

# Optimizing the Use of Data with SuperGIS Desktop in A Cost-effective Way

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# SuperGIS Products



## Server GIS



SuperGIS Server  
SuperGIS 3D Earth Server  
SuperGIS Network Server  
SuperWebGIS

## Cloud GIS



SuperGIS Online  
- Data Services - Excel Add-in  
- Address Locator - Statistical API



## Developer GIS

SuperGIS Engine SuperNetObjects

- Network - Spatial  
- Biodiversity - 3D  
- Spatial Statistical

## Desktop GIS



### SuperGIS Desktop

- Spatial - Spatial Statistical  
- 3D - Biodiversity  
- Network - Topology  
- 67-97 CTS (TW only)  
- CCTS (TW only)

## Mobile GIS



SuperGIS Mobile Engine  
SuperPad  
SuperField  
SuperSurv (Android/iOS)  
SuperVeyor (Hardware bundle)

## Solution



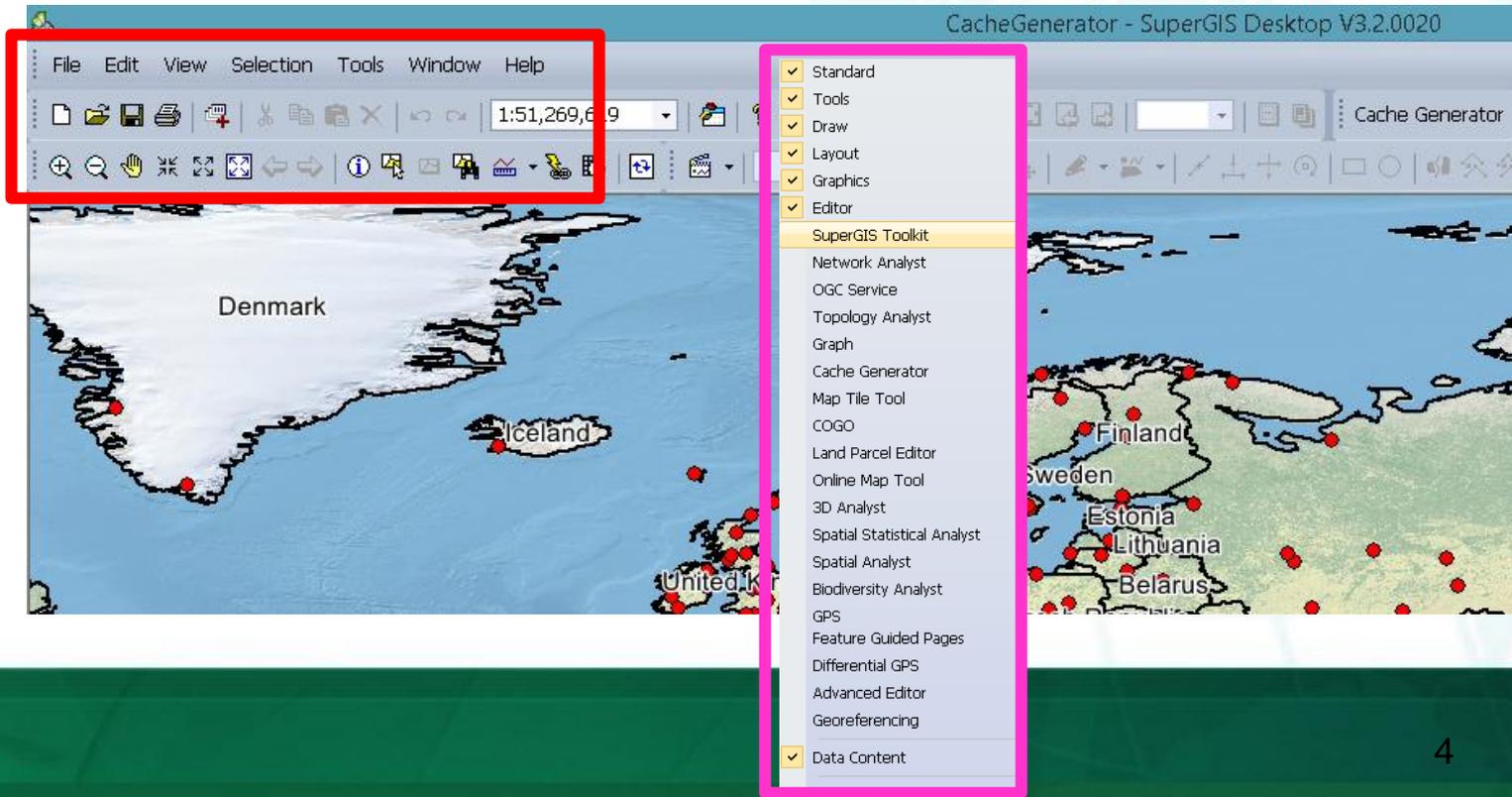
SuperGIS Mobile  
Tour (Android)  
Mobile Cadastral  
GIS (TW only)

# Outline

- The key features of **SuperGIS Desktop v3.2**, combining with real case scenarios:
  - Case 1: Generate Cache Map (Cache Generator)
  - Case 2: Data Sharing in Spatial Database, based on OSM
  - Case 3: View the GIS Data in PDF (Geospatial PDF)
  - Case 4: Rectify on Image data (Georeferencing)
  - Case 5: Precise Mapping (COGO, Advanced Editor)
  - Case 6: Produce Map Atlas (Feature Guided Pages)

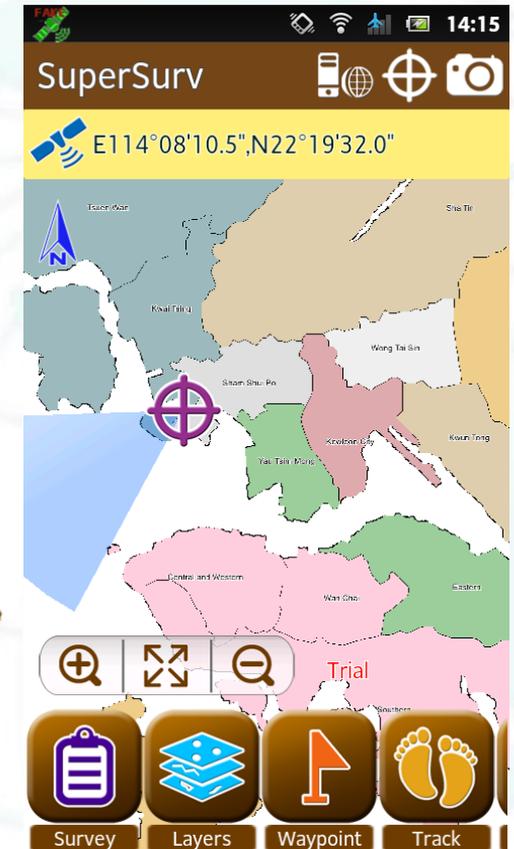
# SuperGIS Desktop: basic

- Common use tool: zoom in/out, pan...etc.
- Right click to call out other extensions or add-ons



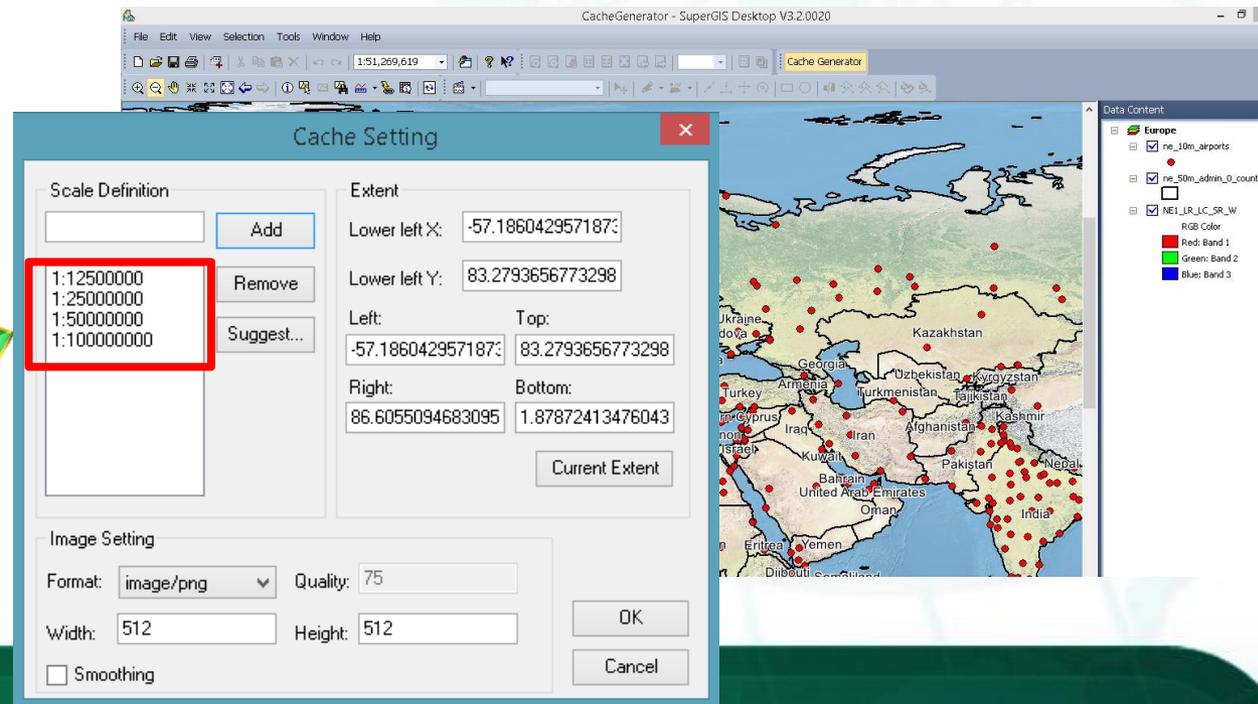
# Case 01: Generate Cache Map

- Why we need to have Cache Map?
  - Survey in the field by using mobile solution
  - Without internet connection
  - How to ensure the location and start to do the survey?



# Generate Cache Map

- Cache Generator in SuperGIS Desktop
  - Produce **Supergis Tile Cache**: color, pattern, labeling...etc.
  - Even visible scale



CacheGenerator - SuperGIS Desktop V3.2.0020

Cache Setting

Scale Definition

- 1:12500000
- 1:25000000
- 1:50000000
- 1:100000000

Extent

Lower left X: -57.1860429571873

Lower left Y: 83.2793656773298

Left: -57.1860429571873 Top: 83.2793656773298

Right: 86.6055094683095 Bottom: 1.87872413476043

Image Setting

Format: image/png Quality: 75

Width: 512 Height: 512

Smoothing

OK Cancel

Data Content

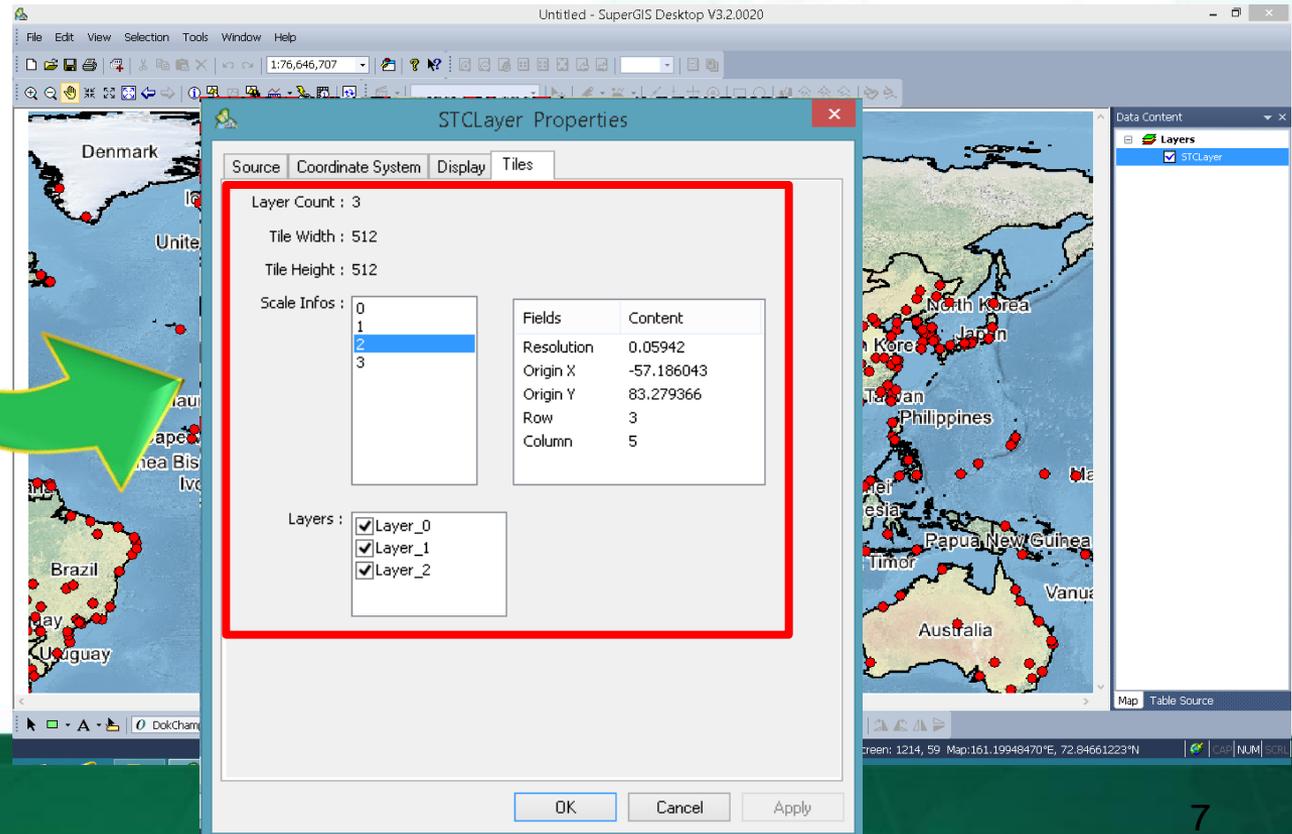
- Europe
  - ne\_10m\_airports
  - ne\_50m\_admin\_0\_country
  - NE1\_LR\_1C\_SR\_W
    - RGB Color
      - Red: Band 1
      - Green: Band 2
      - Blue: Band 3

# View in SuperGIS Desktop

- From the tool: Add Layer
- Properties settings to display the layers



Desktop



Untitled - SuperGIS Desktop V3.2.0020

File Edit View Selection Tools Window Help

1:76,646,707

STCLayer Properties

Source Coordinate System Display Tiles

Layer Count : 3

Tile Width : 512

Tile Height : 512

Scale Infos :

Scale	Info
0	
1	
2	
3	

Fields	Content
Resolution	0.05942
Origin X	-57.186043
Origin Y	83.279366
Row	3
Column	5

Layers :

- Layer\_0
- Layer\_1
- Layer\_2

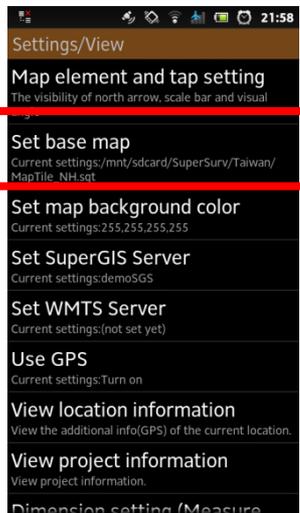
OK Cancel Apply

Map Table Source

Screen: 1214, 59 Map:161.19948470°E, 72.84661223°N

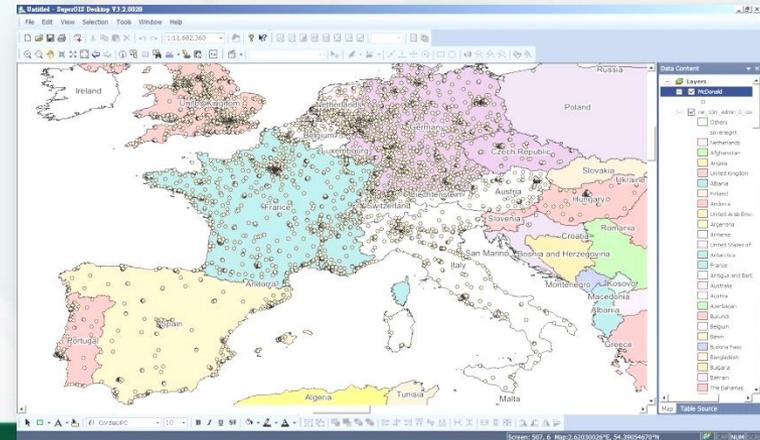
# How to Use in Mobile Device

- Setup for the base map in your mobile device



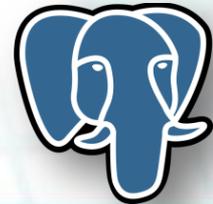
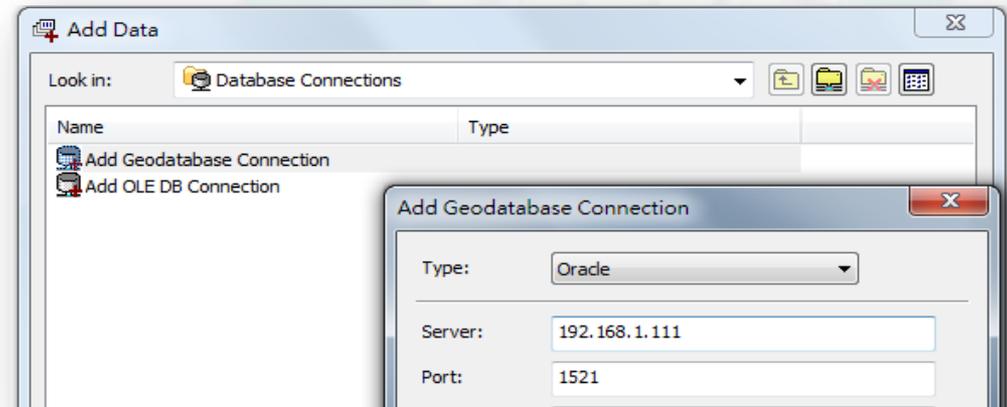
# Case 02: Data Sharing in Spatial Database

- The **headquarter of chain store** wants to know the distribution of each location on the map
- Every store has some basic information, ex: address, phone number, total number of staffs, contact info of manager, even including the sales revenue every year



# Case 02: Data Sharing in Spatial Database

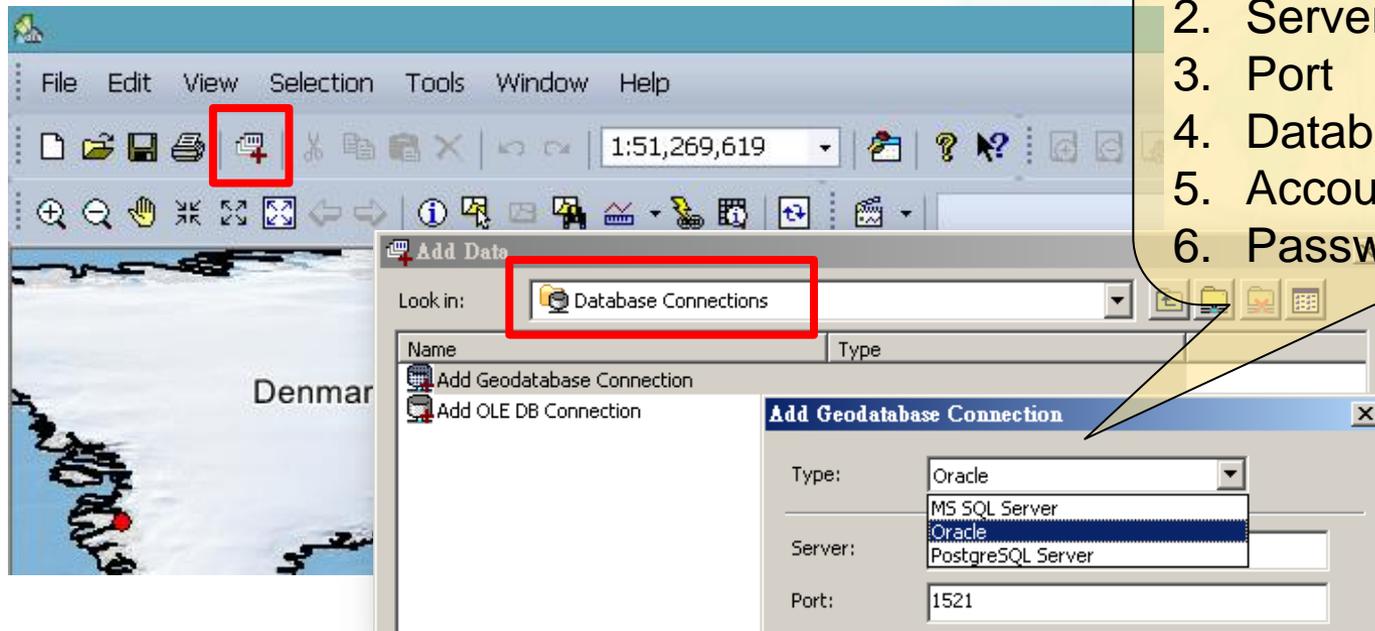
- Import/export layers between spatial databases
- Spatial Database:
  - Microsoft SQL Server
  - Oracle Spatial 11g
  - PostgreSQL



# Add Data in SuperGIS Desktop

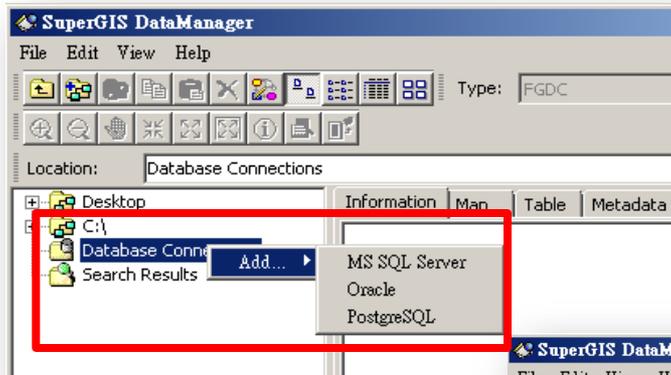
- Add the data from databases, and display in SuperGIS Desktop

1. Select the type
2. Server (IP)
3. Port
4. Database
5. Account
6. Password



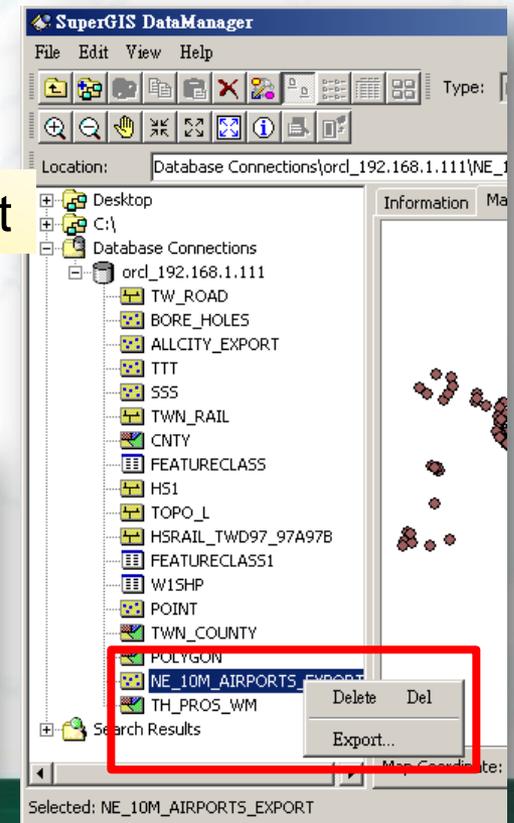
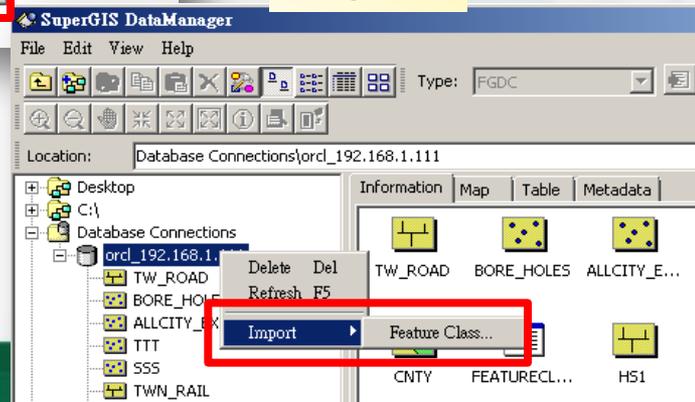
# How to Connect with Databases

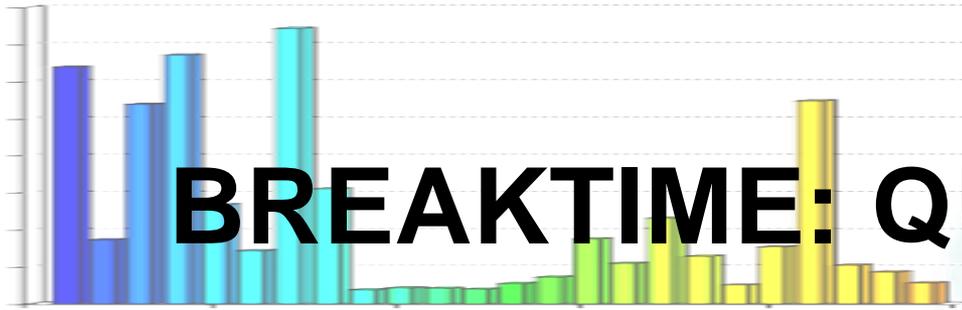
- Import/export data into/from databases by using SuperGIS DataManager



Export

Import



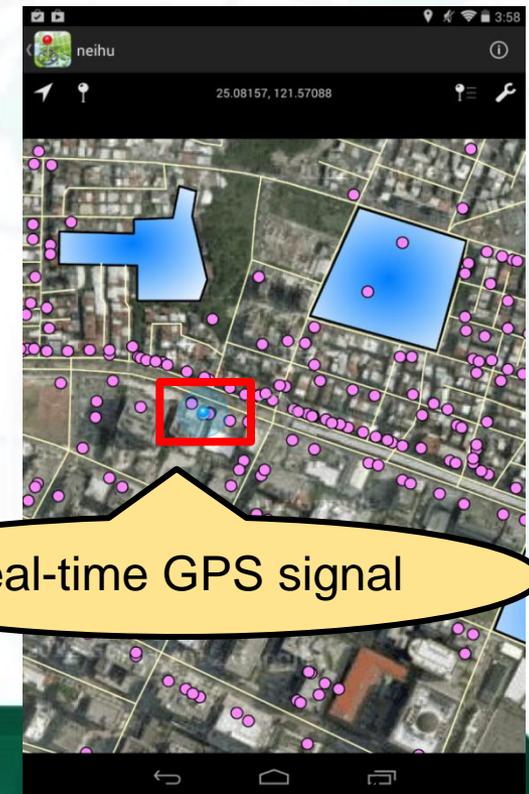
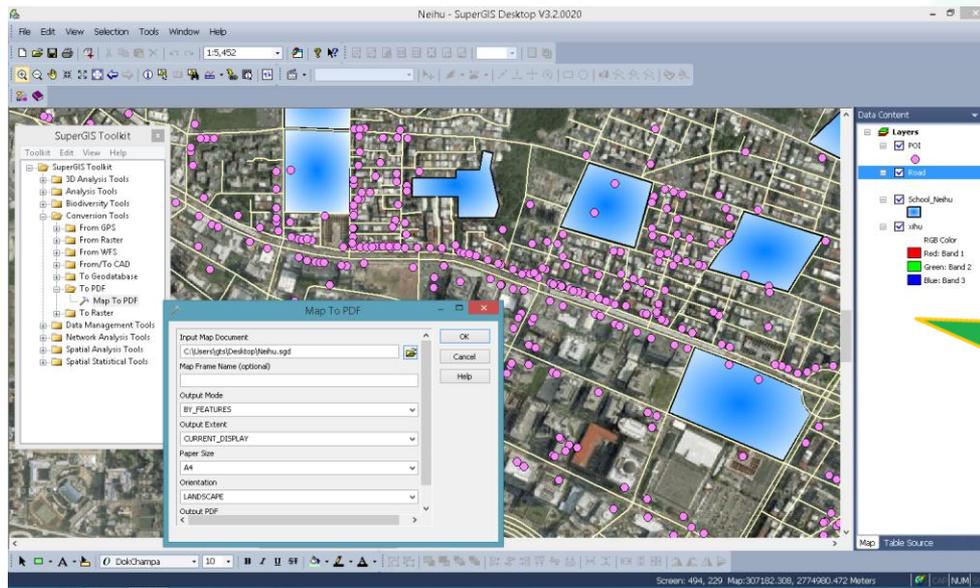


# BREAKTIME: QUICK POLL – I

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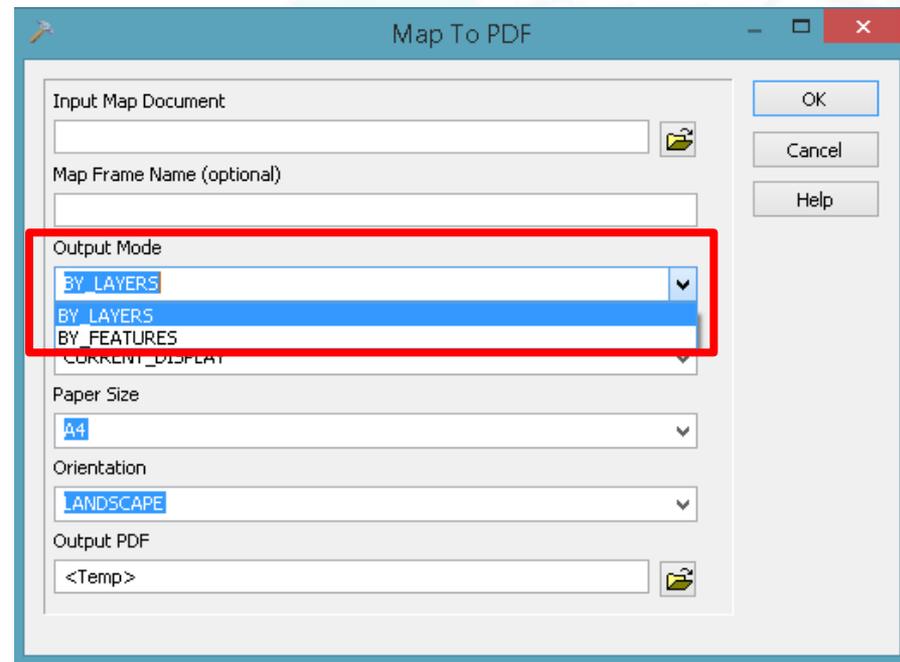
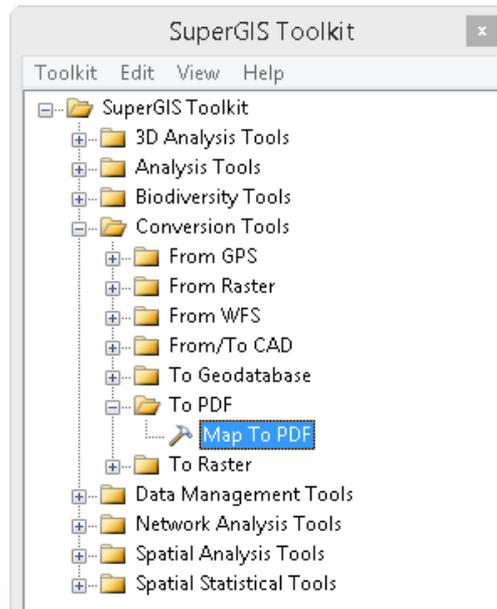
# Case 03: View GIS Data in PDF

- Create the maps for field tasks.
- You can use Geospatial PDF to view the GIS data, with coordinates.



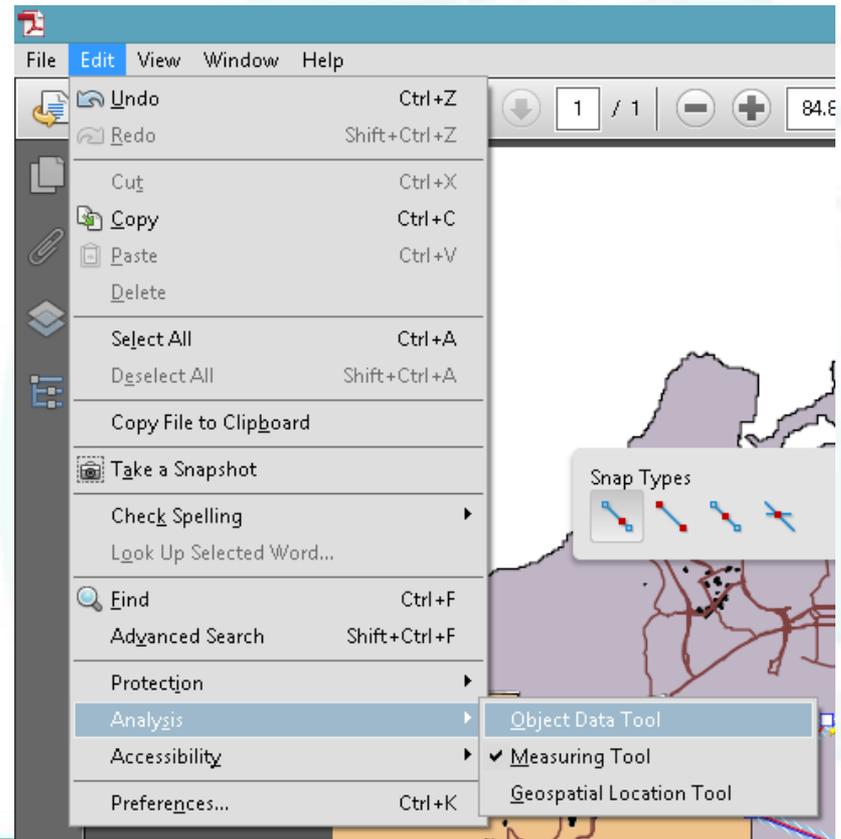
# Export to Geospatial PDF

- Using SuperGIS Toolkit: Map To PDF
  - By Layers (Default)
  - By Features



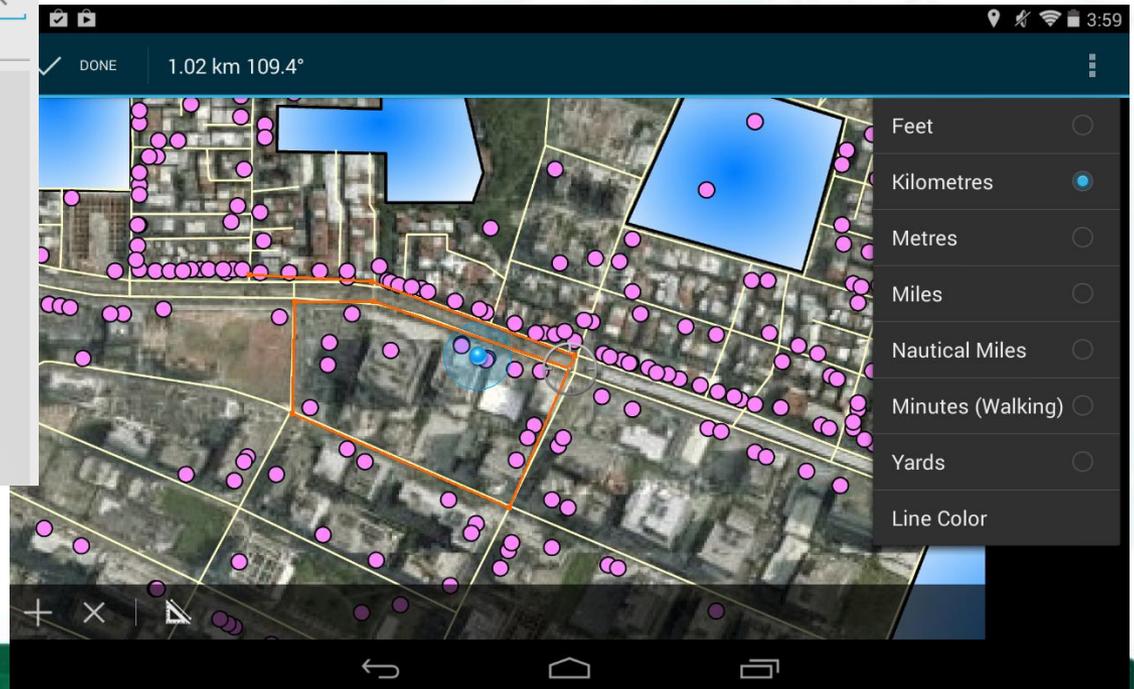
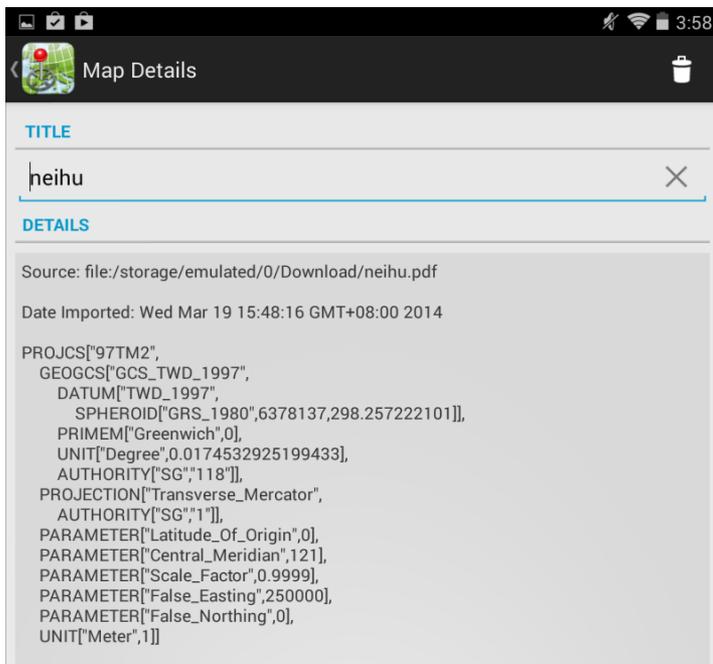
# View the GIS Data in PDF

- View the Geospatial PDF by PDF reader
  - Query (Object Data Tool)
    - ✓ Attribute query
    - ✓ Spatial query
  - Measuring
    - ✓ Distance
    - ✓ Perimeter
    - ✓ Area
  - Geospatial Location



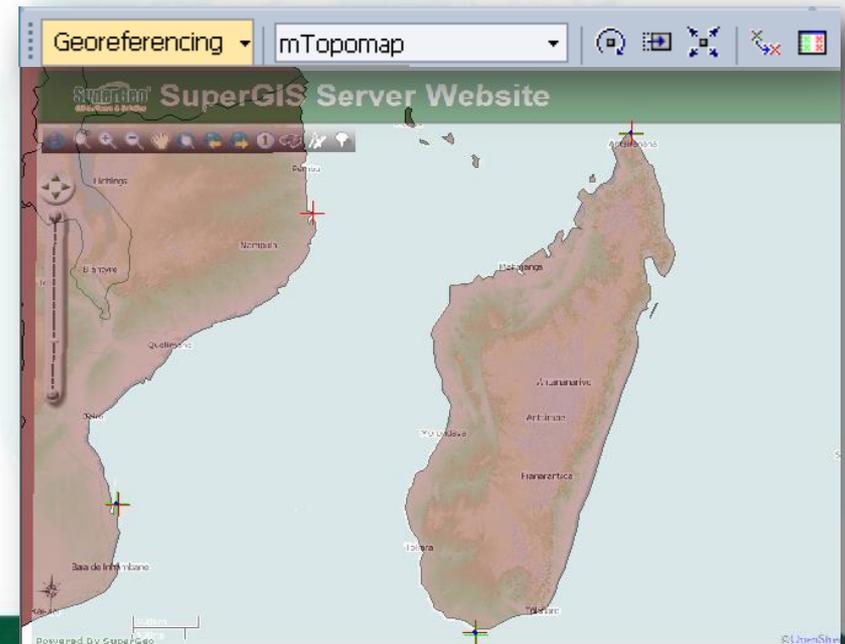
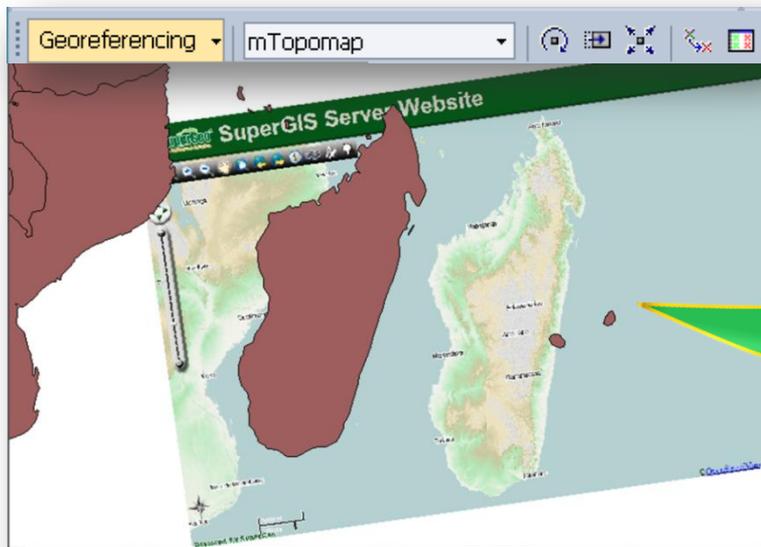
# View the GIS Data in PDF

- View the Geospatial PDF by mobile device



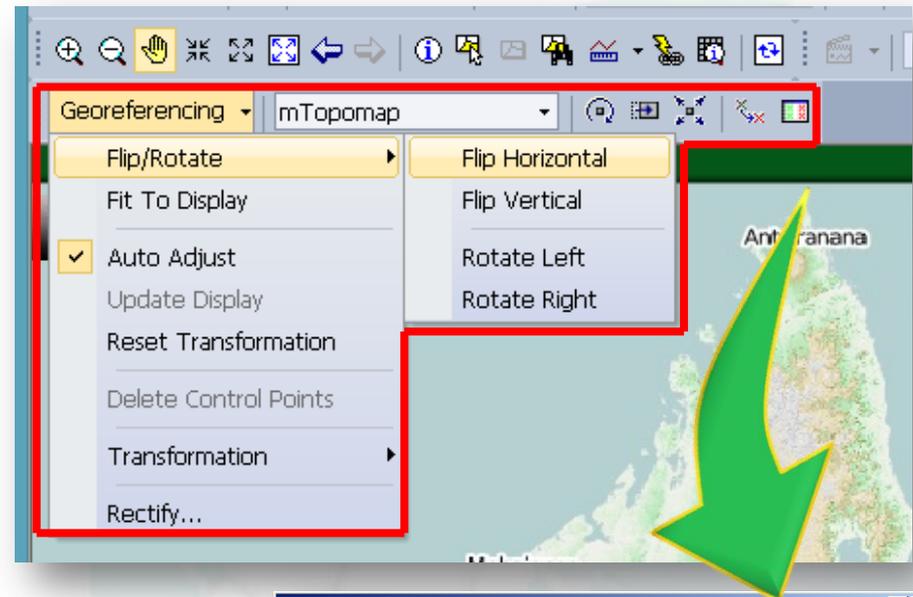
# Case 04: Rectify on Image Data

- Gives raster data a correct position
  - Rotate
  - Shift
  - Scale...etc.



# Georeferencing

- Rotate / Shift / Scale
- Flip / Rotate
- Auto Adjust
- Reset Transformation
- Control Point List
- **Rectify (at least 4 pairs of control point)**



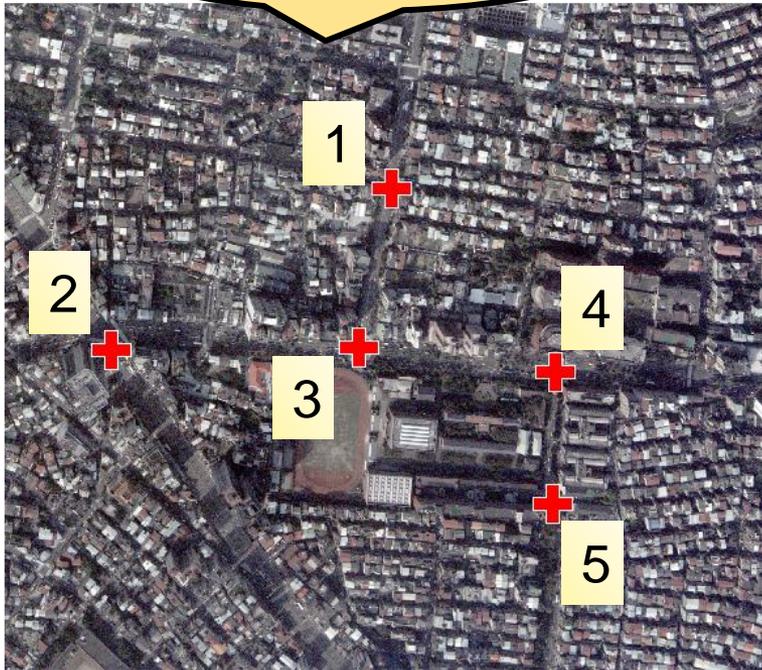
ID	X Source	Y Source	X Map	Y Map	Residual
1	53.011432	-27.118924	45.083783	-25.630164	0.060023
2	54.946820	-12.566292	49.289531	-12.045225	0.036239
3	43.084508	-24.769178	35.499888	-22.150187	0.046323
4	64.037051	-20.009697	57.320216	-20.430255	0.045274
5	46.978247	-15.916532	40.717760	-14.217288	0.027210

RMS Value: 0.044389

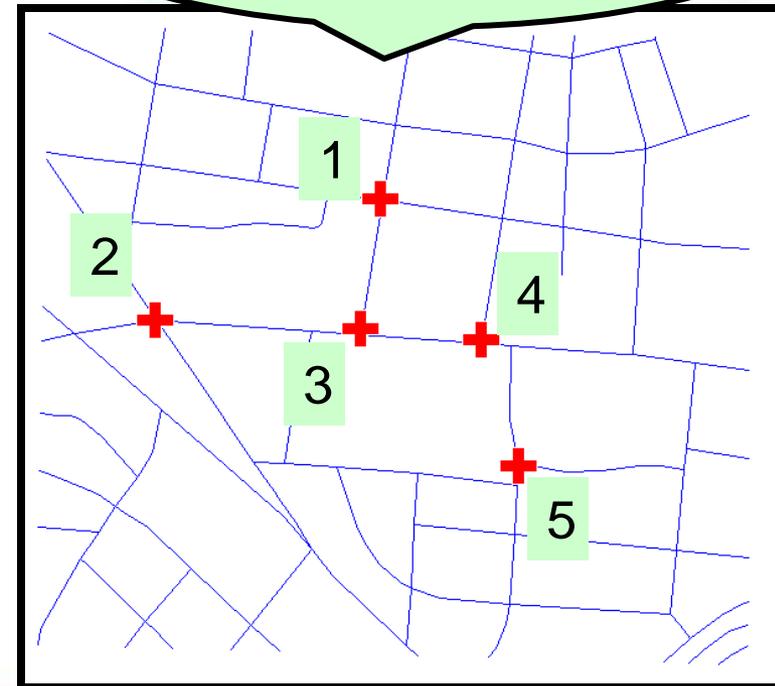
Load... Save... Close

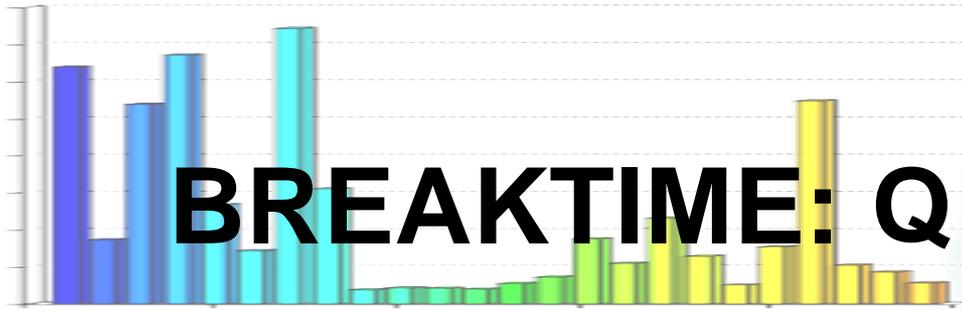
# Start to Do Georeferencing

The raster data which needs to be given the correct coordinate



The GIS data with correct coordinate, which is used to be the comparison





# BREAKTIME: QUICK POLL – II

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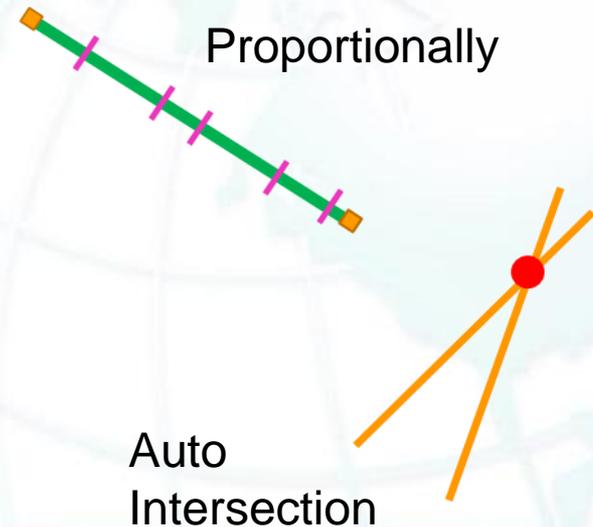
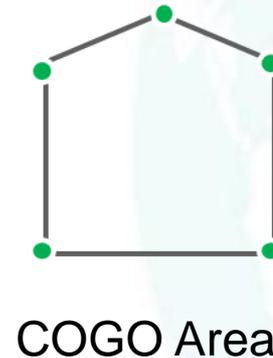
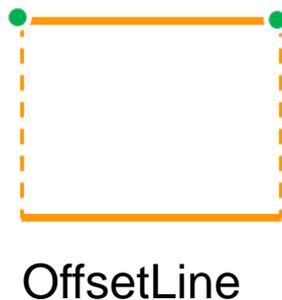
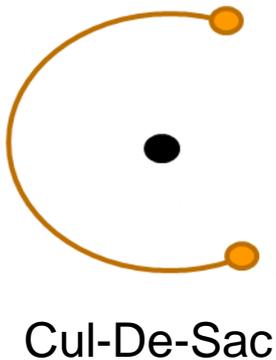
# Case 05: Precise Mapping

- Scenario: A surveyor needs to conduct a survey plan in the city for the government.
- The paper work recording every detail, ex: length, direction...etc., and you need to digitize GIS data on your computer.



# Case 05: Precise Mapping

- Advanced Editor
  - More tools for smart editing, ex: Copy Tools
- COGO
  - Construct the line with direction and distance



# Traverse

- Create the next vertex with direction and distance



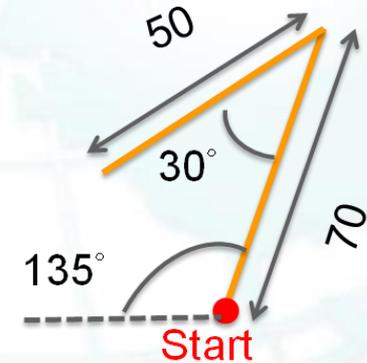
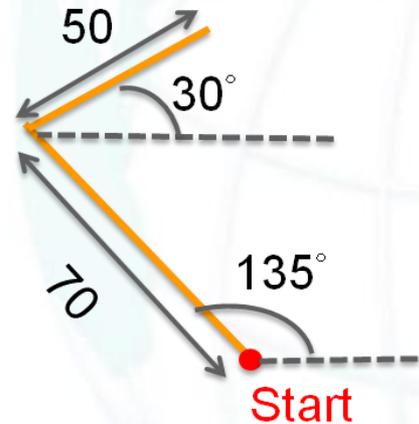
Traverse

#	Type	Direction
1	Direction-Distance	Direction : 135 , Distance : 70
2	Direction-Distance	Direction : 30 , Distance : 50
3	Direction-Distance	Direction : 80 , Distance : 20

Start X:  Start Y:

End X:  End Y:

Direction-Distance      Angle-Distance



# Offset Line

- Create the parallel line by input the offset and length

Offset Line

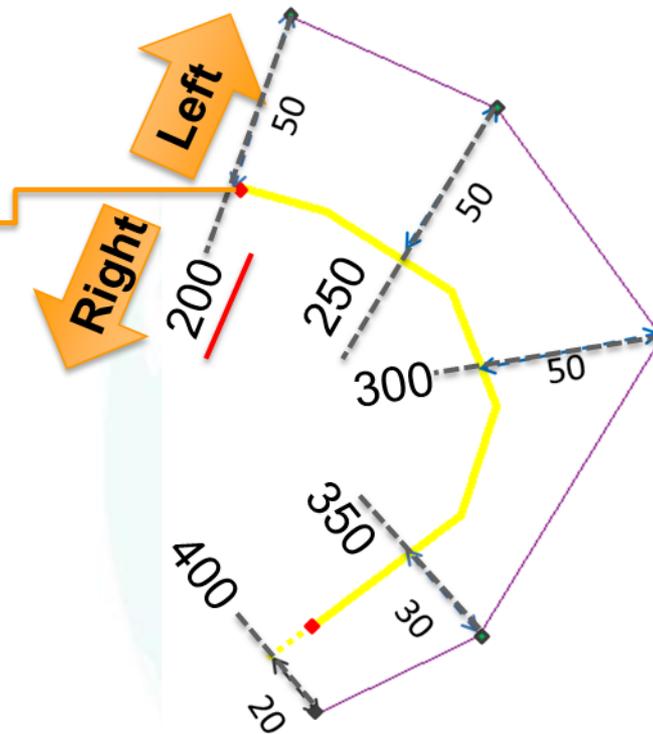
Start Point Of Select Line  
 X: 365.311784 Y: 133.353419

Start Distance: 200

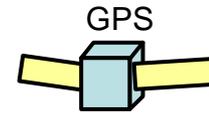
Reverse The Select Direction

#	Side	Distanc	Offset
1	Left	200	50
2	Left	250	50
3	Left	300	50
4	Left	350	30
5	Left	400	20

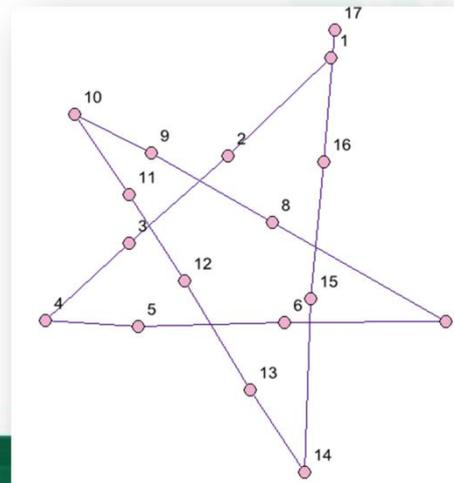
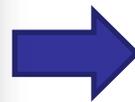
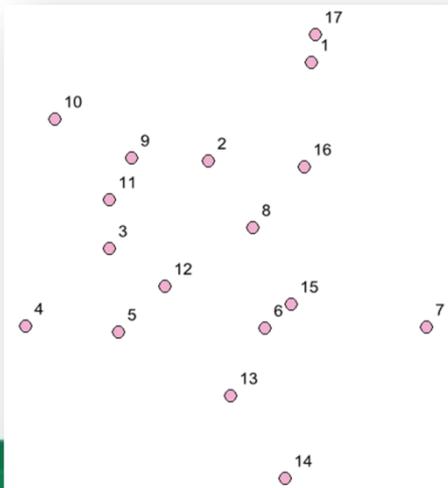
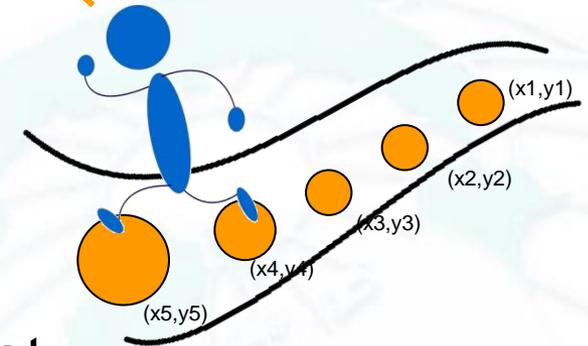
Finish



# Point to Line



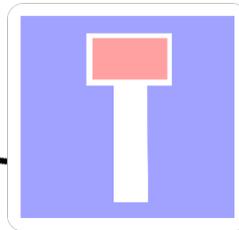
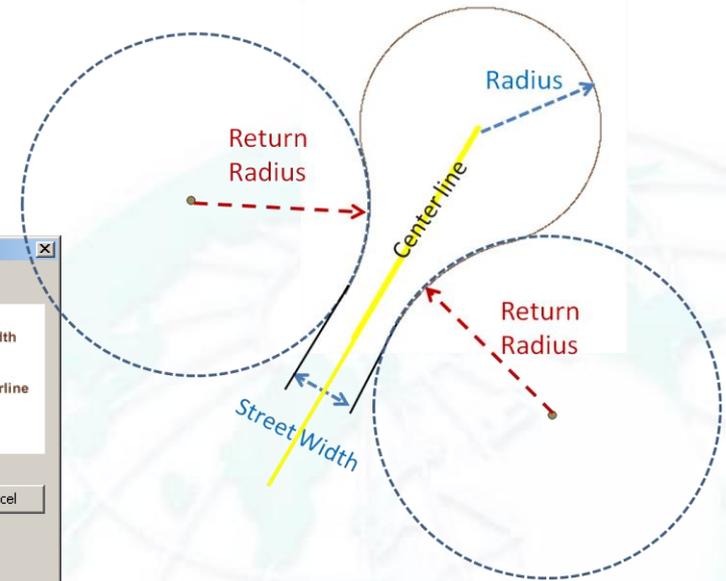
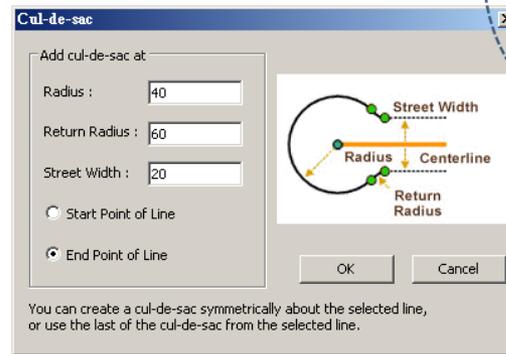
- Convert the points to line
  - The collected survey points can be converted as a line
  - Save the time to digitize
  - Increase the accuracy of the line that is generated from the points



Connecting points to a line by their FID order

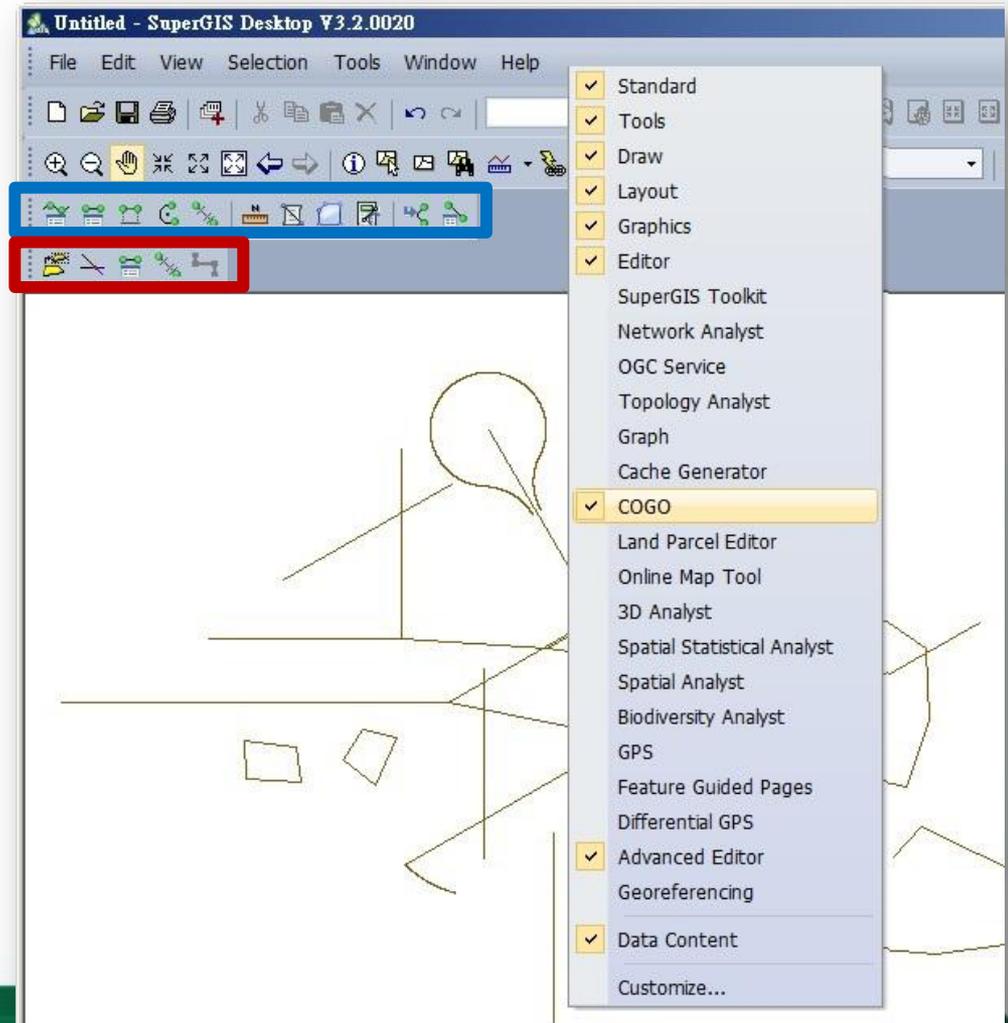
# Cul-De-Sac

- Creates a cul-de-sac from a street centerline



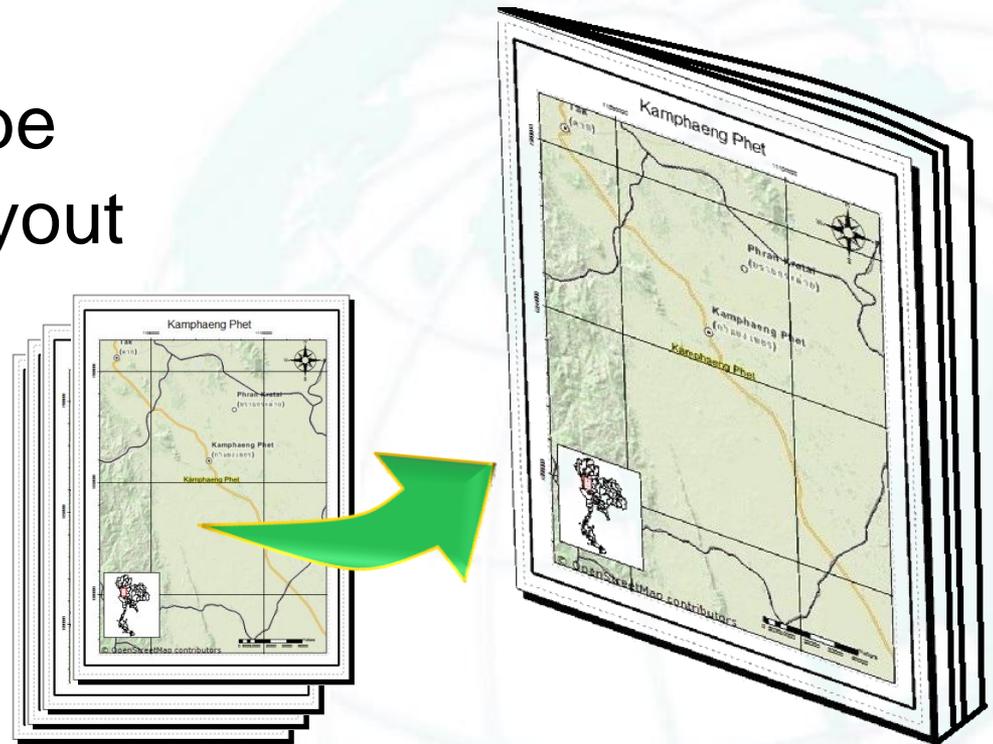
# The other functions...

- **Advanced Editor:**
  - Copy Tool
  - 2-Point Line
  - Split Proportionally
  - Point to Line
- **COGO:**
  - COGO Area
  - COGO Report
  - Split into COGO lines
  - ...etc.



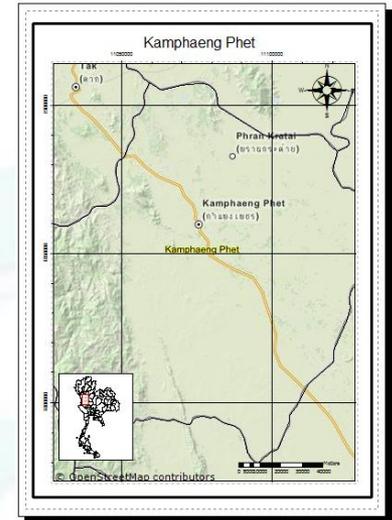
# Case 06: Produce Map Atlas

- The map publisher wants to make the atlas of Thailand.
- Each province has to be shown on the same layout one by one
  - Multiple Map Frames
  - Feature Guided Pages



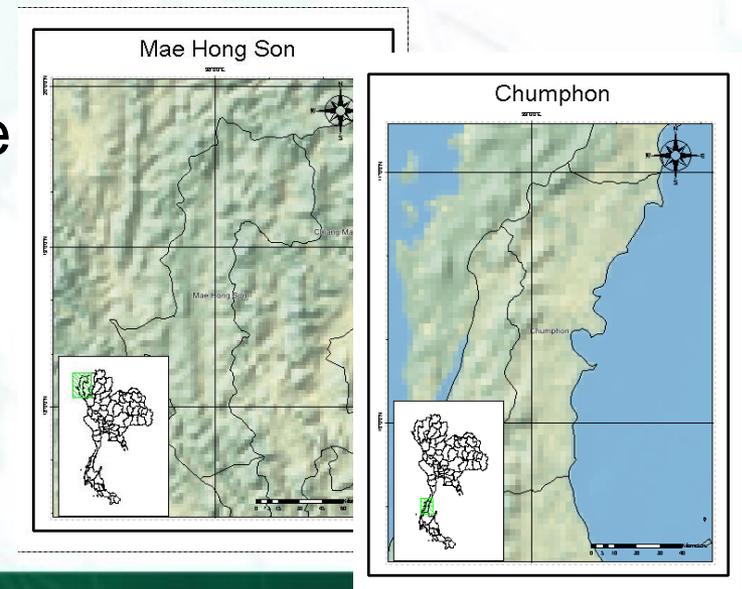
- **Multiple Map Frames**

- Display different area at the same time, even base on different coordinate systems
- Create the indicator and show the current extent automatically



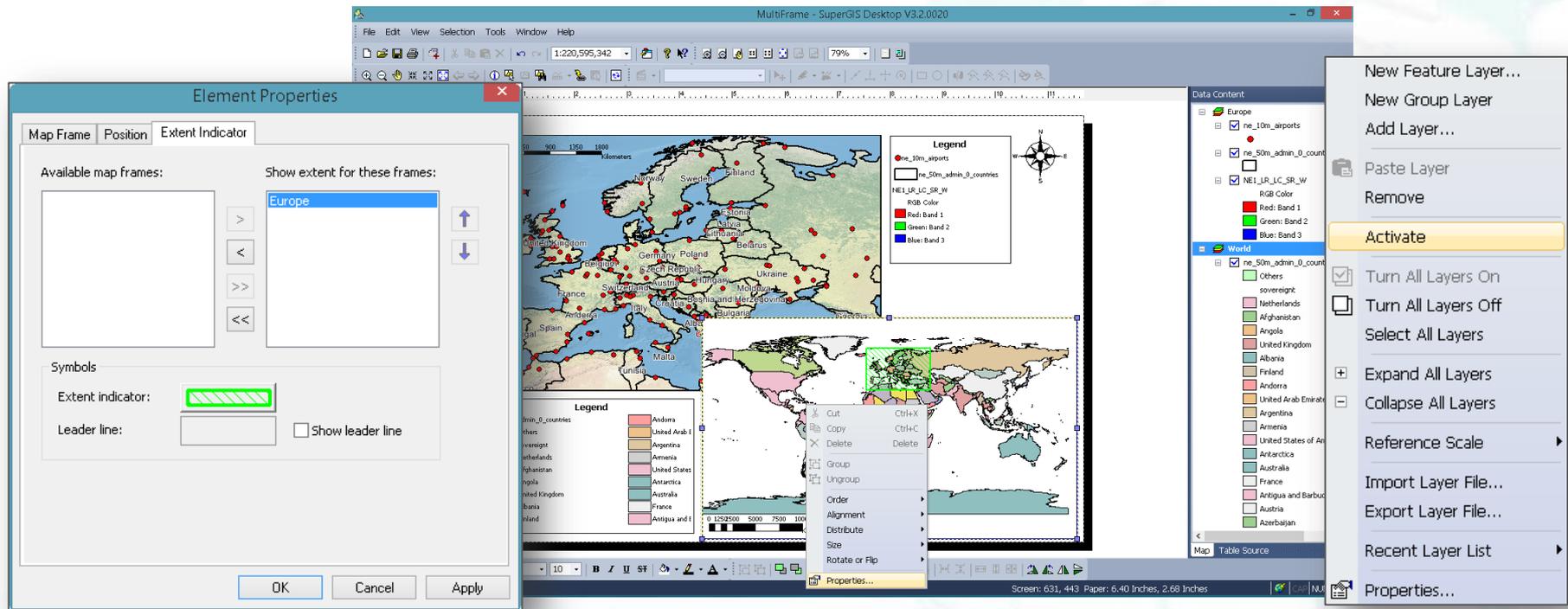
- **Feature Guided Pages**

- Show each of the targets in the same template of layout view
- Print out all the targets in each page, into a map atlas



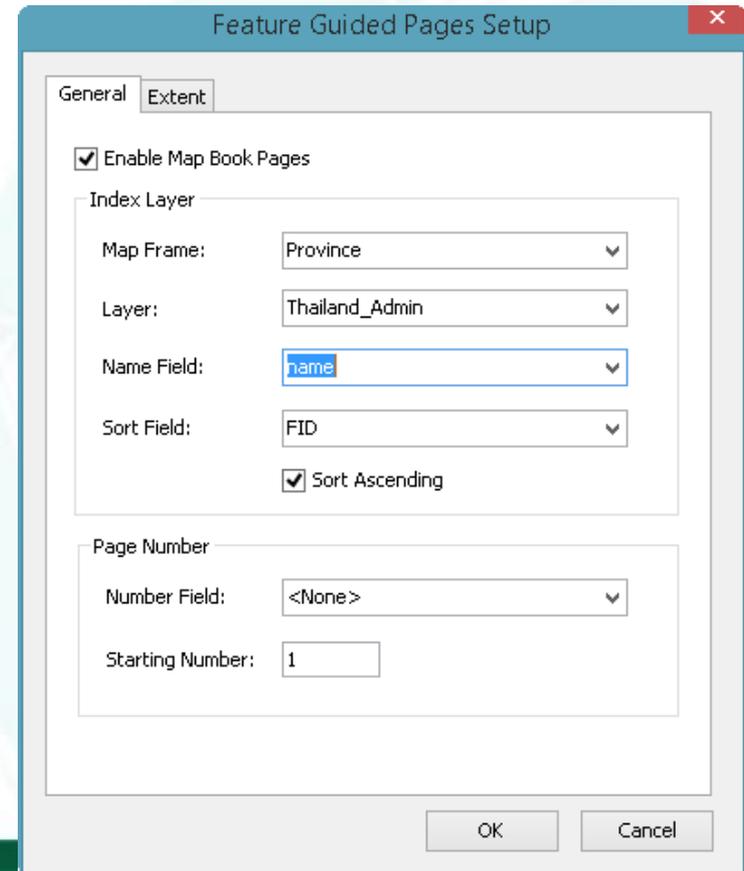
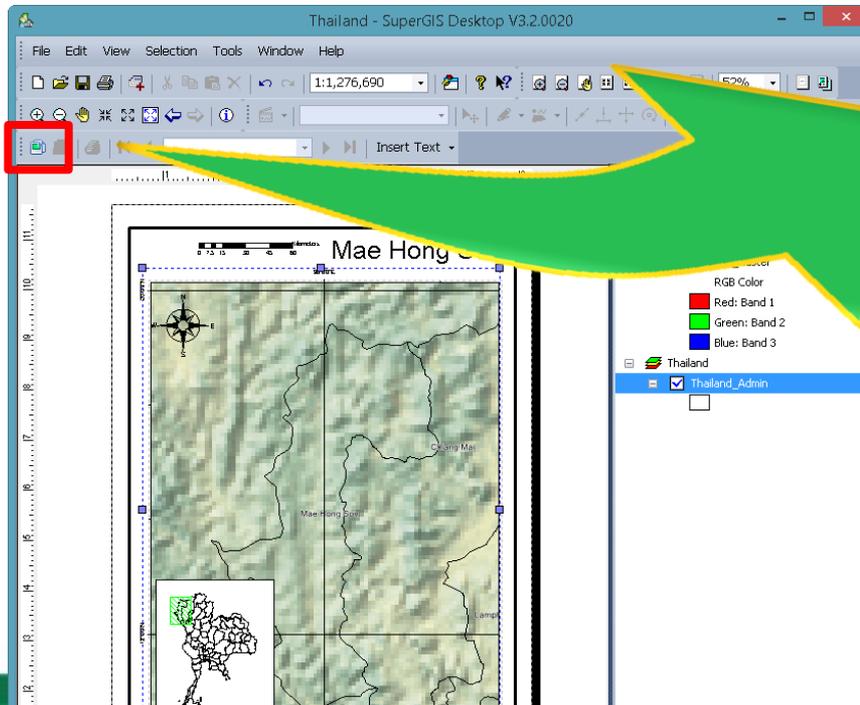
# Multiple Map Frames

- Display different area at the same time
- Create the indicator and show the current extent



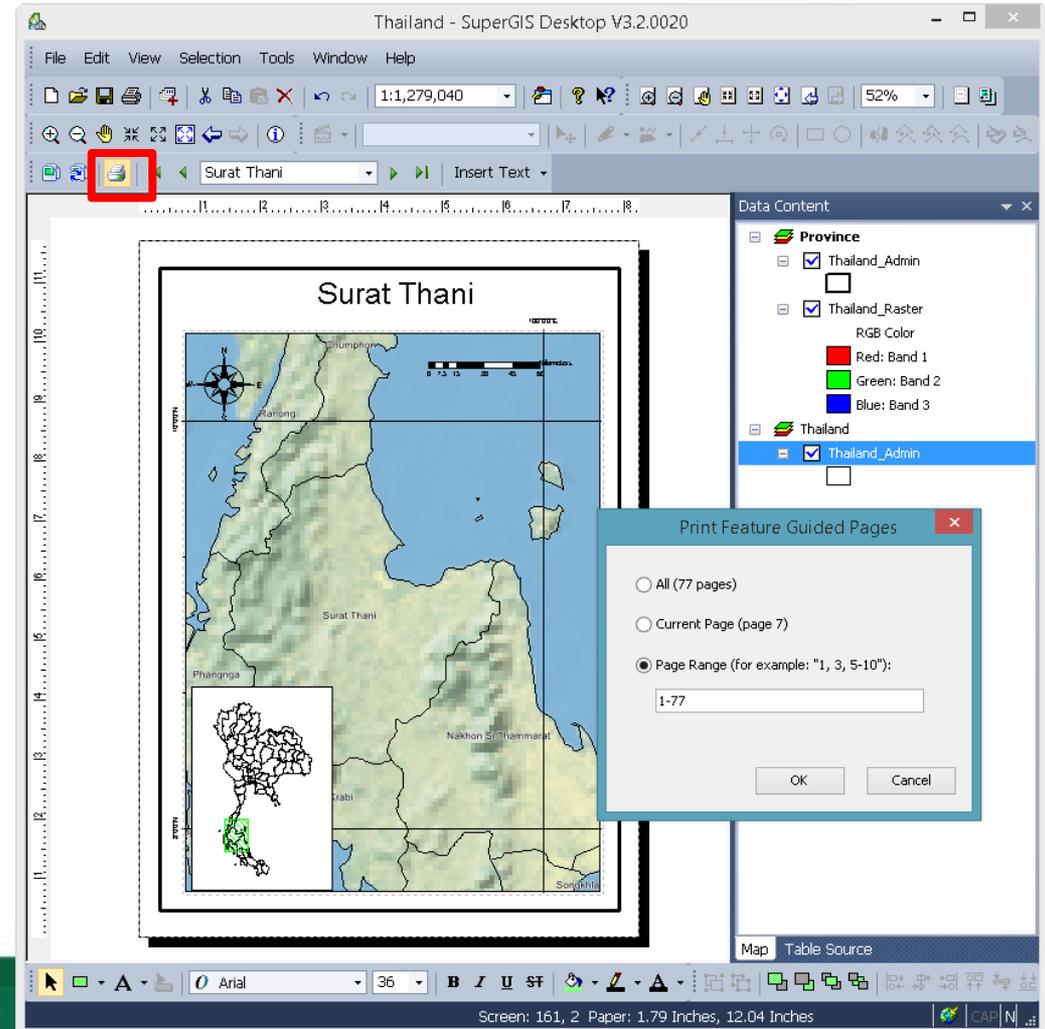
# Feature Guided Pages

- Assign for the map frame, layer, and specify the field and sorting field



# Feature Guided Pages

- Start to produce your own map atlas
- Printer setting



# Q&A Time



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

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A screenshot of a YouTube channel banner for 'supergeotv'. The banner features the Supergeo logo (a globe) on the left. The main text reads 'SuperGIS® Mapping Software' with a sub-tagline 'Develop &amp; Manage Your Solutions with In-depth Geographic Information and Analysis'. On the right, there is a 3D map visualization with various buildings and markers labeled 'A' and 'B'. The YouTube interface elements like the search bar, 'Upload' button, and 'Sign in' button are visible at the top. At the bottom of the banner, there is a 'Subscribe' button and a view count of '99'.