node of the new line feature, or right-click on the end node and select **Finish Sketch**.




▲ To Finish Sketch

To create a polygon feature, you can repeat the step of clicking on map to create the first node, vertices and the end node of the new feature, and double-click on the end node to finish sketch. Besides, users can select a feature and right-click on the feature to cut, copy, paste or delete the target feature through the drop-down menu.

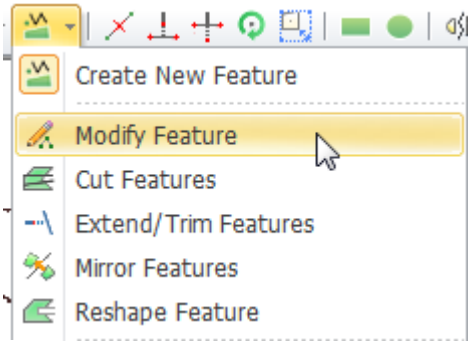



▲ Select a feature and right-click on the feature to delete the target feature by the drop-down menu.

In addition to the basic steps of adding new features mentioned above, SuperGIS Desktop 10 provides various tools like Midpoint Tool, Nearest Distance Tool, Intersection Tool, Arc Tool and so forth. To know more elaborations on adding new features, please refer to chapter **Editing** > section **Editing Features** > paragraph **Adding Features** in SuperGIS Desktop 10 User Guide.

### Edit Vertices

Each feature on map is comprised of a vertex or vertices：A point feature is a vertex; a line feature must be comprised of two vertices at least; and a polygon feature contains more than three vertices. To edit vertex/vertices of a feature, please employ  (Select Feature) to select the feature, click the drop-down menu within the Editor Toolbar and select  (Modify Feature) tool to edit the target feature.

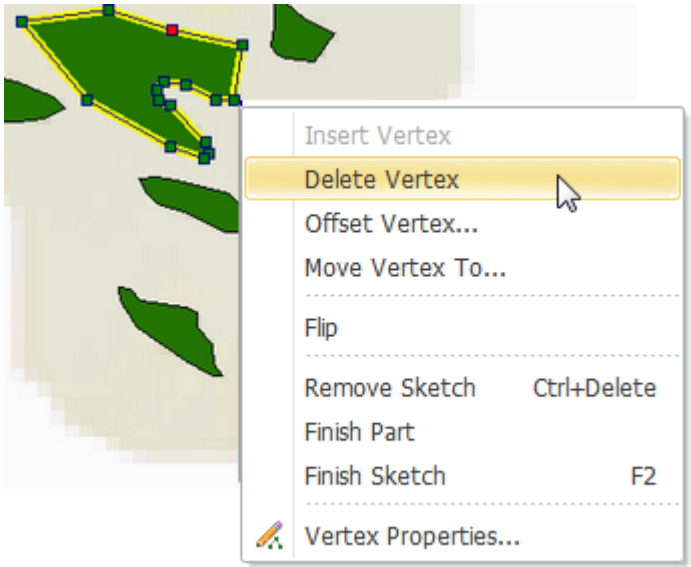



▲ Employ different feature editing tool to edit features on map

Vertices of the feature will display on the screen after the target feature is selected. You can keep on sketching the feature or employ editing tools to cut, mirror and reshape the feature.

▲ A polygon and the vertices that are been editing

Move the cursor to the target vertex and right-click on the vertex to modify it. You can inset, delete, offset and move the vertex, or modify properties of the vertex.



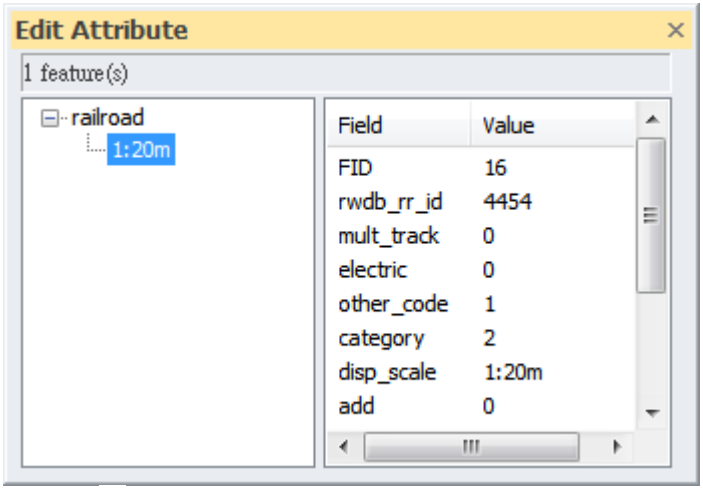

▲ Edit a single vertex of a feature

## 5.3 Edit Layer Attributes

Attributes data, whose type contain text, value, and hyperlink and so forth, record descriptive data of a feature, such as population, area and population density of a county. By viewing attributes data, users can comprehend what features on map denote. Besides, users can utilize tools within SuperGIS Desktop 10 to query, run statistics of attribute data and even perform geoprocessing on spatial data. With editing functions provided by SuperGIS Desktop 10, you can modify attributes by employing Edit Attributes tool on editor toolbar or through attribute table of the feature.

### By Edit Attributes Tool

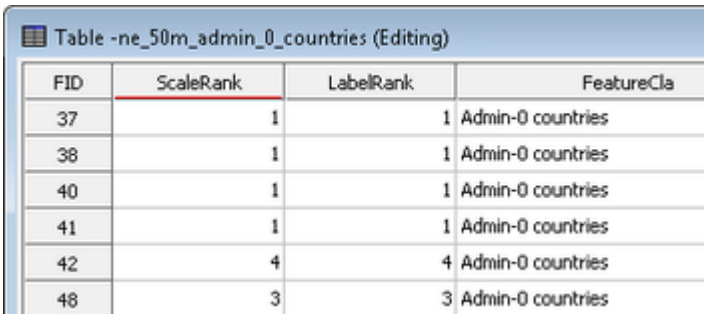
Users need to start editing to edit feature attributes. To edit a selected feature attributes, please click to employ Edit Attributes tool and open the Edit Attribute dialog box simultaneously. On the Edit Attribute dialog box, you can enter/modify values in the attribute columns.




▲ Edit attributes of a single feature

## Through Attribute Table of A Feature

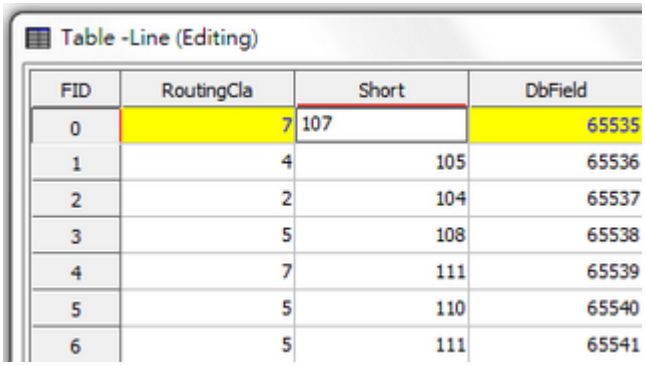
Users can also edit feature attributes through its attribute table. To do so, please start editing and employ Select Features tool ( ) to select the target feature. Subsequently, right-click on the layer of the selected feature and click **Open Table** to open its attribute table. And you can see the attribute table witch is marked with text, Editing, on its title.




| FID | ScaleRank | LabelRank | FeatureCla |
|---|---|---|---|
| 37 | 1 | 1 | Admin-0 countries |
| 38 | 1 | 1 | Admin-0 countries |
| 40 | 1 | 1 | Admin-0 countries |
| 41 | 1 | 1 | Admin-0 countries |
| 42 | 4 | 4 | Admin-0 countries |
| 48 | 3 | 3 | Admin-0 countries |

▲ The Attribute Table on Editing Mode

On the attribute table of the layer, attribute column of the selected feature is shown with yellow as its background color. You can click on the column to modify the feature attribute in value or text.




▲ Edit Attribute in A Single Column

**NOTE**: In addition to basic editing functions mentioned above, SuperGIS Desktop 10 also provides various tools, including snapping configuration which is used to precisely connect one feature to another, Split Tool, and Intersection Tool, etc. And SuperGIS Desktop 10 Professional additionally provides users with Advanced Editor and Topology Analyst to flexibly edit features and rectify error of spatial editing. Furthermore, the **COGO** extension designed for civil engineer to digitalize results of geodetic survey and the **Land Parcel Editor** for parcel surveyor are also available in the latest SuperGIS Desktop 10.

# 6

# Analysis Tools and Extension

GIS is the system designed to help to visualize, edit and manage spatial data. The most important function of GIS is that it supports to analyze spatial data and enable users to solve problems. This chapter briefly introduces analysts and extensions within SuperGIS Desktop 10

# 6 Analysis Tools and Extension

GIS is the system designed to help to visualize, edit and manage spatial data. The most important function of GIS is that it supports to analyze spatial data and enable users to solve problems. This chapter briefly introduces analysts and extensions within SuperGIS Desktop 10.

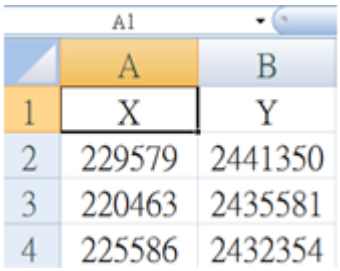
## 6.1 Analysis Tools

Users can employ analysis tools through the drop-down menu within **Tools** on the Standard Toolbar. SuperGIS Desktop 10 supports to add XY data through Excel table and convert the added data into spatial coordinates, provides buffer analytic and geoprocessing tool. Geoprocessing Tool enables users to process spatial data with diverse operations, including Dissolve, Intersect, Merge and so on.

### Add XY Data

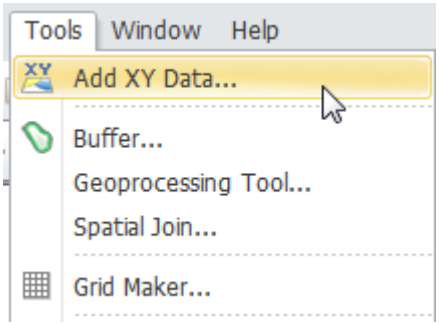
SuperGIS Desktop supports users to apply XY data that are comprised of points' coordinates in DBF and XLS. In this way, users can add points more easily.

Users can edit XY data through Excel and save the file in DBF or XLS. Nonetheless, SuperGIS Desktop 10 only supports Excel 2003 and the previous version. Please notice that you need to save the XY data in *.xls format.

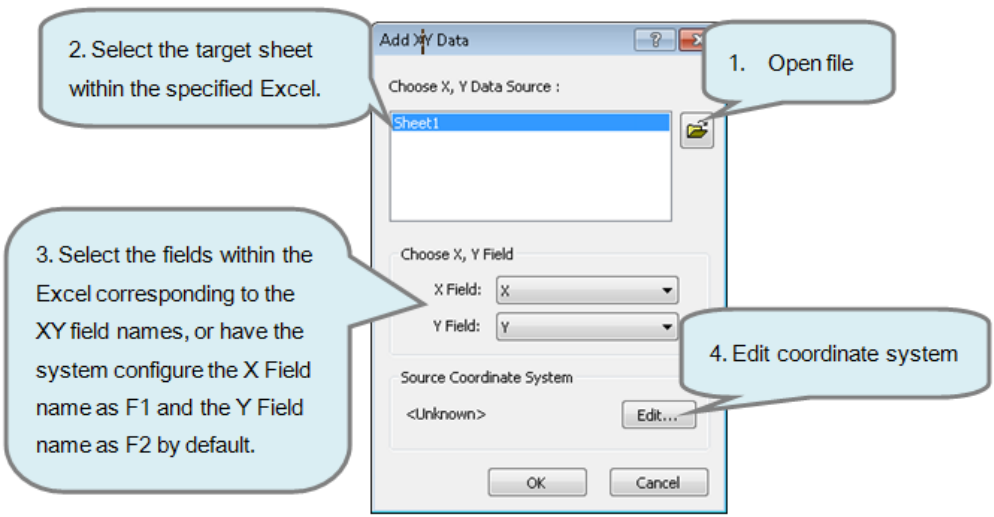


▲ Edit XY data

As long as you have prepared the XY data file, you can click **Tools** > **Add XY Data** to start Add XY Data dialog box.




And configure XY data source, XY fields and coordinate system with Add XY Data dialog box.




## Buffer

**Buffer**, a zone surrounding a map feature with a particular distance, is also an analysis tool used to analyze the proximity. Not only distance measurement tool, Buffer analysis tool can be employed to help us know the buffer zone of a single feature and the relationship between two buffer zones of two different map features. For example, through Buffer analysis, we can know if two map features connect to each other with particular condition, the appropriate distance between the building and the river and the safe zonal area for a facility. The Buffer analysis tool provided by

SuperGIS Desktop 10 supports users to draw buffer zone around any point, line or polygon features on map, to analyze and to make plans. To operate Buffer analysis tool, please click **Tools** > **Buffer** to open the buffer analysis configuration dialog box.

▲ A buffer drawn around a point feature ▲ A buffer drawn around a line feature

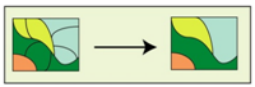
▲ A buffer drawn around a polygon feature

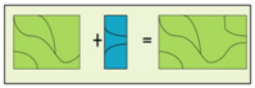
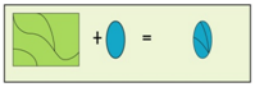
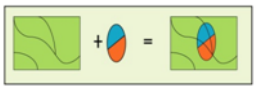
**NOTE**: To know function elaboration of Buffer analysis tool, please refer to chapter Analysis Tools > section Buffering in SuperGIS Desktop 10 User Guide.

## Geoprocessing Tool

In GIS, spatial data are presented in point, line and polygon types, and features in each type can be recorded in the corresponding layer only. Thus, GIS users need geoprocessing tools to intersect, merge layers in different types with different feature types, and set union of layers or clip a range on different layers. Besides, Geoprocessing Tools can also help users to analyze and run statistics on spatial data.

All the geoprocessing tools equipped within SuperGIS Desktop 10 can be employed through Geoprocessing Tool dialog box. Five operations, including Dissolve, Merge, Clip, Intersect and Union, are provided:

| Operation | Illustration | Definition |
|---|---|---|
| Dissolve |  | The process of removing the boundaries that share a single attribute value or removing the sharing boundaries of adjacent polygons. Example: To make villages and cities as one district in the same county. |

| | | |
|---|---|---|
| Merge |  | The process of combining two layers that share same boundary and are in the same data type. Example: To combine counties and cities in the south as a south district |
| Clip |  | The process of extracting a polygon overlaid on the target layer. Example: To clip the polygon based on the shape of an ecological area overlaid on the layer of a county. |
| Intersect |  | The analytical operation used to select any polygon feature that intersects with the target feature. While running Intersect operation, the range of the selected polygon |
| Union |  | The analytical process in which the features from two or more map layers are combined into a single, composite layer. |

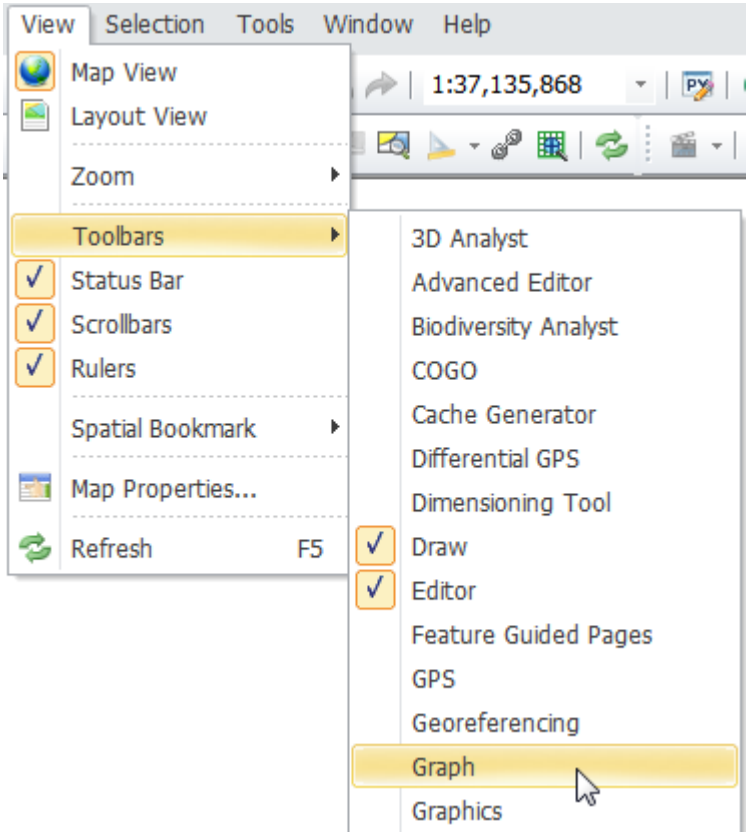
SuperGIS Desktop 10 provides various analytical extensions. To know more about geoprocessing tools, please visit our website: http://www.supergeotek.com/.

## 6.2 Extensions

### Graph

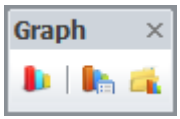
With statistical graphs, we can easily interpret some information, for example, the comparison and contrast of the numeric data of related features. Thus, users can not only recognize the changes of numbers but also figure out the trend of the development. This chapter introduces how to create, manage and modify graphs.

To employ graph tools, please **right-click on the toolbar** of the map window in SuperGIS Desktop 10 or click **View** > **Toolbars**, and select **Graph.**



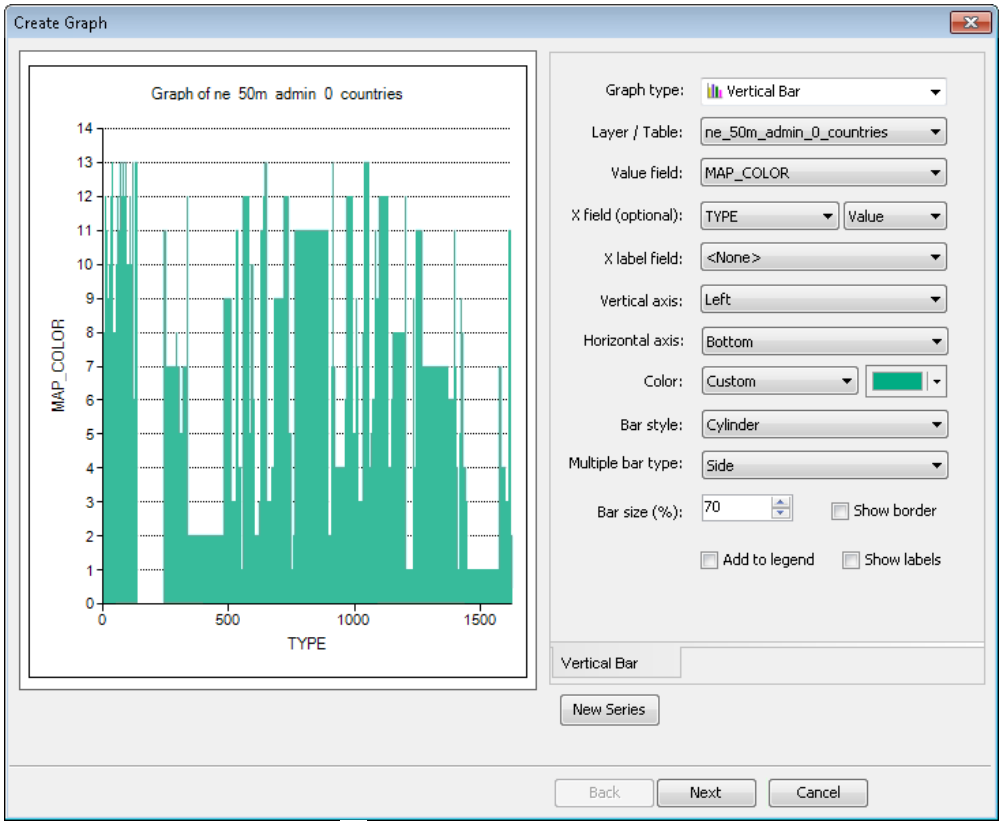

### Tools on Graph Toolbar

Graph tools include **Create Graph**, **Graph Manager** and **Load Graph**.




### Create Graph

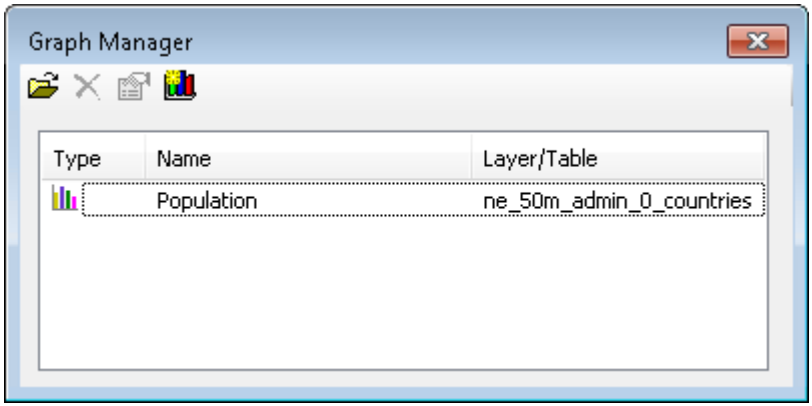
SuperGIS Desktop 10 provides 6 graph types, including Vertical/Horizontal Bar, Vertical/Horizontal line, Vertical Area, Scatter Plot, Box Plot and Pie chart. To create and configure a new graph, please click  (Create Graph) icon to open the configuration dialog in which you need to select graph type, XY fields' name. To create a composite graph or overlay graph, please employ **New Series** function to do so.




▲ **Create Graph** dialog box

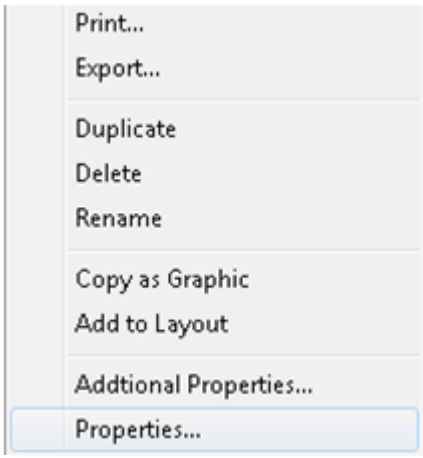
### Graph Manager

Users can manage the existing graphs through **Graph Manager**. Please click  (Graph Manager) icon to edit the target graph with Graph Manager dialog box, or click  (Create Graph) icon in the dialog box to create a new graph.



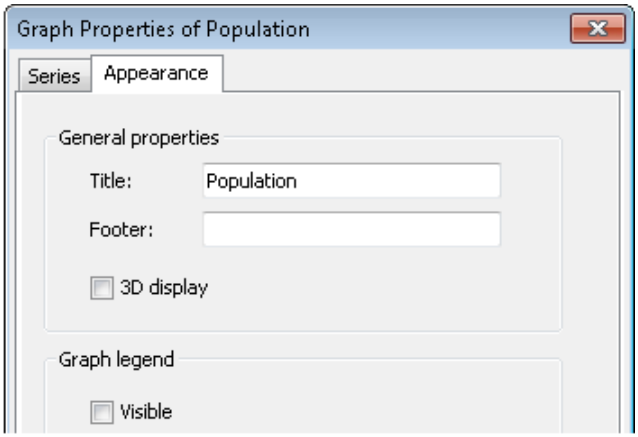

### Modify Graph Appearance

SuperGIS Desktop 10 Graph tools enable users to configure graph appearance. To do so, please right-click on the graph and click **Properties…** to open graph appearance configuration dialog box.




▲ Right-click on the graph and select Properties… within the drop-down menu

SuperGIS Desktop Graph tools enable uses to configure the graph appearance, including title color, background, legend, font, axis, axis style, grid, etc. As a result, users can create their own graph. You can set the appearance while you are creating a graph. Also, you can adjust the appearance after the graph is created.

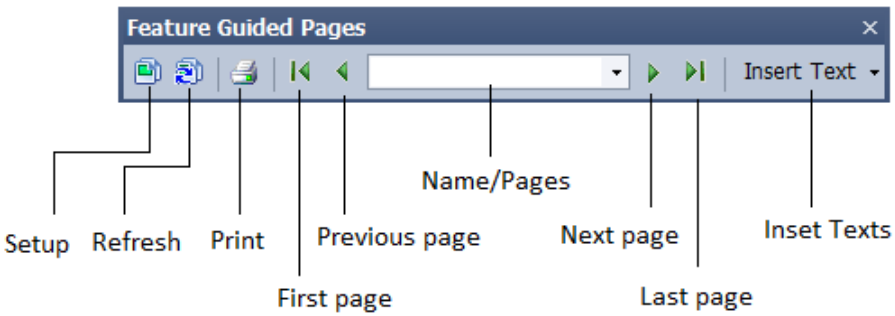



▲ Tab for configuring graph appearance

## Feature Guided Pages

SuperGIS Desktop 10 provides you the feature guided pages tool, which helps you to publish and print your own atlas. It views each feature as a single map page and is especially useful when publishing thematic maps because the map readers can see a local and detailed information of each feature.

### Feature Guided Pages Toolbar




### Configure Feature Guided Pages

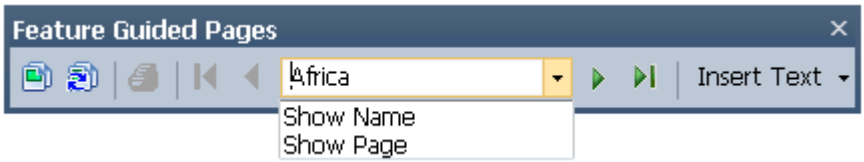
Before using the feature guided pages tool, you may want to switch to the layout view

first (**View** > **Layout View**). To open the tool, right-click anywhere on the toolbar and **select Feature Guided Pages**. Then the Feature Guided Pages tool should appear. The figure below is an overview of the tool. To set the feature guided pages, click on the setup icon ( ).

After clicking on the setup icon ( ), you can then enable the feature guided pages in the General tab of the Feature Guided Pages Setup window. Here you can setup the map layer and its name field you want to use. The name field will be the title of the map. The page number can also be set here. You can set its starting number or you can choose an attribute field to be the page number field.

### Browse Pages

You can browse each page in the layout view after activating the feature gzuided pages (**View** > **Layout View**). To refresh maps, just click the **Refresh** icon ( ). To browse different pages, you can click on **First Page** icon ( ) or **Last Page** icon ( ) to move to the first or last page, or you can use **Previous Page** ( ) or **Next Page** ( ) to move to previous or next page. The page name (or page number, depending on your choice) will be shown in the box. If you want to directly go to a certain page, for example, page 8, you have to select **Show Page** first, and then enter 8 into the box (You can also enter the page name if you select **Show Name**).



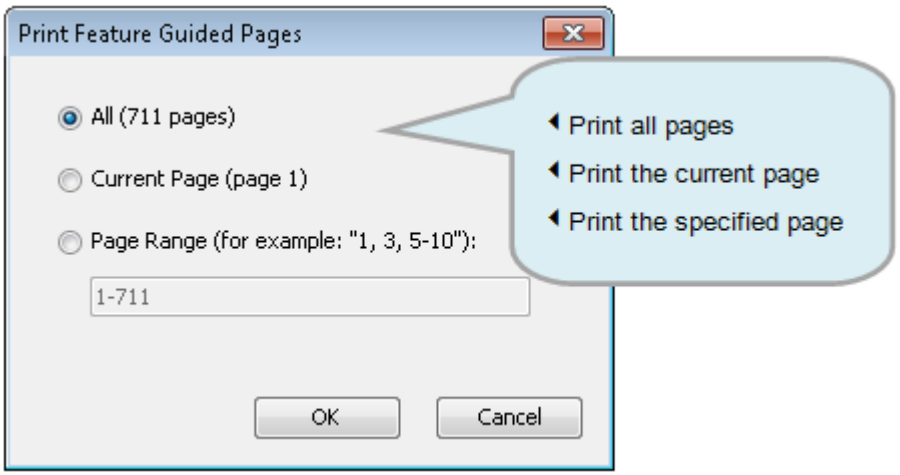

▲ Configuration for showing name or page number

### Design Map Page

SuperGIS Desktop 10 provides you some tools to design your own map page, including insert page name, number or other customized contents. To insert page name, click **Insert Text**>**Page Name**, then the feature's name will be shown on the map page. To insert page number, you can click **Insert Text** > **Page Number** or **Insert Text** > **Page Number with Count**.

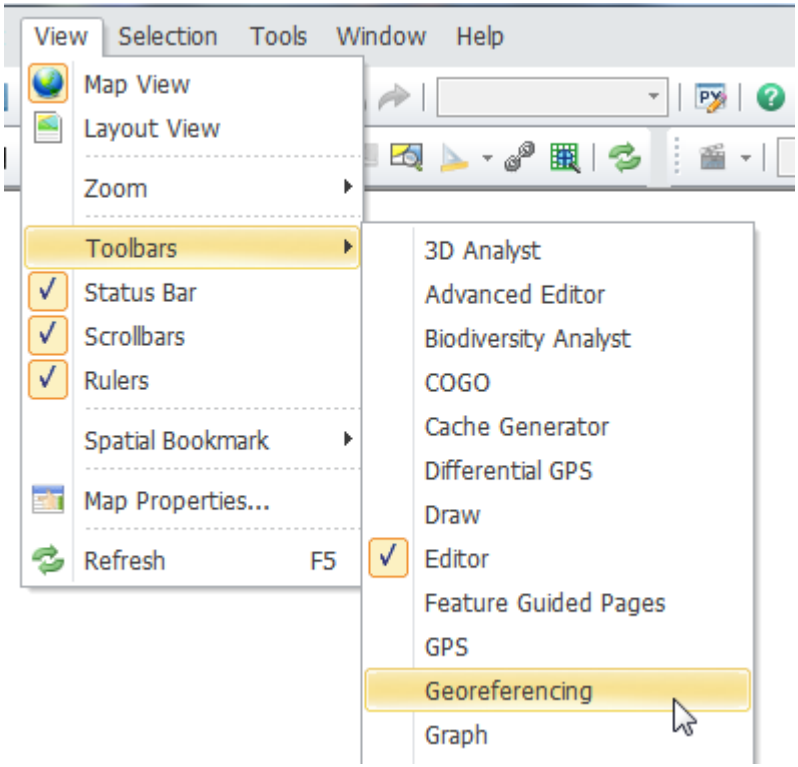
### Configure Page Print Setting

After finishing your map page design, you are ready to print the map. Please notice that you need to stwich to layout view to print the map. Click **Print** icon ( ), you can select to print all pages or the current page, or specify page range to print.




## Georeferencing Toolbar

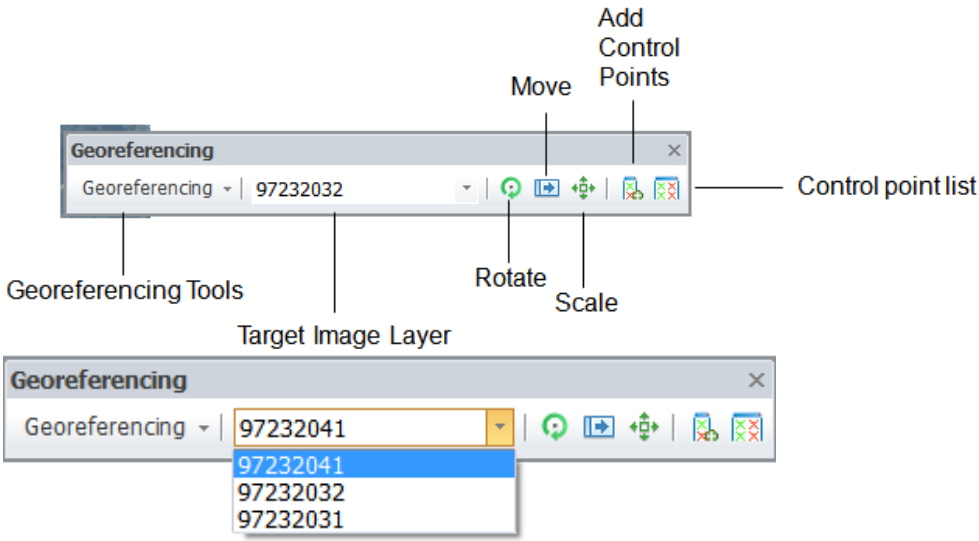
Georeferencing technology is one of the crucial elements in GIS. Precise image position is helpful for users to interpret terrain changes. The Georeferencing tool provided within SuperGIS Desktop 10 enables users to contrast the image with the specific features to configure the accurate coordinates for the image. For instance, the aerial photographs can be located over an existing map to reference the real locations of buildings or roads on the aerial photographs. To employ georeferencing tool, please click **View** > **Toolbars** > **Georeferencing**.




▲ To use georeferencing tool

### Georeferencing Toolbar

Georeferencing tool supports users to rotate and update images. Before transforming or georeferencing the image, you can configure to update the image automatically or manually. To update the image manually, cancel the tick by Auto Adjust.




### Transformation

Including image rotation, shifting and scaling, Transformation enables users to adjust the image data to a correct angle to review. To do so, employ **Rotate** tool ( ), **Shift** tool ( ) and **Scale** tool ( ).

### Image Rectification

The system can rectify image to correct position by use of control points. Map rectification takes at least four control points and the four of them should be evenly distributed to the four corners of the map. Generally speaking, the more control points lead to a more accurate result, but it is also possible that a poor rectification result is obtained due to too many control points.

### Adding Control Points

To add control points, please select the image you want to georeference on the Georeferencing toolbar and click Add Control Points tool ( ). Then click on the map to add green target point and click again to add red control points. If Auto Adjust is checked, the display will be instantaneously updated and the target point will be shifting approaching the control points; if not checked, the image remains but the

target points and control points can still be seen, and a blue line connecting target points of the same group and control points will show.

### Management of Control Points

Users can use the Control Point List tool (  ) to manage all the control points, including delete existing control points, save all the control points, or load control points. The information related to the control points are shown in the control point list, including its source coordinates, map coordinates, and residual. These information can help to evaluate the accuracy of the geo-referencing.

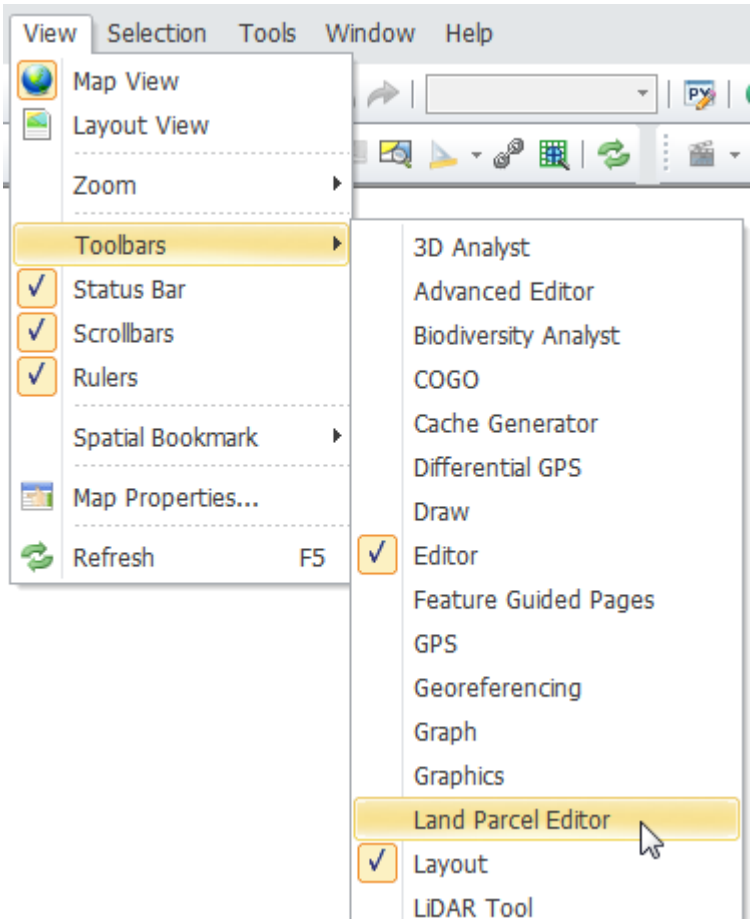
### Starting to Rectify

According to the number of control points, you can select different types of transformation polynomial. Three types of polynomial are provided in SuperGIS Desktop 10, 1st Order Polynomial can be applied whenever control points are added; 2nd Order Polynomial can be applied as the number of control points is 6 and over; 3rd Order Polynomial can be applied as the number of control points is 10 and over. The different Polynomial can be applied to reduce the residual between target point and control point to enhance the precision. Select different polynomials by clicking **Georeferencing** > **Trasformation**. After control points and polynomial are confirmed, please click **Georeferencing** > **Rectify** to start to rectify.

**NOTE**: To know more about georeferencing tools, please refer to chapter Georeferencing Tool in SuperGIS Desktop 10 User Guide. Besides, SuperGIS Data Rectifier within SuperGIS Desktop 10, provides users with more tools to rectify images. To employ SuperGIS DataRectifier, click **Tools** > **SuperGIS DataRectifier**.

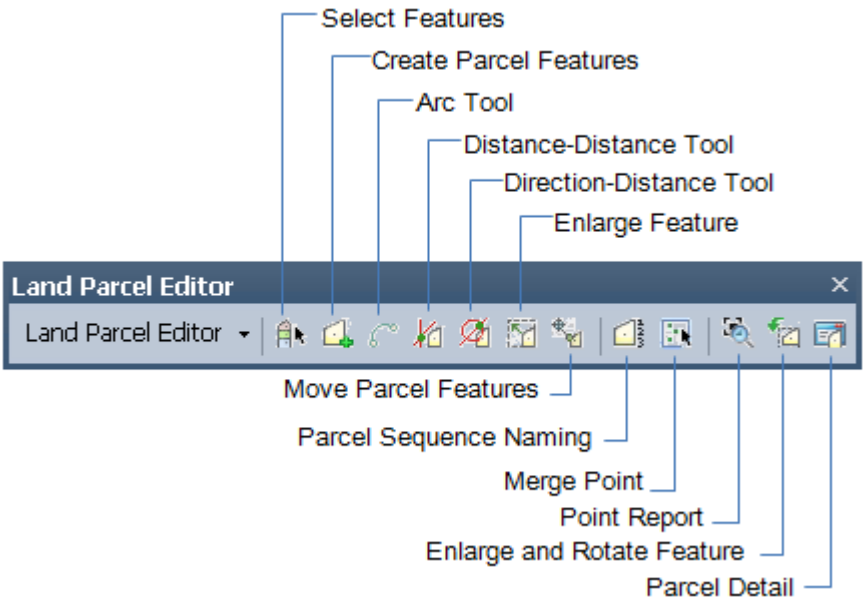
## Land Parcel Editor

The land parcel editor is a land administration tool which helps to manage your parcel data such as adding, deleting, and editing. The parcel data can provide important parcel information for commercial and residential buildings. It is important to updating and managing the parcel data to keep up the dynamic developments of the city.



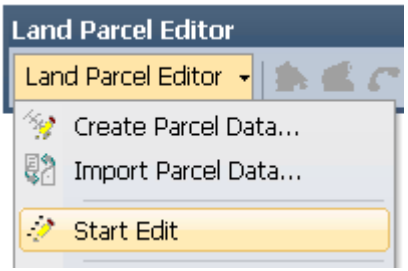

▲ To Use Land Parcel Editor

### Land Parcel Editor Toolbar



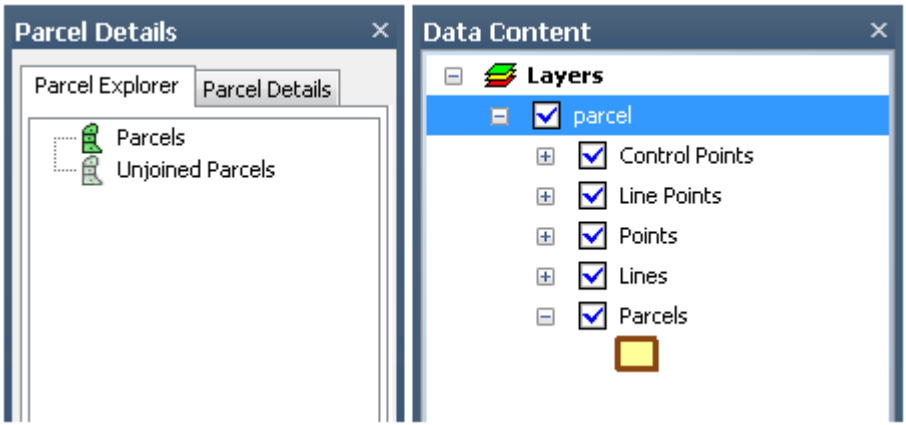

### Open/Import/Create Parcel Data

To use the land parcel editor tool, you have to add the parcel data to the SuperGIS Desktop first by opening existing parcel data, importing existing personal geodatabase (.mdb file) and map layers, or creating a new parcel data.



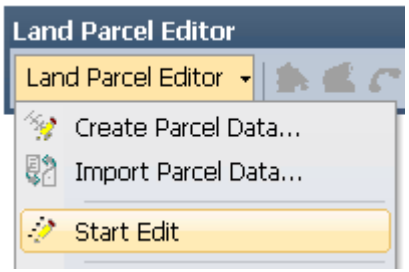

Once you add the parcel data, a parcel fabric will be added as a group of layer to SuperGIS Desktop, including the sublayers such as Control Points, Line Points, Points, Lines, and Parcels. The parcel fabric group layer is similar to a regular group

layer in SuperGIS Desktop, yet layers cannot be added to, or remove from, the parcel fabric group layer.




### Edit Parcel Data

Click **Start Edit** within the drop-down menu of Land Parcel Editor to edit parcel data.




Add Parcel Features

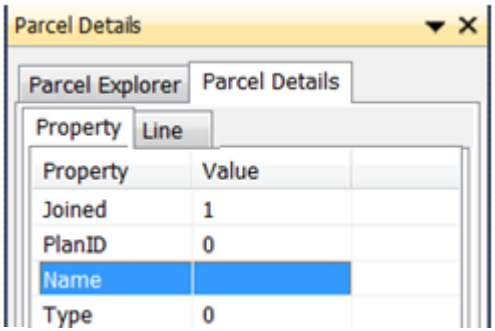
You can add a new parcel polygon or line (arc) feature. To add a parcel polygon, click on Create Parcel Features ( ). Then click on the map to add nodes and draw the boarder of the polygon.

Manage Parcel Features

To manage parcel features, you can use the tools provide by SuperGIS Desktop 10, including Merge Point, Enlarge Feature, and Move Parcel Features. Before managing any parcel features, you have to select a target feature using Select Features tool (  ) first. The Parcel Details window will show the details of the selected parcel feature (the Parcel Detail window can be opened manually by click Parcel Detail icon).

Edit Parcel Details

To edit the parcel detail, you can first select a target parcel feature and switch to the Parcel Detail tab. Here you can edit its properties (attributes) in the Property tab, and also the properties of its edges.



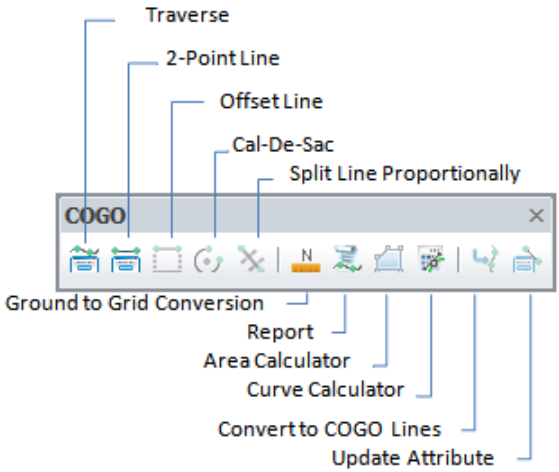

▲ To edit parcel properties (attributes) through Parcel Detail tab

To know more elaborations of Land Parcel Editor function, please refer to chapter Land Parcel Editor in SuperGIS Desktop 10 User Guide.

## COGO

The COGO tool is the short for coordinate geometry, which is useful for creating human-made features, including roads, land parcels, and so on. Before creating those features, you need a record from civil engineers which contains the results describing the measurements of features, which are the coordinate geometry descriptions. For example, a straight line has its direction and distance, and a curved line has a radius, angle, arc length, direction etc. Users can use the COGO tool to precisely create those features in SuperGIS Desktop.

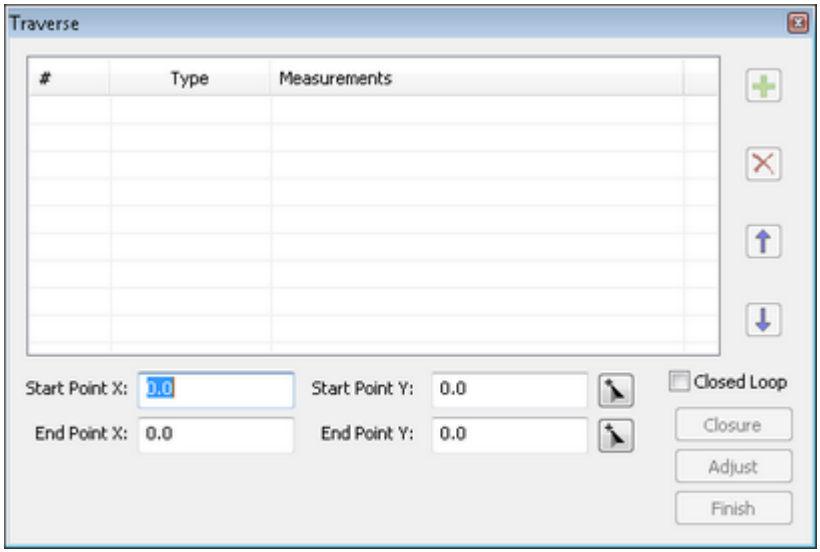
### COGO Toolbar




### Create COGO lines

The COGO tool provides users different ways to create new COGO lines, including Traverse, 2-Point Line, Offset Line, Cul-De-Sac, and Split Line Proportionally. To use the COGO tool, users should have at least one line layer added to the SuperGIS Desktop and enable the edit mode with the line layer as the target layer.

If the survey measurements collected from the field are in the form of directions and distances, angles and distances, or curves, they are called traverse. Click the Traverse icon ( ) to open Traverse window, which shows the segment list of the new line feature.




Users can assign the start/end vertex of the new line feature by typing into its X,Y coordinates or clicking  to click on the map. And then click  to add a line segment. The traverse tool allows users to add straight lines or curves by using Direction-Distance, Angle-Distance, Curve, and Tangent Curve ways.

COGO also supports tools like Offset Line, Cal-De-Sac, Split Line Proportionally, Create COGO lines using existing line features, etc. To know more elaborations of COGO tools, please refer to **COGO** > **Create COGO Lines** in SuperGIS Desktop 10 User Guide.

### Get COGO information

Sometimes users may want to get some COGO information from SuperGIS Desktop, they can use the COGO tool. For example, they know the angle and the chord of a curve, and they want to know other measurements of the curve to help them create a new curve feature. They can use the Curve Calculator to get the necessary information. Other tools include Ground to Grid Correction, Report, and Area Calculator.

### Ground to Grid Conversion

The survey data, including the directions and distances of line features, are measured on the surface of the Earth, which are called ground measurements. But the directions and distances of the line features in SuperGIS Desktop are projected data, which are called grid measurements. The two measurements are often different and need to be converted. Users can use the Ground To Grid Conversion tool to convert the data. Click  to open Ground To Grid Conversion window, and enter the direction offset and distance factor to correct the data.

**NOTE**: If you don't know the two parameters, you can also use interactive ways to provide the information. One interactive way is to enter the direction and distance measured on the surface, and then click on the map to show the corresponding line on the map. The other interaction way is to click on the map to provide both the direction and distance measurements of the ground measurement and grid measurement.

### Report

The Report tool help users to get the correction information according to the parameters set in the Ground to Grid Conversion window or measure the angle. With Report (  ), you can report results of line measurement, angle, orthogonal distance, area and perimeter and coordinates.

### Area Calculator

The Area Calculator calculates the area of the selected COGO lines. To use this tool, users should first select COGO lines that form a closed polygon and click  . The information includes: Number of lines, Grid Area and Perimeter, Ground Area and Perimeter, Attribute Length, Misclosure As Direction/Distance, Relative Error Ratio, Adjustment Method, Attribute Ground Area and Perimeter and Attribute Grid Area and Perimeter.

### Curve Calculator

The Curve Calculator helps users to get the curve measurements. Users only have to provide 2 of the curve measurement, such as angle and chord, to get all the other curve measurements, including angle, radius, arc length, chord distance, chord height, and tangent length.

### Update Attributes

Update attributes will calculate the coordinate geometry descriptions for the selected COGO lines. For straight lines, you will get the distance and direction measurements of them in the attribute table. And for curved lines, you will get the chord, angle, radius, chord direction, arc length, and so on in the attribute table. The units are the same as the map unit. To get the information, you should add the corresponding field name to the table. For example, to get the distance of the straight line, you should add the 'distance' field to the table. The table below lists and describes the required table fields to maintain COGO attributes.

**NOTE**: To know more COGO manipulations, refer to chapter COGO within SuperGIS Desktop 10 User Guide.

## OGC

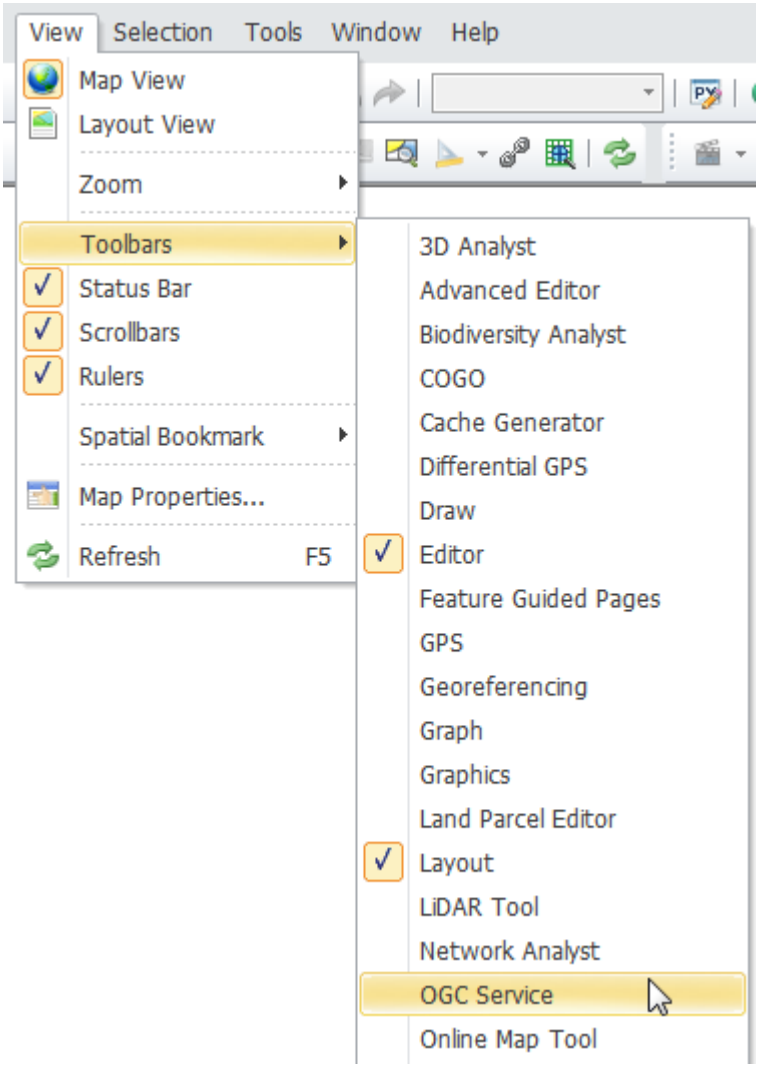
OGC (Open GIS Consortium) is a voluntary, non-government and non-profit organization, devoted in developing an open system to run geoprocessing and leading the interoperability standard of geographic information.

WMS, WFS, WCS and WMTS data are provided in “OGC Service” of SuperGIS Desktop 10:

| | | |
|---|---|---|
| WMS | Web Map Service | The standard protocol defined by OGC for internet client end to demand the mapping |
| WFS | Web Feature Service | The standard protocol defined by OGC. Client end sends the request of the features needed by the application through WFS to obtain the data. |
| WCS | Web Coverage Service | The standard protocol defined by OGC for client end to obtain the image data of specified spatial area and band, such as satellite image and remote sensing image, etc. |
| WMTS | Web Map Tile Service | Also map cache. While the front-end requires the map imagery of a specific region, the server will transmit the map |

| | | |
|---|---|---|
| | | tile of that region to display on the front-end. |

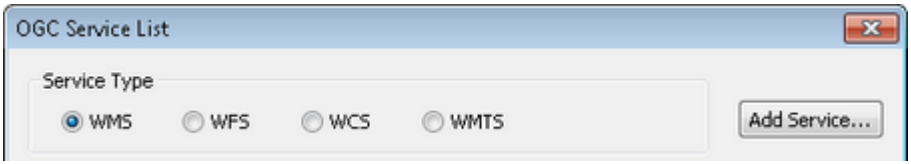
To open OGC service, right-click by toolbar of SuperGIS Desktop 10 and select OGC Service, or click **View** > **Toolbars** > **OGC Service**.



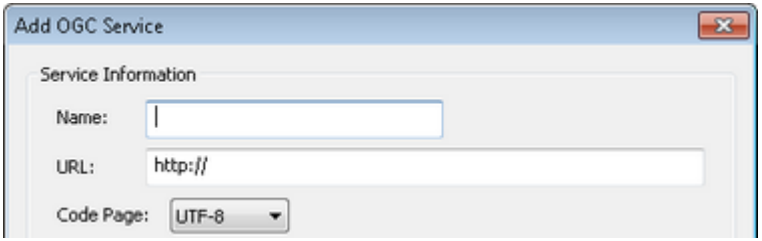

▲ OGC Service Toolbar

**Add OGC Service**

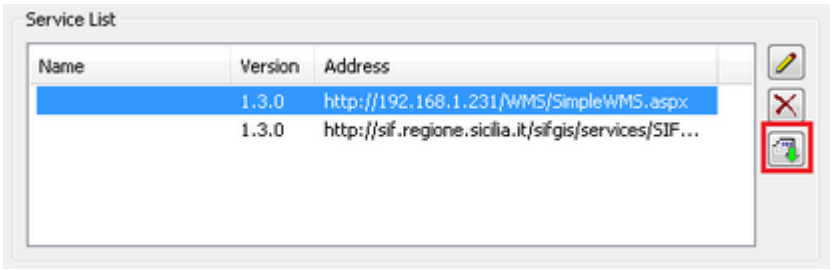
To add a layer, please select the service type and click **Add Service**:




“ URL” field is used to be input service address. “Code Page” field has its default setting as “UTF-8”. Click OK, you can see the service address you input appears in the field of URL.

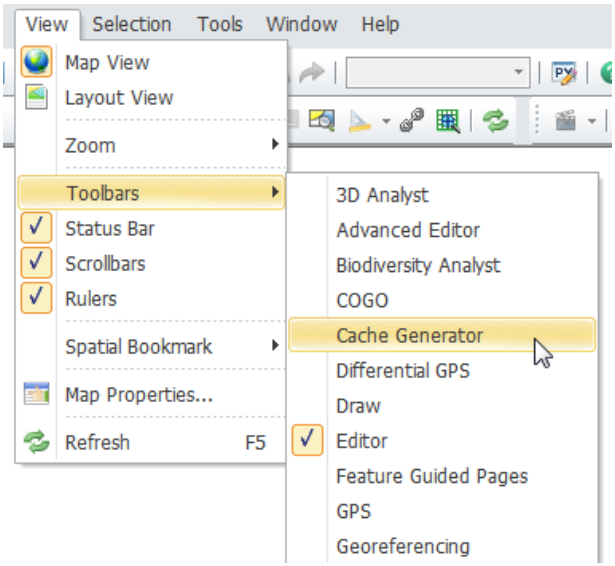



Click  to get open service.



## Cache Generator

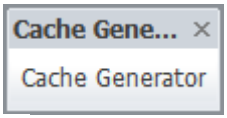
Cache Generator quickly creates cached map in STC format. In this chapter we are going to explain each setting. Starts SuperGIS Desktop, add the layers that you want the cached map to include to SuperGIS Desktop. Right-click on blank part of toolbar to show the menu and click Cache Generator. Or click **View** > **Toolbars** > **Cache Generator** to open its toolbar.




▲ To open Cache Generator through **View**

### Cache Setting

Click Cache Generator button to show Cache Setting window. In Scale Definition, enter the required scale for the cached map, you can enter directly or press Suggest button to quickly create.




▲ Cache Generator

In **Extent**, the extent boundary values of the current layers will be accessed by default and displayed here. You can also enter scales in **Scale Definition** and add by click

**Add** button, or adjust the map extent first and navigate to this page and click **Current Extent** to capture the current extent values.

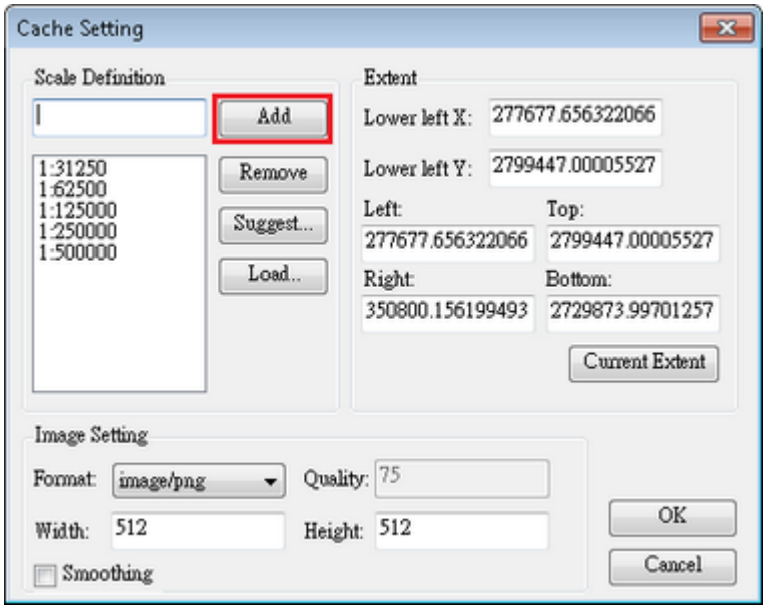
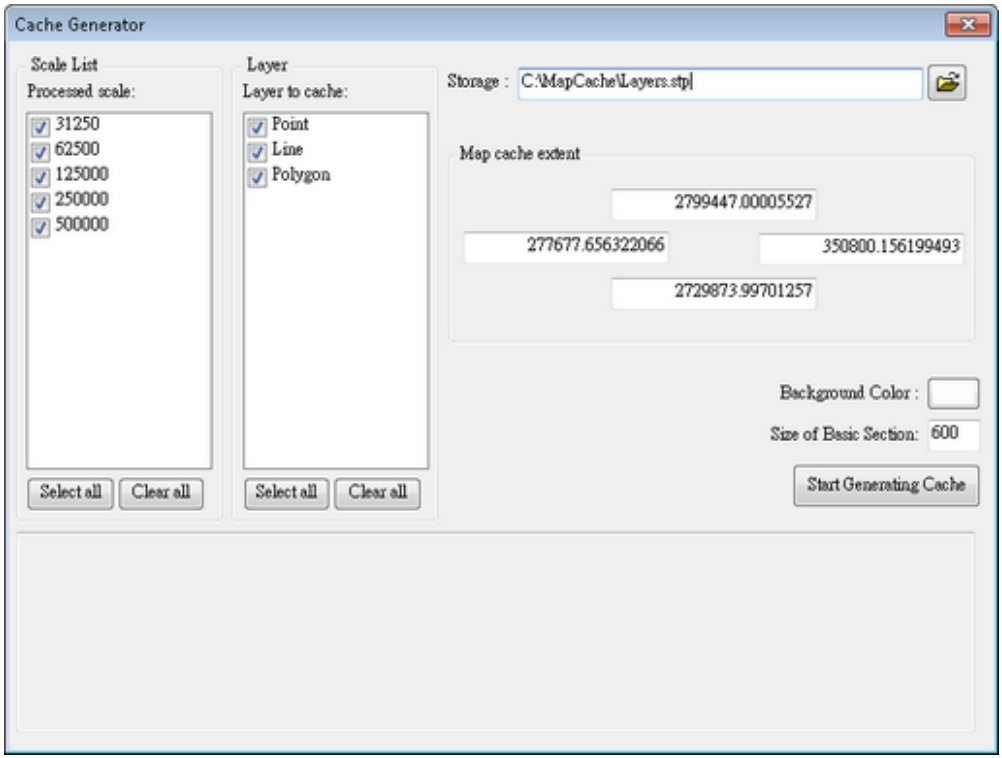


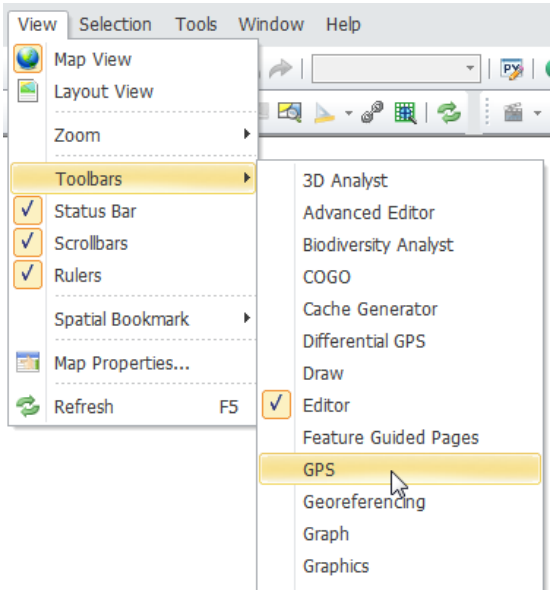

Image Setting sets up the file format of cached map, image quality, width, height and smoothing. Click OK as all settings are finished.

Cache Generator window shows up sequentially, here check the scales to proceed and layers to cached with, set up the storage path for the generated STC cached map, and set the background color and Size of Basic Section. At last click Start Generating Cache button and the system will start to generate cached map. As the cached map is completed, a message shows up asking do you want to add the layer to the current map, if you click OK, the STC will be added to the map.

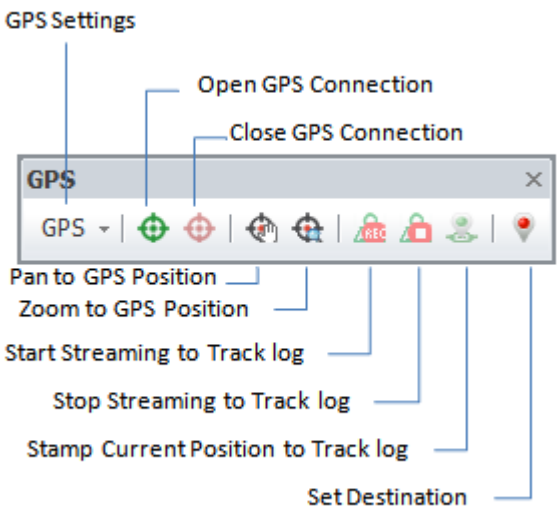



## GPS

GPS(Global Positioning System) is a set of global navigation satellite system, used with appropriate receiver can precisely decide any position on the surface. The satellite net is owned by US Department of Defense, which can be used in fields of navigation, mapping and survey, in which takes precise orientation.


View
Selection
Tools
Window
Help
Map View
Layout View
Zoom
Toolbars
Status Bar
Scrollbars
Rulers
Spatial Bookmark
Map Properties...
Refresh
F5
3D Analyst
Advanced Editor
Biodiversity Analyst
COGO
Cache Generator
Differential GPS
Draw
Editor
Feature Guided Pages
GPS
Georeferencing
Graph
Graphics

## GPS Toolbar


GPS Settings
Open GPS Connection
Close GPS Connection
GPS
GPS
Pan to GPS Position
Zoom to GPS Position
Start Streaming to Track log
Stop Streaming to Track log
Stamp Current Position to Track log
Set Destination

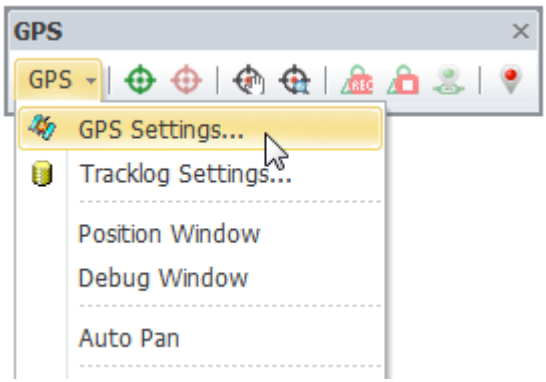
### GPS Settings

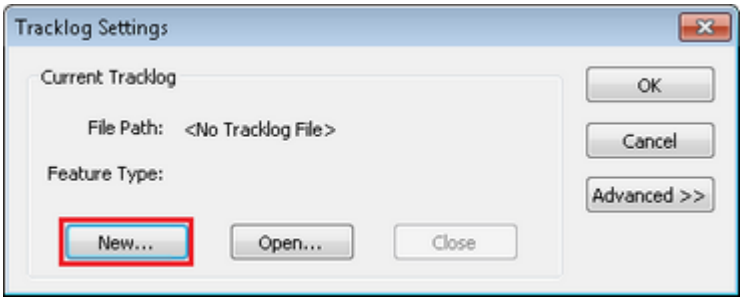
Open "GPS" toolbar, click "GPS Settings" on "GPS" drop-down menu. "GPS Settings" dialog box shows up.

Select "Connect to GPS receiver" or "Simulate GPS using point or line layer." You can only select one item from the two. While one item has been selected, the other item turns non-performable status. If you select "Connect to GPS receiver" please select the communication port to connect to GPS in "Communication Port." When you first open the tool, the item only lists the built-in communication ports. Besides you can select "Auto Detect", system will automatically link to various built-in effective communication ports.

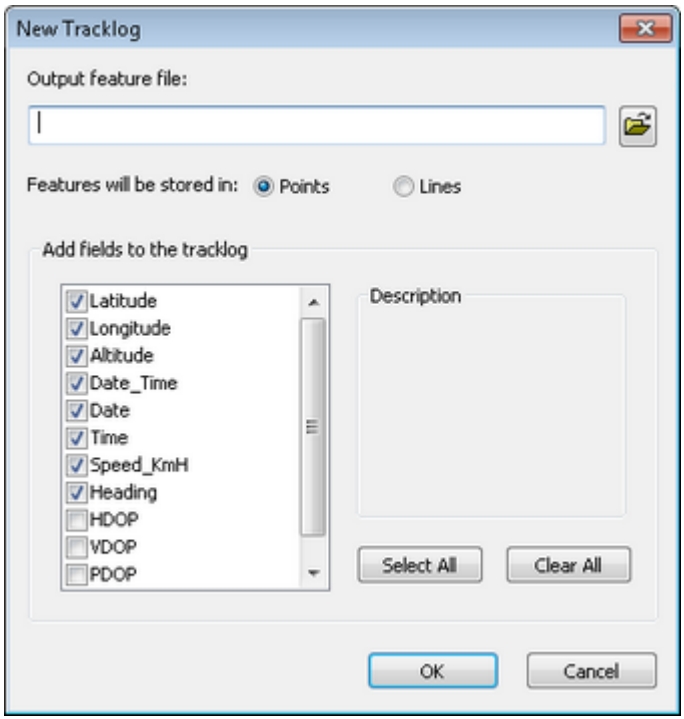
### Tracklog Settings

When SuperGIS Desktop receives the signals, the current GPS status will be demonstrated on the window. To create a new Tracklog file, please click **GPS** > **Tracklog Settings** > **New…**






You can configure file path and feature type to output, and open the traklog file you recorded.




When you accomplish all the configurations, click OK and go back to Tracklog Settings configuration dialog box, and click OK for accomplishment.

**NOTE**: Only basic steps of tracklog settings are portrayed in this paragraph. To know more elaborations, please refer to chapter GPS Add-on within SuperGIS Desktop 10 User Guide.

### GPS Connect to GPS

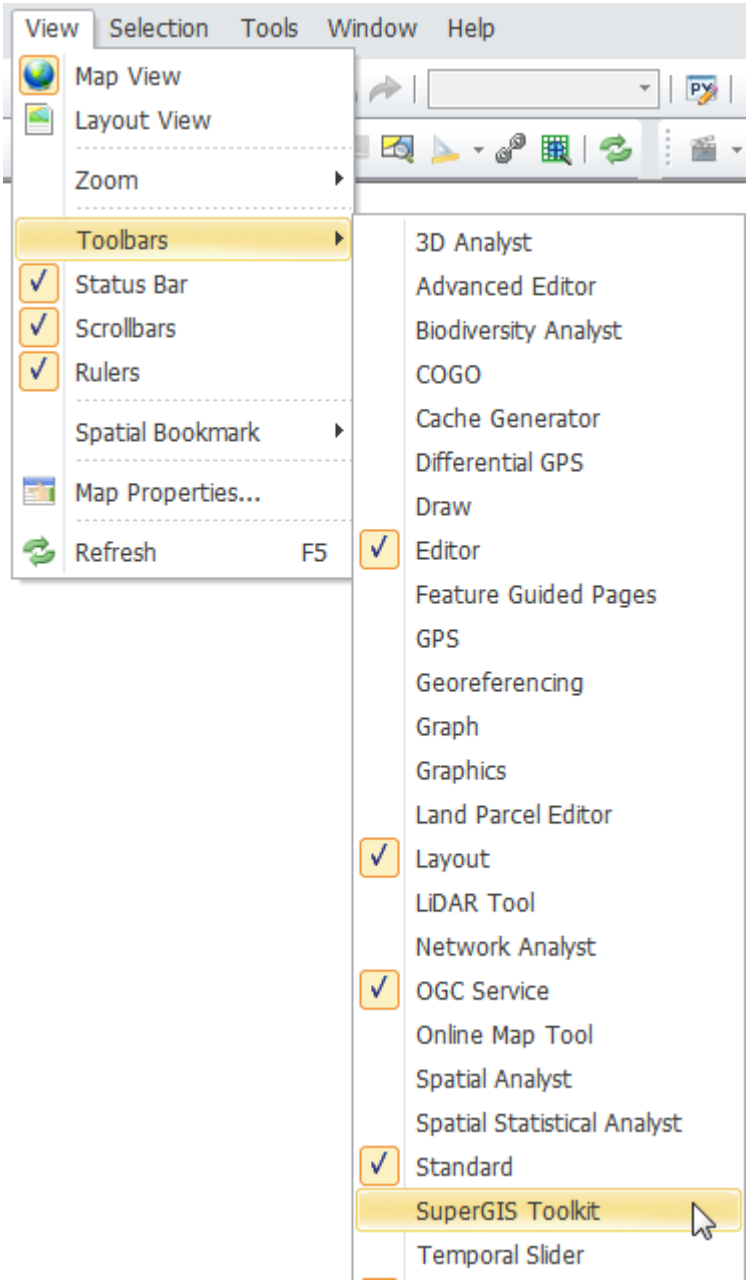
When configurations are accomplished, you can check Connect to GPS receiver in GPS Settings dialog box. Click **Auto Detect**, and system will connect to effective communication port automatically. You may modify the other settings if you have particular demand; otherwise, we suggest to keep the four items with default values. Subsequently, click **Open GPS Connection** on **GPS Toolbar** to SuperGIS Desktop 10 to GPS.

GPS Add-on within SuperGIS Desktop 10 provides diverse functions, including GPS connections, content displaying, tracklog updating, etc. To know more elaborations, please refer to chapter **GPS Add-on** in SuperGIS Desktop 10 User Guide.

# Process Design

## Overview of SuperGIS Toolkit

SuperGIS Toolkit is a powerful Process Design program, through which a Process Design can be designed to handle the various analyses or processing.

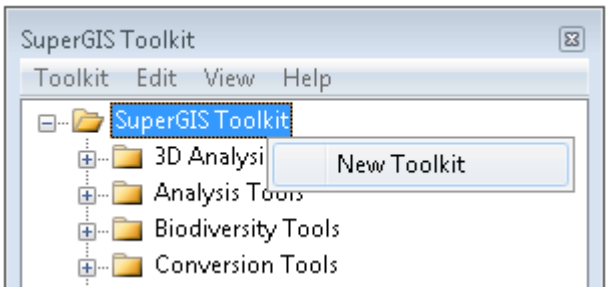



▲ Open SuperGIS Toolkit Toolbar

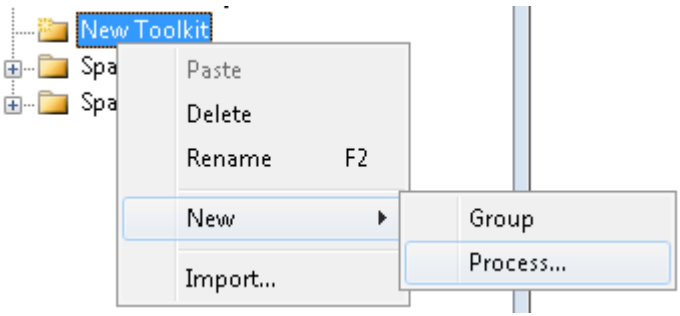

▲ SuperGIS Toolkit Toolbar

### Create a New SGD Project

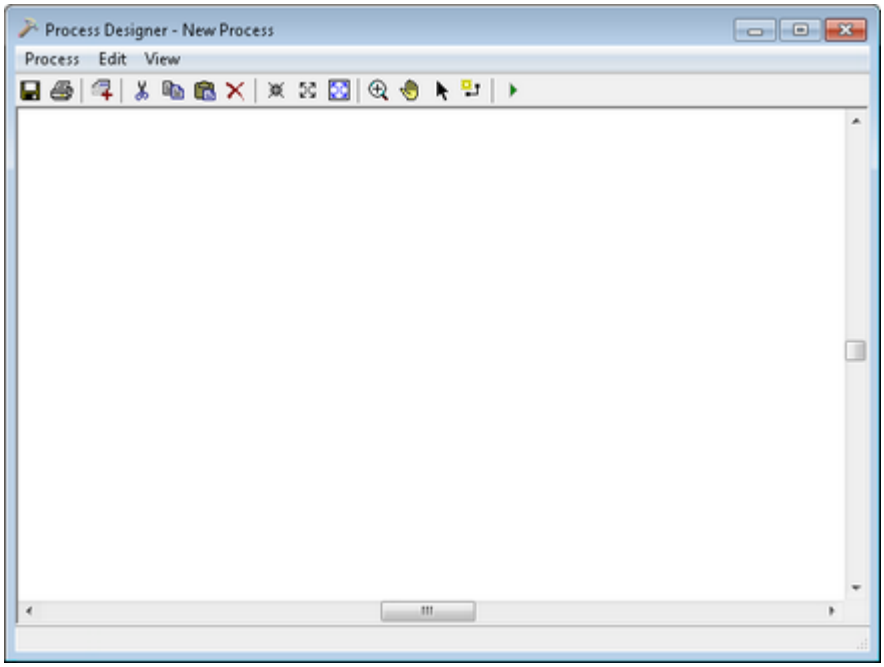
Click SuperGIS Toolkit button to open SuperGIS Toolkit window. And right-click on SuperGIS Toolkit to select **New Toolkit** ( ).



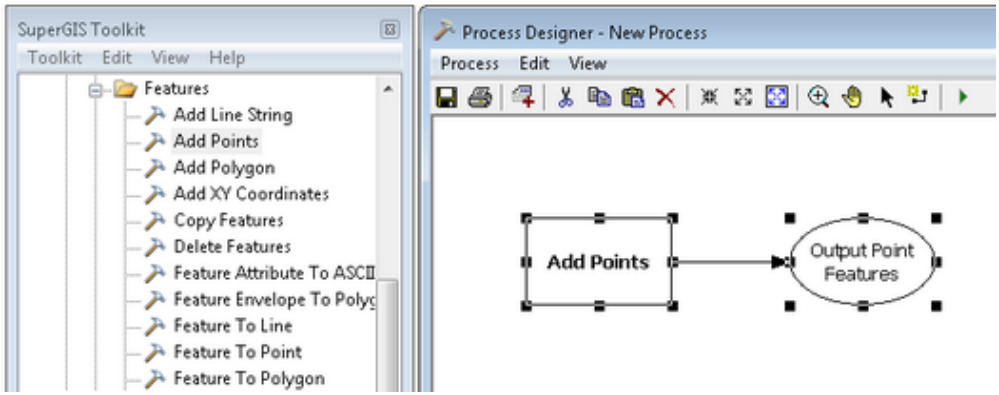

**Right-click** on the newly added **New Toolkit** to select **New** > **Process** to build a new process.



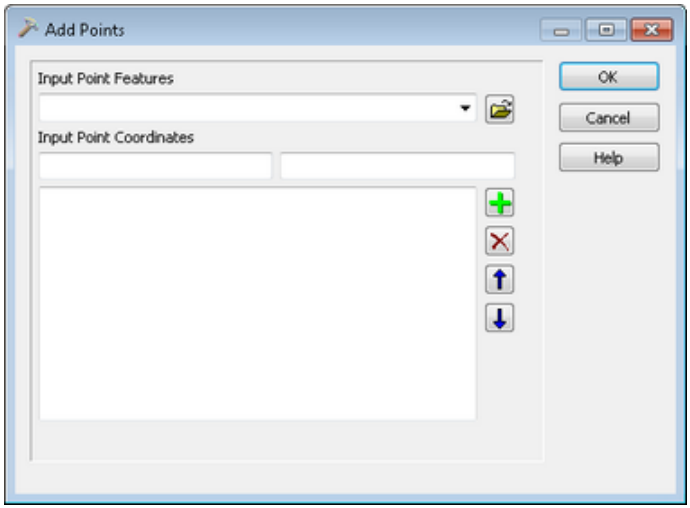

Right-click on the newly added New Process and select Design to open Process Designer window.



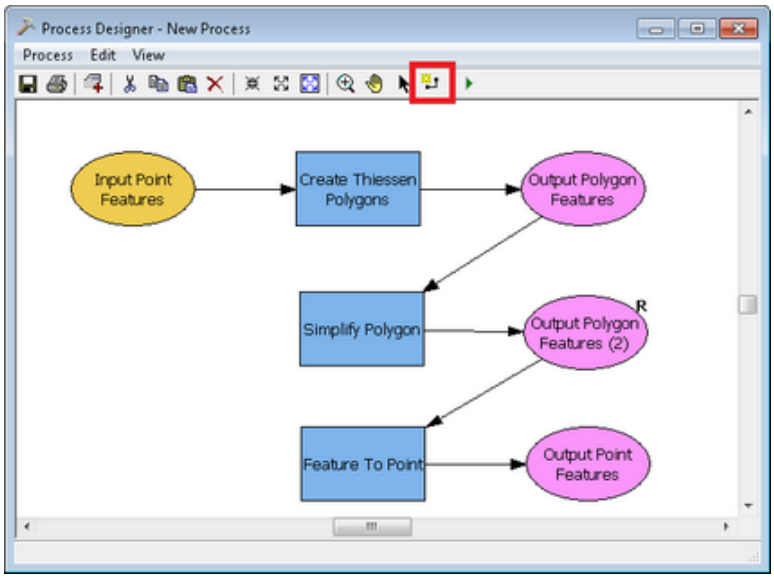

The default Processing items provided by SuperGIS Toolkit can be dragged into Process Designer window directly to build process.



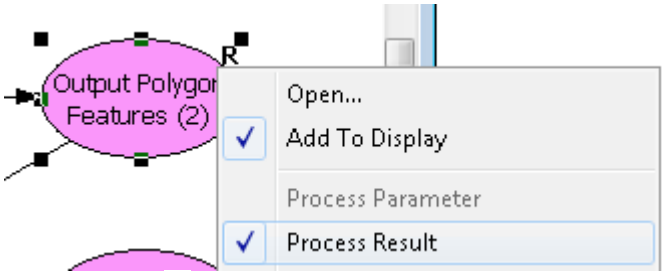

To open process setting window, you can double-click on the newly-added process items or right-click the process item, and select Open on Process Designer window. In the processing window, users can set field contents and parameters.




When the first process is accomplished, you can drag other functions into the existing process and utilize **Add Connection** tool ( ) to yield the first process for second process using.

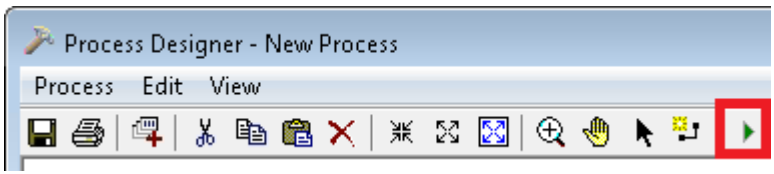



When process parameter settings are configured, please right click on any vertex of output polygon feature and select **Process Result** to output the process result to the front-end website. Results that are set as process results show with **R** on the upper-right of the vertex.




▲ Configure Process Result

And you can click **Run** icon (  ) within Process Designer dialog box to accomplish your design.




To publish a particular map service of Geo-processing through SuperGIS Server, please click the Save icon on Process Designer toolbar to accomplish the process designing task and save the map as SGD project.