



THE NEW GENERATION OF THE SPATIAL SYSTEMS

User's Guide

SES Client for Windows Phone

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SPENTERSYS LLC

Patent Information

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Chapter 1: Installation

This chapter covers the following topics:

- How to download SES Client for Windows Phone;
- How to install SES Client for Windows Phone;
- How to activate free SES Client for Windows Phone;
- Login to SES through the SES Windows Phone.

How to install SES Client for Windows Phone

The following are the steps to download SES Client for Windows Phone:

1. On your phone, go to App Store;
2. Search for “SES Client”;
3. Select and Install.

The copy of SES.Client.WP7.xap will be downloaded and installed to your phone.

Login to SES

As one of the SES clients, the SES Silverlight control requires the user login to perform the further operations. The user profile needs to be setup and configured through the admin console. The following is the login window for the Silverlight control running in out-of-browser mode.



Chapter 2: General Functions




Types of GUI Mode for SES Client

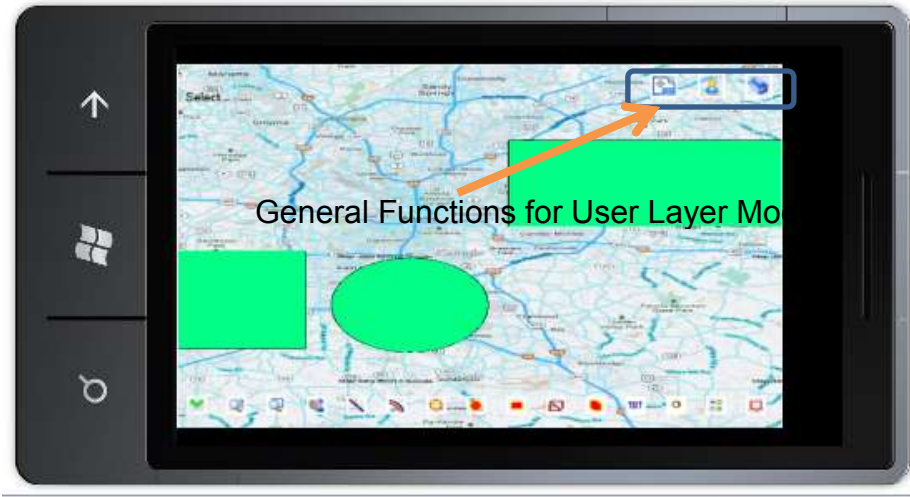
SES Clients are data-driven, which means that all the functions are driven by the state of the data. For example, if the user profile has not been setup, you cannot log into the system. If there is not data changes, the Commit or Rollback commands are not available to the user. If there are no entities selected, the properties dialog box is not available. This data-driven mechanism gives SES the great flexibility to deploy the solutions on the clients.

As the general rule, SES client GUI is also driven by the data model. From the user perspective, SES has 2 types of data models for the user to access – user layer model and workflow model. There 2 data models will trigger the different GUIs on the client.

Client GUI for User Layer Model



The following figure shows the GUI layout for the user layer model. For the GUI, there are 3 major commands for the user layers:

- Layer ;
- Profile ; and
- Logout .



Client GUI for Workflow Model

The following figure shows the GUI layout for the user layer model. For the GUI, there are 2 major commands for the workflows:

- Profile ; and
- Logout .



Layer Property Command

Layer Property command brings up the dialog box for the user layer configuration. This dialog box only allows the user to configure 2 options:

- Set the active layer;
- Change the draw order for the selected layer.

Change Active Layer

In SES, all the operations act on the active layer. The data are loaded based on the active layer. And only the data in the active layer can be edited. It is important for user to be able to change the active layer in order to manipulate the data in different layers. To change the active layer, the user can do following:

1. Select the child layer that need to be the new active layer;
2. Click the Set button on the Active Layer row.

After the above steps, the active layer caption will change to the selected child layer.



Change Draw Order

The draw order is the order for the layer to display. The higher draw-order layer displays on the top of the lower draw-order layers. To set the draw order, user can do following:

1. Select the child layer for the draw order to be set;
2. Enter the number of the draw order for the selected layer;
3. Set button on the Draw Order row.

After the settings are entered, tap OK button will save the settings to the server for the current user. All the GUI functions will be refreshed based on the newly-set layer. And the view will display the layers based on the newly-set draw orders.

Profile Command

The Profile command brings up a profile dialog box to allow the user to change the user profile (shown in the figure below). This dialog allows user to change the following information on the client side:

- User Name;
- Full Name;
- Password;
- Email.



Once the data have been entered into the dialog, user can click OK button to save the profile data to the server.

Logout Command

Logout command allows the current user to logout from the current session. After logout, the local cache on the client side will be cleared. For the next login session, the fresh cache will be generated.

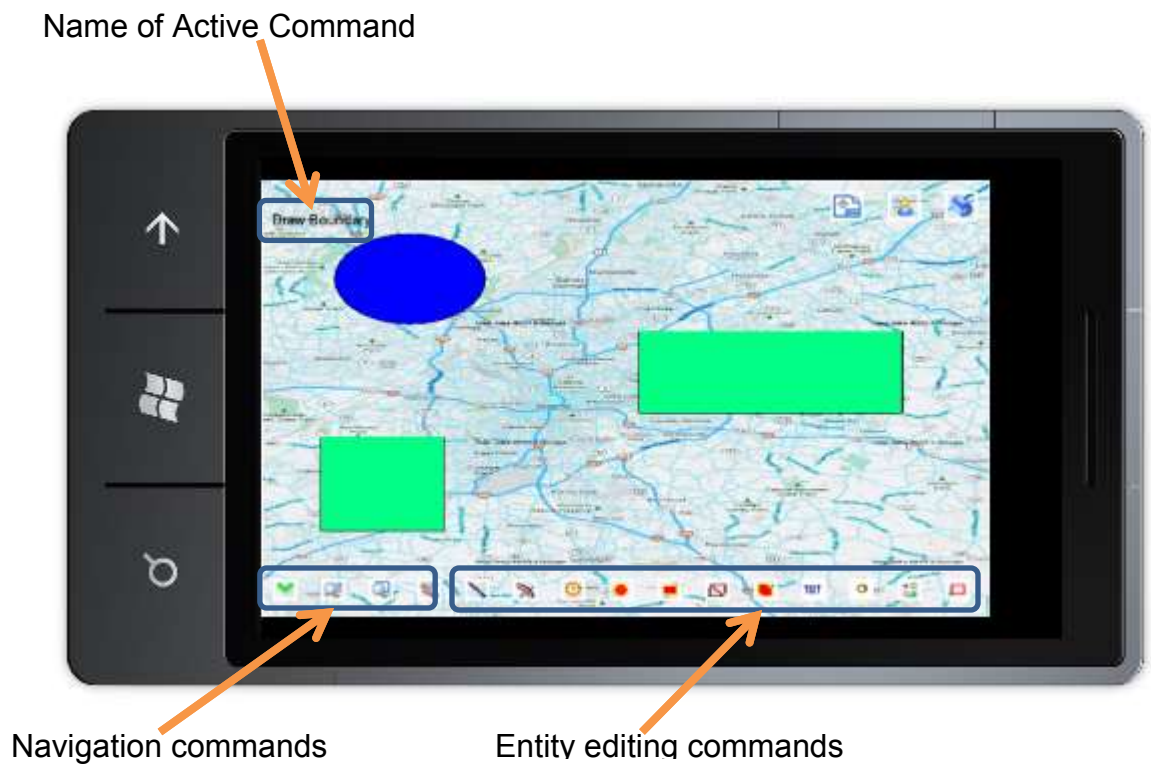
Logout command will bring the screen to the original login screen shown as in the following figure.



Chapter 3: Command References

In SES, commands are the executable modules that can interactively change the behaviors of the rendering entities. Commands are associated with the views. On SES client, there are 3 types of commands:

- Navigation commands;
- Entity editing commands.



The figure above shows the toolbars for the 2 different types of the commands. The name of the active command is displayed on the top-left corner of the view.

Navigation Commands

Navigation commands are the commands that control the view properties to render the entities. The navigation commands in SES include:


- Select Command
- Zoom In/Out Command
- Zoom Window Command
- Pan Command

In SES, the rendering engines for all the platforms are optimized. The optimization procedure occurs at runtime, which includes the following activities:

- Dynamic data loading – only the entities that are required by the view area will be loaded into the rendering cache.
- Entity optimization – the points for the rendering geometries of the entities are filtered to best fit the screen display; the geometries that are too small to view on the screen will be filtered out.
- Polygon optimization – the polygons are triangulated and clipped for the view boundaries.

The above optimization procedure occurs at runtime for all platforms including the clients for Mobile and Silverlight.

Select Command

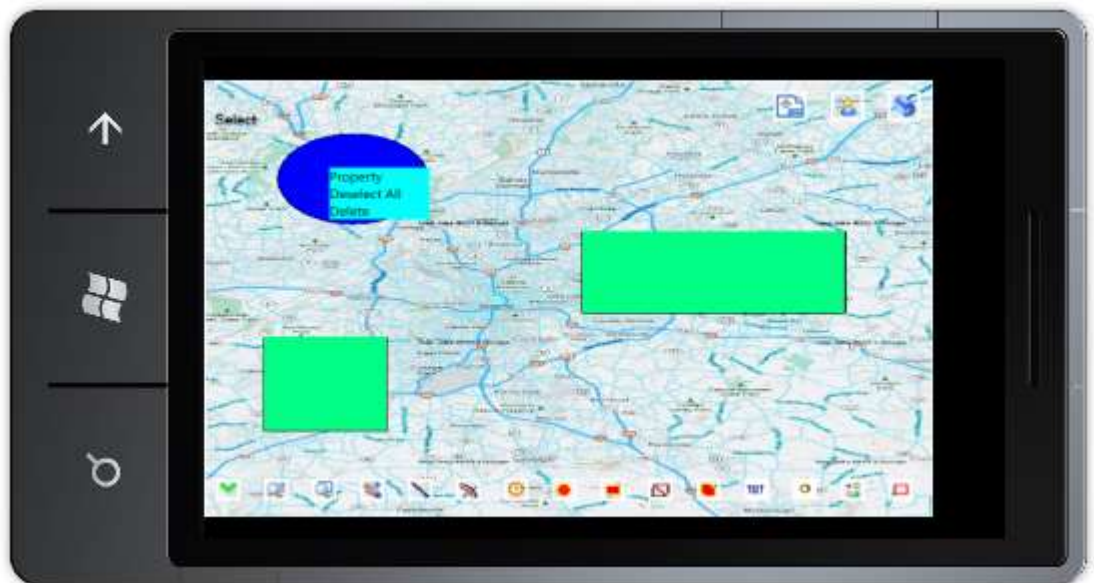
Select command is the command for user to select and move entities. Select command is activated by clicking  icon in the command toolbar.

After select command has been activated, user can select the entities in 2 ways:

- Tap the entities one by one; or
- Drag a rectangle to specify the area in which the entities reside.

The entities can be move after the entities have been selected. Simply dragging the view from one location to another will move the selected entities into the new locations.

After the entities has been selected, right-clicking the mouse (or holding on screen on Mobile) will populate the popup menu. Selecting Property in the menu will populate a dialog box that shows the properties of the first selected entity. Selecting Deselect All will enable user to deselect all entities that have been selected.



Zoom In/Out Command

Zoom In/Out command is the command to zoom in or zoom out the views for the different viewing purposes. Dragging the view up will enlarge the scale of the view. Dragging the view down will shrink the scale of the view.

Zoom Window Command

Zoom Window is the command to zoom the view to the specified window. After Zoom Window command has been activated, user can drag a rectangle on the view. The view will be expanded to the boundaries specified by the rectangle.

Pan Command

Pan command is the command to move the view to the different locations without changing the coordinates of the entities. After the Pan command has been activated, user can drag the view from one location to another. The view will also move from one location to another.

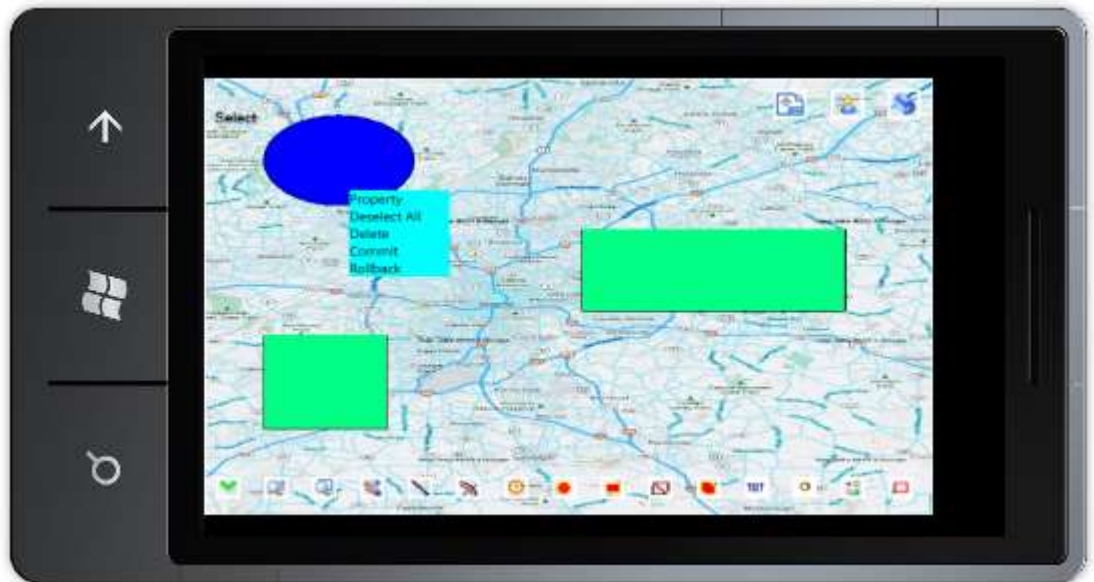
Editing Commands

Editing commands are the commands to add the entities to the system for the specified layers. All editing commands apply only to the active editable layers. For the rendering model configuration, the physical rendering layer is always the active layer by default.

In SES, the geometry of the entity can only be added, removed and moved. Current SES doesn't support the geometry modification features. The attributes of the entity are added automatically when the geometry is added. The attributes of the entity can be modified through the property dialog box populated through the popup menu.

When editing the entity has been completed, the Commit command needs to be executed to save the editing work to the server. The Commit command is

available in the popup menu. If the editing work is not satisfied, the user can select the Rollback command to start over.



The existing entities can be deleted through the Delete command in the popup menu. Again, if the user wants to keep the deletion permanent, the Commit command needs to be executed. Or, the Rollback command can discard the deletion and put the deleted entity back to the screen.

The popup menu is data-driven. It shows the command options based on the current status of the data in the view. If there is no entity selected and edited, the popup menu will not show any command options. It will be left blank.

Draw Line Command

Draw Line command is the command to draw a single line in the view. After the Draw Line command has been activated, user can just drag a line from one point to another. A single line will be created. Just do another drag to create another line.

Draw Arc Command

Draw Arc command is the command to draw a single arc in the view. After the Draw Arc command has been activated, user can just drag an arc from one point to another. A single arc will be created. Just do another drag to create another arc.

Draw Circle Command

Draw Circle command is the command to draw a single circle in the view. After the Draw Circle command has been activated, user can just drag a circle from one point to another. The first point will be the origin of the circle. The radius of the circle will be the distance between the origin and the moving point. Just do another drag to create another circle.

Draw Pie Command

Draw Pie command is the command to draw a single pie in the view. After the Draw Pie command has been activated, user can just drag a pie from one point to another. The first point will be the origin of the circle. The radius of the pie will be the distance between the origin and the moving point. Just do another drag to create another pie.

Draw Rectangle Command

Draw Rectangle command is the command to draw a rectangle in the view. After the Draw Rectangle command has been activated, user can just drag a rectangle from one point to another. A rectangle will display in the view after the dragging has been finished.

Draw Polyline Command

Draw polyline command is the command to draw a polyline the view. After the Draw Polyline command has been activated, user can start add polyline in the following steps:

- Click (or tap) on the screen for the first point of the polyline;
- Drag the lines for each consecutive line segments for the polyline;
- Double click (or double tap) the last point to end adding the polyline.

Draw Polygon Command

Draw polygon command is the command to draw a polygon the view. After the Draw Polygon command has been activated, user can start add polygon in the following steps:

- Click (or tap) on the screen for the first point of the polygon;
- Drag the lines for each consecutive line segments for the polygon;
- Double click (or double tap) the last point to end adding the polygon.

Draw Text Command

Draw Text command is the command to draw a text string in the view. After the Draw Text command has been activated, user can start adding text in the following steps:

- Click (or tap) on the screen for the position of the text, a text box will appear at the position;
- Enter the text in the text box;
- Press Enter key to finish add a text string.

Draw Symbol Command

Draw Symbol command is the command to draw the symbols in the view. After the Draw Symbol icon has been clicked, a symbol selection dialog box will be populated to allow the user to select which symbol needs to be added. After the symbol has been selected, user can just click the positions for the symbol. The selected symbol will be placed on these clicked positions.

Draw Image Command

Draw Image command is the command to draw the image in the view. After the Draw Image icon has been clicked on the toolbar, an image selection dialog box will be populated to allow the user to select the image to add. After the image has been selected, user can drag a rectangle and the selected image will be added to the area specified by the rectangle.

Draw Image Command

Draw Image command is the command to draw the image in the view. After the Draw Image icon has been clicked on the toolbar, an image selection dialog box will be populated to allow the user to select the image to add. After the image has been selected, user can drag a rectangle and the selected image will be added to the area specified by the rectangle.

Draw Boundary Command

Draw Boundary command is the command to draw a rectangle boundary the view. After the Draw Boundary has been activated, user can just drag a boundary in the view. Repeat dragging in different area when multiple boundaries are added.

