

Effortlessly Publishing Online GIS Data and Services by Using SuperGIS Server 3.1a

Ava Lai

International Support Engineer

Supergeo Technologies Inc.

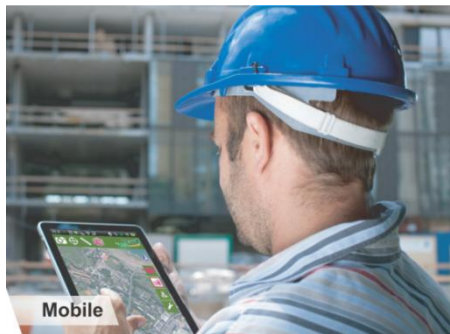


Outline

- The New SuperGIS Server 3.1a: Interface
 - Service
 - Application
- Examples:
 - Mash up with OpenStreetMap [[*](#)]
 - Geoprocess: Publish and Use [[**](#)]
 - Spatial Analysis: Viewshed Analysis [[***](#)]
 - Network Analysis: Shortest Path [[****](#)]

Overview of SuperGIS Server 3.1a

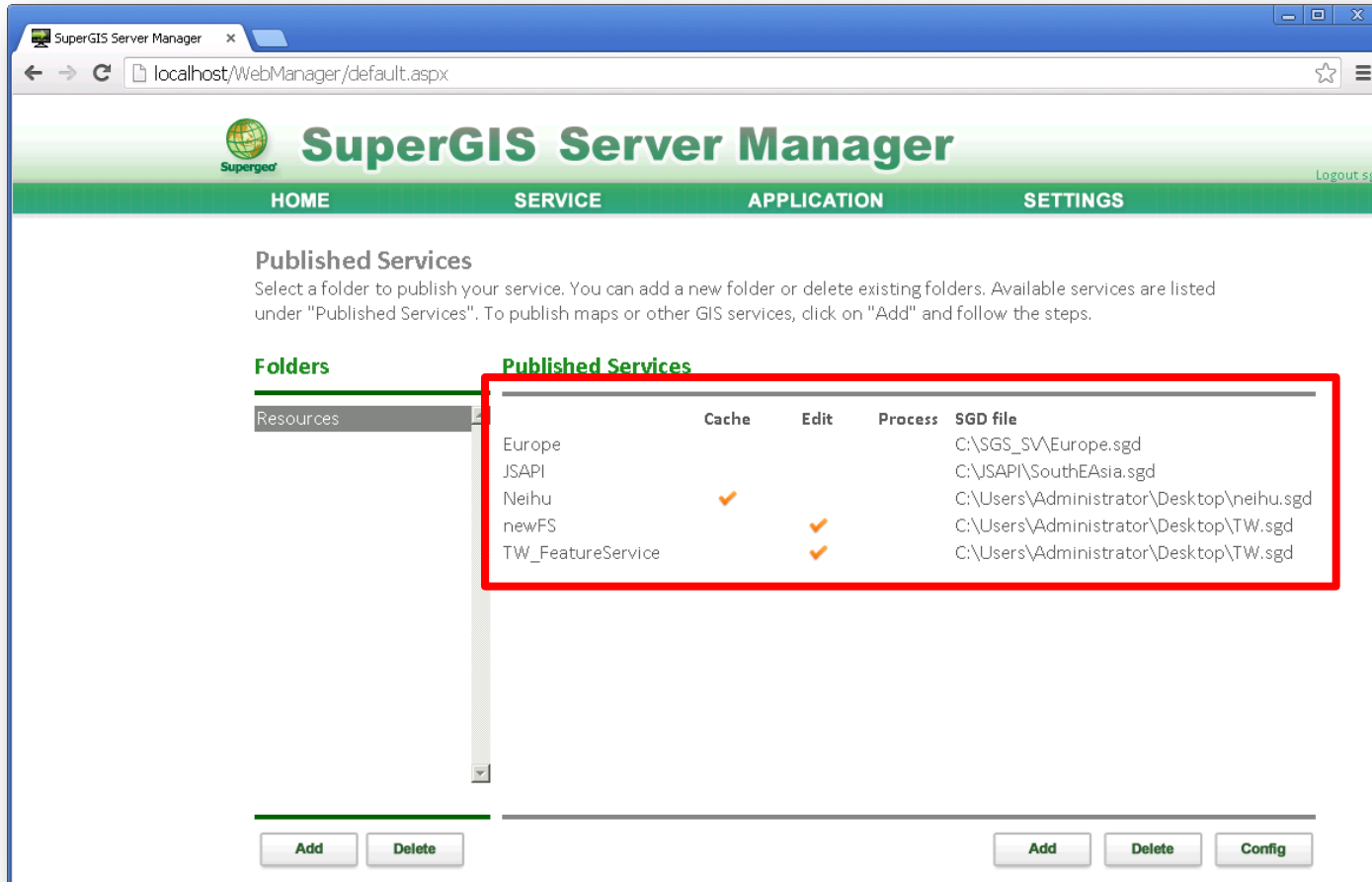
- SuperGIS Server 3.1 Help
 - Copyright
 - Welcome to SuperGIS Server 3.1 Help
 - Get to Know SuperGIS Server
 - Installing and Setup for Server Side
 - Breif of SuperGIS Server Manager
 - Publishing GIS Service
 - The Preparations before Publishing Services
 - System Settings and Preparing Data
 - Creating the Map for Web Map Service
 - Creating SGD file in SuperGIS Desktop
 - Creating SLR file in SuperGIS Desktop
 - Creating SWG file in SuperWebGIS



Interface: Services Part



Interface: Service Part



The screenshot shows the SuperGIS Server Manager web interface. The browser address bar displays `localhost/WebManager/default.aspx`. The page has a green header with the SuperGIS logo and the title "SuperGIS Server Manager". Below the header is a navigation bar with tabs: HOME, SERVICE, APPLICATION, and SETTINGS. The "Published Services" section is active, showing a list of services. A red box highlights the "Published Services" table.

Published Services

Select a folder to publish your service. You can add a new folder or delete existing folders. Available services are listed under "Published Services". To publish maps or other GIS services, click on "Add" and follow the steps.

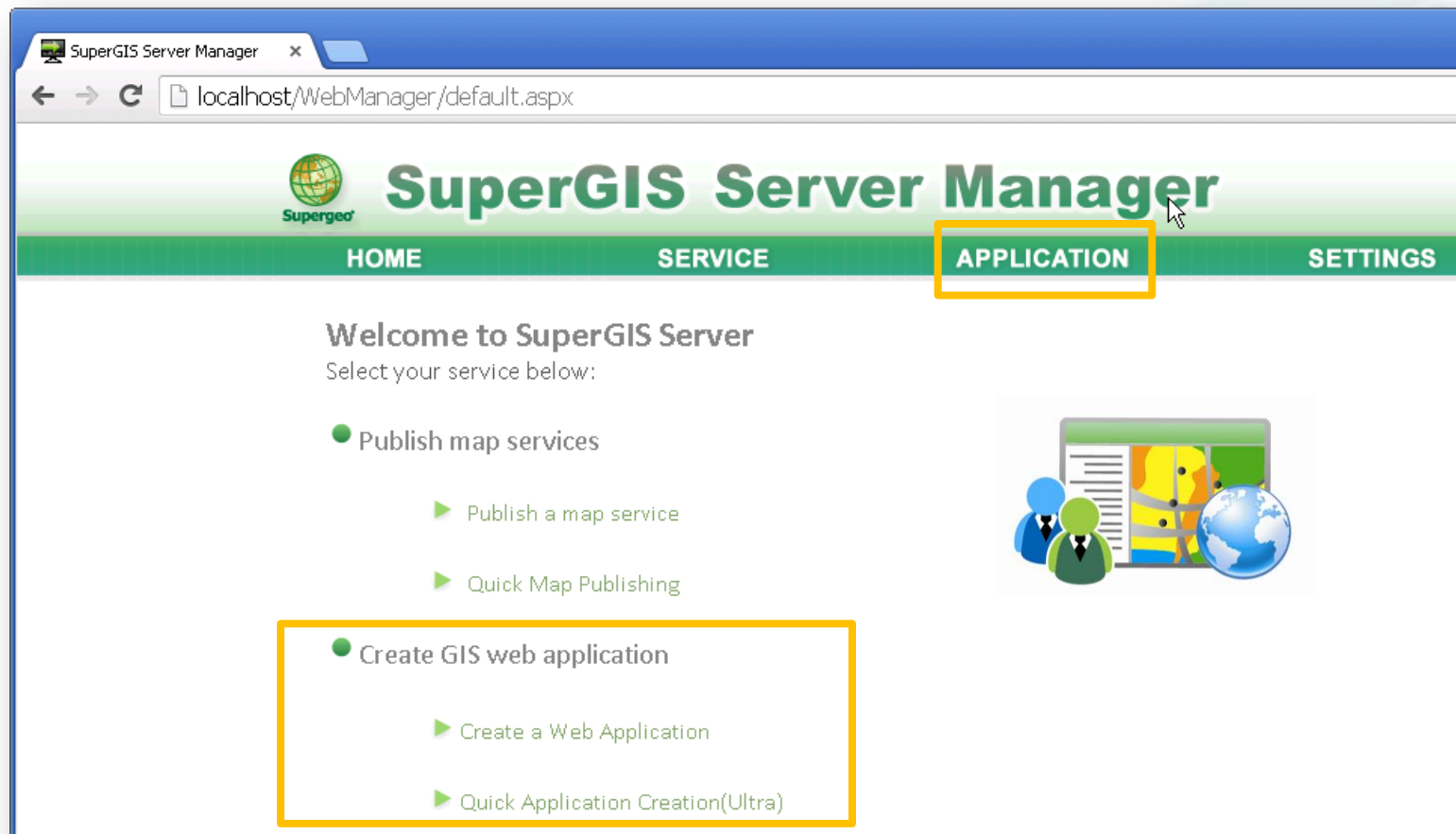
Folders

- Resources

	Cache	Edit	Process	SGD file
Europe				C:\SGS_SV\Europe.sgd
JSAPI				C:\JSAPI\SouthEAsia.sgd
Neihu	✓			C:\Users\Administrator\Desktop\neihu.sgd
newFS		✓		C:\Users\Administrator\Desktop\TW.sgd
TW_FeatureService		✓		C:\Users\Administrator\Desktop\TW.sgd

At the bottom of the interface, there are buttons for "Add", "Delete", and "Config".

Interface: Application Part



Interface: Application Part



The screenshot shows the SuperGIS Server Manager web application interface. The browser window title is "SuperGIS Server Manager" and the address bar shows "localhost/WebManager/default.aspx". The page has a green header with the Supergeo logo and the title "SuperGIS Server Manager". Below the header is a navigation bar with four tabs: "HOME", "SERVICE", "APPLICATION", and "SETTINGS". The "APPLICATION" tab is selected.

Web Application
Select the service type of your application.

- ☒ Ultra
- ☐ Flex
- ☐ Silverlight
- ☐ KML
- ☐ OGC Web Service

A description for the "Ultra" service is provided: "A web service based on JavaScript framework which allows developers to create web map with cached maps or online editing functions."

Below the service selection, three preview images are shown, each displaying a map interface with a green header and navigation controls:

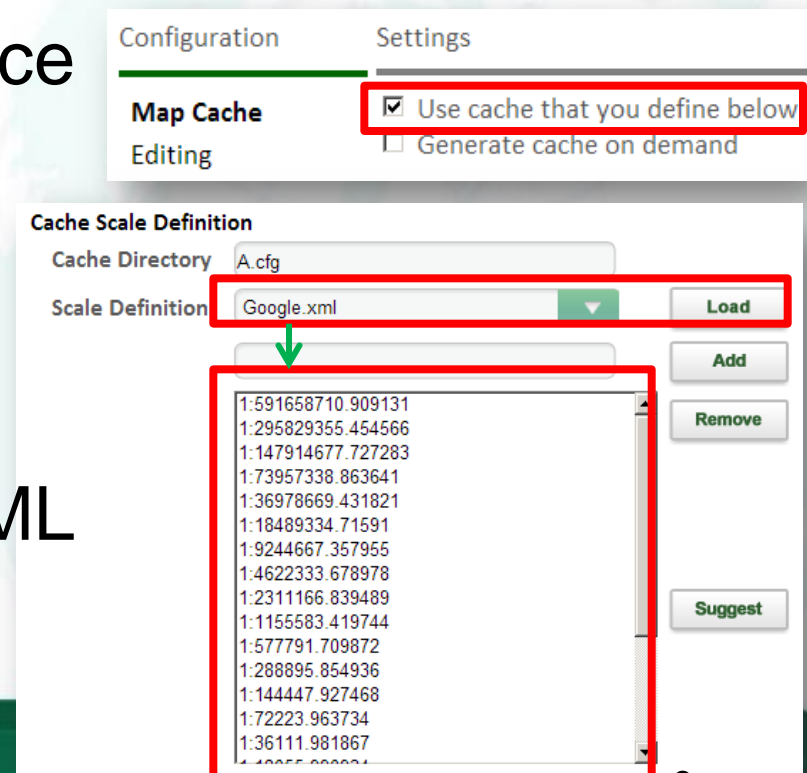
- SuperGIS Server Website**: Shows a map with a green header and navigation controls.
- Flex**: Shows a map with a green header and navigation controls.
- Silverlight**: Shows a map with a green header and navigation controls.

Example 1: Mash Up with OpenStreetMap



Mash up with OpenStreetMap

- Key Points
 - the Coordinate System: Web Mercator
 - Publish as Cache Service
 - Setting for the Scale
 - Modification on the HTML



The screenshot displays the Supergeo configuration interface. The 'Settings' tab is active, showing the option 'Use cache that you define below' checked. Below this, the 'Cache Scale Definition' section is visible, with 'A.cfg' in the 'Cache Directory' field and 'Google.xml' selected in the 'Scale Definition' dropdown. A list of coordinates is shown in a text area, with a green arrow pointing to it from the 'Load' button. The coordinates are:

- 1:591658710.909131
- 1:295829355.454566
- 1:147914677.727283
- 1:73957338.863641
- 1:36978669.431821
- 1:18489334.71591
- 1:9244667.357955
- 1:4622333.678978
- 1:2311166.839489
- 1:1155583.419744
- 1:577791.709872
- 1:288895.854936
- 1:144447.927468
- 1:72223.963734
- 1:36111.981867

Mash up with OpenStreetMap

- Step 1. Set coordinate system in sgd file
- Step 2. Save sgd file
- Step 3. Launch SuperGIS Server Manager
- Step 4. Checkbox for using Cache service
- Step 5. Set for the scale: using Google.xml
- Step 6. Create Application
- **Step 7. Modify in HTML file (copy to a new HTML)**

Mash up with OpenStreetMap

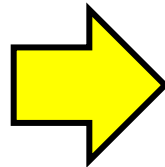
- Step 7. Modify in HTML file (copy to a new HTML)
- In Help Manual:

```
.....  
<script type="text/javascript" src="scripts/Overview.js"></script>  
<script type="text/javascript" src="scripts/Bookmark.js"></script>  
<script type="text/javascript" src="scripts/OpenStreetMap.js"></script>  
<script>  
.....
```

```
.....  
function InitWnd()  
{  
.....  
    var pTrans = new CachedLevelTransformation(pLyr);  
  
    var pMapBase = new MapBase(pOMap, pTrans, 0, 0, "100%", "100%");  
    gMapBase = pMapBase;
```

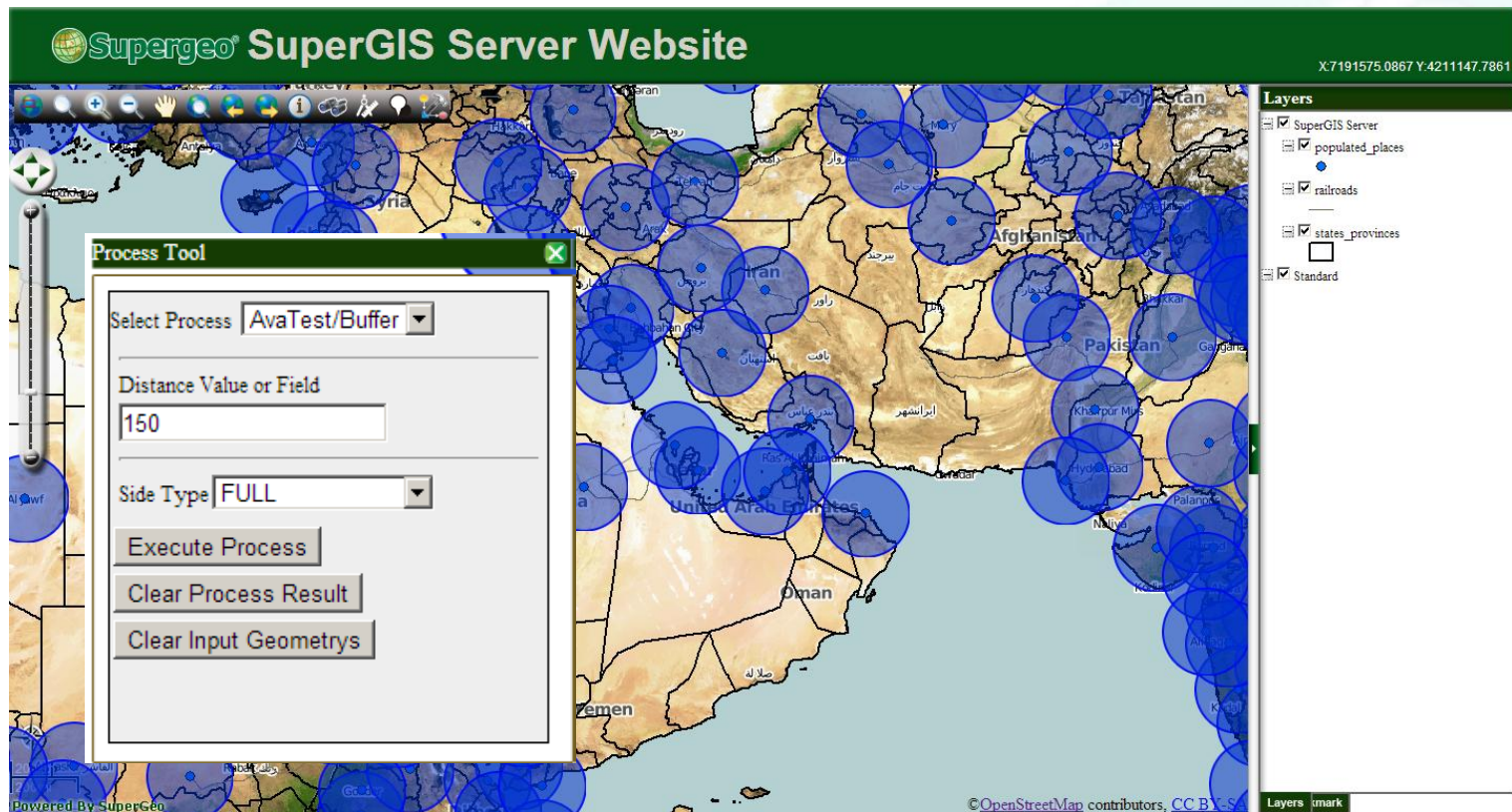
```
        pMapBase.AddLayer(new OpenStreetMap("Standard", {  
            url:["http://tile.opencyclemap.org/cycle/",  
                "http://a.tile.opencyclemap.org/cycle/",  
                "http://b.tile.opencyclemap.org/cycle/",  
                "http://c.tile.opencyclemap.org/cycle/"]  
        }));  
        pMapBase.AddLayer(pLyr);  
.....
```

ATTENTION!



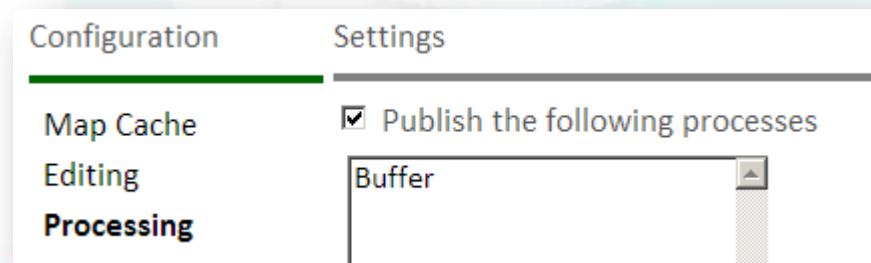
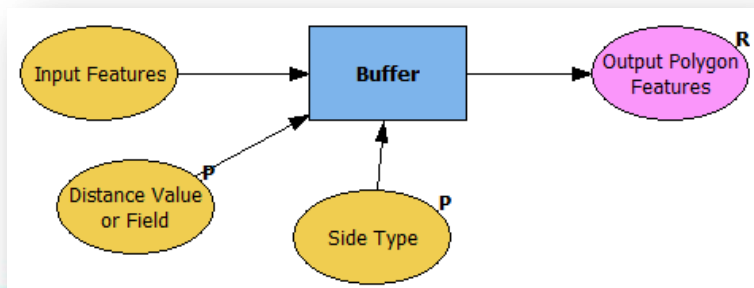
Example 2:

Geoprocess: Publish and Use



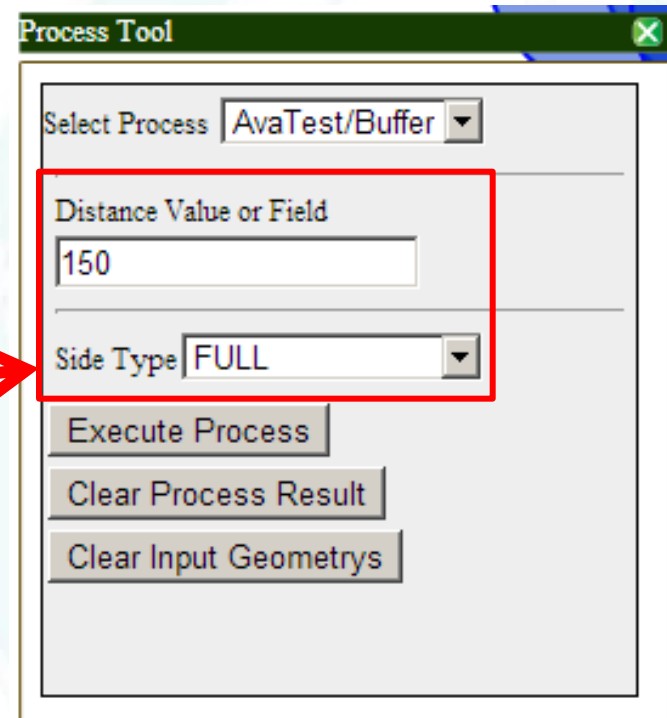
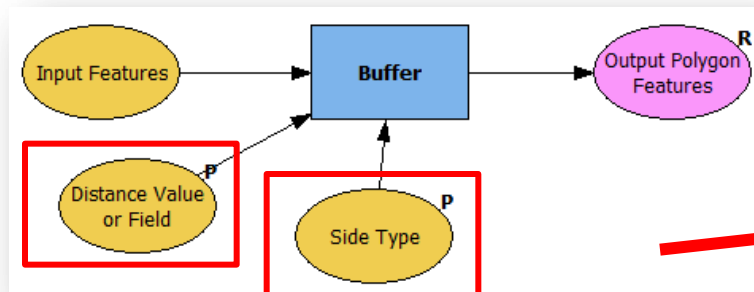
Geoprocess: Publish and Use

- Key Points:
 - Create your own toolkit in SuperGIS Desktop
 - Setting for Process Parameters
 - Setting for Result and Display on Map
 - Must check the box to apply the Process



Geoprocess Publish and Use

- Why do we need to set the Process Parameters?



The screenshot shows the 'Process Tool' window with the 'AvaTest/Buffer' process selected. The 'Distance Value or Field' parameter is set to '150' and the 'Side Type' parameter is set to 'FULL'. Both of these parameter fields are highlighted with a red rectangle. Below the parameters are three buttons: 'Execute Process', 'Clear Process Result', and 'Clear Input Geometrys'.

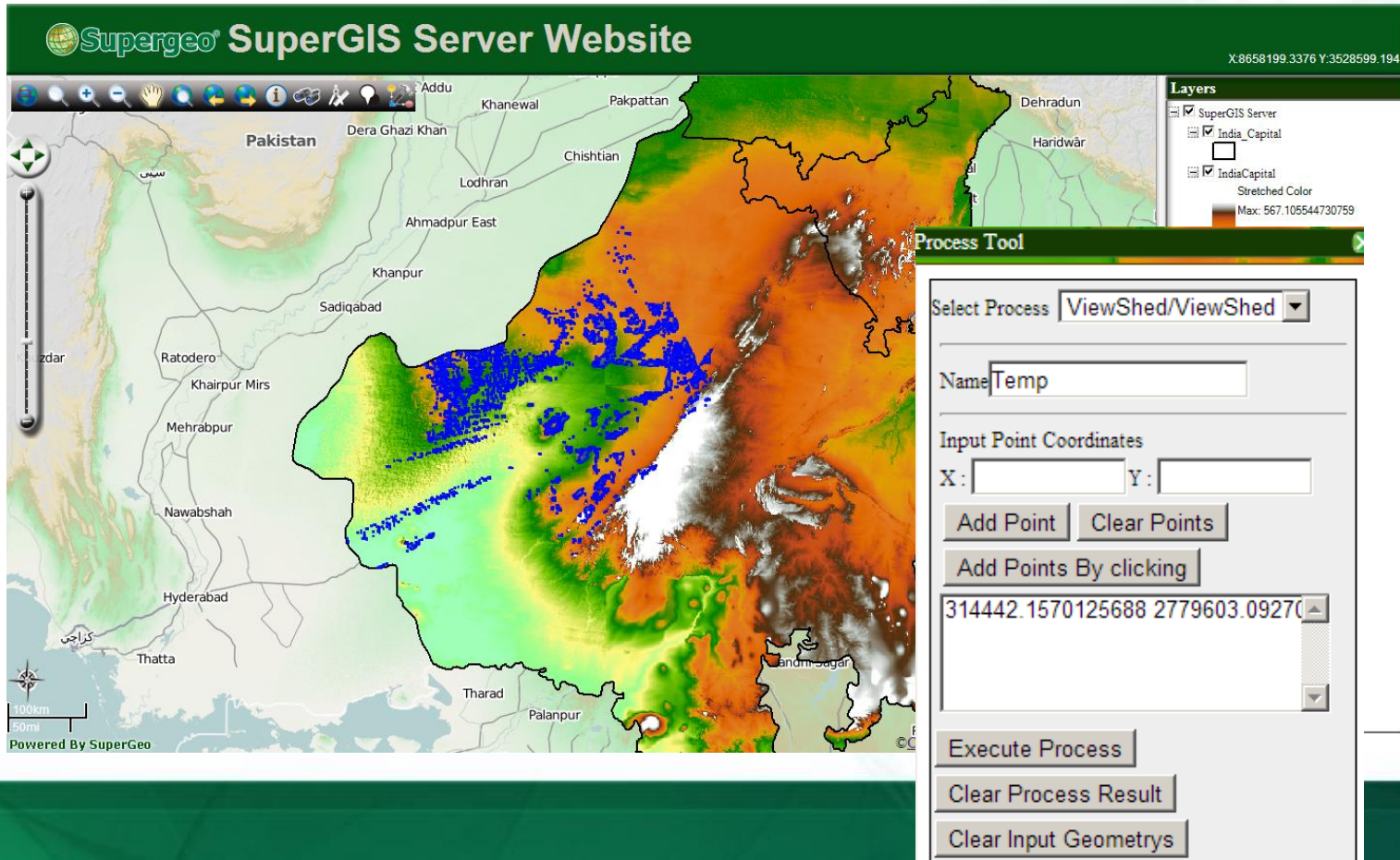
Geoprocess Publish and Use

- Step 1. Create a new Toolkit
- Step 2. Design the process
- Step 3. Save sgd file
- Step 4. Launch SuperGIS Server Manager
- Step 5. Publish the map service
- Step 6. Include the process
- Step 7. Create a web application
- Step 8. Click on the Tool icon, to execute the toolkit

BREAKTIME: A QUICK POLL

Example 3:

Spatial Analysis – Viewshed



Supergeo SuperGIS Server Website

X:8658199.3376 Y:3528599.194

Layers

- ☒ SuperGIS Server
- ☒ India_Capital
- ☒ IndiaCapital
- Stretched Color
- Max: 567.105544730759

Process Tool

Select Process: **ViewShed/ViewShed**

Name: **Temp**

Input Point Coordinates

X: Y:

Add Point **Clear Points**

Add Points By clicking

314442.1570125688 2779603.09270

Execute Process

Clear Process Result

Clear Input Geometrys

Powered By SuperGeo

Spatial Analysis – Viewshed

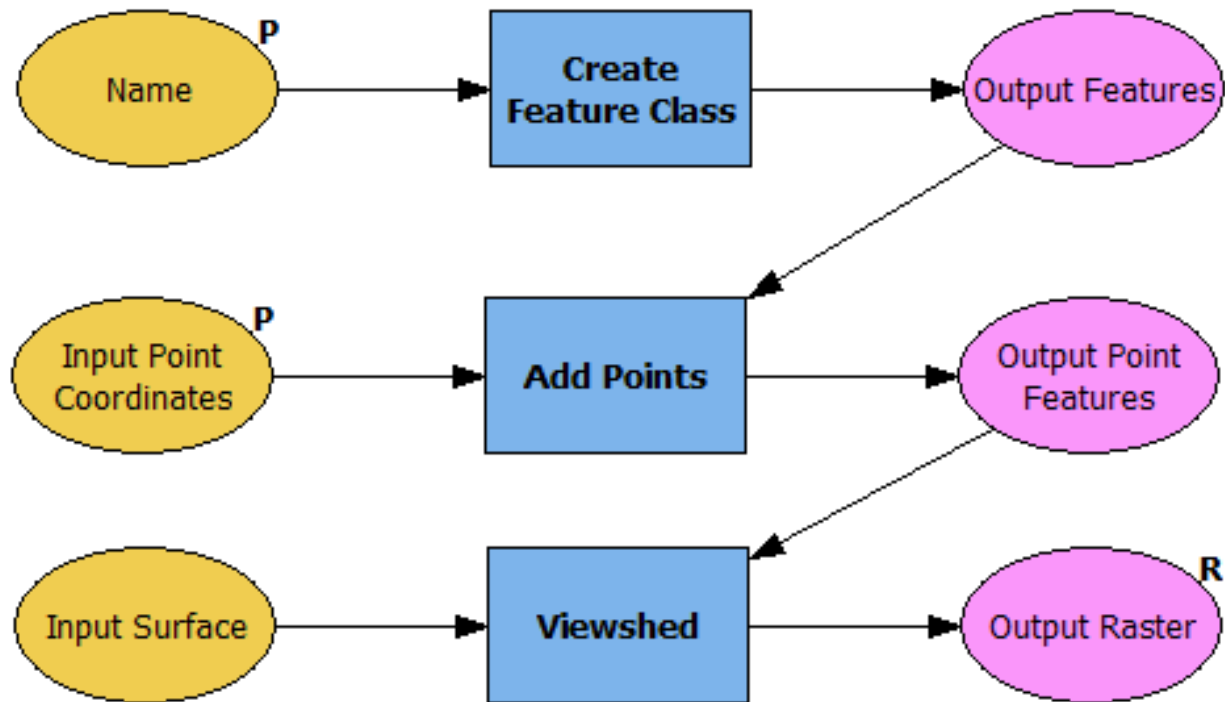
- Key Points:
 - Create your own toolkit in SuperGIS Desktop
 - **Design the process**
 - Setting for Process Parameters
 - Setting for Result and Display on Map
 - Must check the box to apply the Process

Spatial Analysis – Viewshed

- Thinking:
 - What elements do we need?
 - ✓ The target: raster map to analyze
 - ✓ Adding point(s) to analyze the area of viewshed
 - What's the steps? Think reversely
 - ✓ Before add point(s), we need a feature layer
 - ✓ Then we can add point(s)
 - ✓ To analyze for area of viewshed

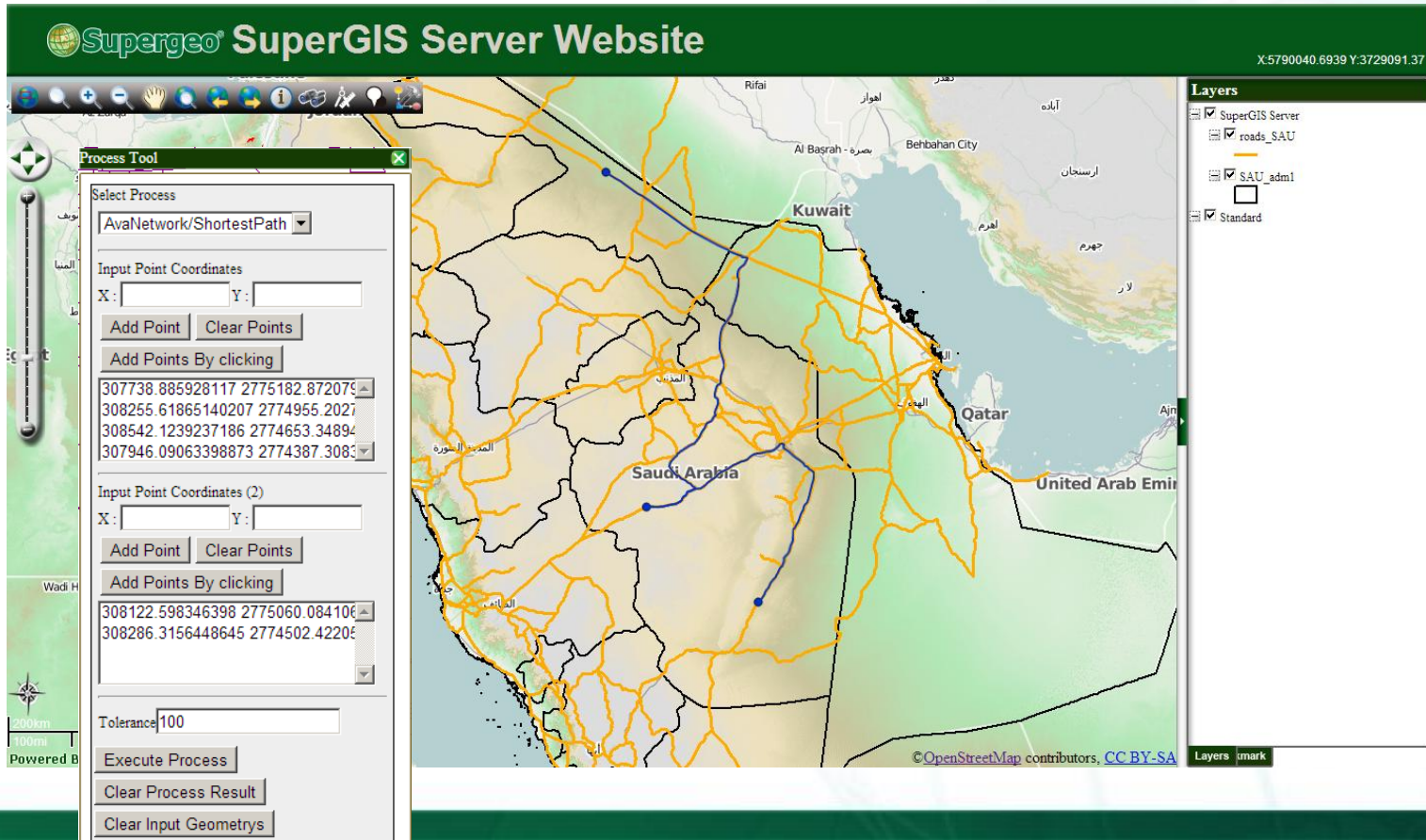
Spatial Analysis – Viewshed

- Design the process:



Example 4:

Network Analysis – Shortest Path



The screenshot displays the Supergeo SuperGIS Server Website interface. The main map shows a network of roads in Saudi Arabia, Kuwait, and the United Arab Emirates. A blue line indicates the shortest path calculated between two points. The interface includes a 'Process Tool' panel on the left, a 'Layers' panel on the right, and a map area with a scale bar and navigation controls.

Process Tool Panel:

- Select Process: **AvaNetwork/ShortestPath**
- Input Point Coordinates:
 - X: Y:
 - Buttons: **Add Point**, **Clear Points**
 - Button: **Add Points By clicking**
 - Coordinates list:
 - 307738.885928117 2775182.872079
 - 308255.61865140207 2774955.2027
 - 308542.1239237186 2774653.34894
 - 307946.09063398873 2774387.3083
- Input Point Coordinates (2):
 - X: Y:
 - Buttons: **Add Point**, **Clear Points**
 - Button: **Add Points By clicking**
 - Coordinates list:
 - 308122.598346398 2775060.084106
 - 308286.3156448645 2774502.42206
- Tolerance:
- Buttons: **Execute Process**, **Clear Process Result**, **Clear Input Geometries**

Layers Panel:

- ☒ SuperGIS Server
- ☒ roads_SAU
- ☐ SAU_adm1
- ☒ Standard

Map Area:

- Scale bar: 200km, 100km
- Powered by: [OpenStreetMap contributors](#), [CC BY-SA](#)
- Coordinates: X:5790040.6939 Y:3729091.37

Network Analysis – Shortest Path

- Key Points:
 - Before apply Network Analysis, the road map should have **done the topology validation**
 - Create your own toolkit in SuperGIS Desktop
 - **Design the process**
 - Setting for Process Parameters
 - Setting for Result and Display on Map
 - Must check the box to apply the Process

Network Analysis – Shortest Path

- Thinking:
 - What elements do we need?
 - ✓ The target: Line (road) feature layer
 - ✓ The destinations, barriers (Optional)
 - What's the steps?
 - ✓ Generate Network: weighted or not weighted? ...etc.
 - ✓ Stops and barriers both need point feature layers
 - ✓ Add points as stops and barriers
 - ✓ Connect points and network, and do the analysis

Network Analysis – Shortest Path

- A better solution for you to save time on designing the process:



The screenshot shows the Supergeo Developer Network (SGDN) website. The header features the title "Supergeo Developer Network" in a large, bold, white font on a dark red background, with several white arrows pointing right. Below the header is a navigation bar with links: "Library", "Supergeo Forums", "Downloads", "Resource Center" (with a dropdown arrow), "News", and "Help" (with a dropdown arrow). The "Resource Center" dropdown menu is open, showing options: "Supergeo Samples", "Upload a Script", "SuperGIS Server API Sample", "SuperGIS Server API Reference", "JavaScript" (highlighted in green), "Flex", and "Silverlight". To the right of the dropdown, a date "Thursday, Oct 1" is visible. Below the navigation bar, the main content area starts with a "Welcome to SGDN" section. The text below the welcome message reads: "If you are a software application developer, the Supergeo Developer Network (SGDN) provides a cost effective way to use and develop SuperGIS products and technologies in applications and systems you design and build. At SGDN, you can be offered many kinds of materials such as documentations, sample codes, scripts and etc. In addition, at Supergeo Forums, you can share your thoughts and experiences with other developers. Even you can obtain the solutions by stating your questions on the Supergeo Forums."

Network Analysis – Shortest Path



Sample.zip



Shortest path.htm



ShortestPath_Sample.sgd

SuperGIS Server API Samples

- Overview Map
- Pan Buttons
- Pan Motion Control
- Part Layer Visible Check Box
- Reset Map Boundary
- Set Map Boundary Using Se
- Slider Location and Size
- Symbol Size Map
- Unique Value Map
- User Defined Visible Scale
- Zoom In Using Shift Key
- Network Analysis**
 - Closest Facilities
 - Routing with Navigation info
 - Service Area
 - Shortest Path**
 - Superior Path
- Query**
 - Buffer Graphics(Geo-Process
 - Buffer Graphics(Server Side)
 - Buffer Query
 - Callout Window
 - Click Feature and Get Info W
 - Click Query on Graphic Laye
 - Data Grid
 - Highlight and Show Info
 - Highlight Selection
 - Key Word Search
 - Map Tip for Selected Feature

Click on map and find a path

[View live sample](#) | [Download as a zip file](#)

Description

To use a geo-process designed previously in your SuperGIS Desktop, use "var strPost" to store the group name and process name, and use "AjaxAgent.SendRequest" to call the process.

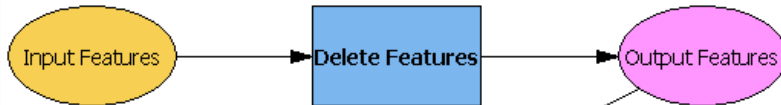
How To Use

1. Build a geo-process in SuperGIS Desktop first.
2. Modify the group name and process name in SuperGIS Desktop and in the code.

Refer to the figure below to build the geo-process:

Process Designer - SP1

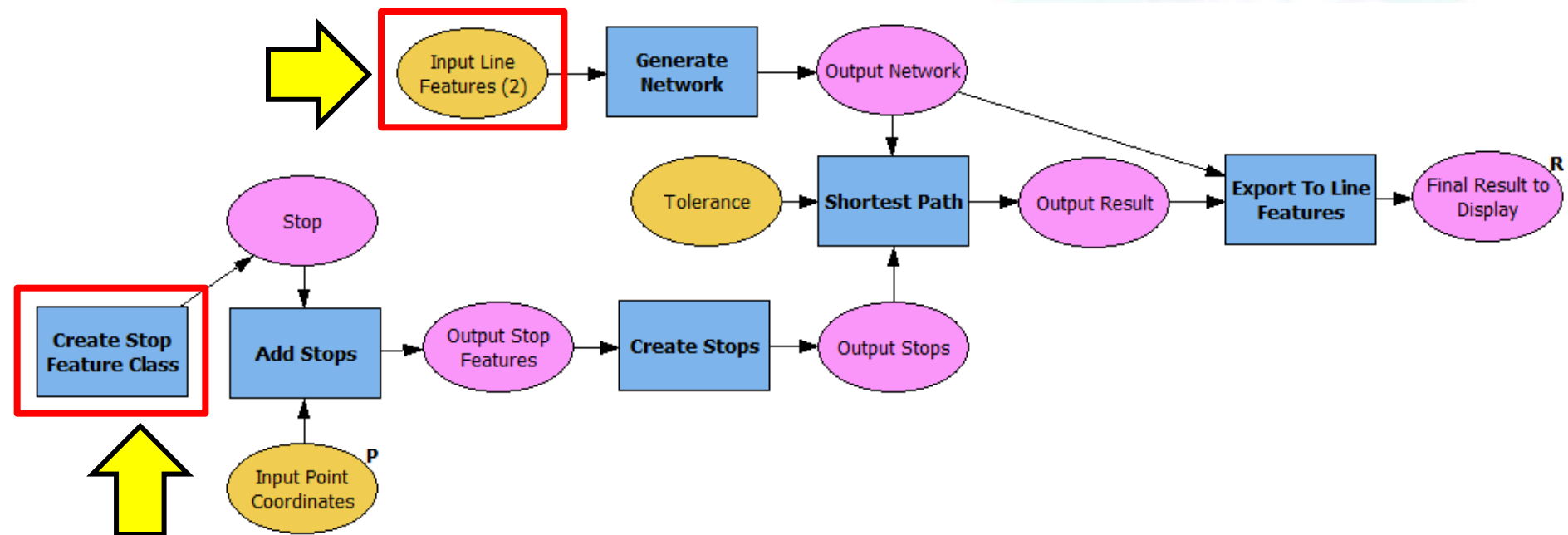
流程(P) 編輯(E) 檢視(V)



```

graph LR
    A([Input Features]) --> B[Delete Features]
    B --> C([Output Features])
        
```

Network Analysis – Shortest Path



ONLY two places need to be modified!

Q&A Time

Contact us:

<http://www.supergeotek.com>

[Email: staff@supergeotek.com](mailto:staff@supergeotek.com)

