

Copyright

All Rights Reserved.

The information contained in this document is the exclusive property of Supergeo. This work is protected under Taiwan copyright law and the copyright laws of the given countries of origin and applicable international laws, treaties, and/or conventions. No part of this work may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying or recording, or by any information storage or retrieval system, except as expressly permitted in writing by Supergeo. All requests should be sent to Attention: 5F., No.71, Zhouzi St., Neihu Dist., Taipei City 114, Taiwan (R.O.C.). The information contained in this document is subject to change without notice.

Disclaimer

THE DATA INCLUDED IN THIS WORK IS FROM AN INDEPENDENT COMPANY AND, AS SUCH, SUPERGEO MAKES NO GUARANTEES AS TO THE QUALITY, COMPLETENESS, AND/OR ACCURACY OF THE DATA. EVERY EFFORT HAS BEEN MADE TO ENSURE THE ACCURACY OF THE DATA INCLUDED IN THIS WORK, BUT THE INFORMATION IS DYNAMIC IN NATURE AND IS SUBJECT TO CHANGE WITHOUT NOTICE. SUPERGEO AND THE DATA VENDOR(S) ARE NOT INVITING RELIANCE OF THE DATA. AND ONE SHOULD ALWAYS VERIFY ACTUAL DATA AND NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SUPERGEO AND THE DATA VENDOR(S) SHALL ASSUME NO LIABILITY FOR INDIRECT, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES, EVEN IF ADVISED OF THE POSSIBILITY THEREOF.

©2017 Supergeo Technologies Inc. All rights reserved. SuperGIS Desktop, SuperGIS Server, SuperGIS 3D Earth Server, SuperPad, SuperSurv, SuperVeyor, SuperField, SuperGIS Mobile Engine, SuperGIS Engine @supergeotek.com and www.supergeotek.com are trademarks or registered trademarks of Supergeo Technologies Inc. Other companies and products mentioned herein are trademarks or registered trademarks of their respective trademark owners. Android Robot is modified based on work created and shared by Google and Windows Mobile logo is modified based on work created and shared by Microsoft.

SuperSurv 10 Help

Chapter 1 Installing and Licensing 7

1 Download Related Applications to Mobile Device.....	7
2 Installation.....	8
3 Licensing.....	14

Chapter 2 Quick Tutorials 16

1 Quick Start Guide.....	16
2 Browsing Map.....	17
3 Pan to	18
4 Creating a New Project.....	19
5 Online Map Tool Project.....	22
6 Switching Online Map.....	24
7 GPS Positioning.....	25
8 Open a Project.....	26
9 Creating a New Layer.....	27
10 Adding Layers.....	32
11 Editing Layers.....	33
12 Layer Management.....	35
13 Adding SGT Base Map or STC Base Map.....	36
14 Online Editing Feature Service.....	37
15 Waypoint.....	40
Adding Waypoints.....	40
Importing Waypoints.....	40
Exporting Waypoints	40

16 Track	48
17 Query	52
18 Measure Tools.....	55
Chapter 3 Detailed Function Description	60
1 An Overview of Functions.....	60
Major System Interface.....	60
Function Description.....	60
2 Exit System.....	65
3 Menu	66
New Project.....	66
Creating Online Map Tool Project.....	66
Open Project.....	66
Save Project.....	66
Settings/View	66
About.....	66
4 Map Toolbar.....	97
Zoom In.....	97
Zoom Out.....	97
Full Extent.....	97
5 Survey.....	100
Create Layer.....	100
Synchronizing Feature Service to Server.....	100
Waypoint.....	100
6 Manage Layer.....	162
Add Layer.....	162
Add GeoSpatialPDF Layer.....	162

Upload Layer to Google Drive and Dropbox.....	162
Layer Setting	162
7 GPS	182
Whether to Use GPS.....	182
GPS_StatusBar.....	182
GPS Positioning.....	182
View Location Information	182
8 Track	196
Start to Record Track.....	196
Pause/Start to Record.....	196
Stop Recording.....	196
Import Reference Track.....	196
Close Reference Track.....	196
9 Query	202
Set the Layer and Field.....	202
Attribute Query.....	202
Identify Query.....	202
Coordinate query.....	202
10 Measure	210
Length Measurement.....	210
Area Measurement.....	210
Feature Measurement.....	210



1

Installing and Licensing

1.1 Download Related
Applications to
Mobile Device

1.2 Installation

1.3 Licensing

There're 3 steps of SuperSurv installation. First, download the installation program from CD to the desktop computer. Second, connect to computer via mobile device. Next, copy the program to mobile device and install it. Since you have to be authorized to use SuperSurv, this section will also detail the software licensing method.

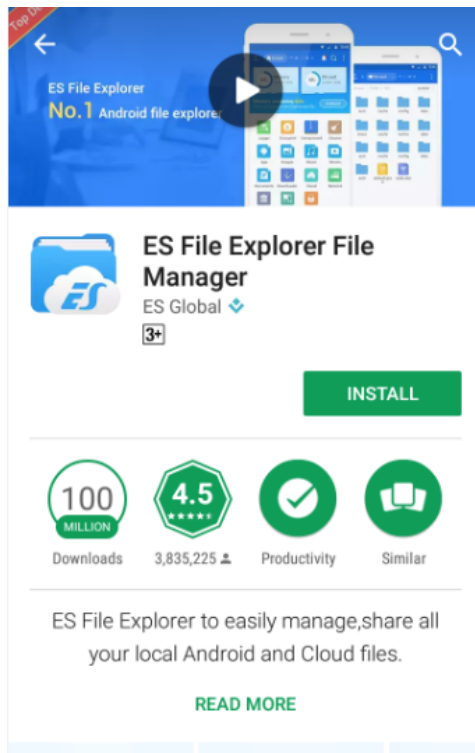
1 Installing and Licensing

1.1 Download Related Applications to Mobile Device

Download Related Applications to Mobile Device

To install SuperSurv, you need to use installation CD to install SuperSurv in PC. Then, copy the installation file (SuperSurv.apk) from PC to mobile device.

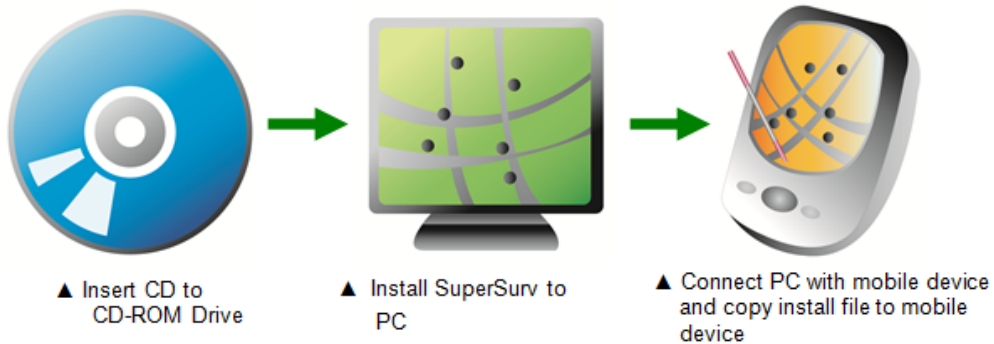
Since there is no built-in Windows-explorer-like application in Android mobile device for users to browse files, it is suggested that you download the related file explorer application from Android Play Store, such as ES File Explorer and install it. Therefore, it would help you browse the files easily. Besides browsing installation file, the file explorer App enables users to browse any other files saved in the mobile device.



1.2 Installation

Installation

The procedure of installing SuperSurv is to install SuperSurv from CD to PC, connect PC with mobile device, and copy the installation file to mobile device to install.

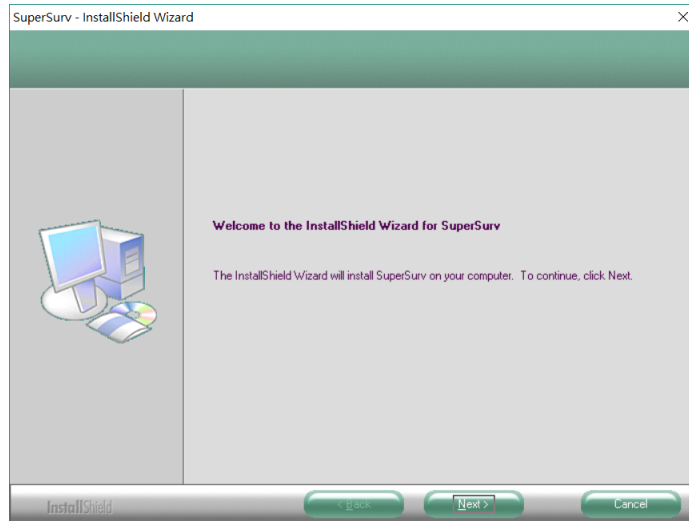


1. Insert CD to CD-Rom drive and the installation window appears. If the window does not appear, please double click CD-Rom drive, and click Install SuperSurv 10.

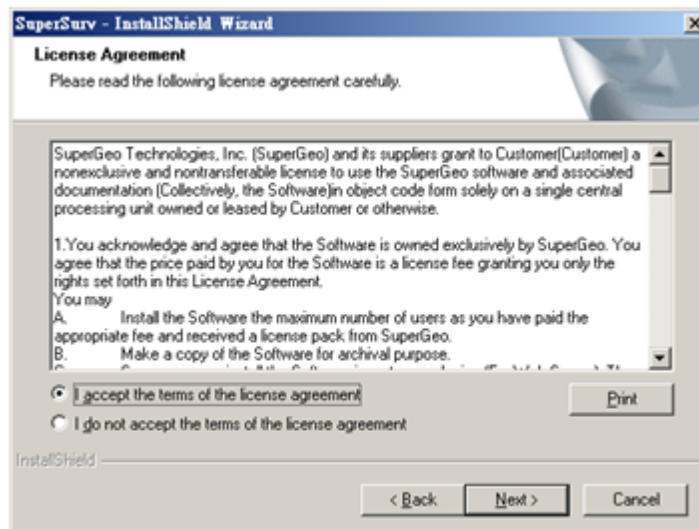


Installing and Licensing

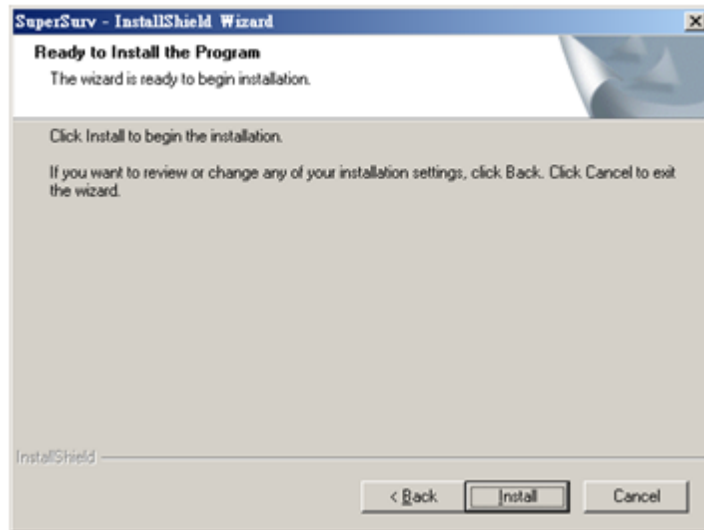
2. As InstallShield Wizard appears, click “Next.”



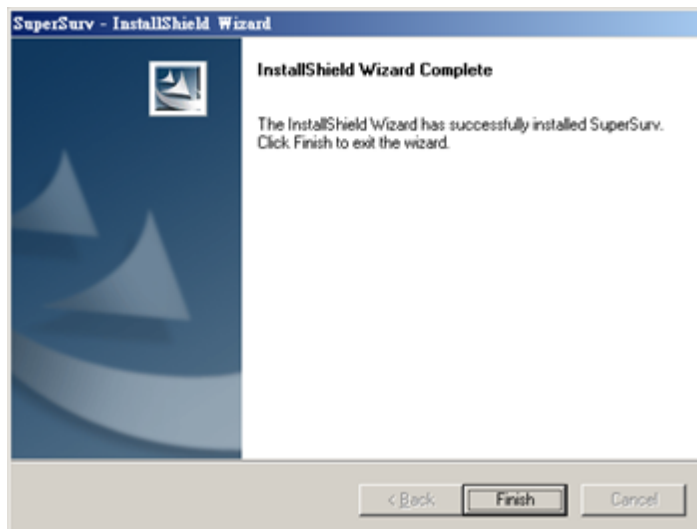
3. Select “I accept the terms of the license agreement” and click “Next.”



4. “Ready to install the program” appears, click “Install.”



5. As the installation is completed, click “Finish.”

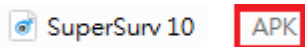


Installing and Licensing

- Click Start > Programs > SuperGeo > SuperSurv 10 > Install SuperSurv.

C:\Program Files (x86)\Supergeo\SuperSurv\Install SuperSurv

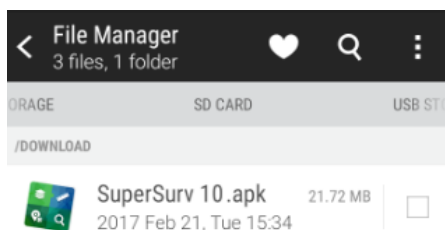
- In the folder of Install SuperSurv, please copy “SuperSurv.apk.”



- Connect mobile device with PC, and set the connection type as Disk Drive.



9. Paste “SuperSurv.apk” to the directory of mobile device.

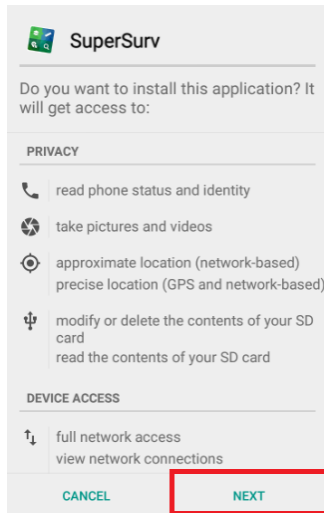


10. Set the connection type other than “Disk Drive”, and start to install SuperSurv.apk.

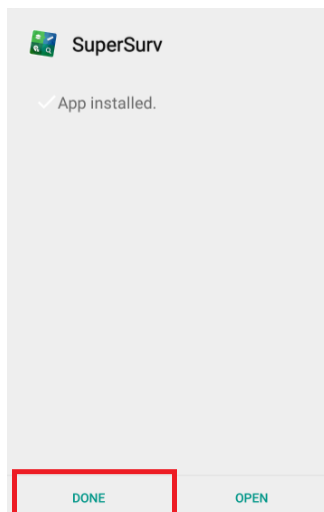
11. Tap SuperSurv.apk.

Installing and Licensing

12. Tap Next to install.



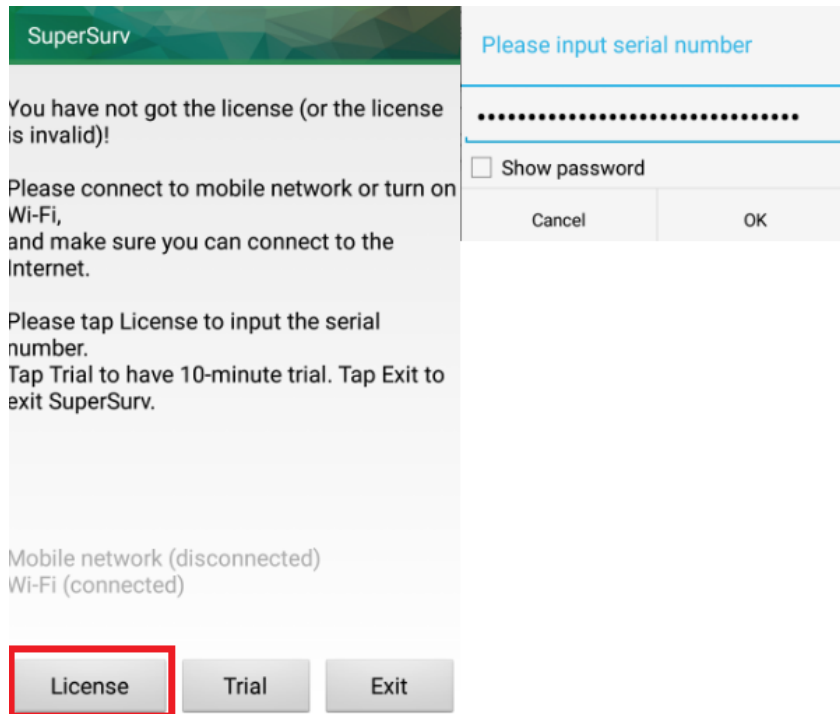
13. As the installation is completed, tap “Done.”



1.3 Licensing

Licensing

1. If you have not got the license, the screen will show the message below as you start SuperSurv. If you have purchased SuperSurv, you can tap License to enter the serial number. If it is a trial version, please tap Trial, and you will have 10-minute trial.
2. Please Enter the serial number and tap OK. As the application is licensed successfully, it will start SuperSurv automatically.



2

Quick Tutorials

- 2.1 Quick Start Guide
- 2.2 Browsing Map
- 2.3 Pan to
- 2.4 Creating a New Project
- 2.5 Online Map Tool Project
- 2.6 Switching Online Map
- 2.7 GPS Positioning
- 2.8 Open a Project
- 2.9 Creating a New Layer
- 2.10 Adding Layers
- 2.11 Editing Layers
- 2.12 Layer Management
- 2.13 Adding SGT Base Map or
STC Base Map
- 2.14 Online Editing Feature
Service
- 2.15 Waypoint
- 2.16 Track
- 2.17 Query
- 2.18 Measure Tools

This section introduces the common functions of SuperSurv, and you can quickly learn the processes of operation.


The mobile survey system can help you to collect data and offer some common functions, like GPS Positioning, Waypoint, Track and Survey. In the process of survey, you can use functions of track and waypoint to find the location and recorded path. It surely and completely fulfill your needs in field survey.

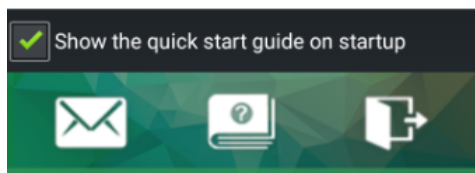
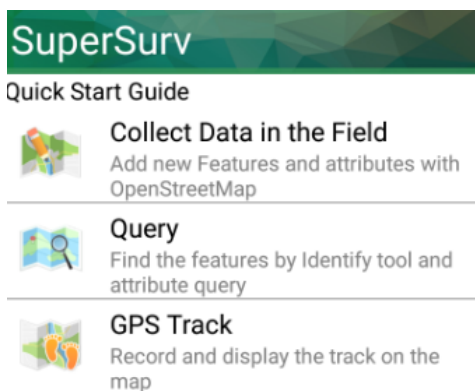
2 Quick Tutorials

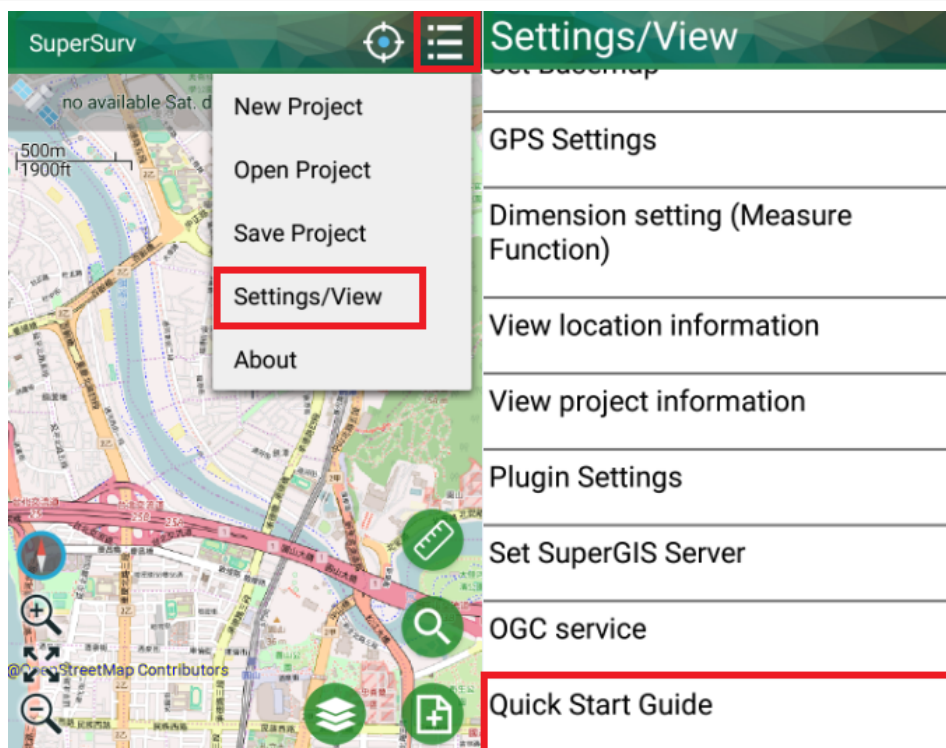
2.1 Quick Start Guide

Quick Start Guide

The Quick Start Guide will be shown while you start SuperSurv, illustrating commonly used functions with simple texts and pictures step by step. You can also turn off this

function by uncheck the Show the quick guide on startup option. Tapping  will lead you to the main map on SuperSurv.





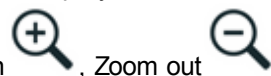
You can find quick guide pages if you want to read it again by tapping the menu button > Settings/View > Quick Start Guide.

2.2 Browsing Map


Browsing Map

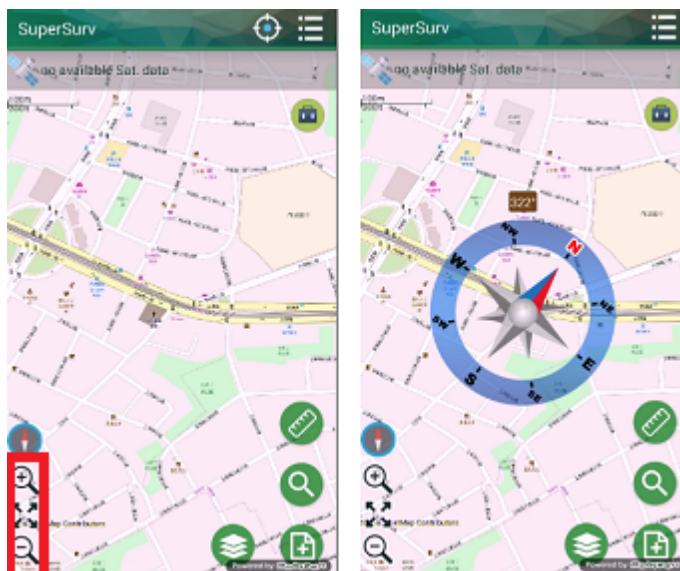
At the lower-left bottom of the map, there is a map tool bar that helps you to browse the

map with different tools with ease. Map Tool includes Zoom in



, Zoom out

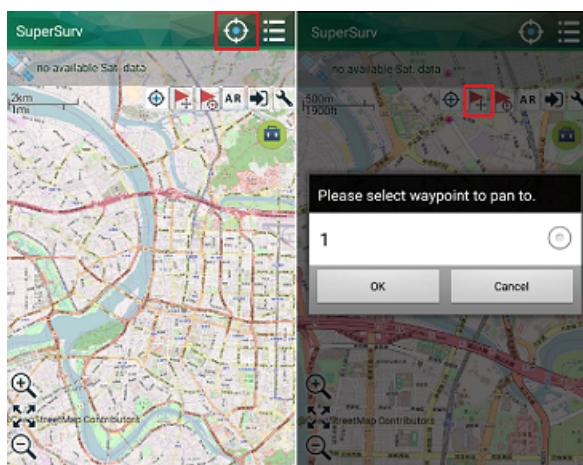
and Full extent . Users can adjust the extent they need. Also, users can zoom in the map with 2 fingers or tap the map twice to zoom in the map. Or you can tap the North arrow to show electronic compass so that it is easier for you to identify the correct aspect and angle in the real world environment.



2.3 Pan to

Pan to

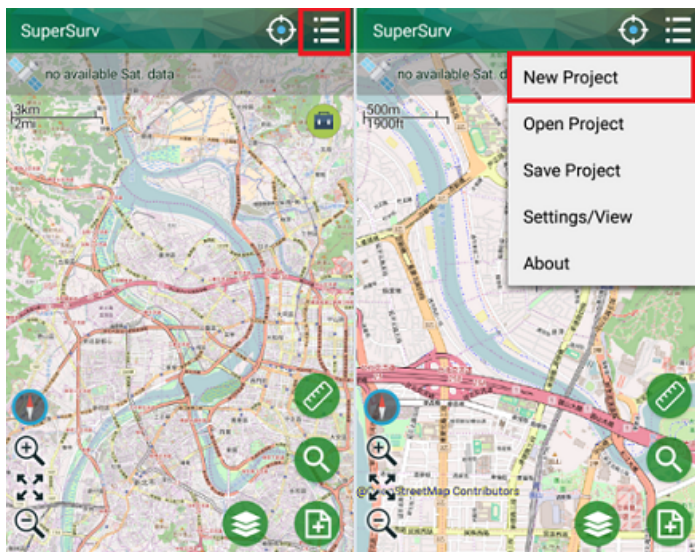
The system provides two ways to position, including Pan to GPS, and Pan to waypoint. Users can choose the way of positioning they need according to their situation.



2.4 Creating a New Project

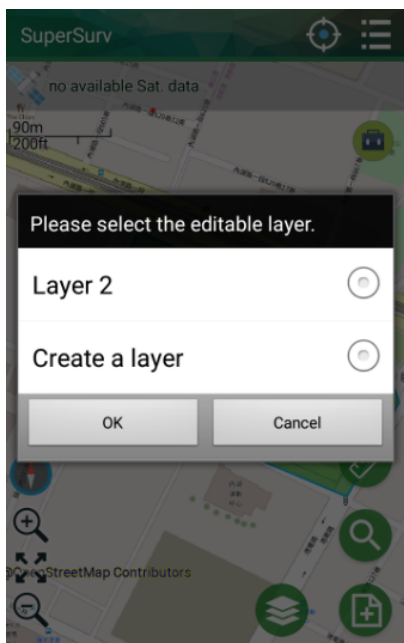
Creating a New Project

SuperSurv works with a project environment. All the layers, track files, photos generated by SuperSurv are saved in a project environment, while all the settings of projects are saved in SPP project file. When you start SuperSurv for the first time, the system will ask whether to create a project file. If SuperSurv has been used, as the system starts, you can tap upper-right bottom on the mobile device > Create a new project to build a new project environment. To create a project with Online Map Tool please refer to [Online Map Tool Project](#).

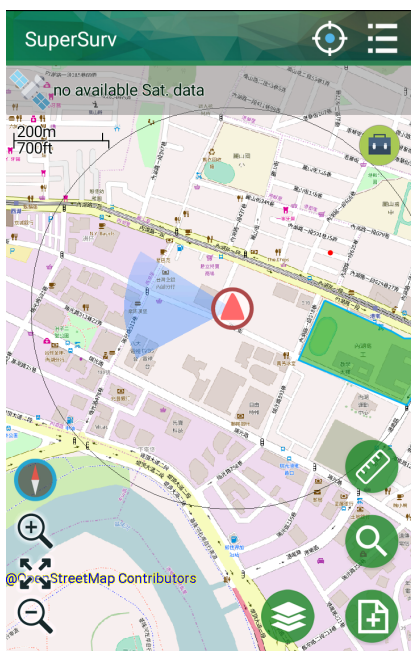


To create a new project, you need to name the project and set the spatial reference. What should be noted is that project name and spatial reference cannot be modified after being set. Tap "Please select" to set spatial reference.

The coordinate systems provided by spatial reference include geographic coordinate systems and projected coordinate systems. In addition, users can also build customized coordinate system by importing PRJ file. Please choose the coordinate system you need and click OK.



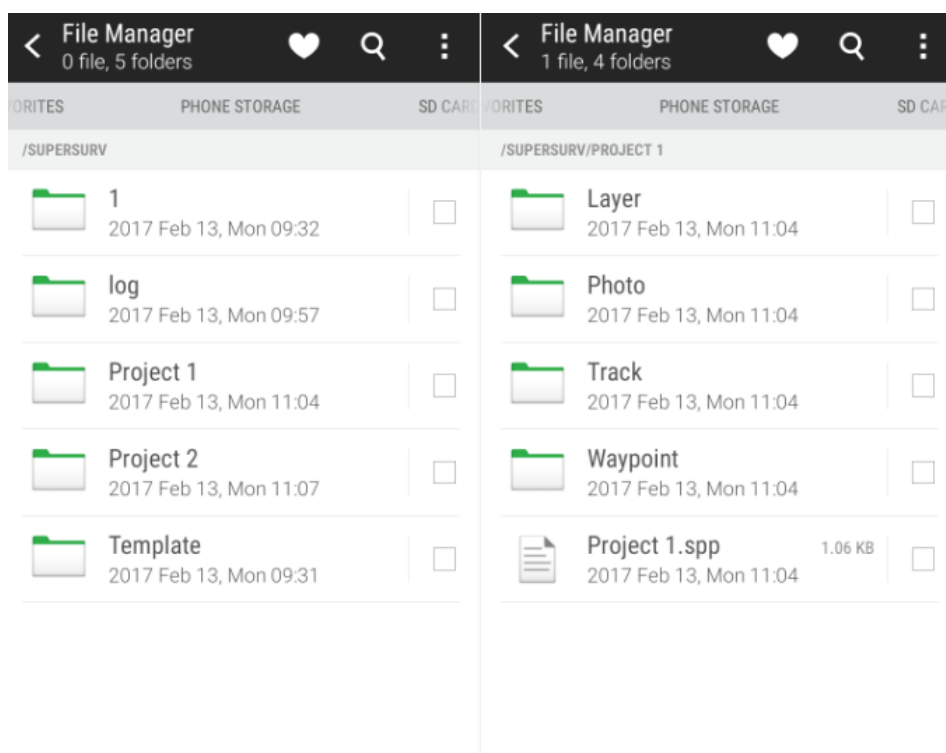
As the project is created successfully, the system shows up.



Quick Tutorials

SuperSurv supports to use GIS vector layers, including GEO and SHP file format. The way to create a new layer, please refer to [Creating a New Layer](#). Besides, you can add a SGT basemap or a STC basemap to enrich the map. The way to generate STC basemap please refer to SuperGIS Desktop or SuperGIS Server User Guide. About the way to add the two kinds of base maps, please refer to [Adding SGT Base Map or STC Base Map](#).

As you build a project environment successfully, a folder, SuperSurv, will be built directly in sdcard. The folder contains a folder named after the project to save the files related to the project and a Template folder. For example, the project name is “project 1”, and the project folder is named after the project.



The project folder includes the subfolders:

Layer: All the layers created in the project are saved in the folder. To add the existing layers to use in SuperSurv, you can copy the layers (SHP/GEO) to Layer folder. Then, start SuperSurv, tap Manager Layer > Add Layer, you can therefore add the layer to map by checking it.

Photo: Photos taken with SuperSurv are saved in the folder

Track: All the track files recorded with SuperSurv are saved in the folder

Waypoint: Waypoint files exported from SuperSurv are saved in the folder

SPP file: SPP project file

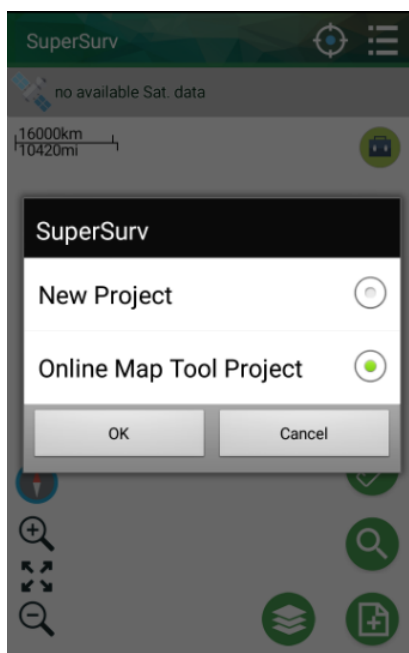
Therefore, every time you create a new project, SuperSurv folder will create the folder and subfolders.

2.5 Online Map Tool Project

Online Map Tool Project

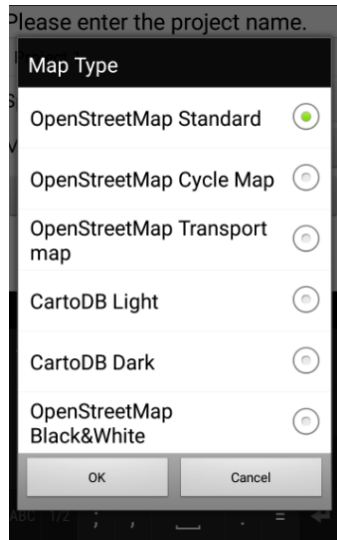
To create a project with Online Map, like OpenStreetMap, as base map please follow the steps below.

Choose Online Map Tool Project on creating a new project.



Quick Tutorials

Enter the project name, the Spatial Reference is grayed out.



Tap the Map Type and choose a online map on the menu to be your project's base map. Click OK.

Return to the map and Online Map displays.




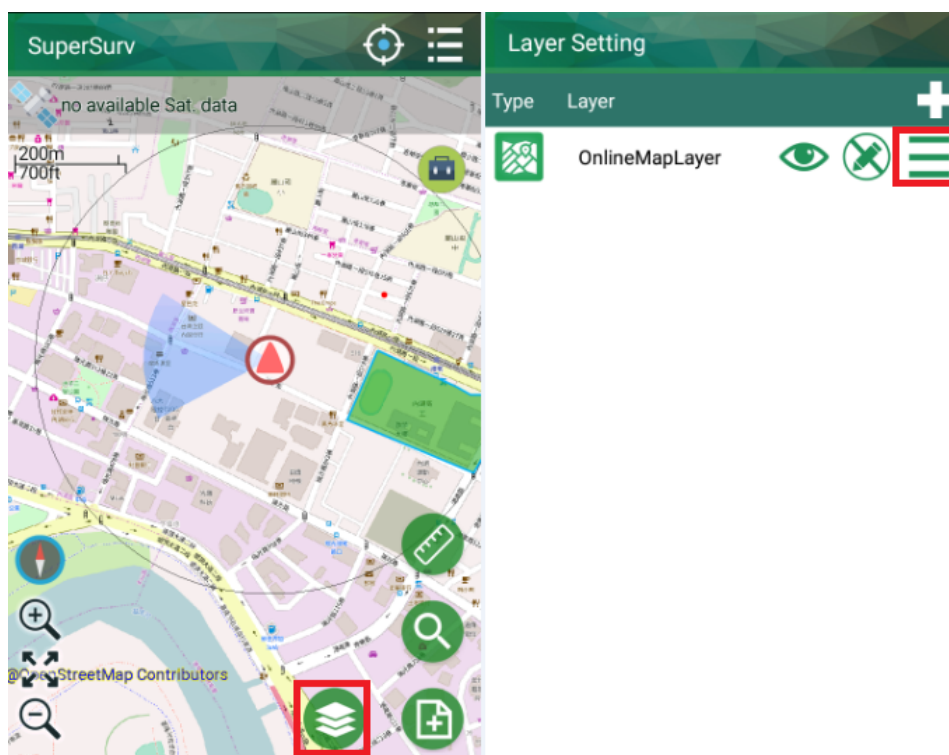
The internet connection of the device must be confirmed available before creating a project with Online Map Tool so that users can access the online map.

2.6 Switching Online Map

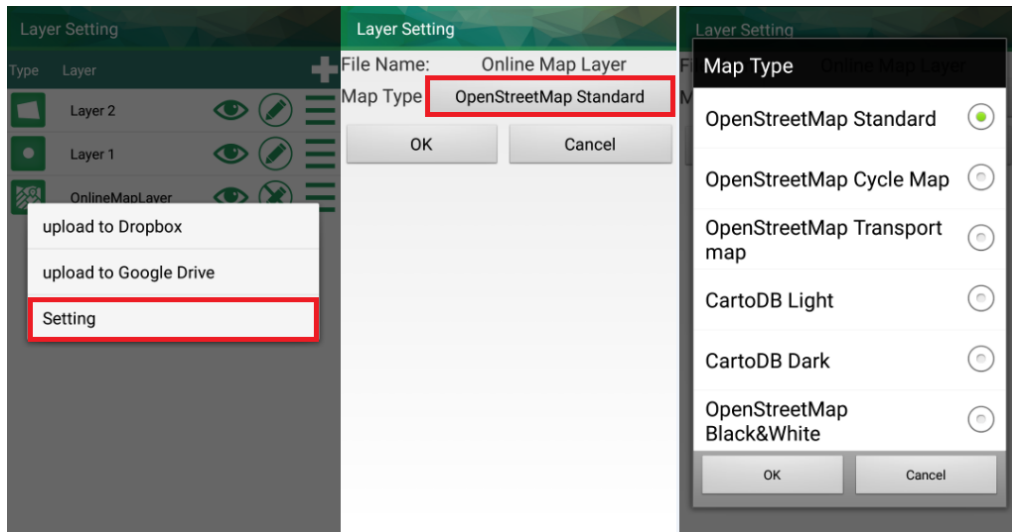
Switching Online Map

A variety of online maps are provided with Online Map Tool and users are free to change online map on SuperSurv at any time.

Tap Layers  . Tap Online Map to enter the layer setting page.




Tap Map Type and select the online map to use and tap OK.




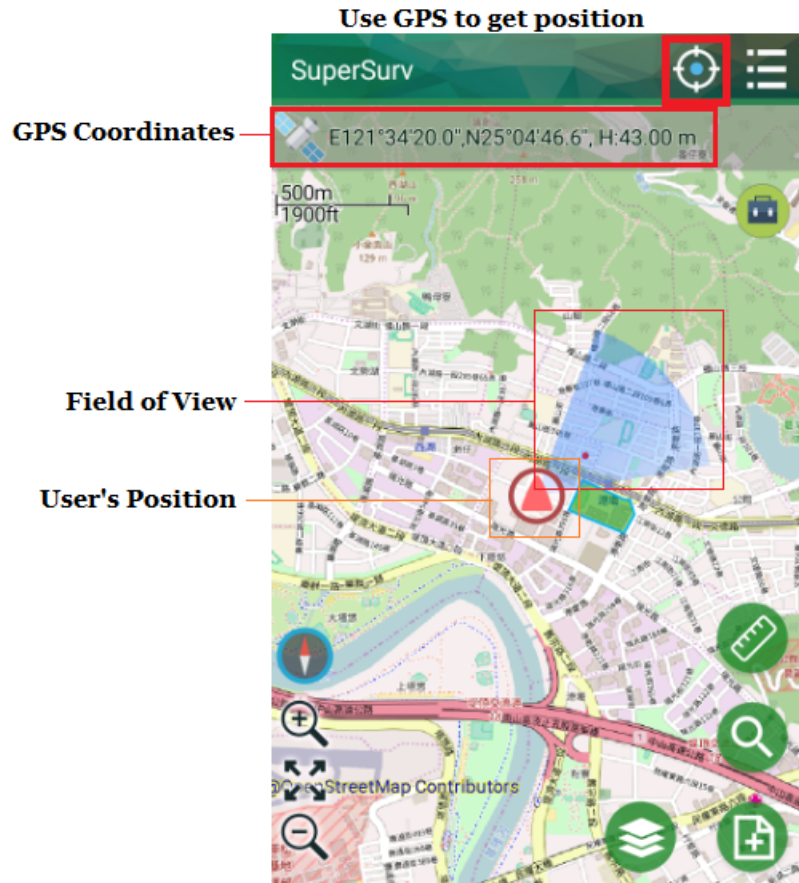
The map is changed to new one.

2.7 GPS Positioning

GPS Positioning

To display the current GPS position on the map, please tap  on the upper-right

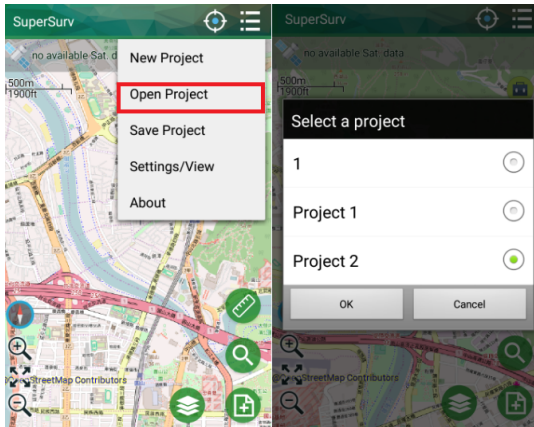
corner to pan to the current GPS position. Then, a purple mark  will be displayed on the map. The fan-shaped area is the visual angle. The longitude and latitude information will be displayed on the top of the map; tapping the information can convert to project coordinate system.



2.8 Open a Project


Open a Project

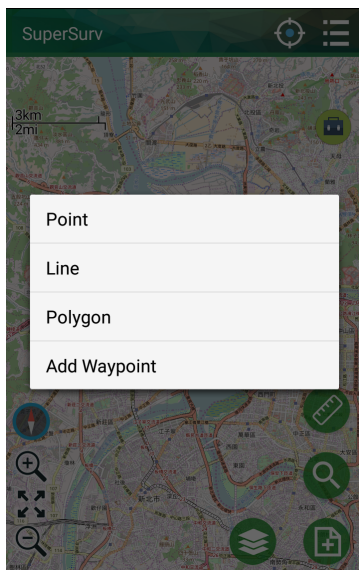
As you close SuperSurv, the system will save the project environment in SPP project file. Next time you start SuperSurv, the system will read the settings of the previous project as default display. If you would like to open other projects, please tap Menu function on the mobile device and choose open project to open another project.



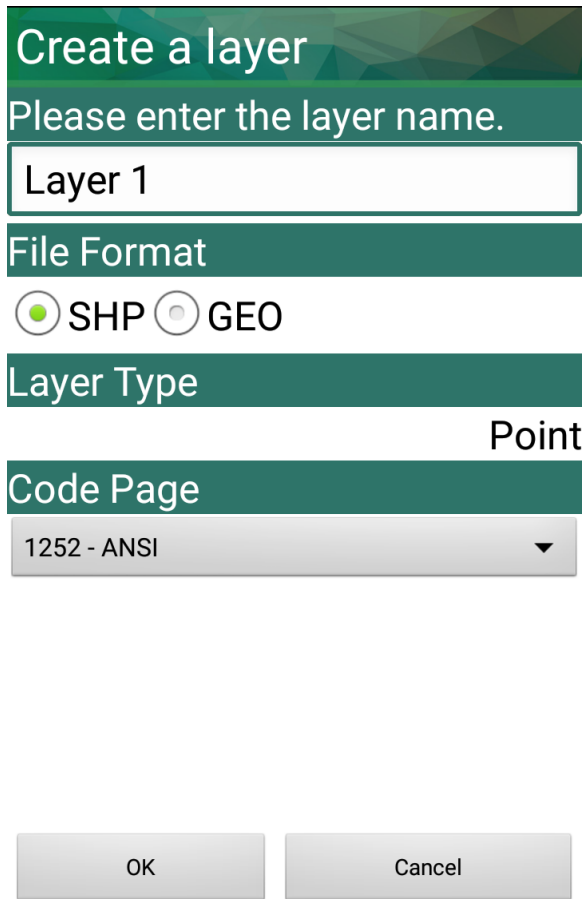
2.9 Creating a New Layer

Creating a New Layer

If you have no available layers, please create a new layer. Tap  and choose a layer you want.



In the setting page, please enter the layer file name, layer name, select code page, layer type (point, line, polygon) and choose the file format (SHP or GEO). After setting is finished, tap OK.



Create a layer

Please enter the layer name.

Layer 1

File Format

☒ SHP ☐ GEO

Layer Type

Point

Code Page

1252 - ANSI

OK Cancel

Field setting dialog appears, choose Start to Customize Table, and tap OK.



field Setting

Start to customize table. ☒

Start to survey. ☐

OK Cancel

Quick Tutorials

In “Create a New Layer”, set the field name and field properties. You can tap a field to set the field format in Field Setting.

Field name Field property

Note

ID Integer

NAME String / Length: 20

MEMO String / Length: 50

PHOTO Photo

DATE YYYY/MM/DD

TIME 24 HR

X LocationXValue

Y LocationYValue

Z LocationZValue

OK

Cancel

Field name:

DATE

Note:

Date

YYYY/MM/DD


MM/DD/YYYY

MM/DD

DD/MM/YYYY

OK

Cancel

To create a new field, please tap  , “Create a new field” appears. Please select a field type and set the format. About the details of the field type and format, please refer to [Custom Table](#).

Field name Field property

Create a new field

Text

Date

Time

Photo

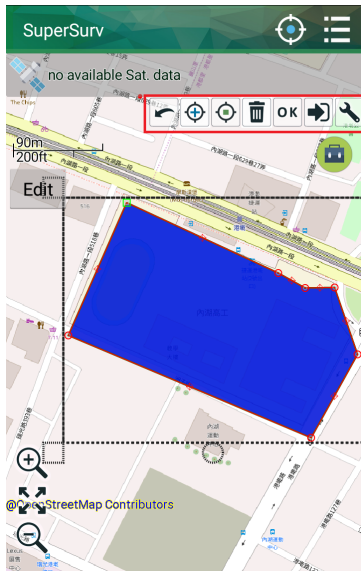
GPS

Numeric

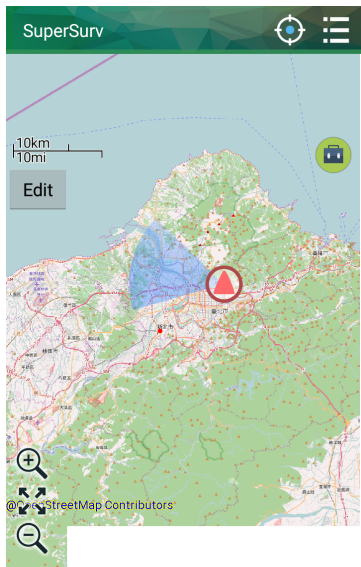
Menu

Cancel

After the setting is finished, please tap OK and back to the map. Survey toolbar shows up on the top of the map.



Then, there are two modes. One is add **Add**. The other one is edit **Edit**. When it is add mode, you can choose type of layer, and create features.



Quick Tutorials

After a feature is created, if you would like to enter attribute data, you can long-press the feature you created in edit mode. Then the attributes page will show up. You can edit the attribute data in Enter Attributes page.

ID:

0

Name:

Memo:

Photo:

Choose a photo or take a photo.

Date:

2017/02/13

Time:

11:28:47

X:

13,520,866.2300312

Y:

2,875,961.32396534

Z:

0

OK

Cancel

Also, you can edit the attributes right after a feature is created. Please tap Survey



Setting, and set “Input attributes after creating a feature” as On and tap OK. Back to the map, you can see Enter Attributes page right after a feature is created.

Survey toolbar setting

Input attributes after creating a feature.

On

Outline color when editing feature

Snap to vertex when editing feature

Off

100 pixels

Add a vertex by GPS average

Time

0

sec

Position :Point

0

Vertex

0

Continuous GPS Position

Time interval

1

sec, Distance


0.1

2.10 Adding Layers


Adding Layers

As you have created multiple layers, you can apply Add Layer function to add the specified layers to the map.
In this function, you can add geopdf file or any layer file from Google drive and Dropbox.

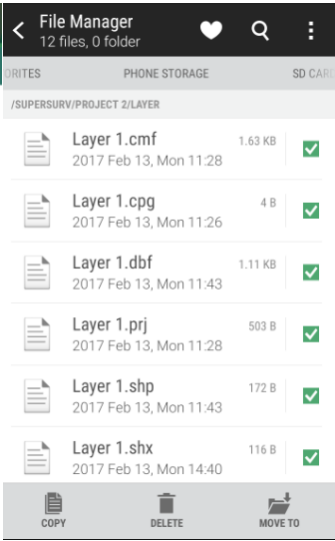


The layers that are not chosen will not be display on the map. Tap , and all the layers are listed here. Or you can copy the layer you want to add, and paste it to the folder. Back to SuperSurv, the map displays the selected layers.

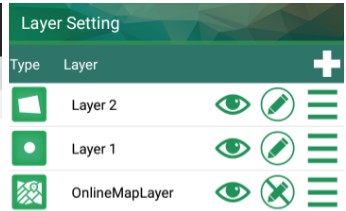
Original layer



Copy all the project files into layer folder



Open SuperSurv again, the new layer will show up in the list

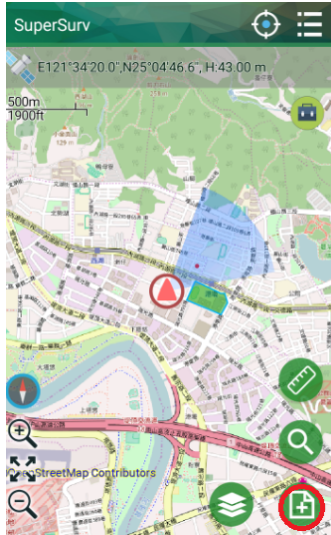


How to add the existing layers to SuperSurv map? To add existing layers to use in SuperSurv please copy the existing layers to Layer folder of SuperSurv folder, start SuperSurv, so that the Add Layer list will include the added layers. Check the layers to display and you can see them displayed on the map.

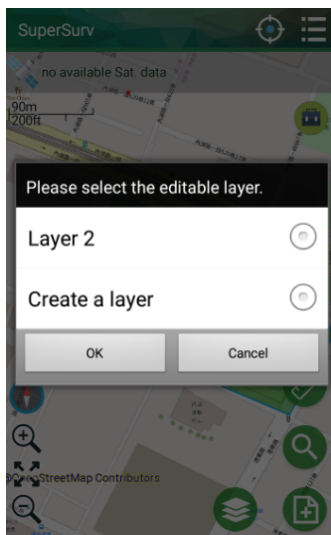
2.11Editing Layers

Editing Layers

To edit layer, you need to specify the layer you want to edit. Tap

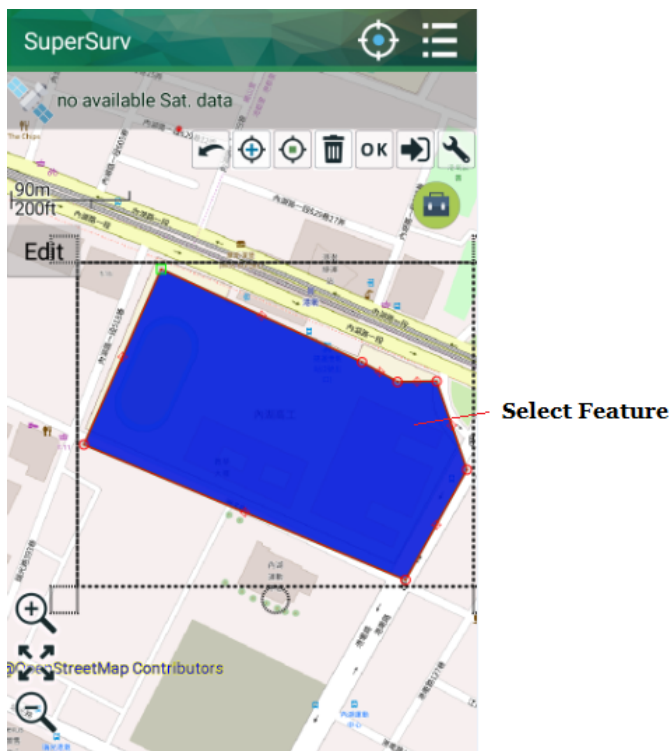


In Please Select Editable page, select the layer you would like to edit. Then tap OK.





The editable SuperGIS Server Feature Service will be listed as editable layer, when such layer is selected, all the layers contained by this Feature Service will be listed as editable SuperGIS Server layers. The way to edit SuperGIS Server layer is the same as to edit ordinary layers.


Please note that you can only edit a layer each time and you cannot edit multiple layers at the same time. To edit another layer, you need to switch another layer. Back to map, Survey toolbar shows up at the top of the map.



Quick Tutorials

As a feature is selected, you can use the following buttons:

Delete Feature 	Delete the selected feature.
Move Feature	Press the selected feature.Move, vertex, stretch feature, rotate feature, insert vertex, and delete vertex.
Edit Attribute	Long-press the selected feature.
Survey toolbar setting 	<p>5 items to set:</p> <ul style="list-style-type: none">a. Input attributes after creating a feature: Whether to show up attribute window right after a feature is create. ON is Yes, OFF is Not.b. Sampling time for collecting a GPS position: Set the sampling time for collecting GPS positions. The longer the time bar is, the longer time it takes.c. Interval for continuously collecting GPS positions: Set the Interval for continuously collecting GPS positions (line layer/ polygon layer)d. Outline color when editing feature: Set the outline color when editing feature.e. Snap to vertex when editing features: Set up the snapping tolerance for vertex editing, the unit is pixel.

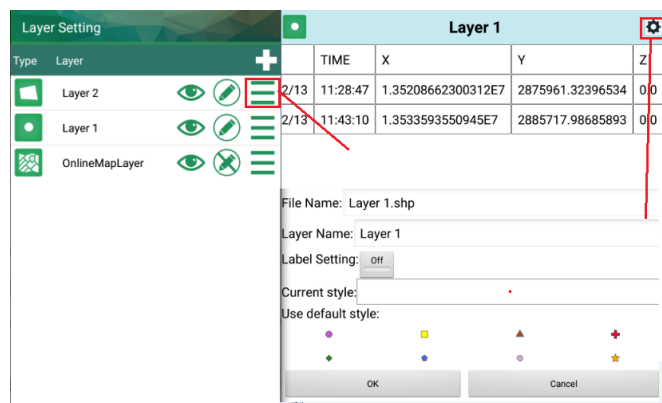
You can stop the current editing by 2 methods: 1. tab  2. press Back key, and a dialog will appear to check whether you would like to finish the editing. Tap OK to finish editing. The details of editing, please refer to [Survey](#).

A message will show up to confirm whether users want to synchronize data to Server upon the editing is finished. Please tap Yes if you want to synchronize the data, otherwise, tap No.

2.12Layer Management

Layer Management

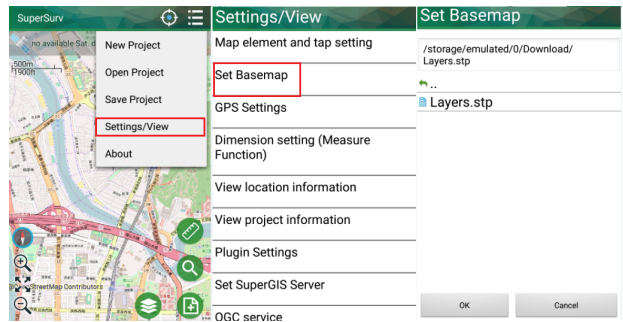
With Layer Management, you can add a layer to the map and set the properties of the layer. If you create a new layer, you can customize tables to enter the attribute data rapidly.



2.13 Adding SGT Base Map or STC Base Map

Adding SGT Base Map or STC Base Map

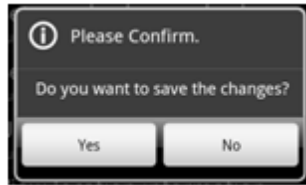
In addition to adding GIS layers, you can add SGT base map or STC base map to make the map more complete and abundant. Tap Menu button on the mobile device> Settings/View > Set base map and choose the SGT project file or STC project file. Then tap Ok.



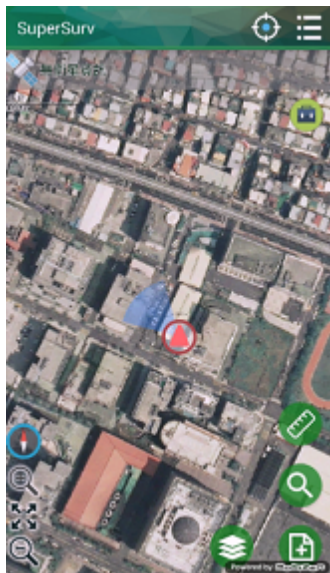
Note: STC map includes 2 files, **.stc and .stp**; both of the files should be copied to your mobile device. While selecting the basemap, please select *.stp file.

Quick Tutorials

Back to Settings/View, and tap Back key, and tap Yes in the dialog.



Back to the map, the SGT basemap or STC basemap is added to the map. A project file can contain one SGT basemap or one STC basemap only.



The way to create STC project file, please refer to SuperGIS Desktop or SuperGIS Server User Guide.

2.14 Online Editing Feature Service


Online Editing Feature Service

Feature Services published by SuperGIS Server can be displayed on SuperSurv and those editable services can be edited with features and attributes. Furthermore, the

editing can be synchronized to SuperGIS Server. In addition, Feature Service attributes can be queried and be measured just like the ordinary layers.

Tab menu button > Settings/View > Set SuperGIS Sever.



Tab  and key in name, server, account and password.

Connect to SuperGIS

Name	mapc1
Server	192.168.3.103
Port	80
Service	/SGSPWS/SGSPAgent.ashx

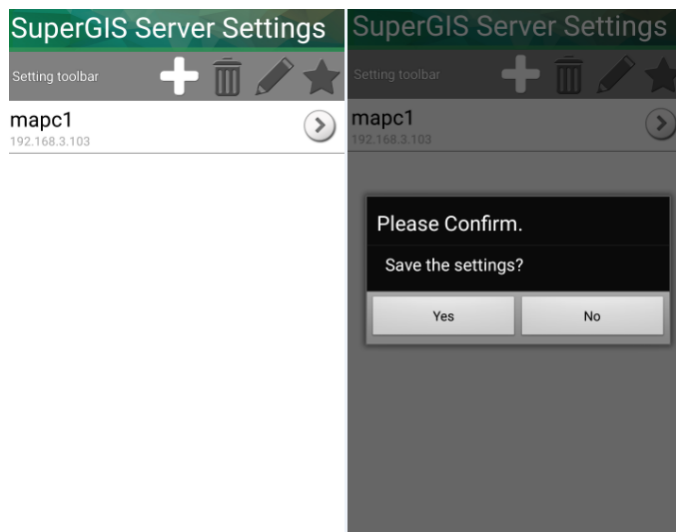
Account	a
Password	•

☐ Display password
☒ Remember account inform.

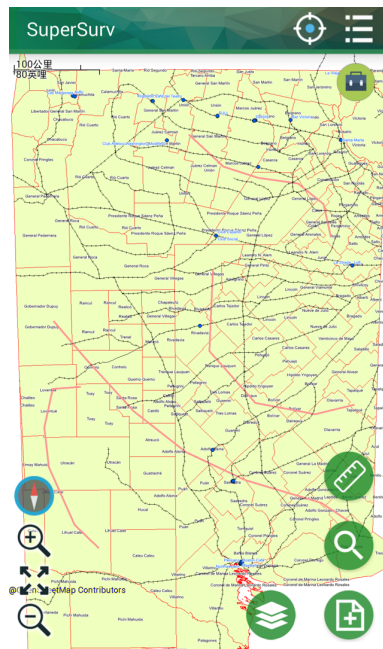
After setting finished, press OK and go back to SuperGIS Sever Setting page. Then you will see the server shows up.

Quick Tutorials

Remember save your setting before go back to map.



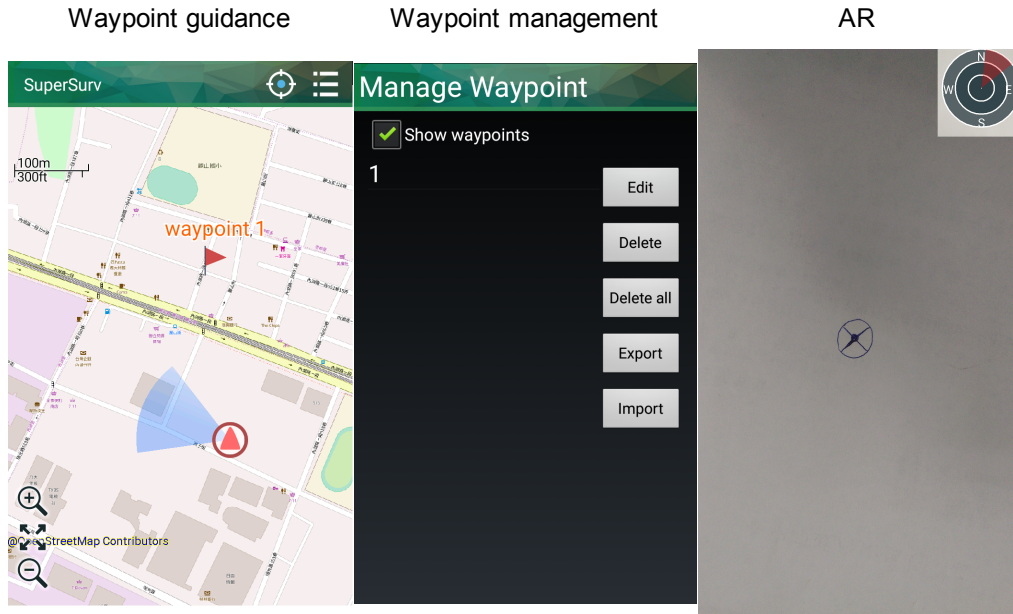
Then get the SuperGIS map.



2.15 Waypoint

Waypoint

You can set and manage waypoints and pan to the waypoint. Besides, you can display the waypoint information on the map to help reaching destination. Or you can use AR (Augmented Reality) to help find the correct direction and distance to the destination.



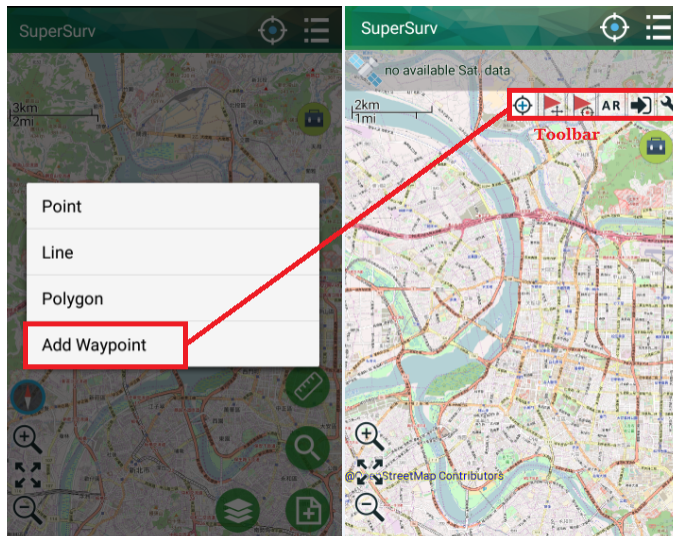
Adding Waypoints


Adding Waypoints

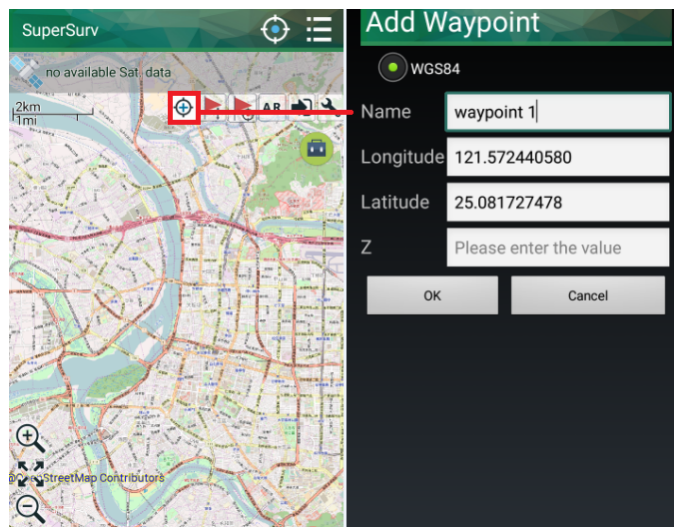
In field survey, you might need to add some points to survey temporarily because of accidents or missions. Then, you can create new waypoints to complete the operation. Or when you are surveying, you might need to add some point information (e.g. building, tree, etc.) for references, you also can apply waypoints to achieve the target.

Quick Tutorials

1. Press menu > Add Waypoint.



2. Tab the place you want on the map or tab  to set waypoint and "Add Waypoint" window shows up, please select the coordinate system, and enter waypoint name and Z value. The coordinate fields (longitude, latitude, elevation) shows the current coordinates. You can modify the coordinate values manually. Please tap OK to finish.



- Waypoint is successfully added. The name of waypoint is also displayed on the map.



Note:

- The function can be worked with Positioning function to rapidly zoom to the target position and add the new waypoint by long-pressing.
- You can also use waypoints as an annotation of points on the map.

Importing Waypoints

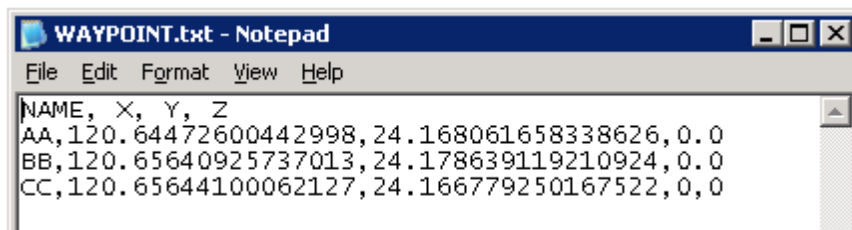
Importing Waypoints

If you have known the route of field survey and there are several locations you must pass by, you can edit the coordinates of the locations on PC and then import the locations to SuperSurv. In field survey, you can apply waypoint to know the relative location between current position and the locations you must pass. The system supports to import TXT, CSV or KML.

Besides, if you want to display some more information on the map, such as rain gauge station, hospitals, scenic spots, etc. you can apply notepad to create the coordinate data. Then, the text file can be imported to the system. The coordinate data can be displayed as points on the map and help you know the positions of the points effectively.


The following is the way to create TXT file to import waypoints.

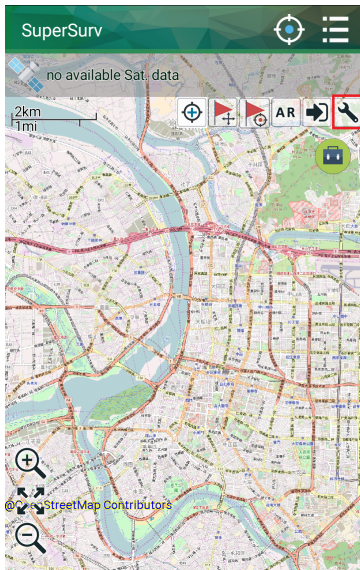
1. Connect your PC with the mobile device.
2. Start notepad on PC, and enter waypoint name, X coordinate, Y coordinate, and Z coordinate.
3. After entering, please save the file. Then copy the file to your mobile device.



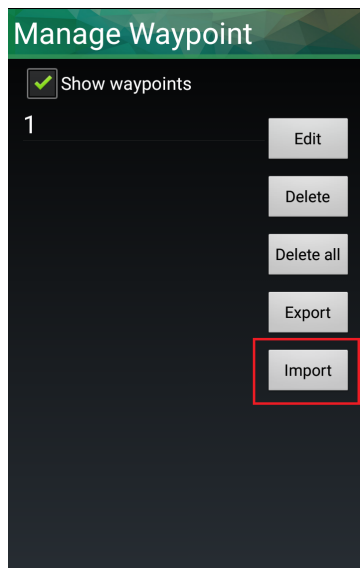
Note:

- While editing waypoint information in notepad, enter Name, X, Y, Z in the first row. Then, enter the information of each point in each row.
- Name, X, Y, and Z stand for waypoint name, X coordinate of waypoint, Y coordinate of waypoint, elevation of waypoint.
- The supported coordinate systems are WGS84, TWD67, and TWD97. if you use WGS84, the system only supports "degree."

4. In SuperSurv, tap menu > Add Waypoint. > Tap settings button  on waypoint toolbar.

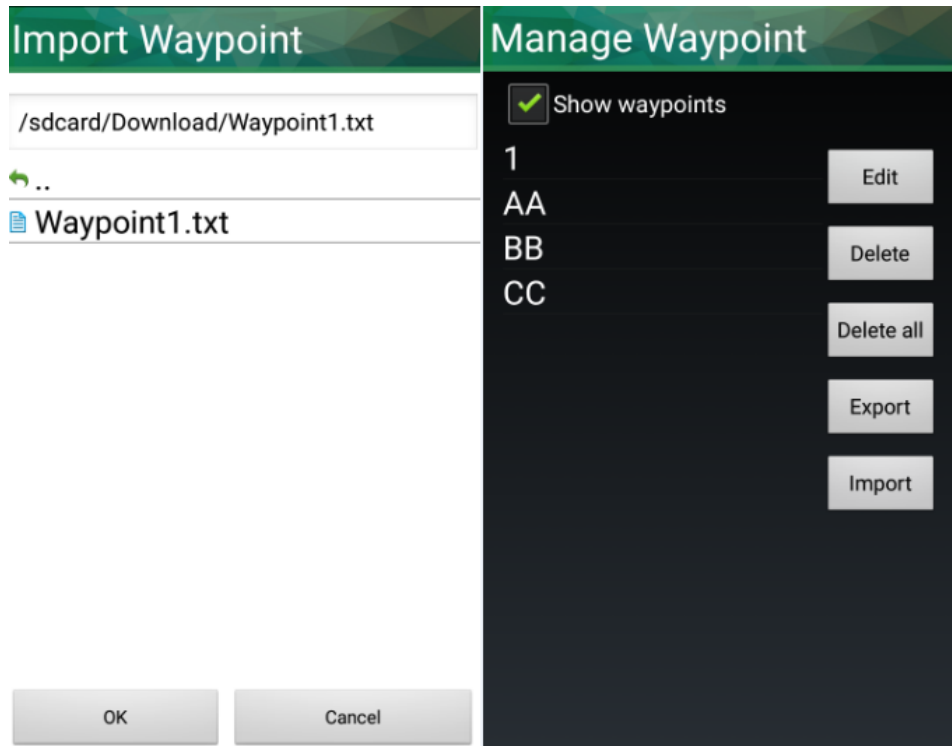


5. In Waypoint management window, tap import.

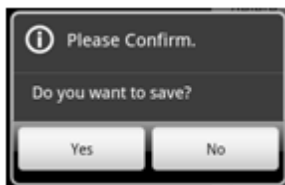



Quick Tutorials

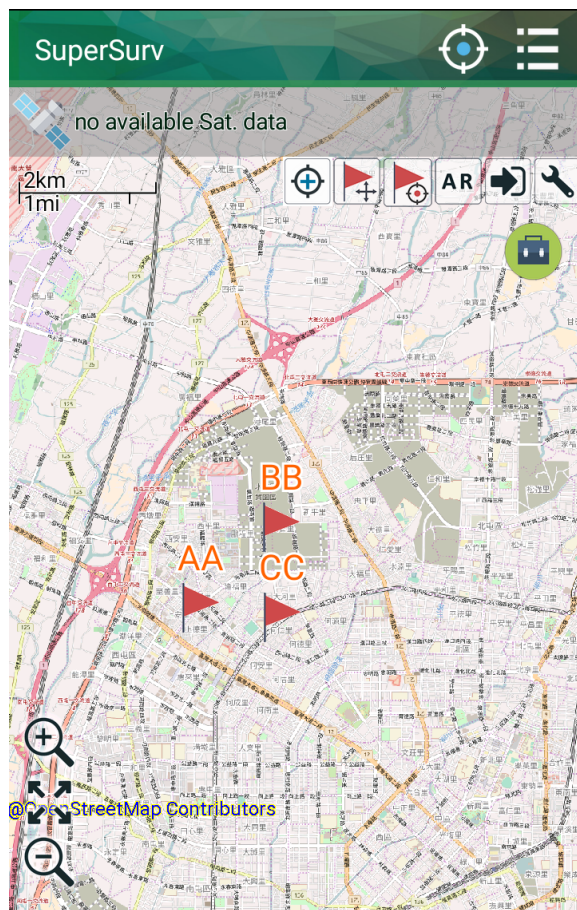
6. Select the file you created in Step 2, and tap OK.



7. Back to waypoint management window, tap Back key, and the message appears. Tap Yes.



8. Back to the map, and you can see the imported waypoints. The icon  on the map stands for the position of waypoint. The waypoint name is displayed above the icon.




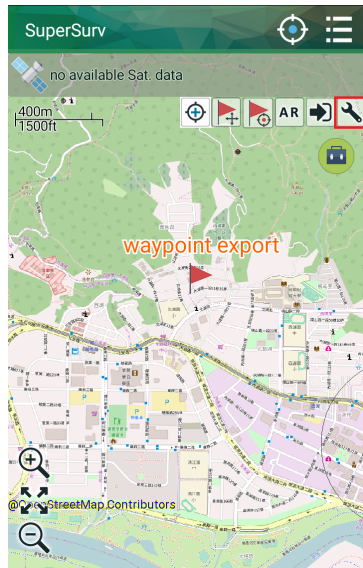
Exporting Waypoints

Exporting Waypoints

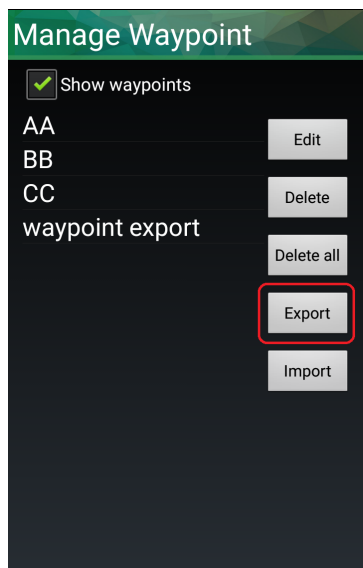
Surveying with SuperSurv in the field, you can work with waypoint, and the waypoint can be used as an annotation of position (please refer to [Adding Waypoints](#)). After surveying, you can export the waypoints to export the points to check and display them on different platforms.

Quick Tutorials

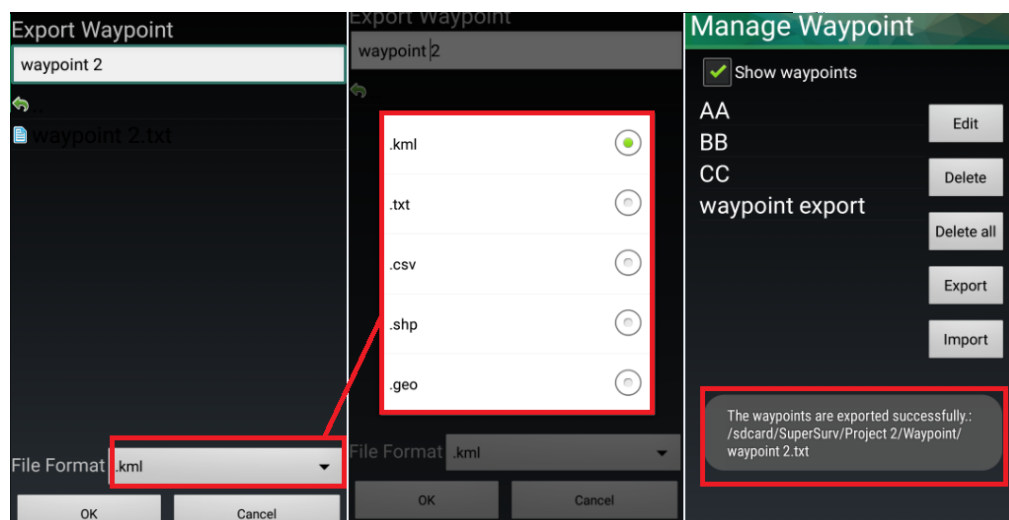
1. In SuperSurv, tap menu > Add Waypoint. > Tap settings button  on waypoint toolbar.



2. In Waypoint management window, the waypoints will be listed on the left, and Export is on the right. You can export all the waypoints as files.



3. Enter the file name and choose the file format to export. There are 3 formats, KML, TXT, CSV. After setting, please tap OK.
The waypoint is exported successfully. The message will show up and display the path.



Note:

Waypoints can be exported and saved as TXT, CSV, KML formats. You can upload the data to PC, other applications, or on Google Earth.

2.16Track

Track

After turning on GPS, you can record GPS track. In addition, you can also display the track on the map that helps to know the route you move.




Tab menu button > Plugin Settings > check the "Track" item.

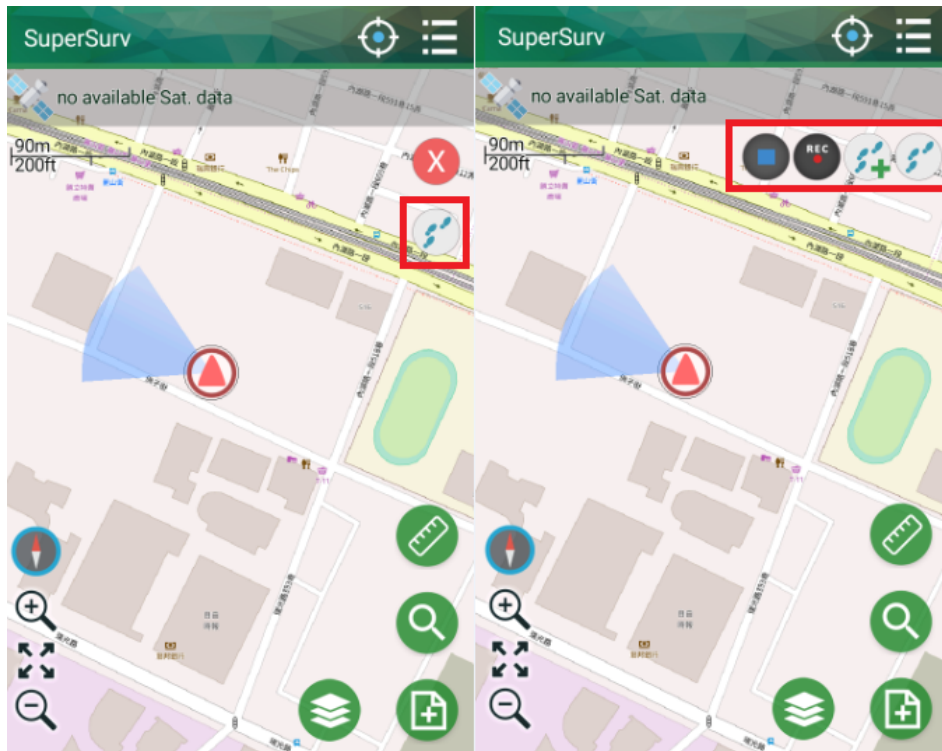
Quick Tutorials


Settings/View	Plugin Settings
Map element and tap setting	<input checked="" type="checkbox"/> Track
Set Basemap	
GPS Settings	
Dimension setting (Measure Function)	
View location information	
View project information	
Plugin Settings	
Set SuperGIS Server	
OGC service	



Go back to map.

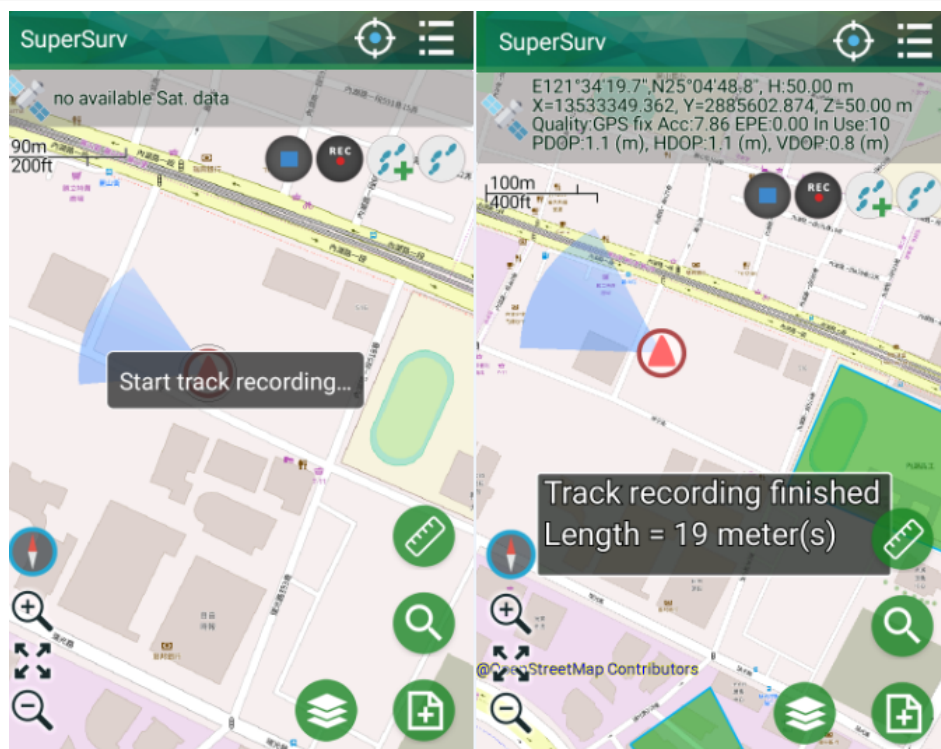
Then, please refer the steps:


1. Tap Plugin Settings button  > tap track  . The Track toolbar will show up on the screen. Tap  to start recording. The upper-left corner will show the Recording.



2. While recording, You can tap  to pause to record, and then the upper-left

corner will show the message . Tapping  again to continue to record. You can tap Pause to record and start recording for more than once. During the process, the track will be saved in the same track file.



3. As you would like to stop recording, please tap  to stop recording. The upper-left corner shows the message . Then, the track file will be saved directly. The file will be saved in Track folder in the project folder.


Note:

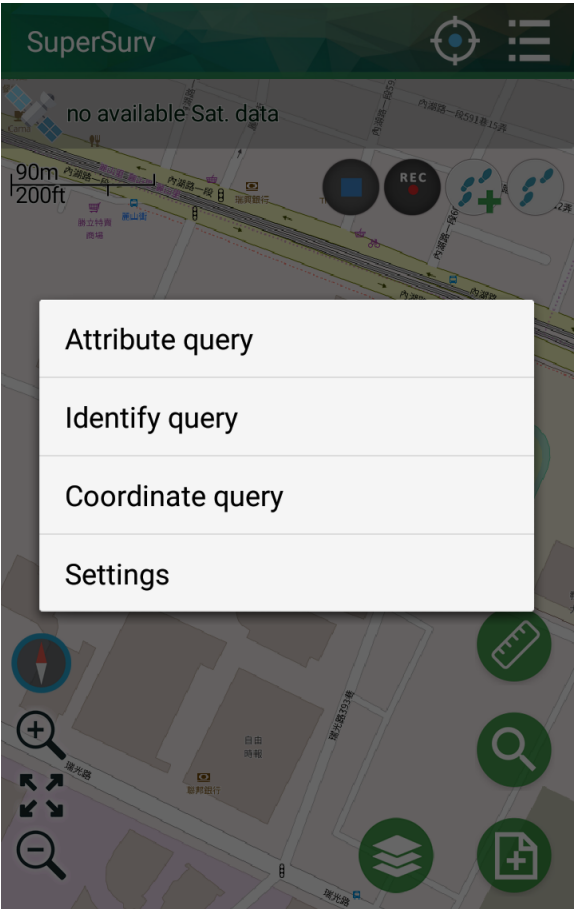
- Track recording only works when GPS positioning works successfully.
- The name of track file is YYYYMMDD_XX; YYYY is year, MM is month, DD is day, XX is the order of the file created on the same date, for example "20110328_02" is the second file generated on March 28th in 2011.
- Files are saved in point layer (*.kml) and line layer (*.shp) in Track folder in the project folder.
- If you did not close the system in a normal procedure, the current track will be saved.

2.17Query

Query

The system provides 3 methods to query: attribute query, identify query and coordinate query.

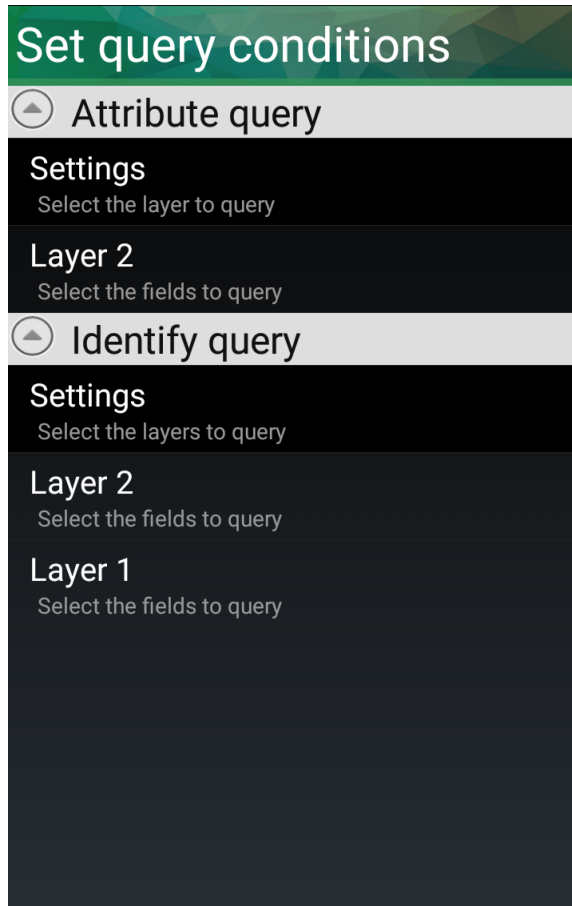
1. Firstly, you need to set the query conditions, tap Query , and then query selection will pop up.



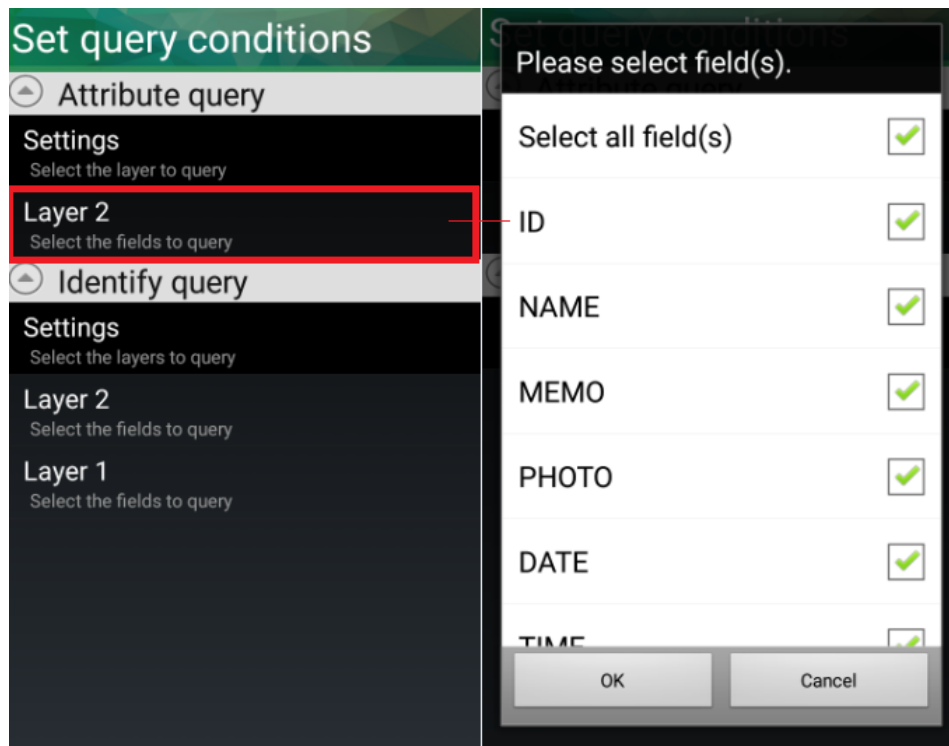
2. Tap settings to set the settings. Attribute Query only allows users to query a single

Quick Tutorials

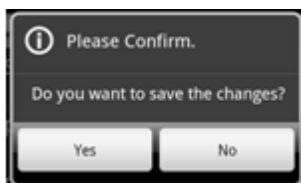
layer; Identify Query allows users to query multiple layers, you can select all layers by checking “Select All.” Coordinate query enables users to query the coordinate information by tapping.




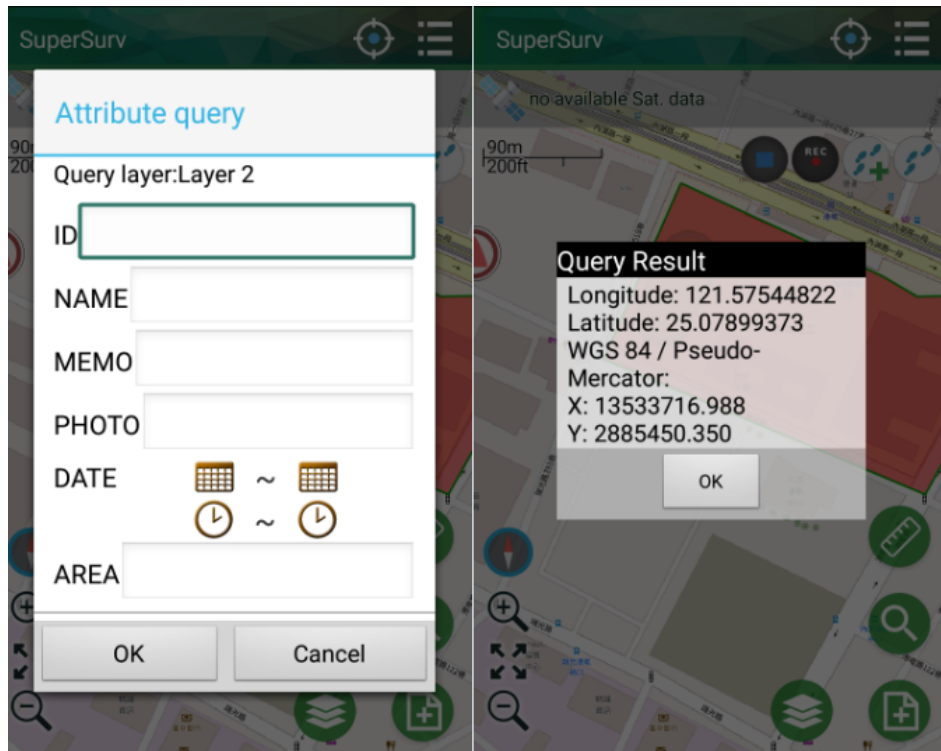
3. After setting the layers, the layer you set to query will be displayed below Setting. Then, you can set the fields you would like to query of each layer. Both Attribute query and Identify query are able to set to query multiple fields or you can check “Select All” to select all fields. Attribute Query and Identify Query both allows users to set multiple fields. After setting, please tap OK. Then, back to Set Query Conditions page, the fields you set to query will be listed here as well.



4. As the setting is finished, please tap Back key on the mobile device, and tap yes in the dialog.



5. Back to the map, and you can start to query. Tap Query  > Select Attribute Query. Then, the dialog shows up; please set the key words, value, or range. Or you can fuzzy inquiry by entering some key conditions. Tap OK. The features that meet the conditions will be displayed and panned to the map center.



SuperGIS Server layers can be queried as the ordinary layers. All layers contained in the SuperGIS Server layer will be listed for user to select. And the way to query SuperGIS Server layers are the same as to query ordinary layers.

2.18 Measure Tools

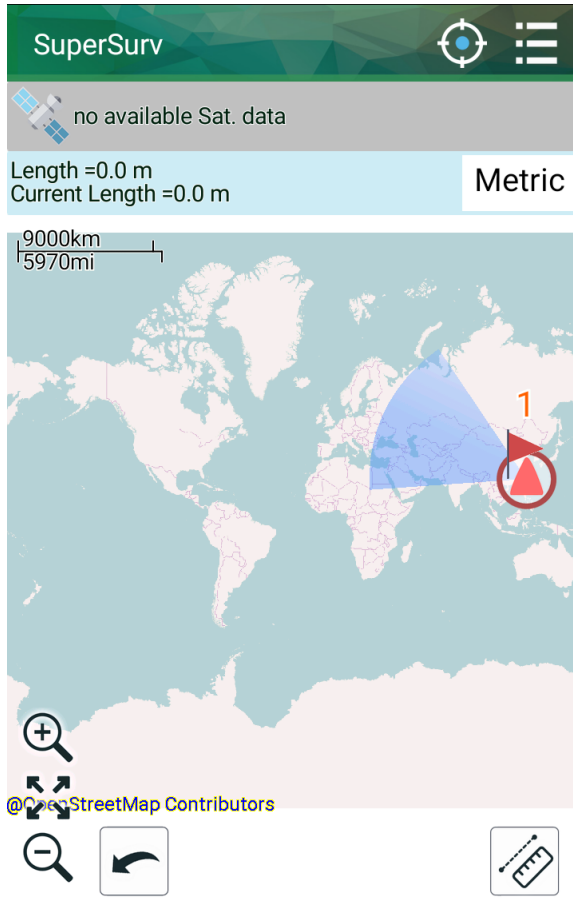
Measure Tools

In field survey, if you would like to know the real length or area on the map, you can measure with the tools. Besides, the system also provides the function to measure features. Please refer to the description to operate:


Line Measurement	Area Measurement	Feature Measurement	Undo
------------------	------------------	---------------------	------



1. Tap Measure, and the measurement toolbar will show up.

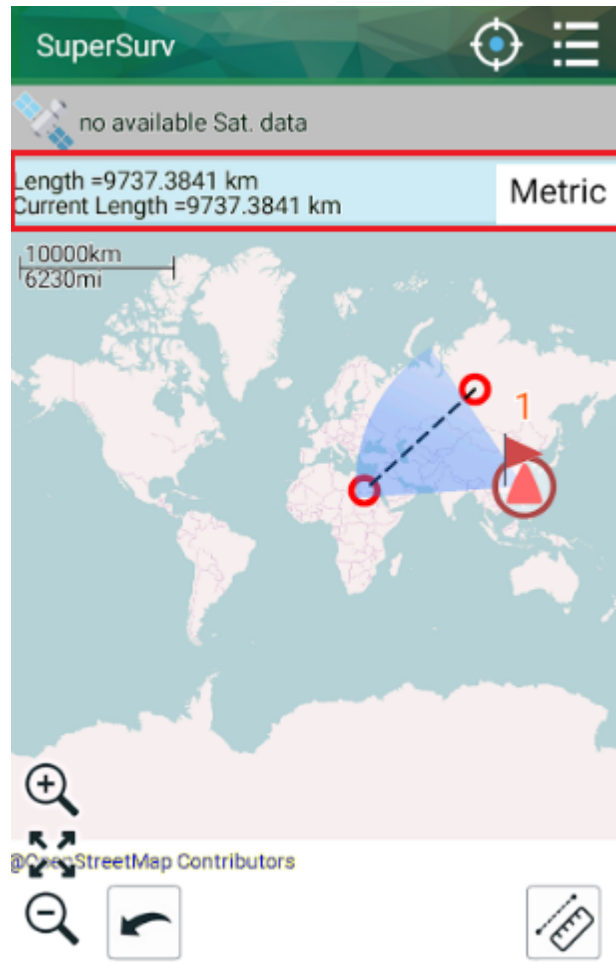



2. Tap length measure  or area measure .

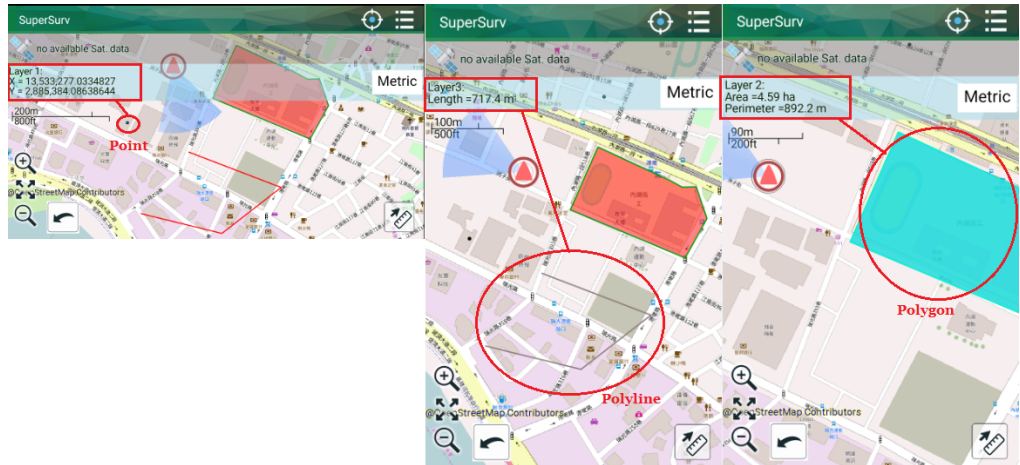
3. Tap Undo , you can cancel the current measurement.

Quick Tutorials

4. The system will calculate the total length or area of the segment or extent and display the results on the map.



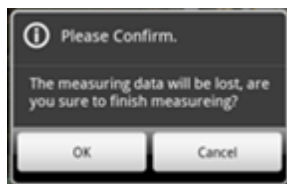
5. Tap "Measure Feature"  and tap on point, polyline or polygon feature on the map to respectively get the XY coordinates, length, perimeter and area. Users can also measure SuperGIS Server layer features.



6. Tap back button of mobile device, you can close the measurement mode.

Note:

- Line measurement units include: meter and kilometer (the line longer than 1000 m will be displayed with km); area measurement units include: square meter, hectare (the area larger than 10000 square meters will be displayed with square hectare), and square kilometer (the area larger than 1000 hectare will be displayed with square kilometer)
- The message below will show up if you are measuring but switch to different measurement or tap finish measurement. Tap OK and the current measurement will be canceled.





3

Detailed Function Description

3.1 An Overview of
Functions

3.2 Exit System

3.3 Menu

3.4 Map Toolbar

3.5 Survey

3.6 Manage Layer


3.7 GPS

3.8 Track

3.9 Query

3.10 Measure

This section will describe the functions and operations of each tool in the different sections. It will also describe the details of the timing and procedures of all functions. Therefore, you can use SuperSurv efficiently and totally understand all function .



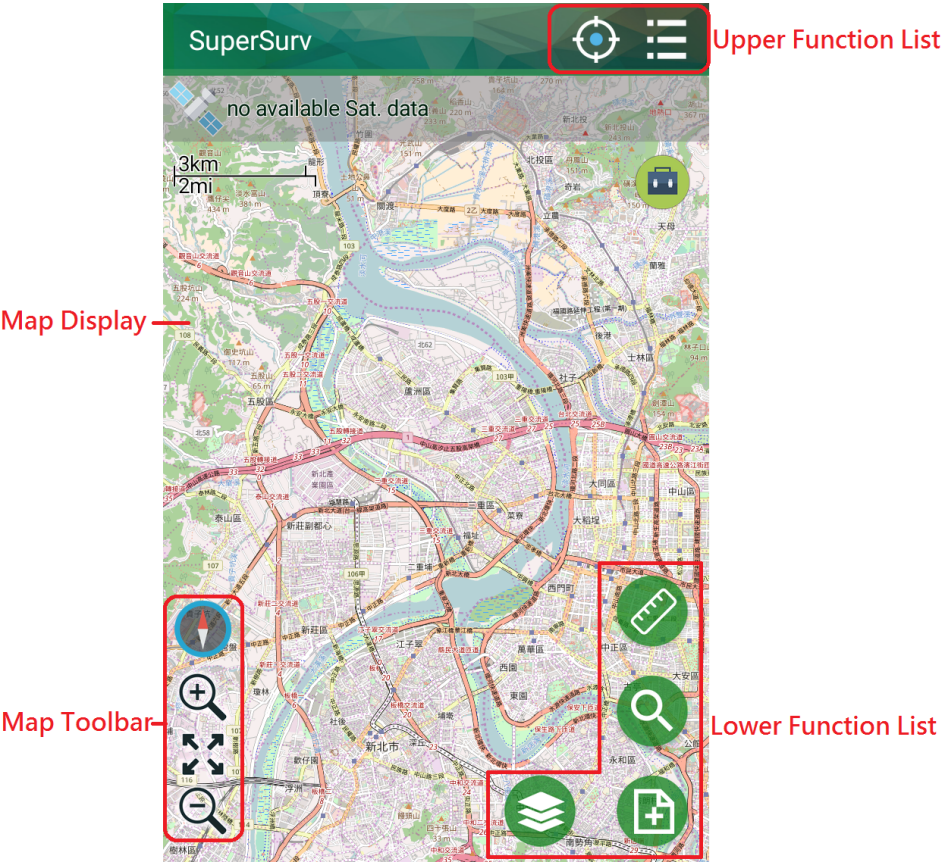
3 Detailed Function Description

3.1 An Overview of Functions

Major System Interface

Major System Interface

The major system interface includes “map display”, “map toolbar”, “upper function list” and “lower function list.”



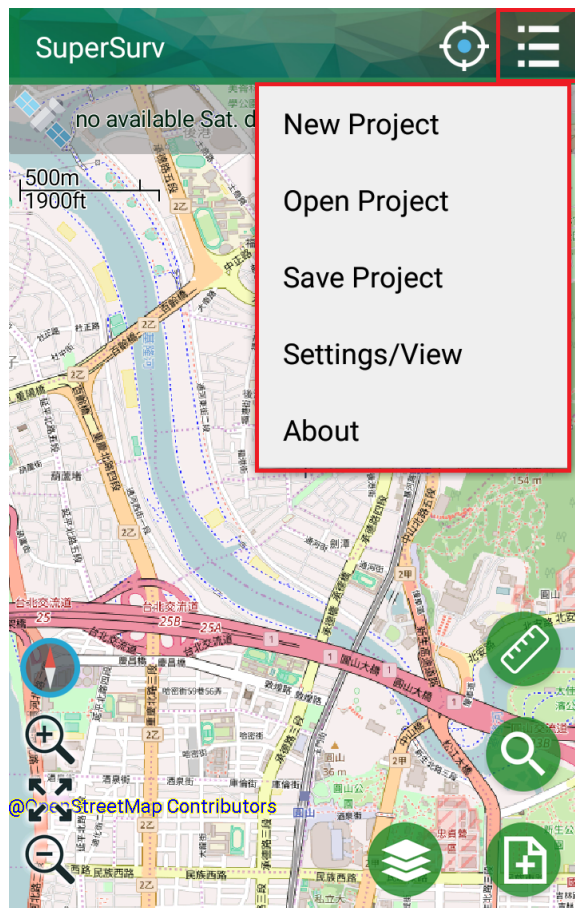
Map Display

The loaded files will be displayed here.

Detailed Function Description

Map Toolbar	The toolbar at lower left corner is the map toolbar. You can Zoom in and out, or zoom to full extent with tab the icon.
Upper Function List	The function list at top of the major interface includes "GPS Orientation" and "Menu."
Lower Function List	The function list at bottom of the major interface includes "Measure", "Query", "Survey' and "Layer Management."

Tapping "Menu" button of the mobile device will open a menu which allows you to open/ save project, create project, enter "Settings/View" and "About."



In Settings/View page, you can use Map element and tap settings, Set base map, GPS Setting, Dimension setting (Measure Function), View Location information, View project information, Plugin Settings, Set SuperGIS Server. As to the details of how to set these

items please refer to settings/view.

Settings/View

Map element and tap setting

Set Basemap

GPS Settings

Dimension setting (Measure
Function)

View location information

View project information

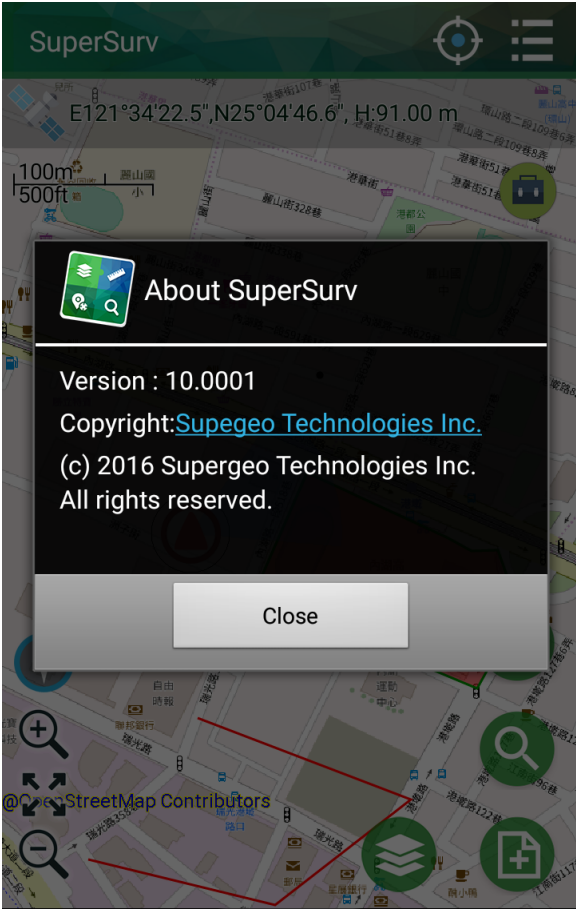
Plugin Settings

Set SuperGIS Server

OGC service

"About" shows the copyright and the software version. You can exit by tapping "Close."


Detailed Function Description




Function Description

Function Description

Upper Function List




Funtion	Description
GPS Orientation 	Pan map to the current GPS position.

Funtion	Description
Menu 	Open menu.


Menu button menu

Function	Description
Create Project	Creates Projects.
Open Project	Opens Projects.
Save Project	Saves Projects.
Setting/View	Sets Map element and tap settings, Set base map, GPS Setting, Dimension setting (Measure Function), View Location information, View project information, Plugin Settings, Set SuperGIS Server.
About	Announces the copyright and software version.





Lower Function List

Function	Description
Measure 	Measure length or area by drawing polyline and polygon. Measure feature.
Query 	Query features: attribute query, identify query, coordinate query and settings.
Survey 	Creates layers. Add waypoints.

Detailed Function Description

Function	Description
Layer Management 	Adds layers. Sets the order of layers, symbol style and size. Customizes the attribute table.

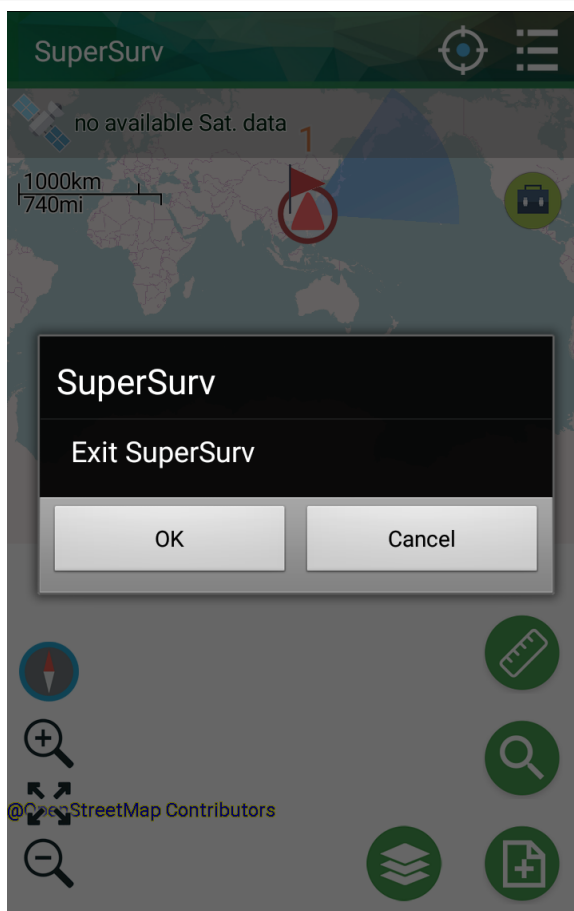
Map Toolbar

Function	Description
Zoom in 	Zooms in map.
Zoom out 	Zooms out map.
Full extent 	Zooms map to full extent.
Compass 	Show electronic compass so that it is easier for you to identify the correct aspect and angle in the real world environment.

3.2 Exit System

Exit System

Tap Back key, and the message will appear to ask you whether to exit the system. Tap OK, and the system will close.



3.3 Menu

New Project

New Project

Enter the project name and set the spatial reference to create a new project.

Detailed Function Description

SuperSurv

New Project

Online Map Tool Project

Open Project

OK

Cancel

Please enter the project name.

Project 1

Spatial Reference

Please select.

OK

Cancel

Or create a Online Map Tool Project which has online map as the base map.

SuperSurv

New Project

Online Map Tool Project

OK

Cancel

Map Type

OpenStreetMap Standard

OpenStreetMap Cycle Map

OpenStreetMap Transport map

CartoDB Light

CartoDB Dark

OpenStreetMap Black&White

OK

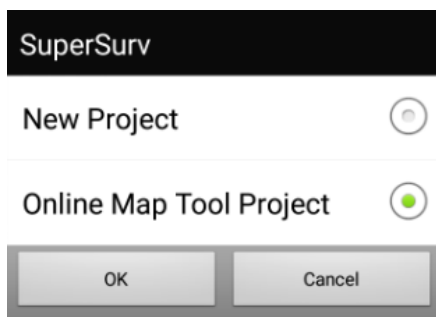
Cancel

Creating Online Map Tool Project

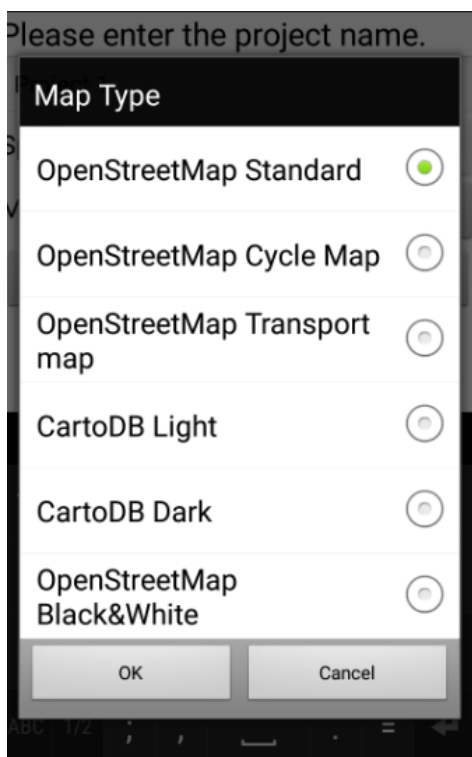
Creating Online Map Tool Project

Online Map can be used to be the basemap in SuperSurv project by creating a SuperSurv Online Map Tool project. Internet connection is necessary to connect online map, please confirm the Internet connection works.

Tap "Online Map Tool Project" and tap OK.



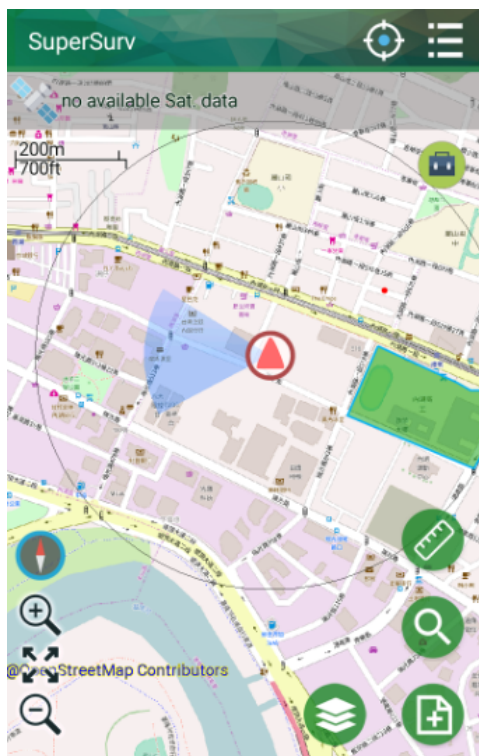
Enter the project name, Spatial Reference will be grayed out.



Detailed Function Description

Tap the Map Type and a menu shows up. Choose one online map to be the basemap and tap OK.

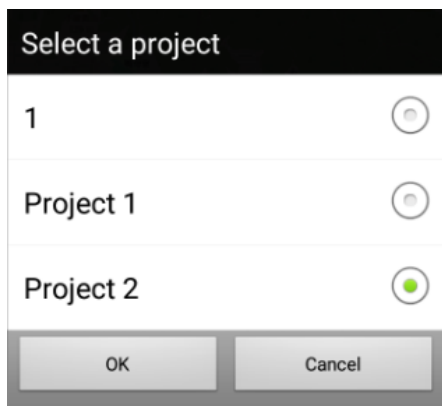
Return to the map, Online Map shows.



Open Project

Open Project

You can open the existing project. As the menu shows up, you can select a project, and tap OK.

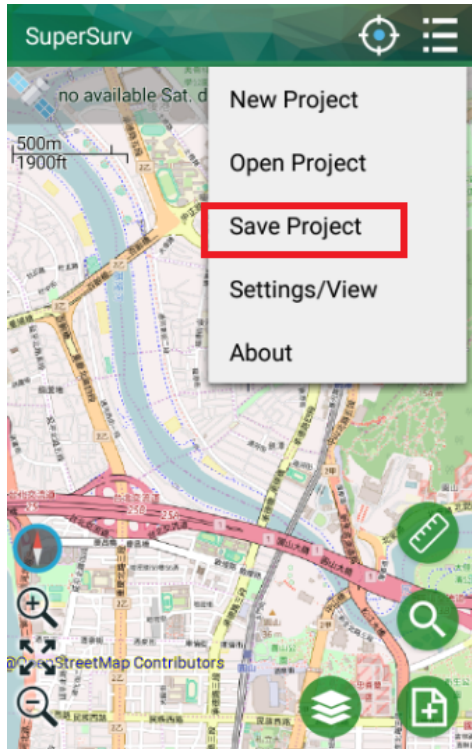


Save Project

Save Project

You can save the project. If you leave the system without saving, the system will save the project for you.

Detailed Function Description



Settings/View

Settings/View

Tap Settings/View and you can setting 9 items.

Settings/View
Map element and tap setting
Set Basemap
GPS Settings
Dimension setting (Measure Function)
View location information
View project information
Plugin Settings
Set SuperGIS Server
OGC service

Map Element Setting

Map Element Setting

You can set whether to display north arrow, scale, visual angle and to activate snap tolerance.

Detailed Function Description

Map element and tap

North Arrow

☒ Yes ☐ No

Scale Bar

☒ Yes ☐ No

GPS information


Latitude and longitude, X,Y,Z, Satellite, A.. ▼

Zoom in/out

☒ Yes ☐ No

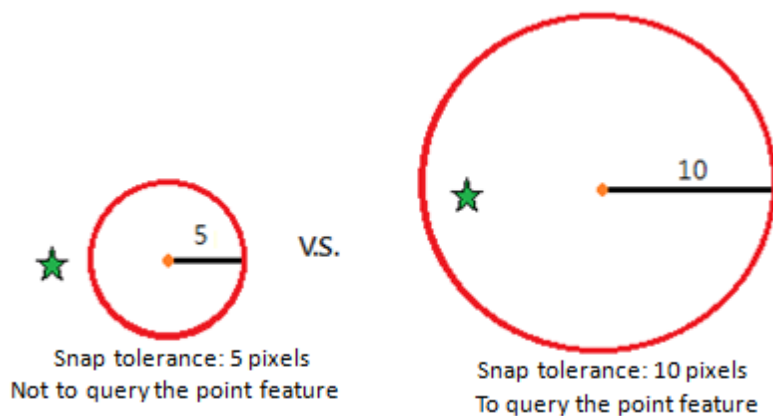
**Visual angle
(Fan-shaped)**

☒ Yes ☐ No

The top of the map always points to the north, but the aspect of the actual environment might not be the same. At the moment, you can tap the north arrow  on the map to show the electronic compass to indicate the north aspect of the current environment.



Snap tolerance takes effect in Query, Waypoint and Measure, which allows users to select the needed position more flexibly while manipulating. The unit is pixel. Take Identify query as an example. See the figure below that the center of the circle is where the query tapping is performed. If the tolerance is 5, the point feature is located outside the query range, so it will not be performed query; if the tolerance is 10, the point feature is inside the query range, so it will be performed query.



Set Base Map

Set Base Map

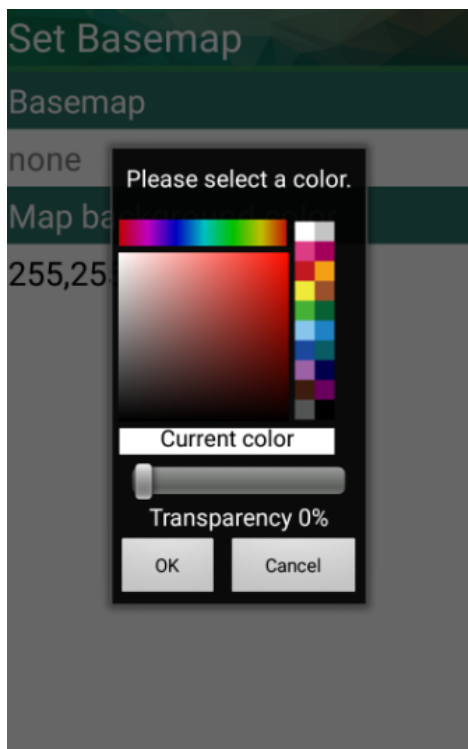
Please specify the path of SGT layer or STC layer. The coordinate system of the SGT Layer or STC Layer should be the same as the one of the project. Please tap OK. Back to Settings/View page, tap Back key. The message, "Do you want to save?" appears, tap Yes.



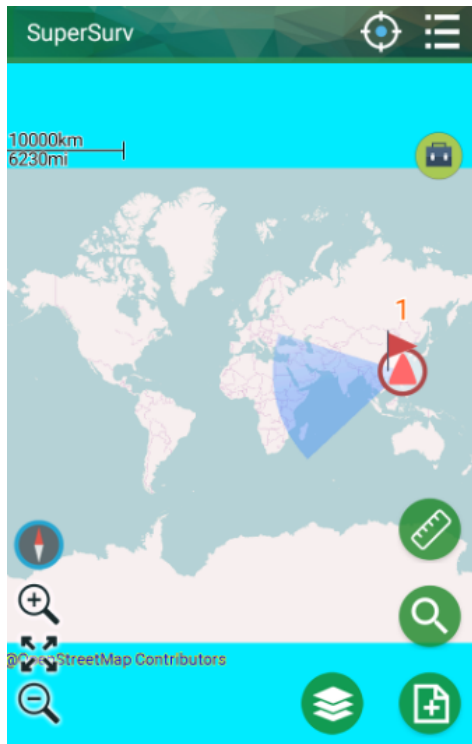
The way to create STC project file, please refer to SuperGIS Desktop or SuperGIS Server User Guide.

Map Background Color

You can specify the color of the area outside the base map; you can choose from the 20 basic colors or from the middle area. Current Color displays the color you choose. Besides, you can set the transparency by dragging the bar. The higher the percentage is, the more transparent the color is. After setting, please tap OK. Back to Settings/View, tap Back key, the message will appear. Tap Yes.



Apply the background color to the map.



GPS Settings

GPS Settings

Users can choose a GPS signal through GPS Settings. Tap the drop-down menu of GPS Signal and you can find all the options which include GPS Off, Internal GPS and Bluetooth GPS.

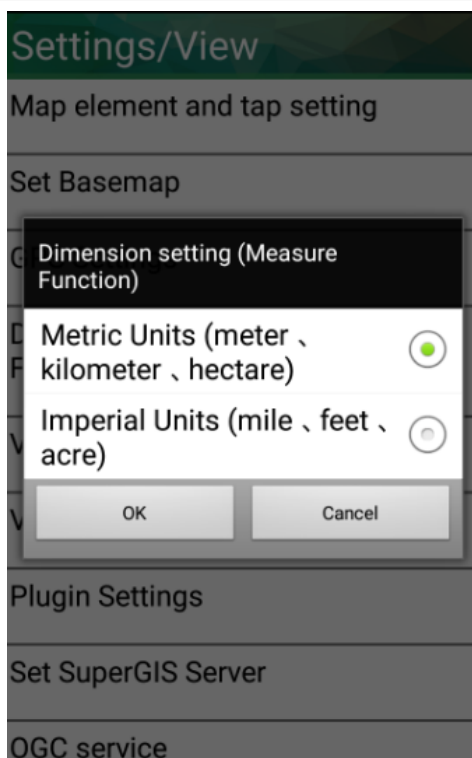
Detailed Function Description

Settings/View	GPS Settings	GPS Settings
Map element and tap setting	Signal Source	Signal Source
Set Basemap	Internal GPS	Internal GPS
GPS Settings	Paired Device	Paired Device
Dimension setting (Measure Function)	none	none
View location information	BTGPS Module	BTGPS Module
View project information	General Device	General Device
Plugin Settings	Serial Port	Serial Port
Set SuperGIS Server	Baud Rate	Baud Rate
OGC service	4800	4800
	NTRIP	NTRIP

Dimension Setting(Measure Function)

Dimension Setting(Measure Function)

Set to display the measurement result in metric units or imperial units.

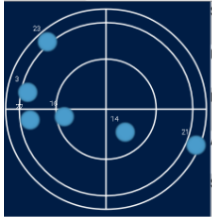


View Location Information

View Location Information

You can view the information related to the current location, including General, Details, and Satellite.

Detailed Function Description

General		Detail		NMEA		General		Detail		NMEA	
Positione2017-02-14 16:23:46				Location source				278,*62			
d				NETWORK				\$GPGGA,0.0,*,*66			
				Date and time				2017-02-14 16:23:55			
Satellites				Longitude				\$GNGNS,NN,*,*53			
17				121.572632				\$GPRMC,T,M,N,K,N*2C			
Longitude				Latitude				\$GPRMC,V,*,*53			
121.572632				25.079728				\$GPGSA,A,1,*,*1E			
Latitude				Altitude(m)				\$GNGSAA,1,*,*00			
25.079728				N/A				\$GPGSV,			
Altitude(m)				Speed(km/h)				3,1,11,03,18,279,,14,61,143,,16,53,264,,21,03,			
N/A				N/A				111,*79			
Speed(km/h)				Direction				\$GPGSV,			
N/A				PDOP				3,2,11,22,20,261,,23,12,319,,26,65,329,,27,23,			
N/A				HDOP				188,*7C			
N/A				VDOP				\$GPGSV,			
N/A								3,3,11,29,21,046,,31,48,039,,32,33,147,*44			
PRN Azimuth System Elevation SNR								\$GPGSV,			
03 282 GPS 18								2,1,08,74,37,340,,75,14,288,,65,14,323,,84,33,			
14 140 GPS 63								115,*66			
16 260 GPS 52								\$GPGSV,			
21 112 GPS 03								2,2,08,83,22,053,,85,11,165,,71,35,205,,72,46,			
22 262 GPS 21											
23 319 GPS 10											
25 GPS											
26 323 GPS 66											

Start

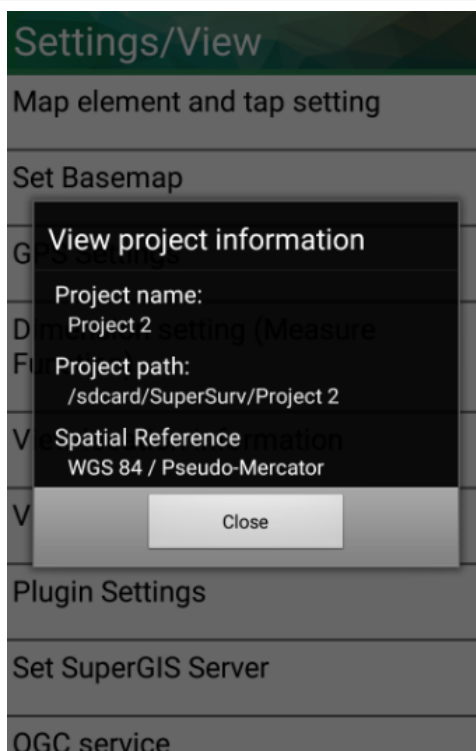
Clear

Save

View Project Information

View Project Information

Provide the information related to project name, path, spatial reference, etc.



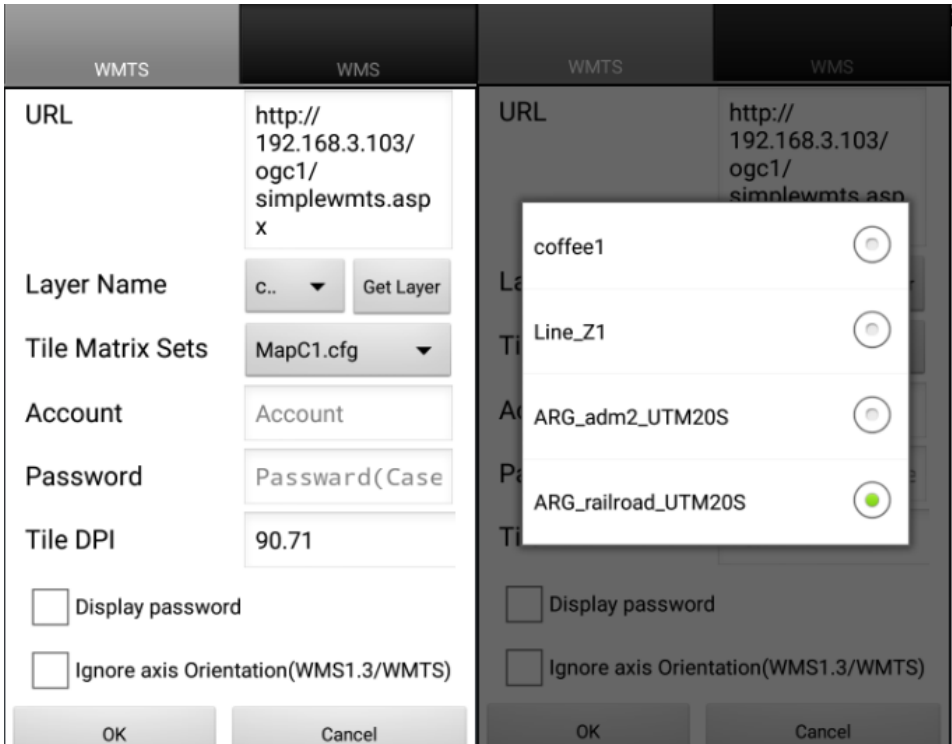
OGC Service

OGC Services

Setting WMTS Server

Input the WMTS service address in URL, tap Get Layer(s), when the layer name shows in Layer, tap the downward arrow to show layer menu and select the layer you want to add to SuperSurv. If account and password are required to access the service, please enter both of them; if not, just ignore them.

Detailed Function Description



If you want to access TIANDITU, we suggest you to modify Tile DPI and set it between 95 and 96. As to the other WMTS services, please maintain the default value as 90.71. To modify the Tile DPI, please uncheck Modify Tile DPI first and change the value. As the value is changed, check Modify Tile DPI to finish it. Tap OK and save settings.

WMTS	WMS
URL	<input type="text" value="http://t0.tianditu.com/vec_c/wmts"/>
Layer Name	<input type="text" value="v.."/> <input type="button" value="Get Layer"/>
Tile Matrix Sets	<input type="text" value="c"/>
Account	<input type="text" value="Account"/>
Password	<input type="text" value="Password(Case"/>
Tile DPI	<input type="text" value="95"/>
<input type="checkbox"/> Display password	
<input type="checkbox"/> Ignore axis Orientation(WMS1.3/WMTS)	
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	

Return to the map and you can see WMTS service displays on the map.

WMTS	WMS
URL <input type="text" value="http://192.168.3.103/ogc1/simplewms.as"/>	
Account <input type="text" value="User Account"/>	
Password <input type="text" value="User Password"/>	
<input type="button" value="Select Layer"/>	
<input type="button" value="Select SRS/CRS"/>	
<input type="button" value="Select Image Format"/>	
<input type="checkbox"/> Display password	
<input type="button" value="OK"/>	<input type="button" value="Cancel"/>

2. Tap select a layer and wait for WMS list. And then select a layer from the list.

Detailed Function Description

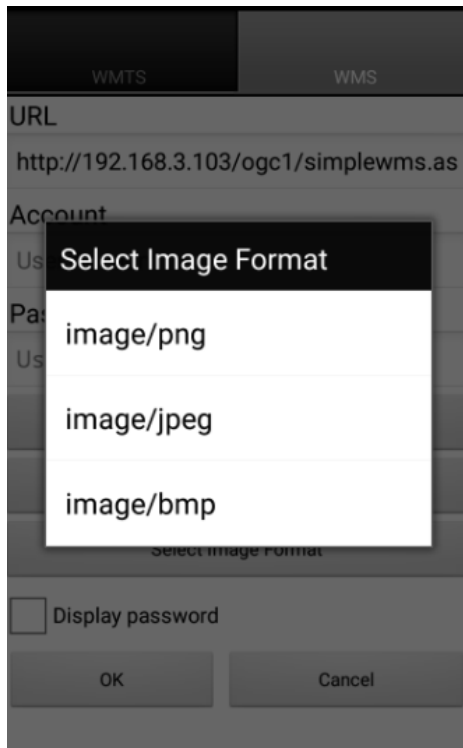
<div><div>WMTS</div><div>WMS</div></div>	MapC1
<div>URL</div> <div>http://192.168.3.103/ogc1/simplewms.as</div>	ARG_adm2_UTM20S
<div>Account</div> <div>User Account</div>	Line_Z1
<div>Password</div> <div>User Password</div>	ARG_railroad_UTM20S
<div>Select Layer</div>	coffee1
<div>Select SRS/CRS</div>	
<div>Select Image Format</div>	
<div><input type="checkbox"/> Display password</div>	
<div>OK</div> <div>Cancel</div>	

3. Choose SRS/CRS (projection system). Projection systems are defined by the service provider. Therefore, you may find different projection systems in each service.

WMTS	WMS
URL	CRS:84
<input type="text" value="http://192.168.3.103/ogc1/simplewms.as"/>	EPSG:32720
Account	EPSG:4326
<input type="text" value="User Account"/>	
Password	
<input type="text" value="User Password"/>	
<input type="button" value="Select Layer"/>	
<input type="button" value="Select SRS/CRS"/>	
<input type="button" value="Select Image Format"/>	
<input type="checkbox"/> Display password	
<input type="button" value="OK"/>	<input type="button" value="Cancel"/>


4. Select Image format. The image format is also defined by the service provider. Usually, service providers would apply image in PNG/GIF format to display services with transparent effect. In other words, if you choose PNG as image format, you can view other layers which under your current WMS layer. And services without transparent effect offer BMP/JPEG.

Detailed Function Description



5. After setting, tap Back key. The message "Do you want to save?" appears. Tap Yes.



6. Tap the full-extent  button, and then you can view the WMS in SuperSurv.




Note :

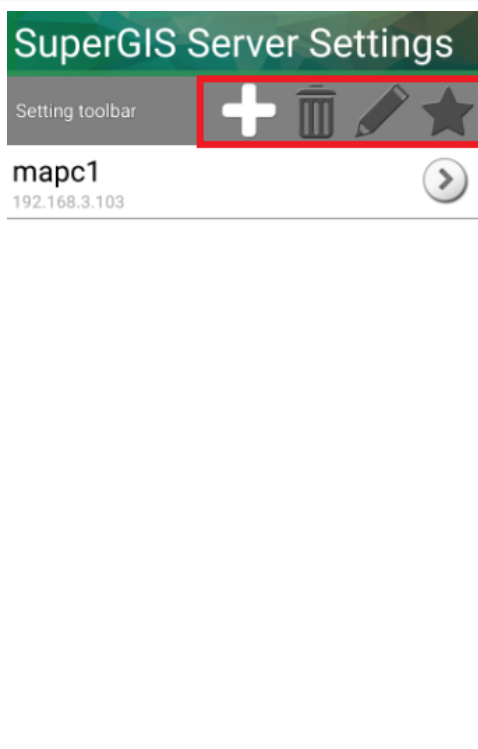
1. Before using the WMS connection, please make sure that the coordinate system setting of your SuperSurv project is matched with the target WMS service.
2. The drawing of WMS is impacted by status of internet connection and configuration of service provider.

SuperGIS Server Settings

SuperGIS Server Settings

You can download SuperGIS Server map service to use in SuperSurv as long as you finish the SuperGIS Server settings and successfully connect to it. In SuperGIS Server

Settings page one connection file is provided by default. Or you can tap  to add a new connection file.



Then select a connection file and operate with the tools above.



: Delete the selected connection file.



: Edit the selected connection file, input data and click OK.

Detailed Function Description

Connect to SuperGIS

Name	mapc1
Server	192.168.3.103
Port	80
Service	/SGSPWS/SGSPAgent.ashx

Account	a
Password	•

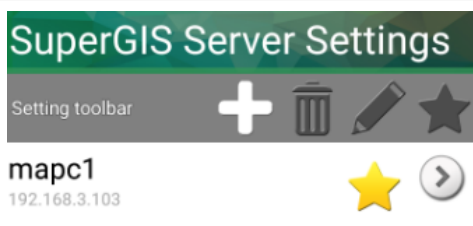
☐ Display password

☒ Remember account information


OK

Cancel

★: Set as the default connection file. More than one connection file can be created, but the connection file you want to connect must be set as default so that the SuperSurv can successfully connect to the right server. Select a connection file, tap ★ and you can see the screen shown as picture below. At the time, the selected server is the default one.



mapc1 is the default server now

In the next, tap  and a default service list shows up. Select the map service to download to SuperSurv and tap OK.

Back to the map, the map service is added to the map.

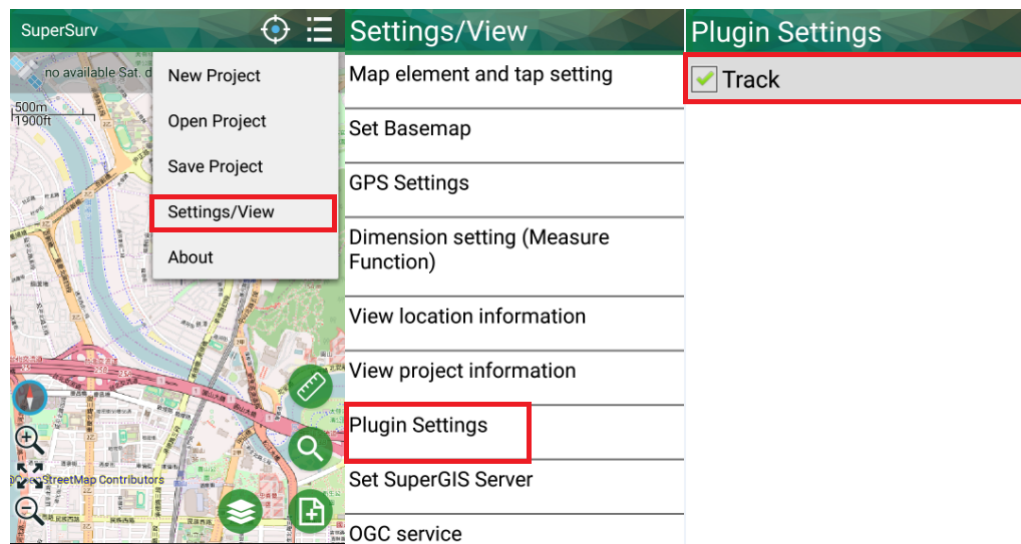
Plugin Settings

Plugin Settings

Since SuperSurv 10, some functions or tool will become plug-in tool. To activate certain plug-in tool, please refer the steps below:

1. Tap Menu > Settings/View > Select Plugin Settings > Select the tool you need

Detailed Function Description



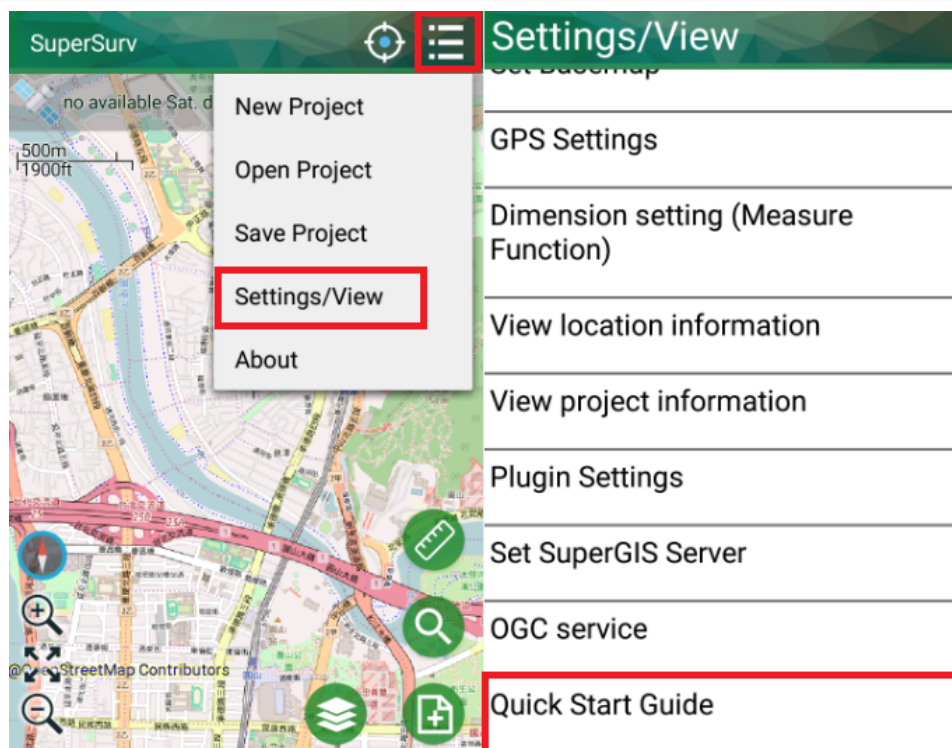
2. Back to main screen and tap plugin button as you need to use it



Quick Start Guide

Quick Start Guide

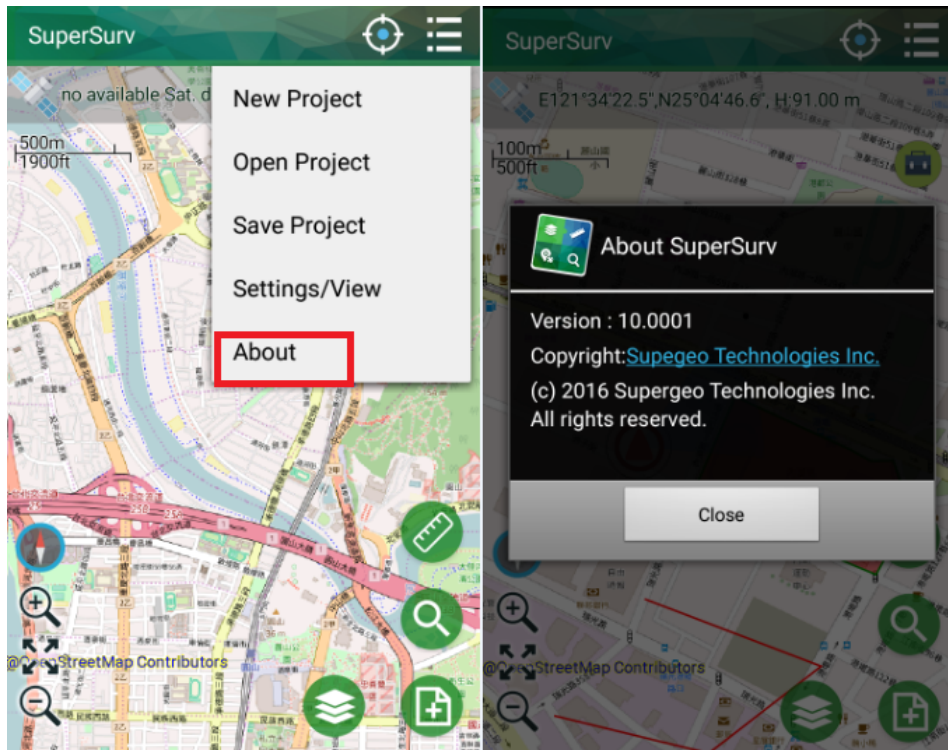
For helping user to make the best use of SuperSurv, Quick Start Guide had been built up and offer various information about SuperSurv and field survey. User can decide whether the Quick Start Guide to be shown or not while open up the project. Moreover, user are also allow to turn on the Quick Start Guide in the setting page anytime during usage.



About

About

Tap Settings > About to view the version and copyright of the system.




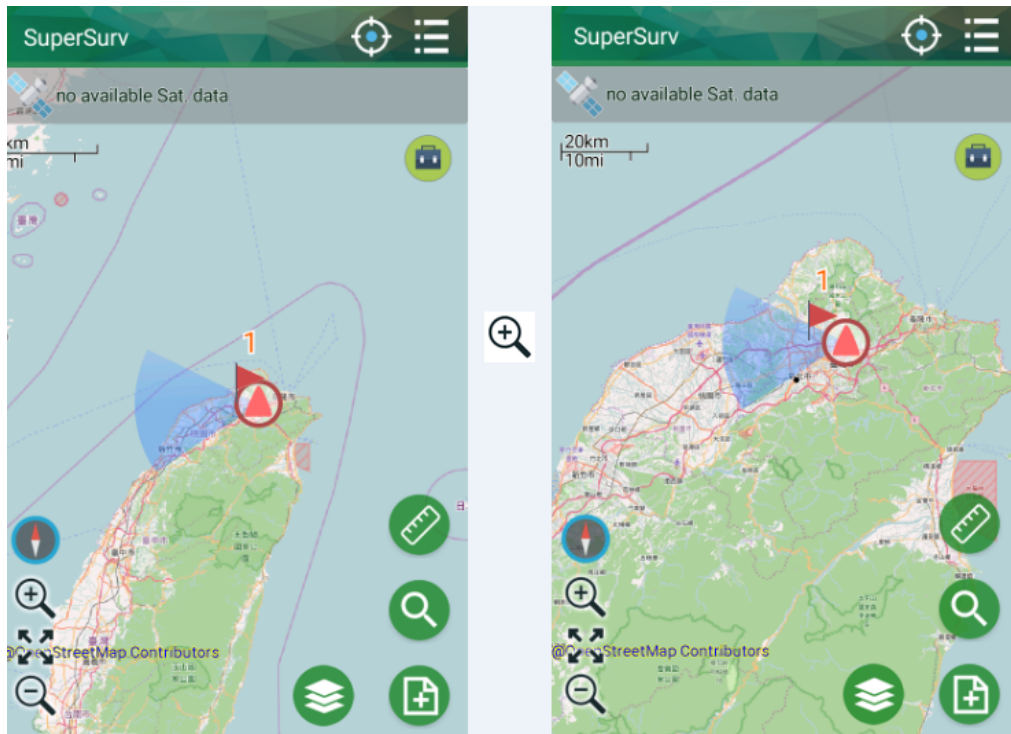
3.4 Map Toolbar

Zoom In

Zoom In

“Zoom In” enables users to zoom in the map by one level based on the map center.


1. Tapping “Zoom in ” will zoom in the map by one level. You can also zoom in the map by the thumb and index finger or by double-tapping on the map.



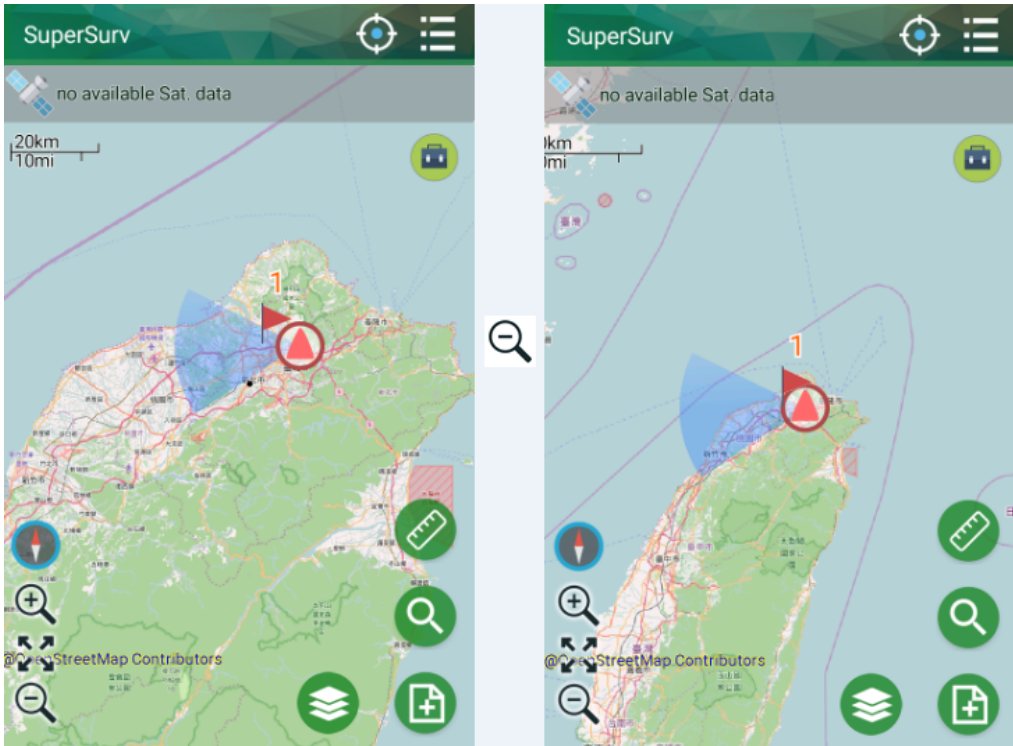
Zoom Out

Zoom Out

“Zoom Out” enables users to zoom out the map by one level based on the map center.

1. Tapping “Zoom out”  will zoom out the map by one level. You can also zoom out the map by the thumb and index finger.


Detailed Function Description

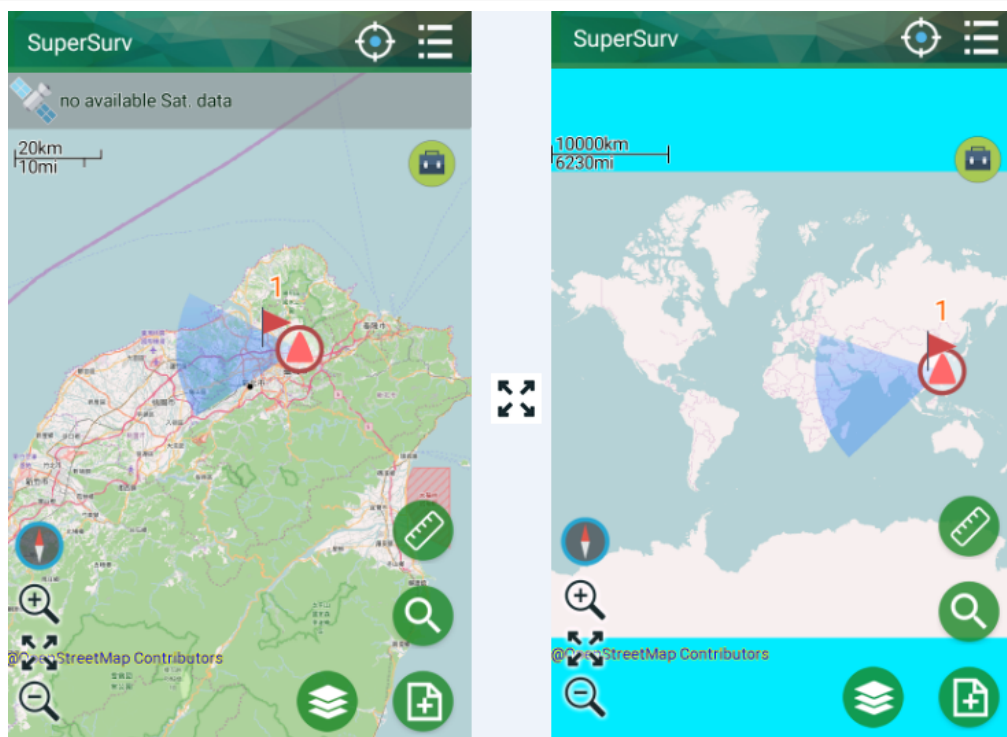


Full Extent

Full Extent

”Full Extent” will zoom the map to full extent.

1. Tap “Full Extent ” to zoom the map to full extent.



3.5 Survey

Create Layer

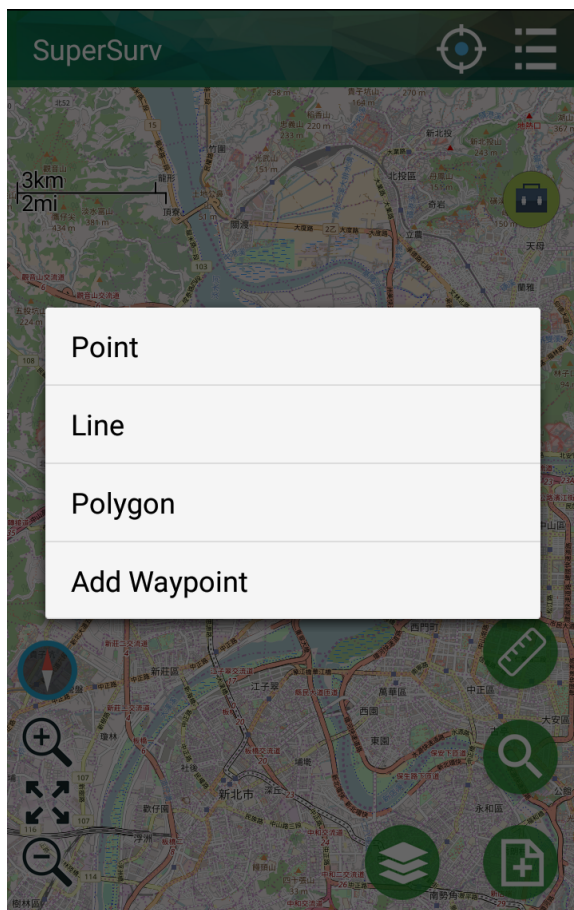
Create Layer

If you have no available layers, please create a new layer. Tap

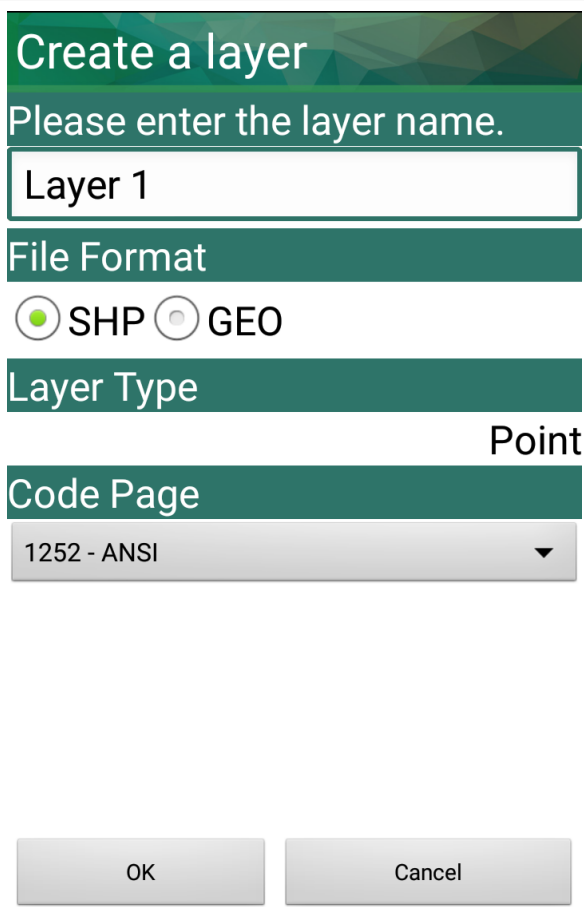


and choose a layer you want.

Detailed Function Description



In the setting page, please enter the layer file name, layer name, select code page, layer type (point, line, polygon) and choose the file format (SHP or GEO). After setting is finished, tap OK.



Create a layer

Please enter the layer name.

Layer 1

File Format

☒ SHP ☐ GEO

Layer Type

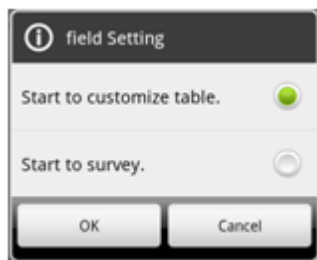
Point

Code Page

1252 - ANSI

OK Cancel

Field setting dialog appears, choose Start to Customize Table, and tap OK.



field Setting

Start to customize table. ☒

Start to survey. ☐

OK Cancel

In “Create a New Layer”, set the field name and field properties. You can tap a field to set the field format in Field Setting.

Detailed Function Description

Field name

Field property

+

ID	Integer	>
NAME	String / Length: 20	>
MEMO	String / Length: 50	>
PHOTO	Photo	>
DATE	YYYY/MM/DD	>
TIME	24 HR	>
X	LocationXValue	>
Y	LocationYValue	>
Z	LocationZValue	>

OK

Cancel

Field name:

DATE

Note:

Date

☒ YYYY/MM/DD


☐ MM/DD/YYYY

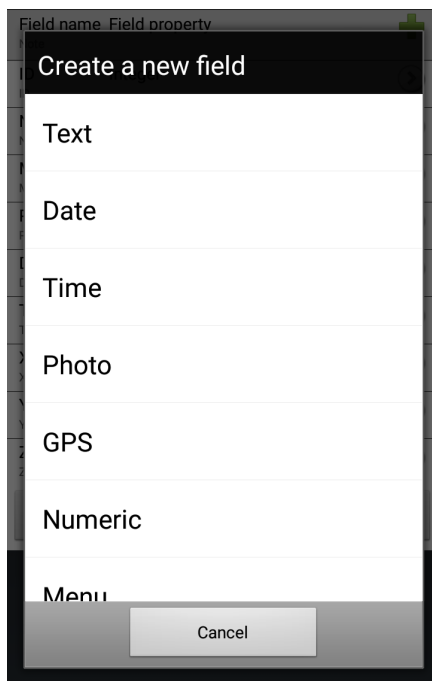
☐ MM/DD

☐ DD/MM/YYYY

OK

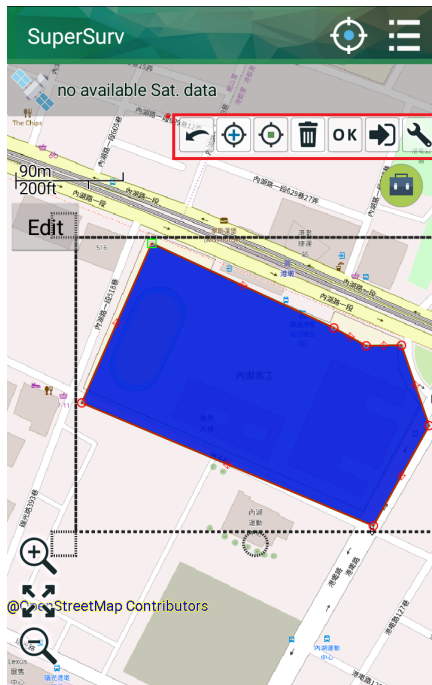
Cancel

To create a new field, please tap , “Create a new field” appears. Please select a field type and set the format. About the details of the field type and format, please refer to [Custom Table](#).

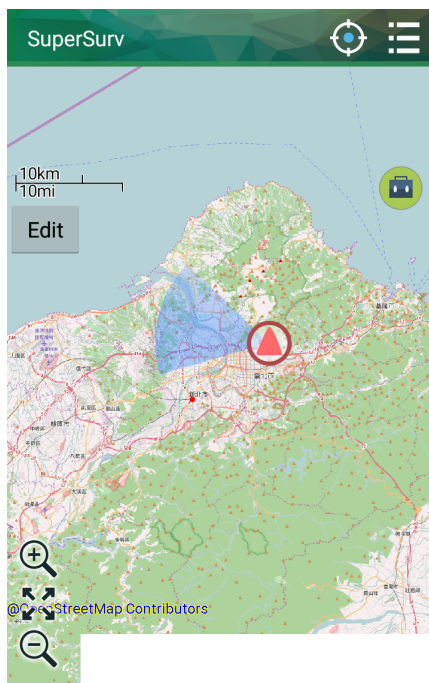


After the setting is finished, please tap OK and back to the map. Survey toolbar shows up on the top of the map.

Detailed Function Description





Then, there are two modes. One is add **Add**. The other one is edit **Edit**. When it is add mode, you can choose type of layer, and create features.




After a feature is created, if you would like to enter attribute data, you can long-press the feature you created in edit mode. Then the attributes page will show up.

You can edit the attribute data in Enter Attributes page.

Detailed Function Description

ID:	<input type="text" value="p"/>
Name:	<input type="text"/>
Memo:	<input type="text"/>
Photo:	<div>Choose a photo or take a photo.</div>
Date:	2017/02/13 
Time:	11:28:47 
X:	<input type="text" value="13,520,866.2300312"/>
Y:	<input type="text" value="2,875,961.32396534"/>
Z:	<input type="text" value="0"/>
<div><input type="button" value="OK"/> <input type="button" value="Cancel"/></div>	

Also, you can edit the attributes right after a feature is created. Please tap Survey

Setting , and set "Input attributes after creating a feature" as On and tap OK. Back to the map, you can see Enter Attributes page right after a feature is created.

Survey toolbar setting

Input attributes after creating a feature.

On

Outline color when editing feature

Snap to vertex when editing feature

Off 100 pixels

Add a vertex by GPS average

☒ Time 0 sec

☐ Position :Point 0

Vertex 0

Continuous GPS Position

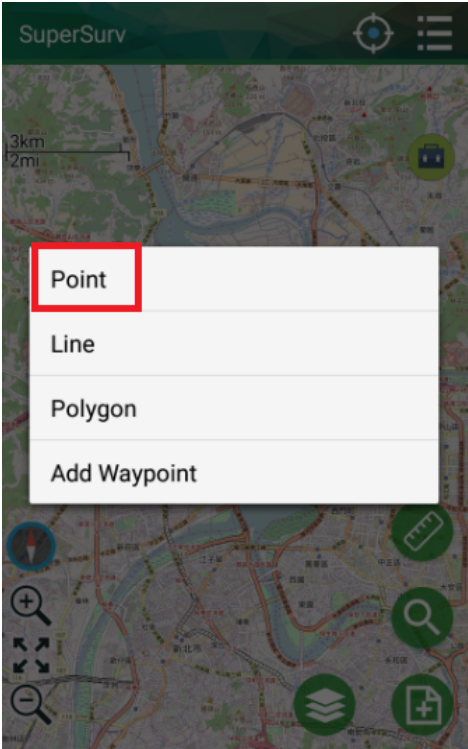
☒ Time interval 1 sec, Distance 0.1

Point Feature



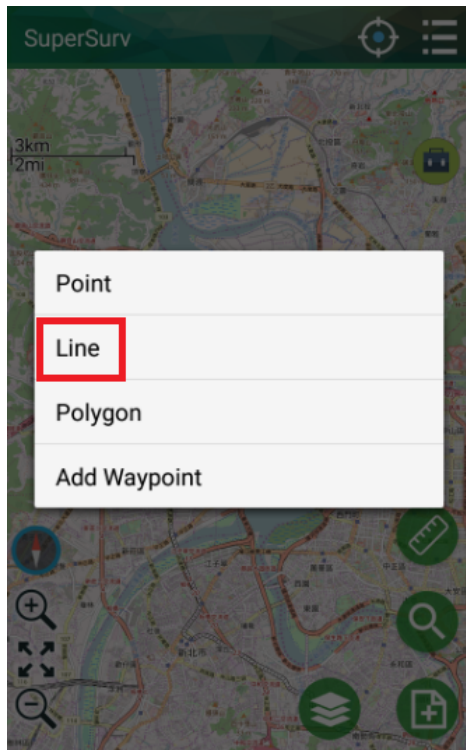
Tab

Detailed Function Description



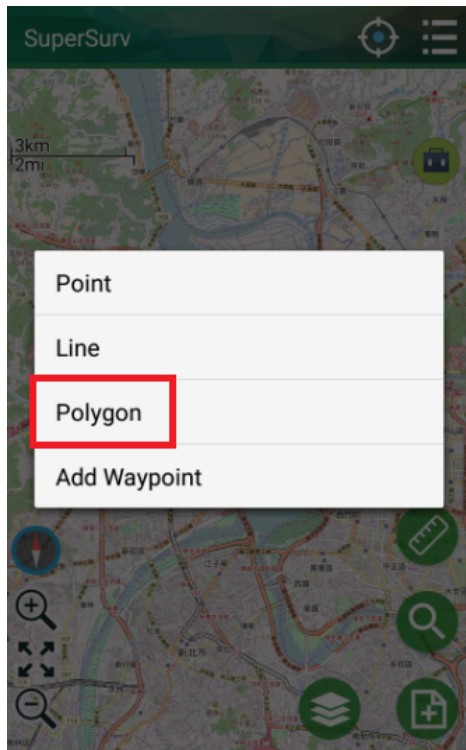
Add Line Feature





Add Polygon Feature

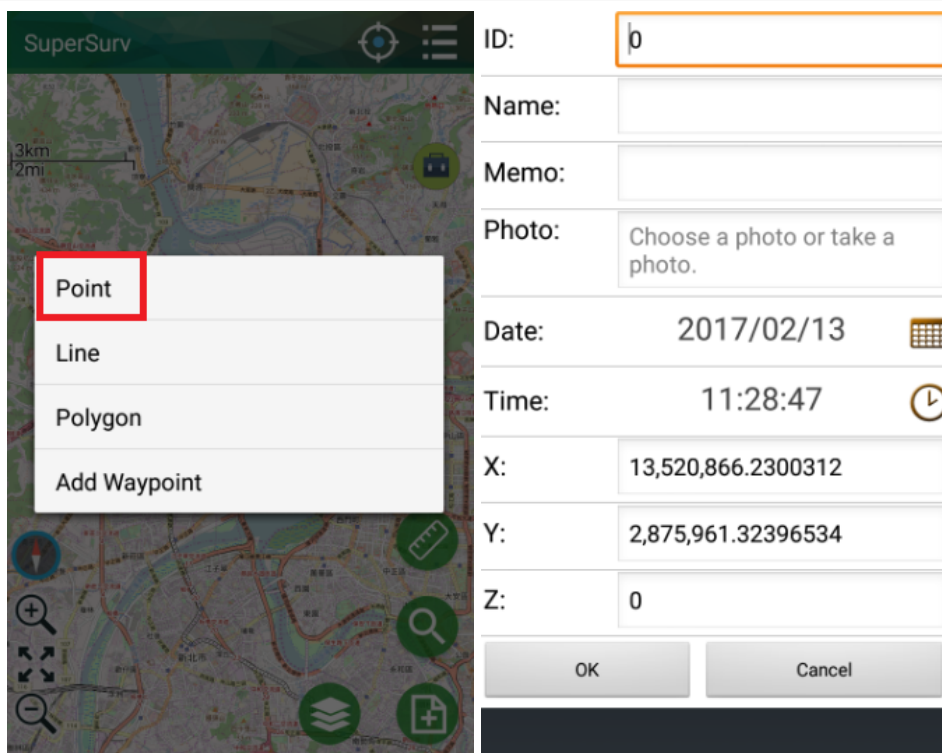
Tap at the locations where you want to add vertices for the polygon feature. A polygon must be created by three vertices at least, and system will auto-connect the vertices in a line. The line will connect the last and first vertex, making it into a polygon.



Add Point Feature

Add Point Feature

1. Directly tap at the location where you want to add a point feature, and the point feature is created.




The screenshot displays the SuperSurv 10 mobile application interface. On the left, a map view shows a red box highlighting the 'Point' option in a menu. On the right, a form for adding a point is displayed with the following fields and values:

Field	Value
ID:	0
Name:	
Memo:	
Photo:	Choose a photo or take a photo.
Date:	2017/02/13
Time:	11:28:47
X:	13,520,866.2300312
Y:	2,875,961.32396534
Z:	0

At the bottom of the form are 'OK' and 'Cancel' buttons.

Add Line Feature

Add Line Feature

1. Tap at the locations where you want to add vertices for the line feature, and system will auto-connect the vertices in a line. To finish the editing, please tap .

Detailed Function Description

SuperSurv

3km
2mi

Point

Line

Polygon

Add Waypoint

ID:

b

Name:

Memo:

Photo:

Choose a photo or take a photo.

Date:

2017/02/13

Time:

11:28:47

X:

13,520,866.2300312

Y:

2,875,961.32396534

Z:

0

OK

Cancel

Add Polygon Feature

Add Polygon Feature

1. Tap at the locations where you want to add vertices for the polygon feature. A polygon must be created by three vertices at least, and system will auto-connect the vertices in a line. The line will connect the last and first vertex, making it into a polygon. To finish the editing, please tap

OK

.

SuperSurv

3km

2mi

Point

Line

Polygon

Add Waypoint

ID:

b

Name:

Memo:

Photo:

Choose a photo or take a photo.

Date:

2017/02/13

Time:

11:28:47

X:

13,520,866.2300312

Y:

2,875,961.32396534

Z:

0

OK

Cancel

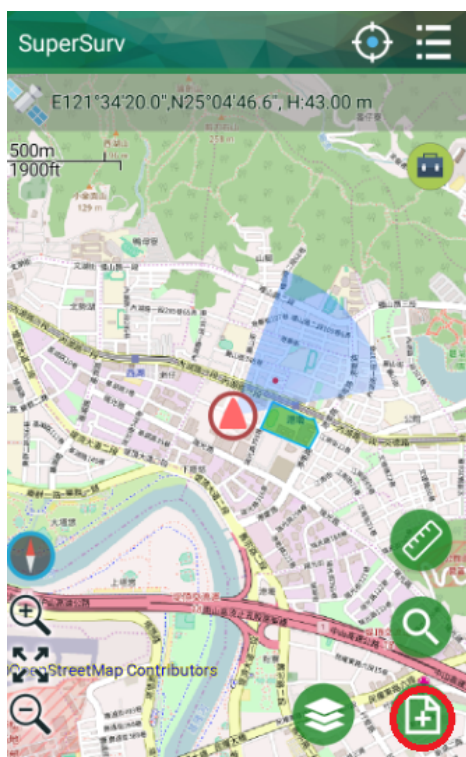
Custom Table

Custom Table

A custom table used to enter attribute values is a quick menu that is particularly designed according to the features of the attribute to enable users to quickly enter attribute values. For instance, there is a layer whose contents of attribute table should be input in date format, in that case, the field format can be set as YYYY/MM/DD with custom table. While users are editing the field, they can select a date by tapping instead of typing each word. We will introduce each field type in this section. Each field type has Field Name and Note. Field Name must be English or number, which is the name recorded in the file; Note is the name displayed on the interface for users to identify and input data, which can be any language or simple description to help users easily know what the field records. They both are field names, the difference stands in one is the name recorded in the file, while the other is used to be displayed for users to read.

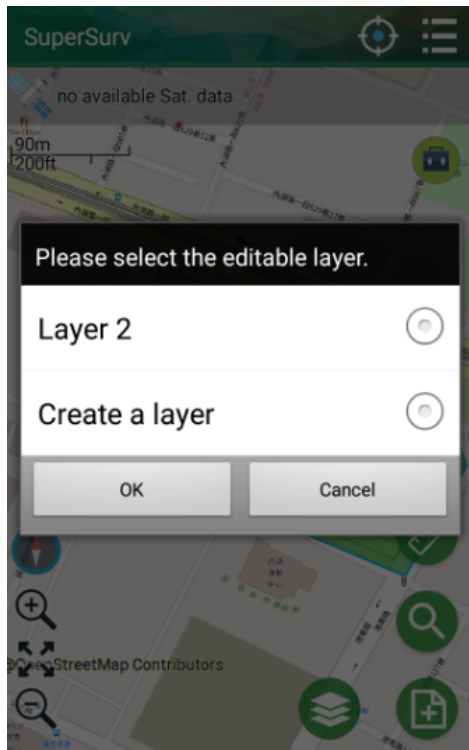
Detailed Function Description


To edit custom table, you need to specify the layer you want to edit. Tap



In Please Select Editable page, the layer list appears. Please select the layer to customize attribute table.

Please note that you can customize the attribute table only when no feature and no attribute data has been created in the layer.



1. If you select “Start to customize table” in the beginning of creating layer, you can follow the below steps to continue, because it works in the same way as “Custom Table.” The “Create a new layer” page appears with multiple default fields. First column is field name and the second column is field property.
2. To add field, please tap , and a list of all field types appears.

Detailed Function Description

Field name	Field property
Note	
ID	Integer
NAME	String / Length: 20
MEMO	String / Length: 50
PHOTO	Photo
DATE	YYYY/MM/DD
TIME	24 HR
AREA	Area(m ²)

OK Cancel

Create a new field

Text

Date

Time

Photo

Area

Numeric

Menu

Cancel

3. Select a field type, the field setting page appears. Enter the field name and field note and set up the property. Now we will introduce the property and effect of all types of field.

Text: It is string, and should be input attribute value manually. Please set the length of the field, the unit is bit.

Field name:

NAME

Note:

Name

Length:

18
19
20
21
22

OK Cancel

When you use “Edit Attribute”, you will enter the “Enter Attributes” page. To this type of field, you need to enter the attribute value manually.

Date: The system will show the date automatically, or you can change it by tapping. Four types of data format are available YYYY/MM/DD, MM/DD/YYYY, MM/DD and DD/MM/YYYY.

When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, the system will automatically show the date. To change the date, you can directly tap the icon and set.

Detailed Function Description



The screenshot shows a mobile application interface with a form. The form has fields for ID, Name, Memo, Photo, Date, Time, and Address. A date picker overlay is visible, showing the date Feb 15, 2017. The date picker has three columns for month, day, and year, with plus and minus buttons for navigation. Below the date picker are OK and Cancel buttons. The background form is dimmed.

ID:	0
Name:	
Memo:	
Photo:	Choose a photo or take a
Date:	Feb 15 2017
Time:	
Address:	

Time: The system will automatically show the time or you can change by tapping. The time format includes 12 HR and 24 HR.

When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, the system will show the time automatically. To change time, please tap the icon and set.

The screenshot shows a mobile application interface for entering attributes. The background is a dimmed form with fields for ID, Name, Memo, Photo, Date, Time, and A. The 'Photo' field is active, displaying the text 'Choose a photo or take a'. Overlaid on this is a date and time picker. The date is set to 11/42/19, with '+' and '-' buttons above and below each number. The time is set to --:--:-- with '-' buttons below each pair of dashes. At the bottom of the picker are 'OK' and 'Cancel' buttons. The background form also has 'OK' and 'Cancel' buttons at the bottom.

Photo: The attribute value is a path of photo. You can select a photo file or take a photo with the camera device of mobile device, and the path of the selected file or of the photo you just taken will be shown in the field. The photo you take in SuperSurv will have GSP data and will be saved in the PHOTO folder of project folder.

When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, you can choose a photo or take a photo. Tap the field and a dialog shows up, you can select choose a photo or camera.

Detailed Function Description

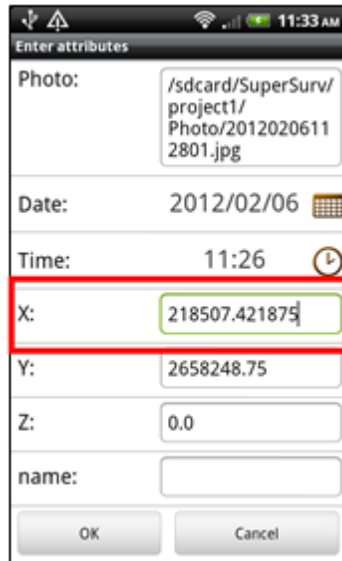


Tap “Choose a photo”, specify a photo file and the path of the photo file will be input automatically.

Choose “Camera”, it enters camera mode. After you take a photo, the path of the photo file will be automatically shown in the field. The coordinate values will be saved to the file and photo file will be saved to the project folder.

GPS: The system will automatically record the GPS coordinates of the position of the feature or you can change manually. You need to specify the XYZ value. Please note that this type is available for point layer only

When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, the specified coordinate value will be recorded as the attribute value.



Enter attributes

Photo: /sdcard/SuperSurv/project1/Photo/20120206112801.jpg

Date: 2012/02/06

Time: 11:26

X: 218507.421875

Y: 2658248.75

Z: 0.0

name:

OK Cancel

Length:the system will calculate and record the length of the line feature as the attribute value or you can change manually. Please note that this type is available for line layer only.



Field setting

Field name: LENGTH

Note: Length(m)

OK Cancel

When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, the length will be recorded as the attribute value, the unit is meter.

Detailed Function Description

Enter attributes

ID: p

Name:

Memo:

Photo: Choose a photo or take a photo.

Date: 2012/02/06

Time: 11:35

Length(m): 128.079

OK Cancel

Area: The system will calculate and record the area of the polygon feature as the attribute value, or you can change manually. Please note that, this type is available for polygon layer only.

Field setting

Field name: AREA

Note: Area(m²)

OK Cancel

When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of

field, the area of the feature will be recorded as the attribute value, the unit is square meter.

The screenshot shows a mobile application interface titled "Enter attributes". It features several input fields: "ID:" with the value "0", "Name:" (empty), "Memo:" (empty), "Photo:" with a button "Choose a photo or take a photo.", "Date:" with the value "2012/02/06" and a calendar icon, "Time:" with the value "11:37" and a clock icon, and "Area(m²):" with the value "5877.109". The "Area(m²):" field is highlighted with a red rectangle. At the bottom are "OK" and "Cancel" buttons.

Numeric: The attribute value should be an integer and input manually.


When you use "Edit Attribute", you will enter the "Enter attributes" page. To this type of field, you need to input an integer as the attribute value.

Detailed Function Description

The screenshot shows a mobile application interface titled "Enter attributes". It features several input fields: "ID:" with the value "2341" (highlighted by a red box), "Name:", "Memo:", "Photo:" with a prompt "Choose a photo or take a photo.", "Date:" with the value "2012/02/06", "Time:" with the value "11:40", "X:" with the value "218492.390625", and "Y:" with the value "2658380.0". At the bottom are "OK" and "Cancel" buttons.

Menu: When you are entering the attribute value, the field will provide with a menu or automatically filter the text that is entered and display the suitable one for users to choose.

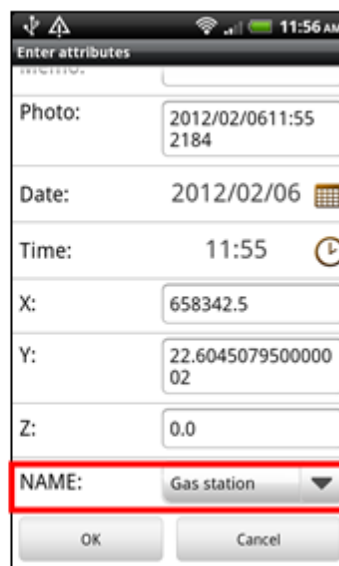
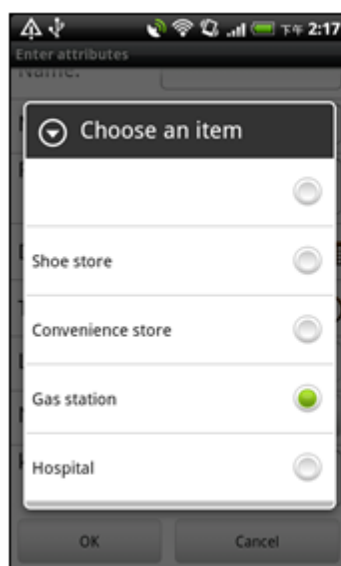
The screenshot shows a mobile application interface titled "Field setting". It features several input fields: "Field name:" with the value "NAME", "Note:" with the value "NAME", and "Item list:" which is highlighted by a red box and shows a list of items: "Shoe store", "Convenience store", "Gas station", and "Hospital". A green plus sign is visible next to the "Item list:" field. At the bottom are "OK" and "Cancel" buttons.

Tapping  can add the menu item, and the window of figure below will appear for you

to enter the name of menu item.

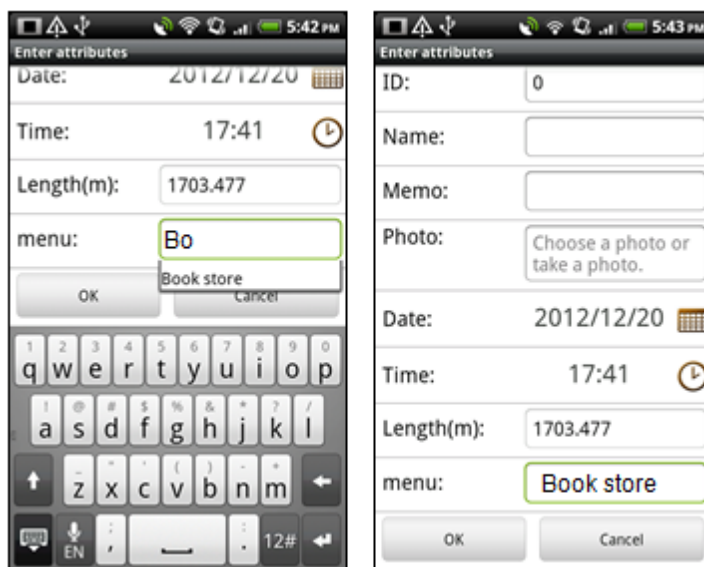


If you choose Menu, when you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, you can tap the drop-down menu and choose one item as the attribute value.



Detailed Function Description

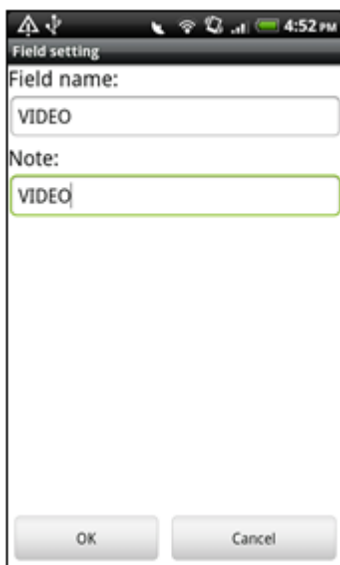
If you choose AutoComplete, when you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of field, you need to enter the attribute value manually, and system will auto-filter and present the suitable one for you to choose. Then, you can just tap the one that matches.



In addition, when you are editing the field, in the “Create a new layer” page, you can long-press a field and a menu appears. With the menu, you can tap “Delete” to delete the field; tap “UP” and “Down” to change the order.



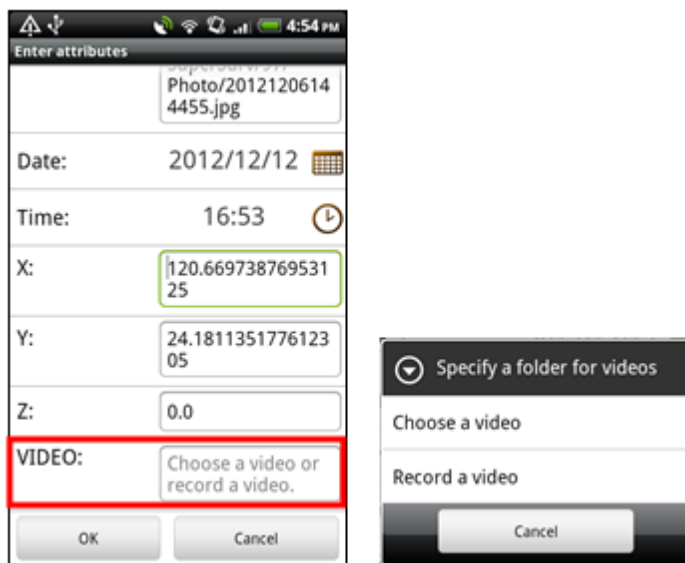
Video: The attribute value is a video file path. Users can select a video file or record a video with the device's built-in recording function. As the file is specified or video has been recorded, the video file path will be presented as the attribute value. The file format supports what the device supports.



When you use “Edit Attribute”, you will enter the “Enter attributes” page. To this type of

Detailed Function Description

field, it shows “Choose a video or record a video”, tap it and a dialog shows up with two options: choose a video or record a video.




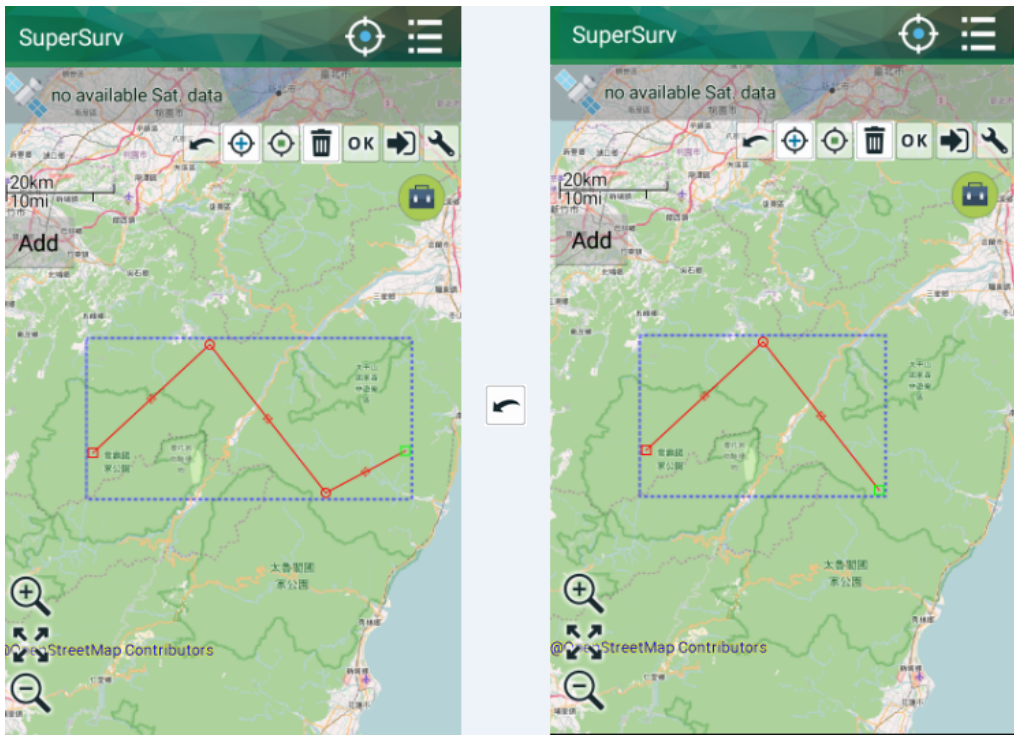
If you want to choose a video, please specify a video and the file path will be presented in the field. If you choose record a video, the device will switch to video mode, when the video is finished, the file path for the video will be presented in the field.



Undo/Redo


Undo/Redo

1. In edit mode, you can undo by tapping  .



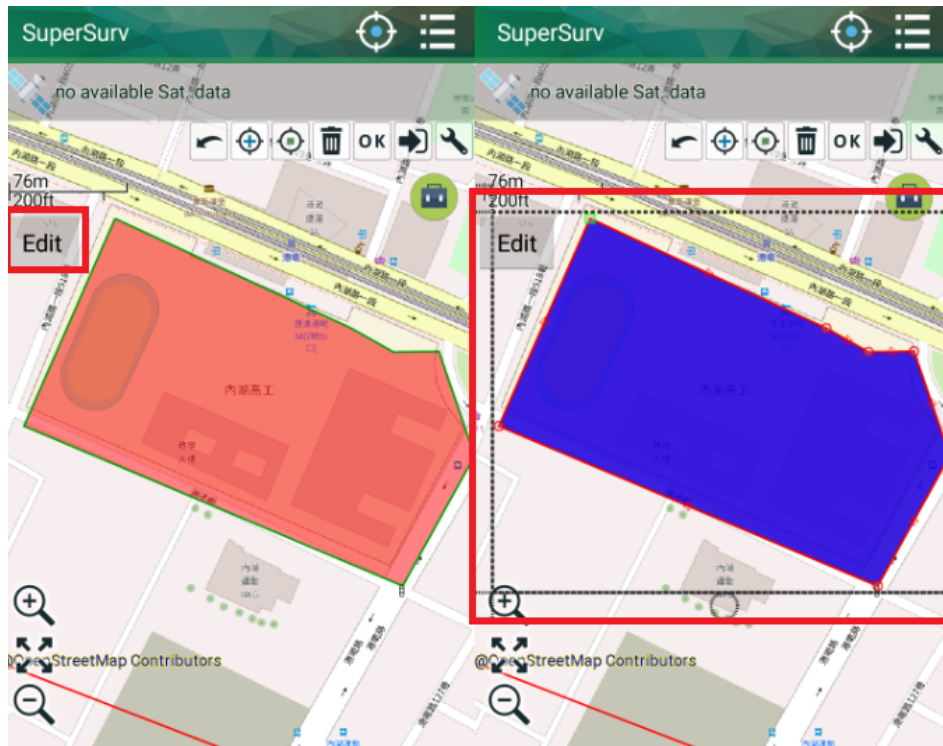
Select Feature

Select Feature

1. If there is a existing feature, go to add feature and tab  swift to edit mode. Then you can edit existing feature mode.


Detailed Function Description

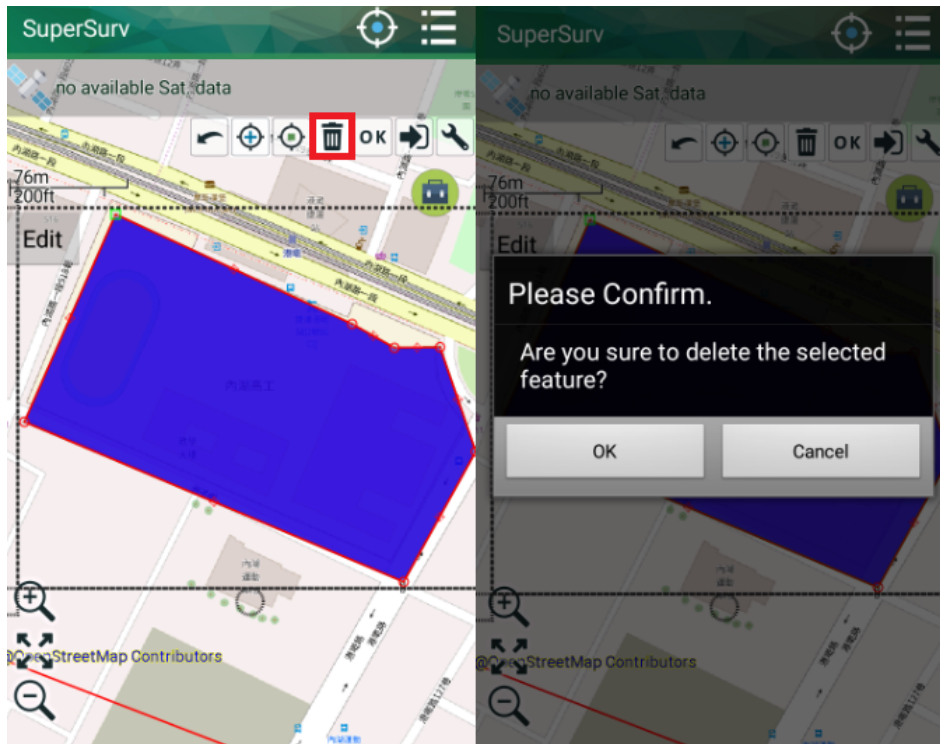
2. Then you can delete, move, edit attribute a specified feature.



Delete Feature

Delete Feature

1. After a feature is selected, tap . Then a confirming dialog shows up. Please tap OK and delete the selected feature.




Edit Attribute

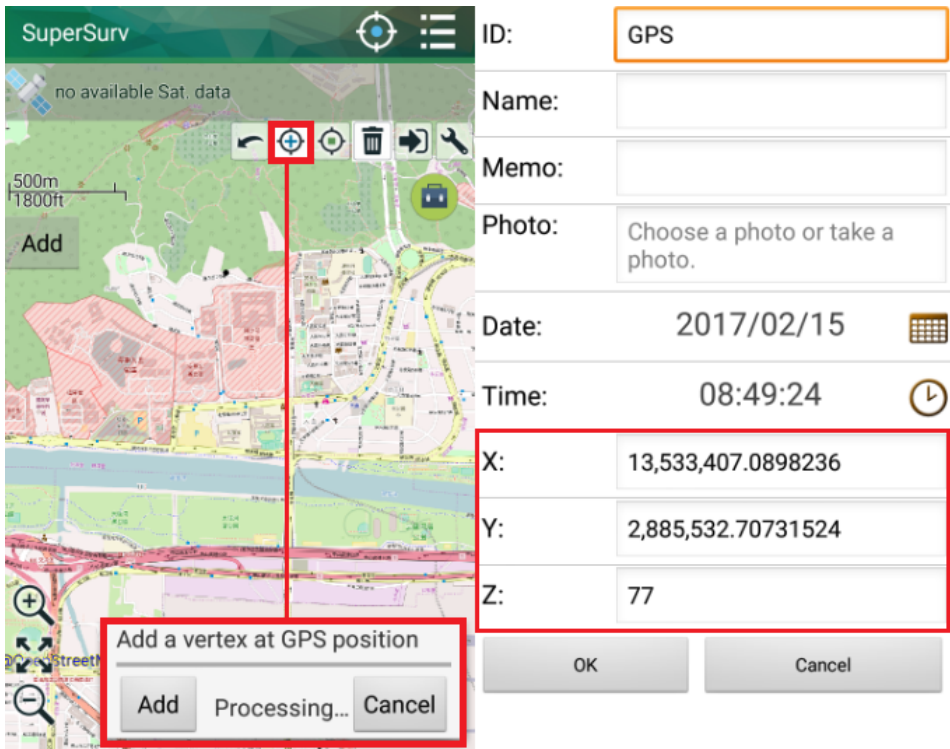
Edit Attribute

1. Select a feature > long-press the selected feature > attributes edit page appears. Please enter the attribute data. When you create the layer, you will need to enter the attribute value manually. Some attribute values will be given automatically when creating the feature, such as date, time, XYZ coordinate values (for point layer), length (for line layer), area (for polygon layer), but you can change them manually.

Add A Vertex at GPS Position

Add A Vertex at GPS Position

To add point features or vertices of line or of polygon features, you can tap  to add a vertex at GPS position.
A vertex is added at the GPS location. Tap, and the feature is successfully created.




Collect Data with GPS Automatically

Collect Data with GPS Automatically


1. Before using this function, please make sure GPS works correctly. You can continuously add points at GPS positions through the GPS data, which allows you to

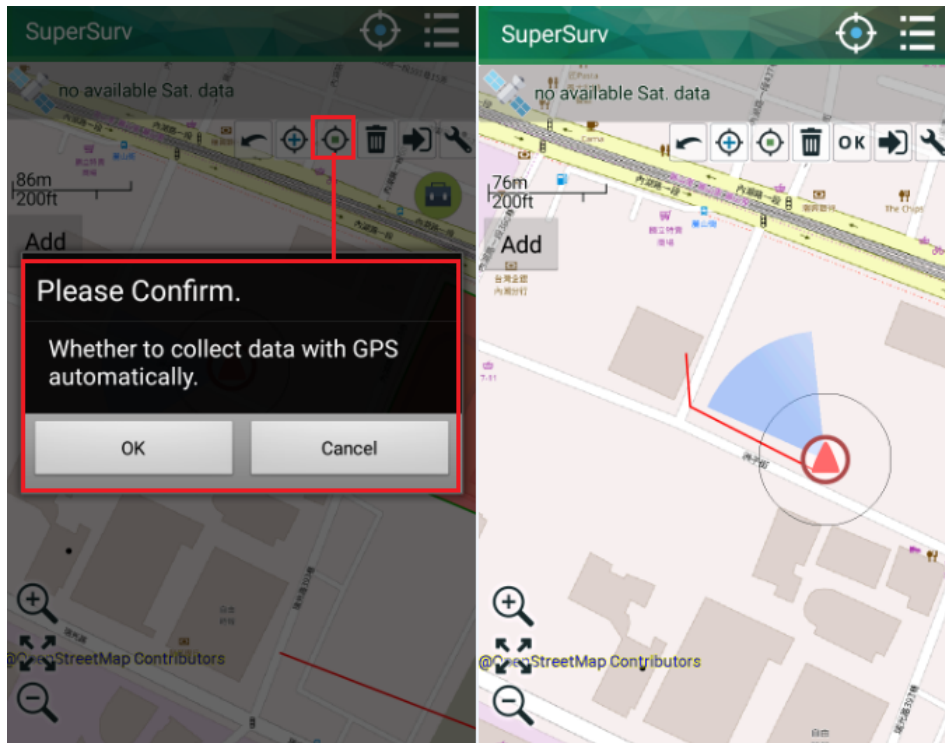
Detailed Function Description

add line or polygon features. Firstly, add a line or polygon feature, here we illustrate

with a line feature. Add the first vertex of the line feature, tap  > A message shows up: "Whether to collect data with GPS automatically" > Please tap OK.


2. When you are moving, the vertices will be added to the map based on the GPS data.

To stop collecting GPS data, tap  to finish the editing. Tap OK , and you will see the new feature on the map.



Set Survey Toolbar

Set Survey Toolbar

Tap , the survey toolbar setting page appears. Five items:

Survey toolbar setting

Input attributes after creating a feature.

On

Outline color when editing feature



Snap to vertex when editing feature

Off

100 pixels

Add a vertex by GPS average

☒ Time 0 sec

☐ Position :Point 0

Vertex 0

Continuous GPS Position

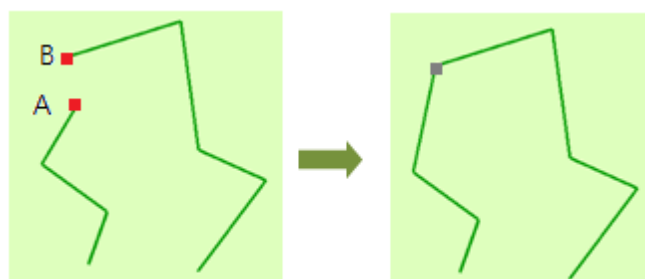
☒ Time interval 1 sec, Distance 0.1

- Input attributes after creating a feature: If set it On, the attribute table window shows up right after a feature is created. If set it Off, no attribute table window shows up after a feature is created; in that case, to edit attribute you need to select the feature first and use "Edit Attribute" so the attribute table windows will appear.
- Outline color when editing feature: Set the outline color when editing feature.
- Snap to vertex when editing feature: When editing features, the new or editing feature is able to snap to other existing feature within the specified tolerance. Users can switch on/off the function, the unit is pixel.

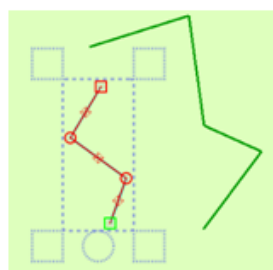
Please note that, to activate snapping when editing features, firstly, you need to set "Snap to vertex when editing features" on and specify the tolerance. Sequentially,

SuperSurv allows snapping vertices with tolerance automatically. To snap two vertices, please select the feature to snap and then activate Move Vertex function so that you can pan vertex A which you want it to be snapped to vertex B by approaching to vertex B. As the distance between the two vertices is shorter than tolerance (you set in Snap to vertex when editing features, the unit is pixel), vertex A will be snapped to vertex B automatically. Please refer to the illustration below.

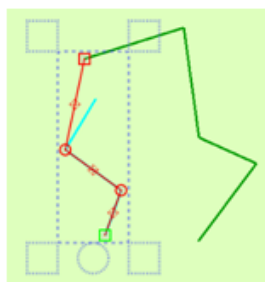
Detailed Function Description



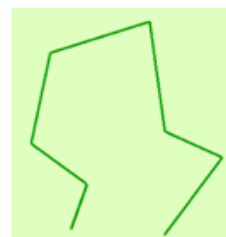
To snap Vertex A and Vertex B




Firstly select the feature that vertex A belongs to and activate Move Feature tool



Pan vertex A approaching to vertex B, and the system will automatically snap the two vertices as the distance between is shorter than tolerance



Tap  on the Editing toolbar, and vertex A is successfully snapped to vertex B

- Add a vertex by GPS average: The function used to collect and add point(s) or vertices of point, line and polygon layer.
 - (1) Time: Please fill in the blank with a number which will stand for the time interval (second) for GPS to add a vertex. Fill in with 1; the GPS adds a vertex every second. Fill in with 2; SuperSurv will average the positions of the collected vertices every 2 seconds and adds the point/vertex on the map.
 - (2) Position: The Point setting is for collecting point data while the Vertex setting is applicable for collecting the vertices of line/polygon data. Please fill in the blank you require with a number. Fill in with 1; the GPS adds every point it collected. Fill in with 2; SuperSurv now averages positions of every 2 vertices it collected and adds the vertex on the map.

- Continuous GPS Position: The function used to collect data (or vertices) of point, line and polygon layer.

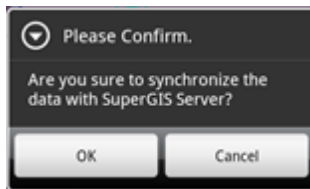
(1) Time interval: Please fill in the Time interval with an integer which stands for the time interval (second) for GPS to add a vertex. If you fill in with 1, SuperSurv will add its position every second. Subsequently, fill in the blank of Distance with a number which represents the distance (meter) threshold for the data collection. Fill in with 1; SuperSurv will add every next point while the distance among them is at least 1 meter.

(2) Position interval: Please fill in the blank of Position interval with an integer which stands for the specified points collected by GPS. Fill in with 1; SuperSurv will add every collected point on the map. Fill in with 2; SuperSurv will add the even points it collected. Subsequently, fill in the blank of Distance with a number which represents the distance (meter) threshold for the data collection.

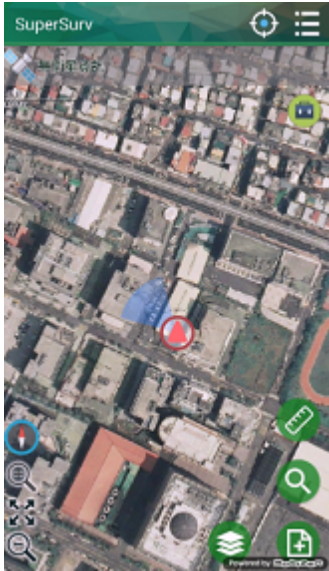
Synchronizing Feature Service to Server

Synchronizing Feature Service to Server

When editing SuperGIS Server layer, a message will show up to confirm whether you want to synchronize data with Server after a feature is added, please tap Yes to synchronize, otherwise, tap No.



After inputting attribute data in Enter attributes dialog, please tap OK(Synchronize) to synchronize the attribute data with Server.



Waypoint

Waypoint

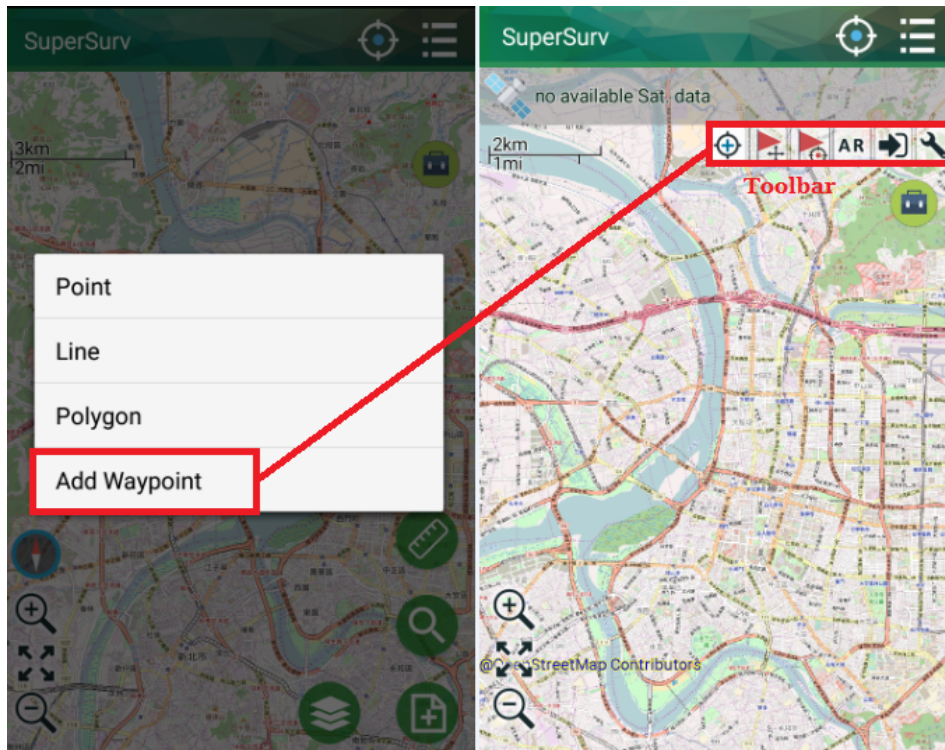
There are two ways to create waypoints: you can select a file and import waypoints or create new waypoints on SuperSurv. As the waypoints are created, the waypoint guidance will appear. The waypoint guidance can help users to know the position you are and where the destination is. Moreover, users can pan to, edit, delete, export, and import waypoints.


Create Waypoints by GPS

Adding Waypoints

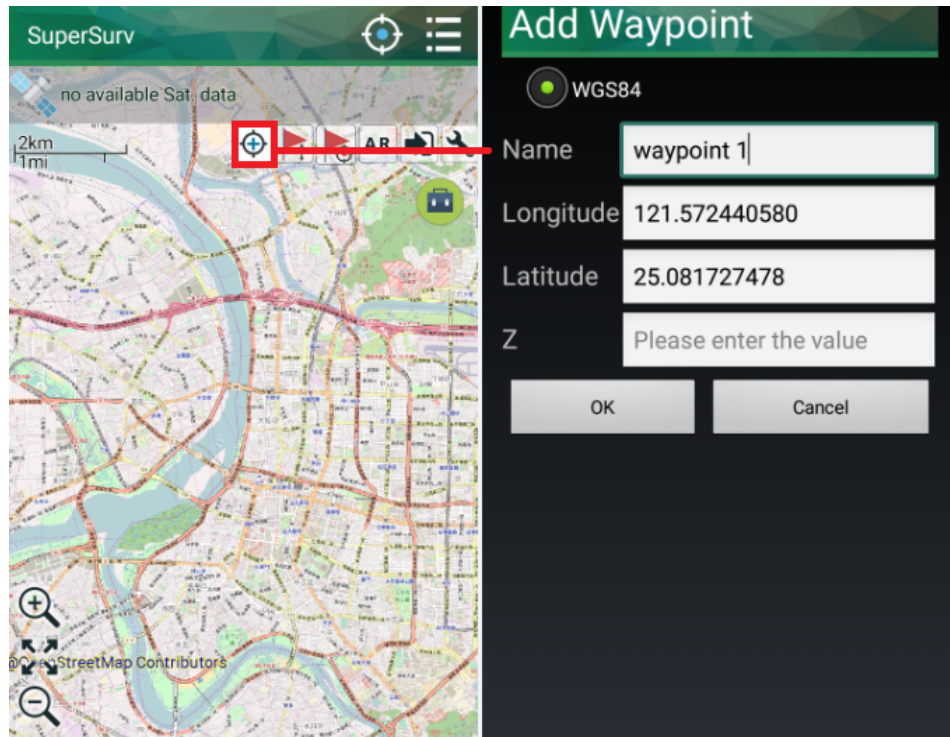
In field survey, you might need to add some points to survey temporarily because of accidents or missions. Then, you can create new waypoints to complete the operation. Or when you are surveying, you might need to add some point information (e.g. building, tree, etc.) for references, you also can apply waypoints to achieve the target.

1. Press menu > Add Waypoint.



2. Tap the place you want on the map or tap  to set waypoint and "Add Waypoint" window shows up, please select the coordinate system, and enter waypoint name and Z value. The coordinate fields (longitude, latitude, elevation) shows the current coordinates. You can modify the coordinate values manually. Please tap OK to finish.

Detailed Function Description



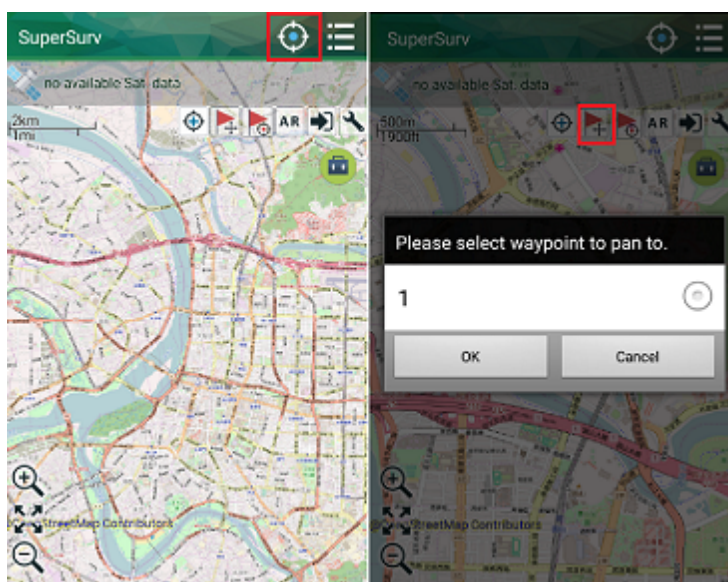
- Waypoint is successfully added. The name of waypoint is also displayed on the map.

**Note:**

- The function can be worked with Positioning function to rapidly zoom to the target position and add the new waypoint by long-pressing.
- You can also use waypoints as an annotation of points on the map.

Pan to**Pan to**


The system provides two ways to position, including Pan to GPS, and Pan to waypoint. Users can choose the way of positioning they need according to their situation.

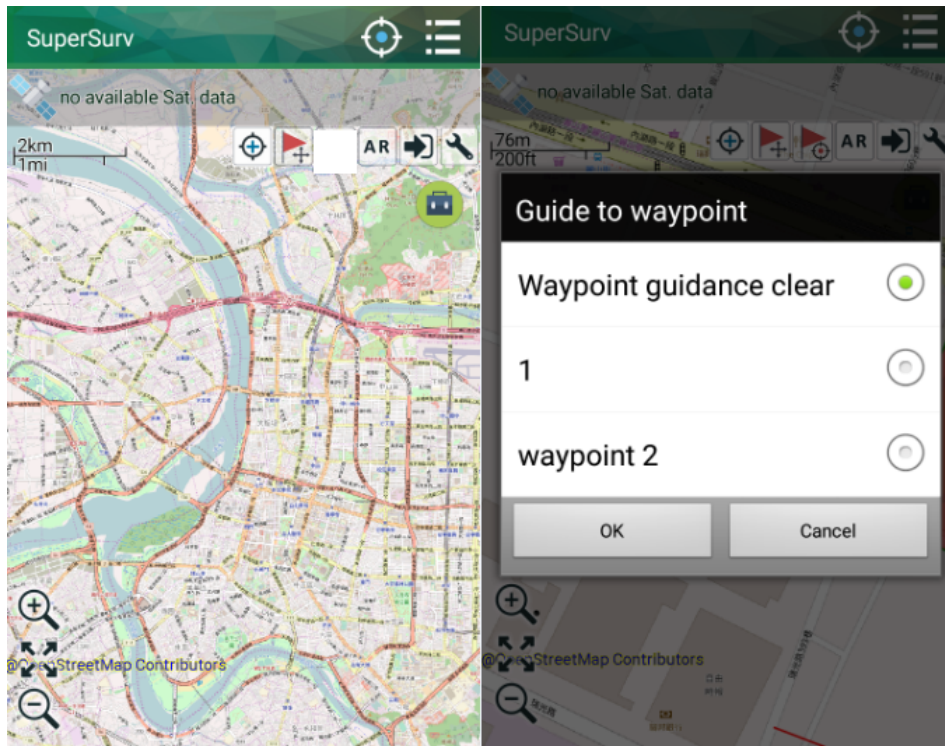


Waypoint Guidance

Waypoint Guidance

As GPS is used, you can select a waypoint as the destination of the waypoint guide. The system will calculate the shortest straight line distance between the current GPS position and waypoint; an orange dashed line will be connected between the two points on the map. Also, the information of waypoint guidance will appear on the top of the map and guide the users to the destination.

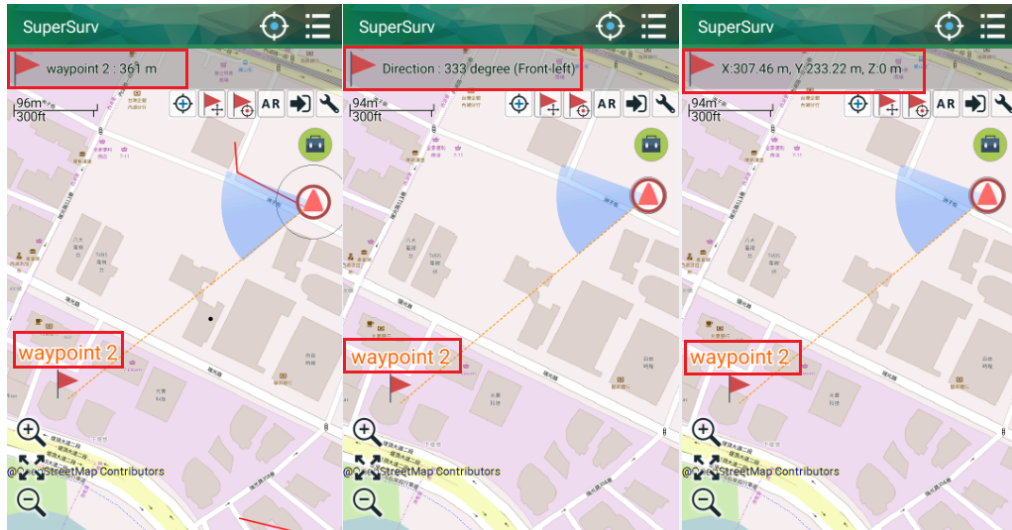
1. Tap  you would like to see the guidance.
2. Select the waypoint you need from Guide to Waypoint page. If you would like to clear waypoint guidance, select ??Waypoint guidance clear?? and the guidance will be cleared.



Guidance information includes:

- (1) Waypoint name
- (2) Switch to the shortest straight line distance between current GPS position and waypoint destination
- (3) Switch to waypoint guidance

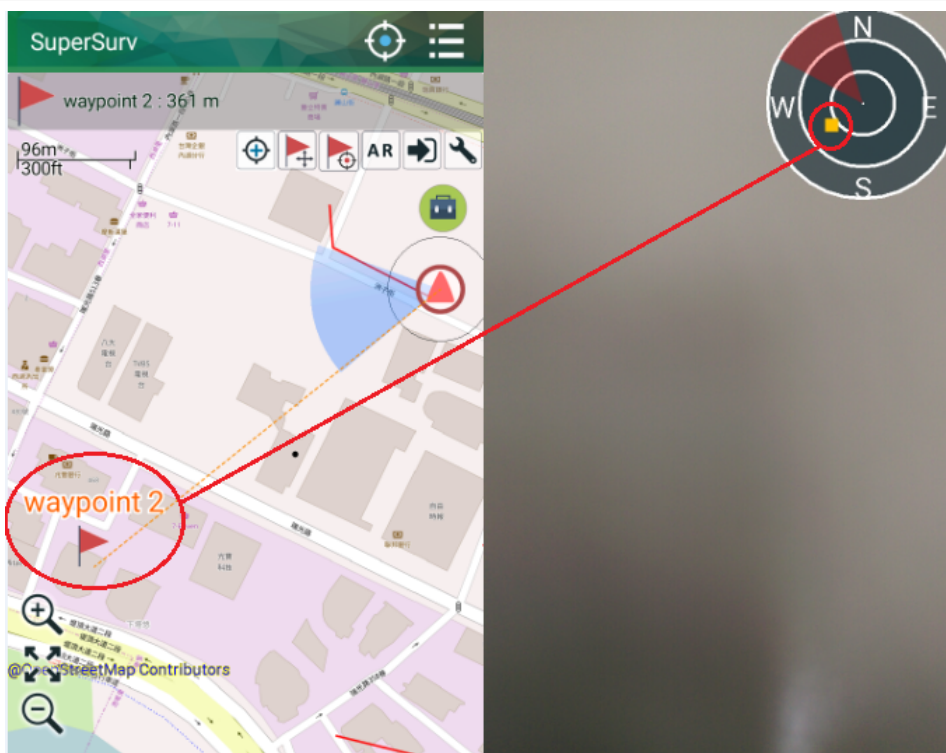
Detailed Function Description



AR

AR

Activate AR(Augmented Reality), the waypoints which are located within 700 meters away from the GPS position will show up as a tag with waypoint name and distance. And the radar at the upper right corner shows to identify the relative direction in between all waypoints.



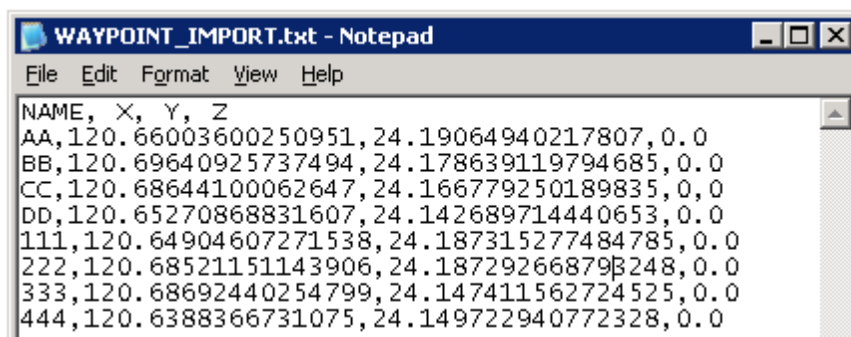
Waypoint Management

How to create waypoint file?

How to create waypoint file?

You can create waypoint files on PC and then copy the files to the mobile device. Then, you can import the waypoints to SuperSurv. SuperSurv supports to import waypoints in TXT, CSV, or KML file. If you use TXT and CSV format, please follow the rules below:


- Column names: the order is Name, X, Y, and Z. They stand for waypoint name, X coordinate, Y coordinate, and elevation.
- Punctuation: use comma(,) to split each column.
- Coordinate system: XY coordinates can be projected system or WGS84 format. If you use WGS84, please use degree.
- Z value: Z value is the elevation of waypoint. The unit is meter. Z value is an optional column; you can choose whether to enter the value.

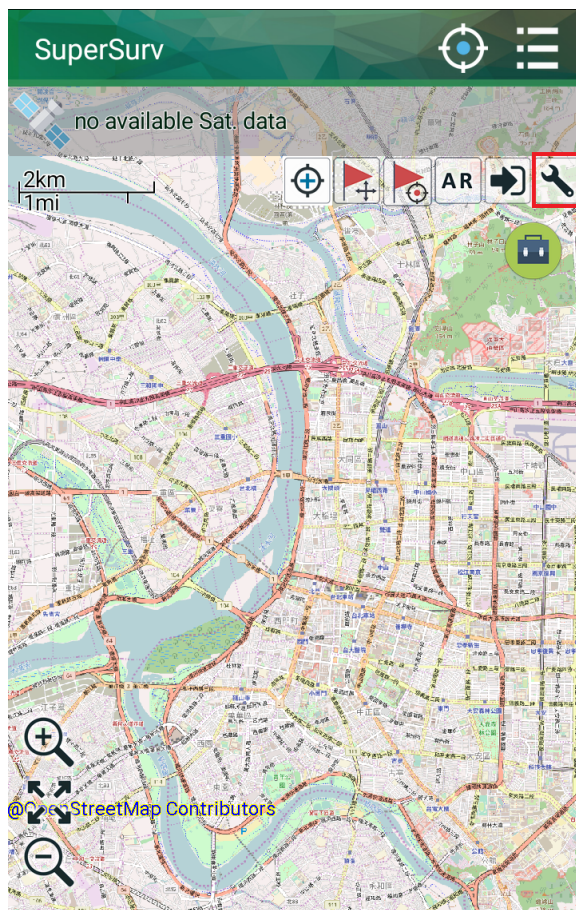


Importing Waypoint

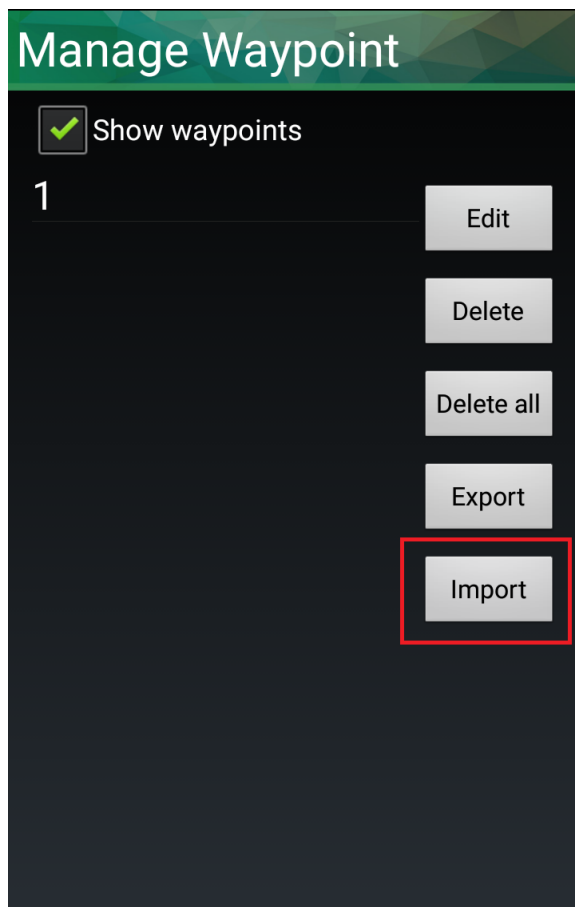
Importing Waypoint

Users are allowed to importing waypoints to SuperSurv. The system supports to import TXT, CSV, or KML format; the imported XY coordinates can be displayed as points to help you recognize the actual positions of the points on the map.

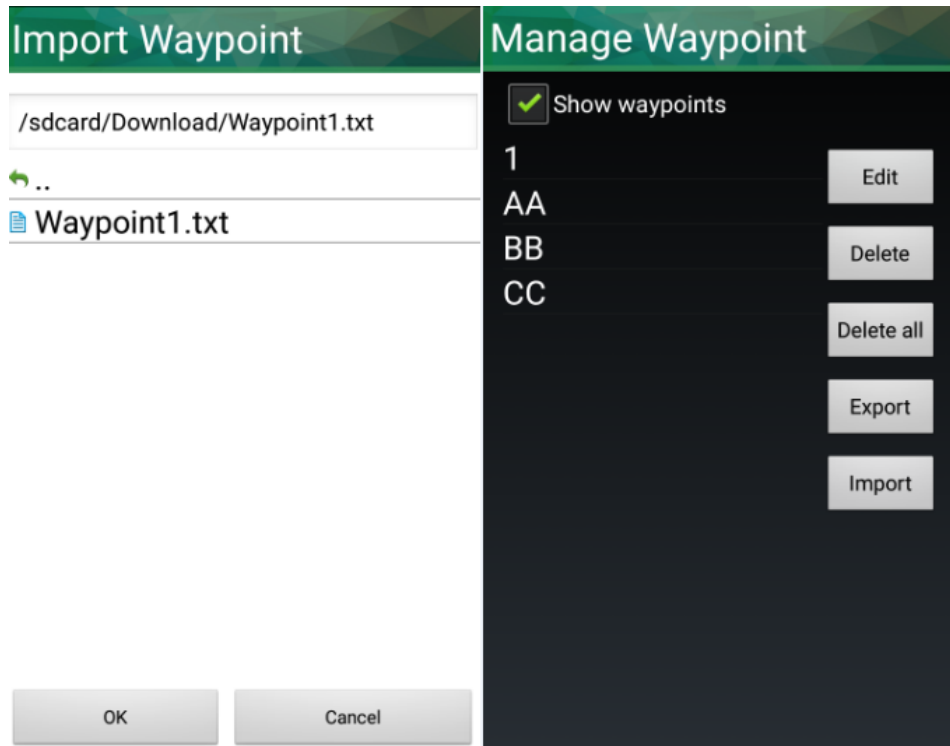
1. In SuperSurv, tap menu > Add Waypoint. > Tap settings button  on waypoint toolbar.



2. In Waypoint management window, tap import.




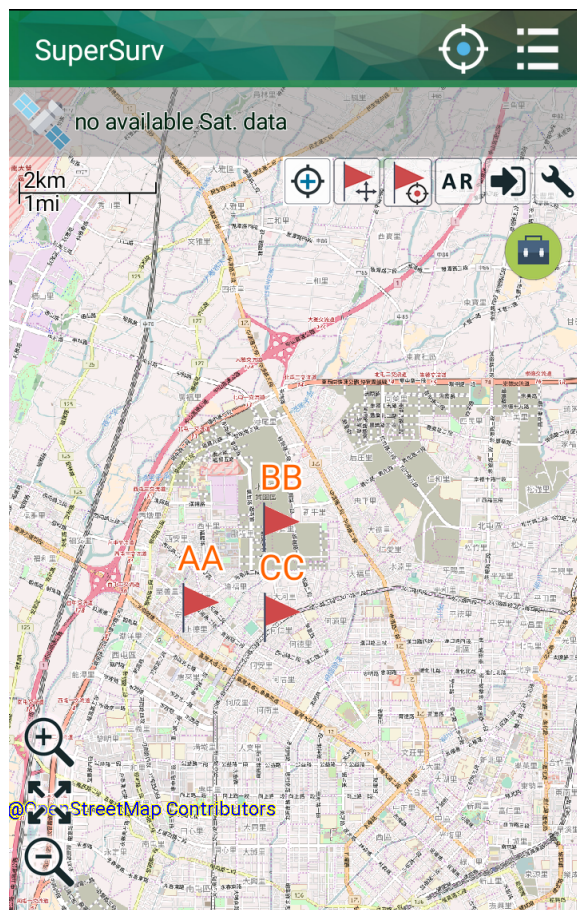
3. Select the file you created in Step 2, and tap OK.



4. Back to waypoint management window, tap Back key, and the message appears. Tap Yes.



5. Back to the map, and you can see the imported waypoints. The icon  on the map stands for the position of waypoint. The waypoint name is displayed above the icon.

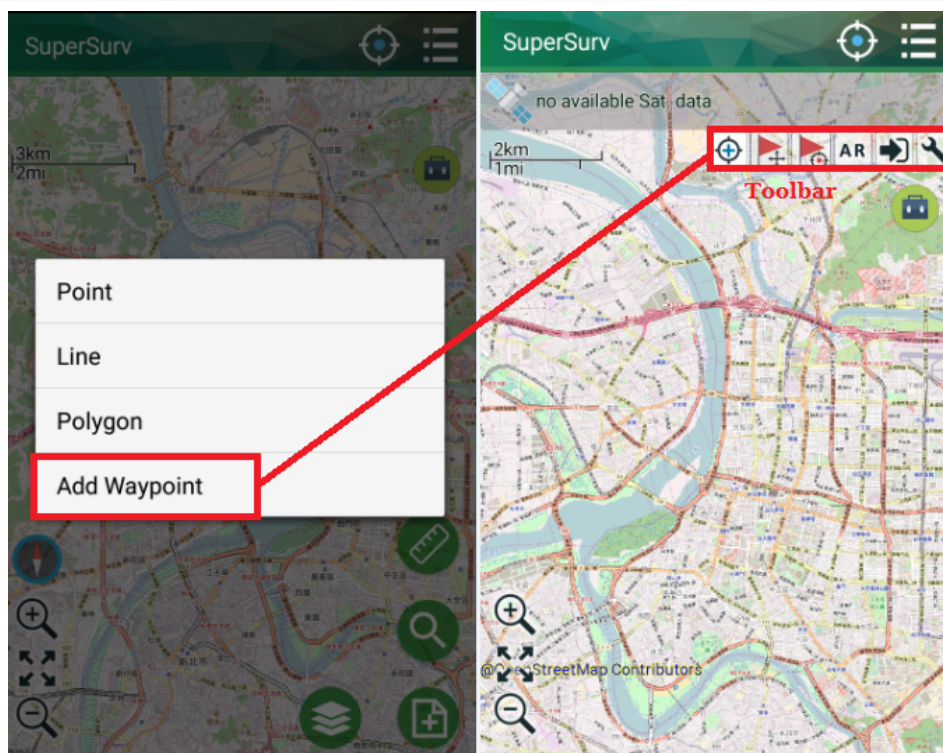



Adding Waypoints

Adding Waypoints

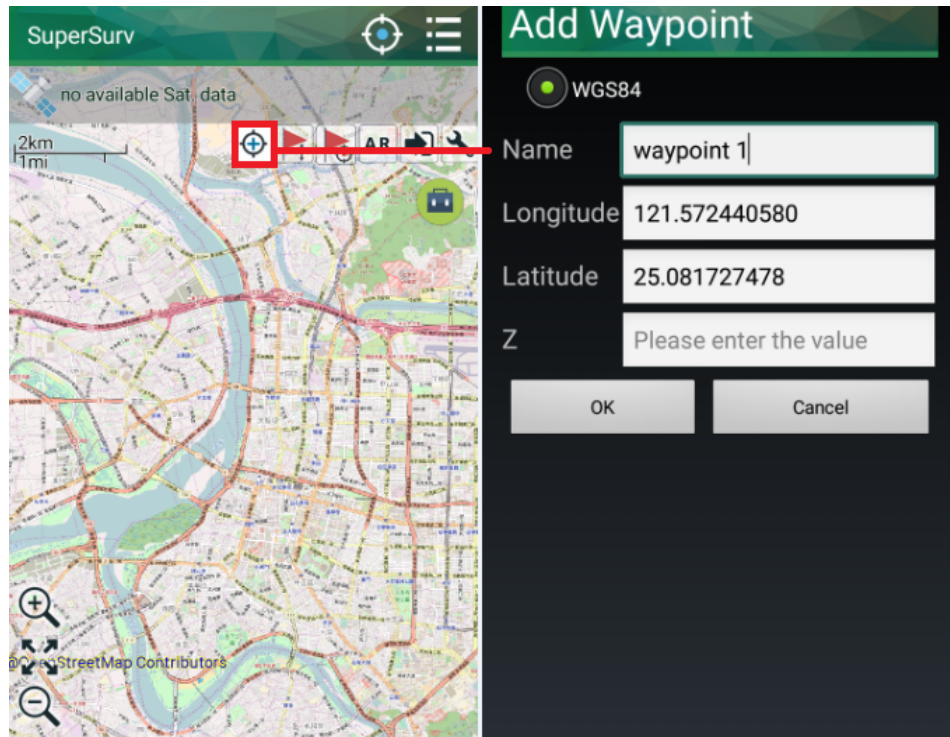
In field survey, you might need to add some points to survey temporarily because of accidents or missions. Then, you can create new waypoints to complete the operation. Or when you are surveying, you might need to add some point information (e.g. building, tree, etc.) for references, you also can apply waypoints to achieve the target.

1. Press menu > Add Waypoint.



2. Tap the place you want on the map or tap  to set waypoint and "Add Waypoint" window shows up, please select the coordinate system, and enter waypoint name and Z value. The coordinate fields (longitude, latitude, elevation) shows the current coordinates. You can modify the coordinate values manually. Please tap OK to finish.

Detailed Function Description



- Waypoint is successfully added. The name of waypoint is also displayed on the map.



© 2017 Supergeo Technologies Inc. All Rights Reserved.

Edit/Delete Waypoint

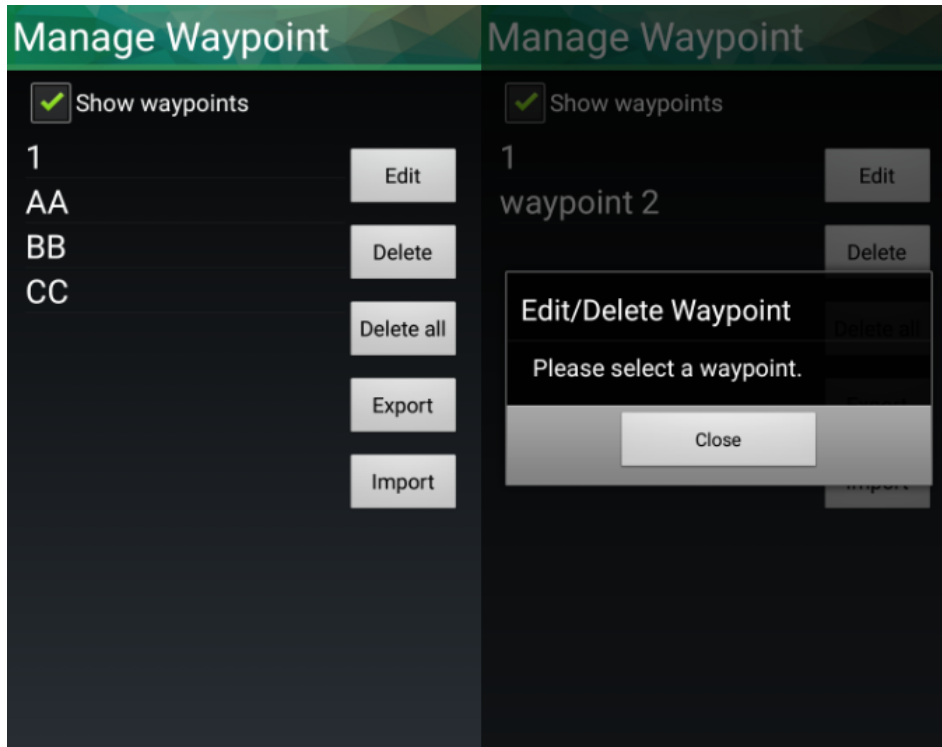
Edit/Delete Waypoint

Manage Waypoint page list all the imported and added waypoints. You can edit, delete, import, and export the waypoints. The following describes the way to edit and delete.

1. Tap 

Detailed Function Description

2. Manage waypoint page appears. You can select the waypoint you need on the left and then tap the items on the right to edit the waypoints. If no waypoint is selected and you tap an item on the right, the message will appear to remind you to select a waypoint.



Edit: You can edit the name, longitude, latitude, z value (altitude) of the selected waypoint.

1. You can select a waypoint to edit; the selected waypoint will be marked with green.
2. Tap Edit.
3. Waypoint page appears; you can edit the name, longitude, latitude, and z value (altitude).
4. Tap OK to complete edit.

Manage Waypoint

☒ Show waypoints

1
waypoint 2

Edit

Delete

Delete all

Export

Import

Waypoint

Name **waypoint 2**

Longitude 121.56987020

Latitude 25.07763346

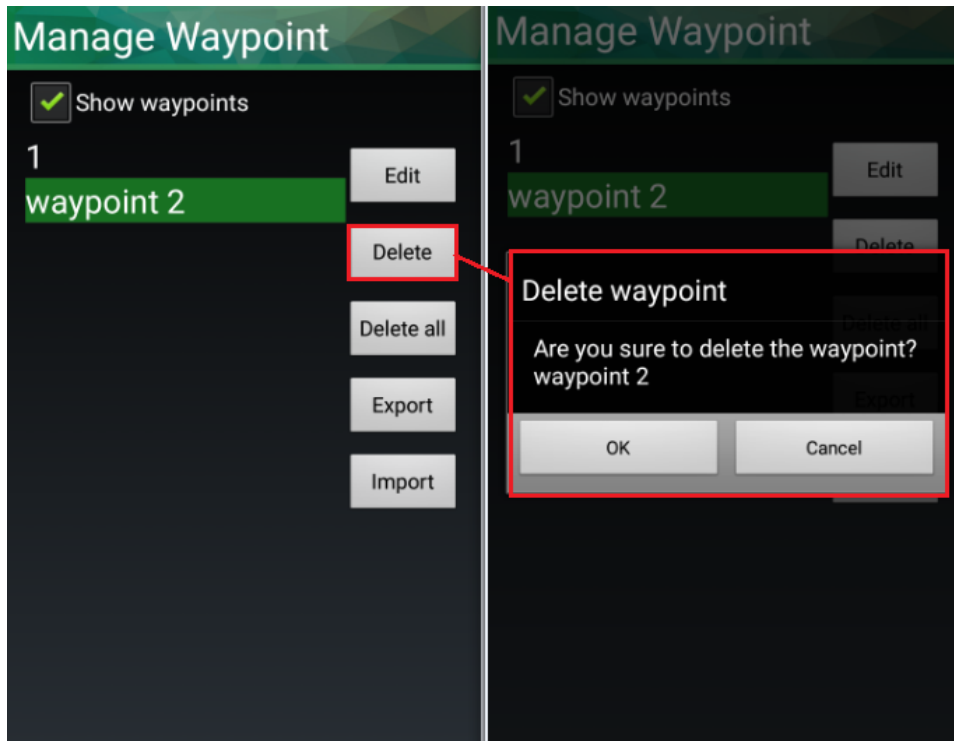
Z 0.00000000

OK Cancel

Delete: Delete the selected waypoint.

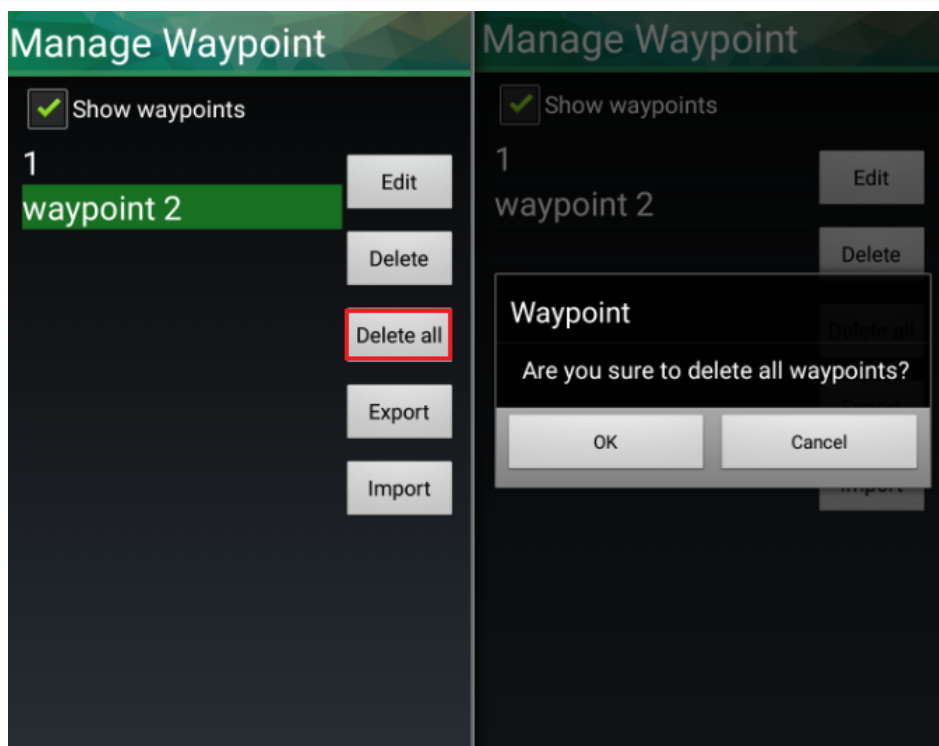
1. Select the waypoint you would like to delete. The selected waypoint will be marked with green.
2. Tap Delete.
3. The warning message appears, ??Are you sure to delete the waypoint???
4. Tap yes, and the waypoint will be deleted. Tap Back key, the message will appear, ??Do you want to save the waypoints???

Detailed Function Description



Delete All: Delete all the waypoints.

1. Tap Delete All.
2. The warning message will appear, "Are you sure to delete all waypoints?" Tap yes.
3. Back to Manage Waypoint page, you can see all the waypoints are deleted. Tap Back key, and the message will appear, "Do you want to save?" Then tap yes.

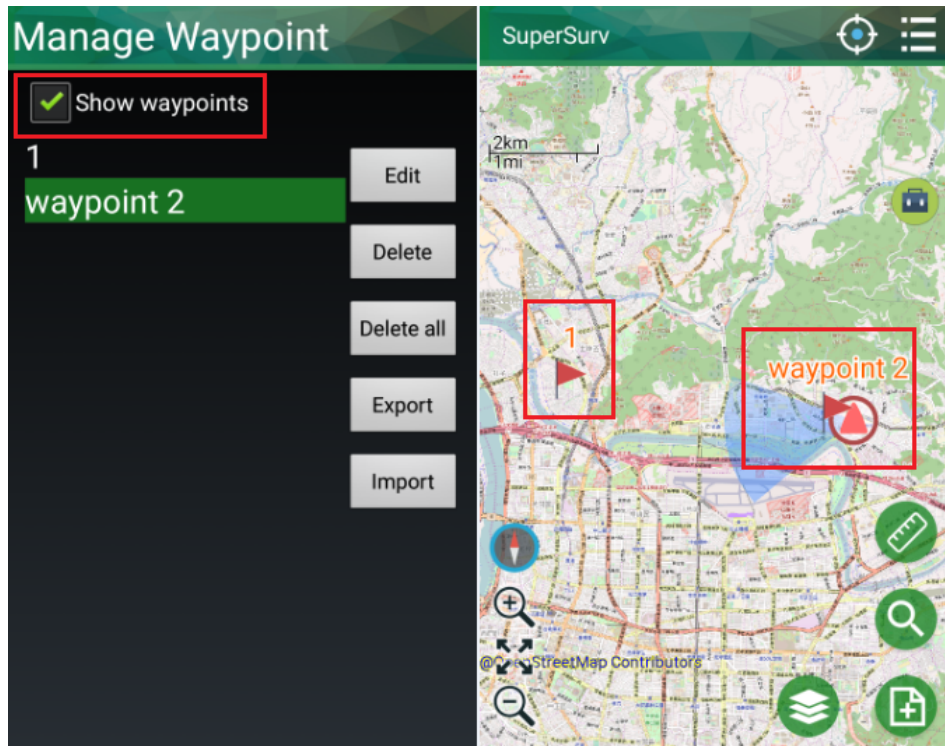
**Note:**

Deleting waypoints only deletes the added and imported waypoints that will neither delete the original waypoint file nor modify the data in the file.

Show Waypoints

Show Waypoints


You can choose whether to show the waypoints on the map. If you check Show Waypoints, all the waypoints and waypoint names will be displayed on the map. If Show Waypoints is not checked, no waypoint will be displayed on the map.

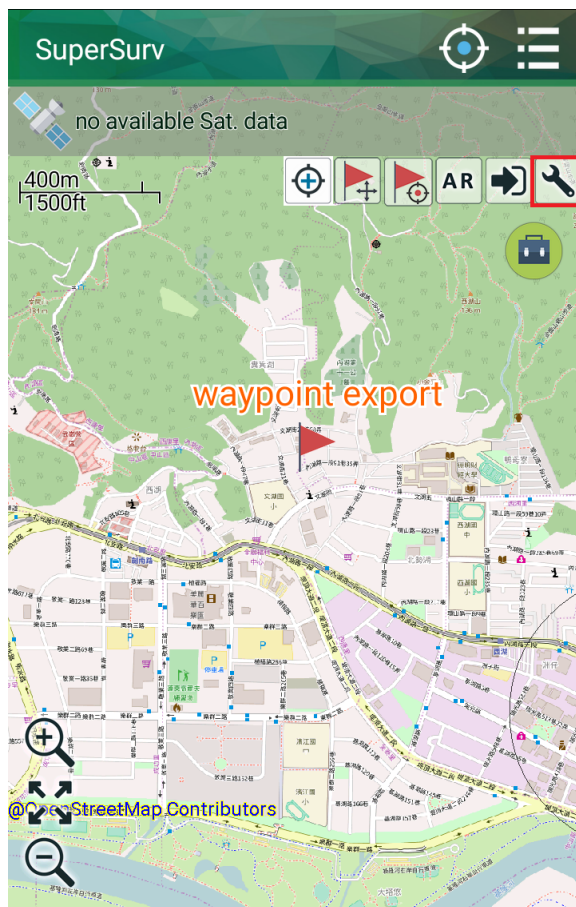


Exporting Waypoints

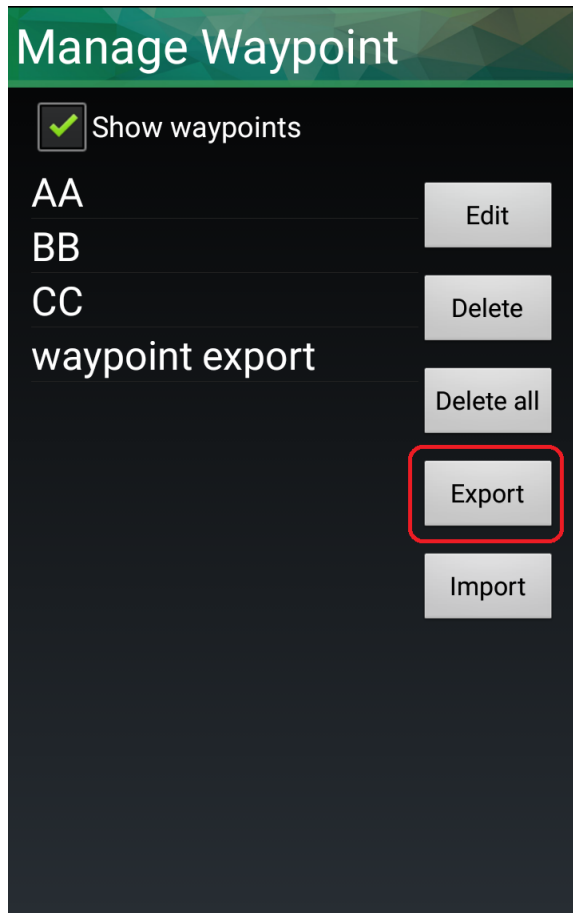
Exporting Waypoints

Through exporting waypoints, you can export all the waypoints (including the imported waypoints and newly added waypoints) as TXT, CSV, or KML files. And the waypoints can be used for further application.

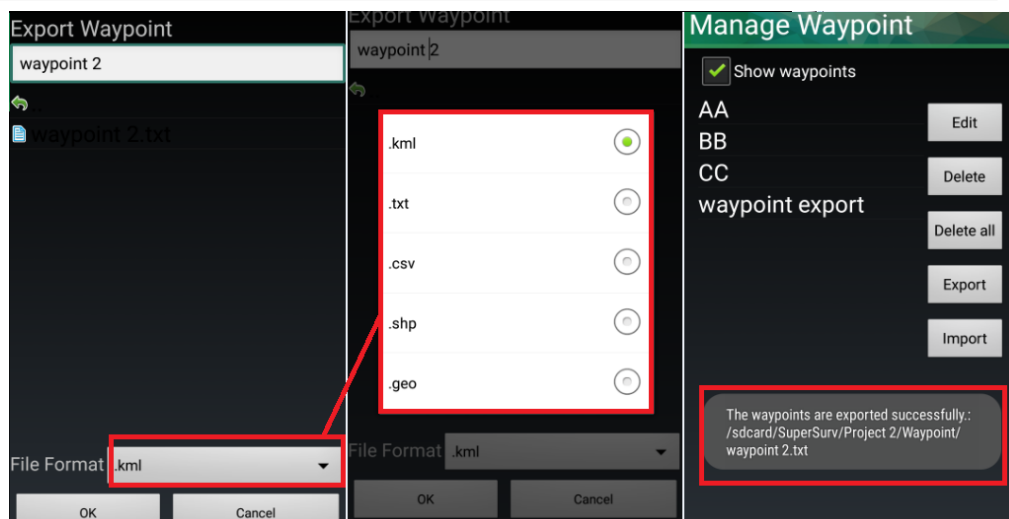
1. In SuperSurv, tap menu > Add Waypoint. > Tap settings button  on waypoint toolbar.



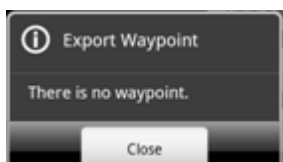
2. In Waypoint management window, the waypoints will be listed on the left, and Export is on the right. You can export all the waypoints as files.



3. Enter the file name and choose the file format to export. There are 3 formats, KML, TXT, CSV. After setting, please tap OK.
The waypoint is exported successfully. The message will show up and display the path.

**Note:**

If there is no waypoint in the system, the message ??There is no waypoint??will appear.




3.6 Manage Layer

Add Layer

Add Layer

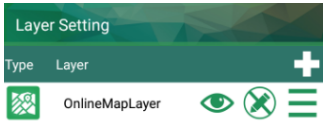
After the layers are created, you can add layers to the map.

The layers that are not chosen will not be display on the map. Tap , and all the

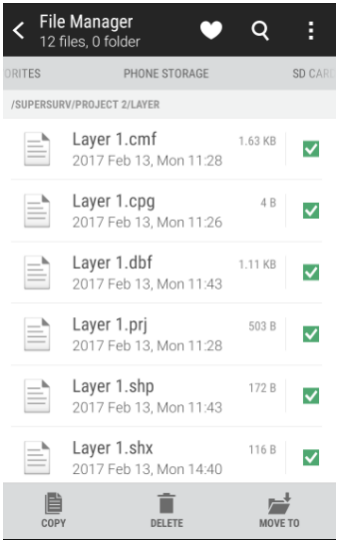
Detailed Function Description

layers are listed here. Or you can copy the layer you want to add, and paste it to the folder. Back to SuperSurv, the map displays the selected layers.

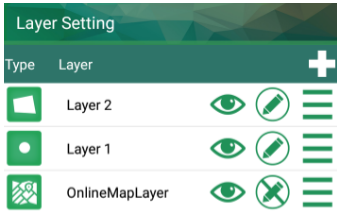
Original layer




Copy all the project files into layer folder

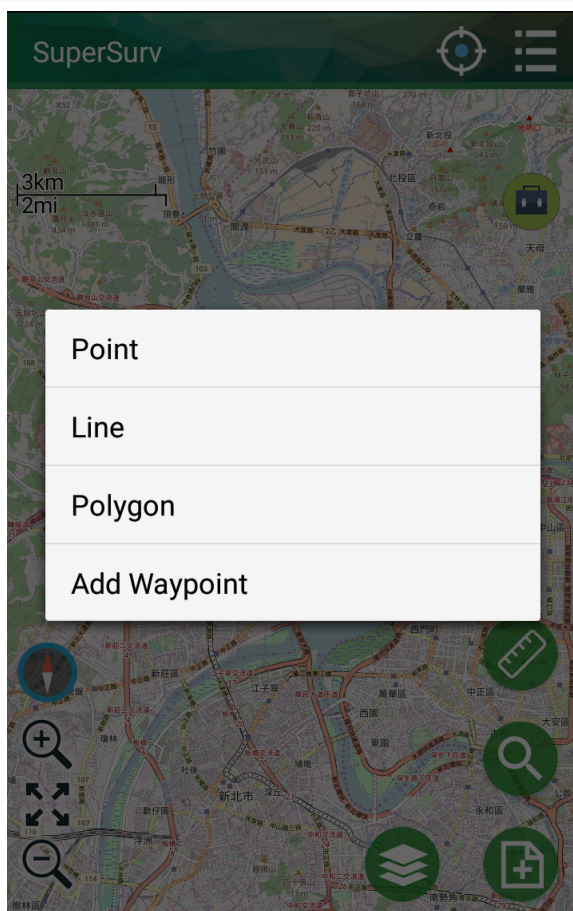


Open SuperSurv again, the new layer will show up in the list

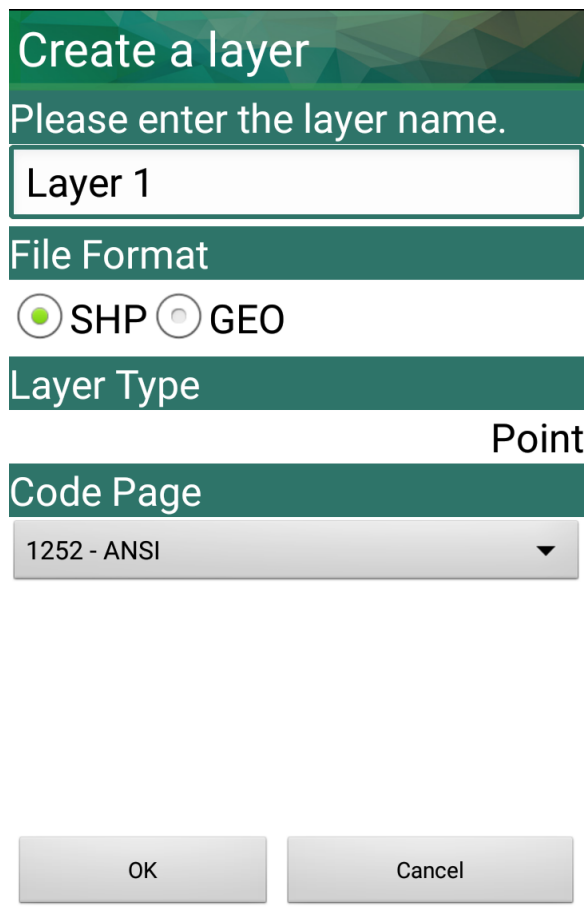


How to add the existing layers to SuperSurv map? To add existing layers to use in SuperSurv please copy the existing layers to Layer folder of SuperSurv folder, start SuperSurv, so that the Add Layer list will include the added layers. Check the layers to display and you can see them displayed on the map.

If you have no available layers, please create a new layer. Tap  and choose a type of layer you want.

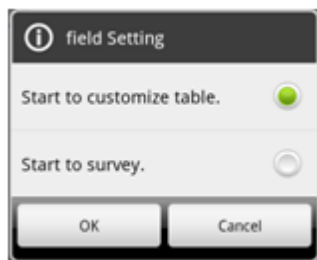


In the setting page, please enter the layer file name, layer name, select code page, layer type (point, line, polygon) and choose the file format (SHP or GEO). After setting is finished, tap OK.



The screenshot shows a 'Create a layer' dialog box with a green header. Below the header, it says 'Please enter the layer name.' followed by a text input field containing 'Layer 1'. Below this is a 'File Format' section with two radio buttons: 'SHP' (selected) and 'GEO'. Below that is a 'Layer Type' section with a 'Point' label. At the bottom is a 'Code Page' section with a dropdown menu showing '1252 - ANSI'. At the very bottom are 'OK' and 'Cancel' buttons.

Field setting dialog appears, choose Start to Customize Table, and tap OK.



The screenshot shows a 'field Setting' dialog box with a dark header. It has two options: 'Start to customize table.' with a selected radio button, and 'Start to survey.' with an unselected radio button. At the bottom are 'OK' and 'Cancel' buttons.

In “Create a New Layer”, set the field name and field properties. You can tap a field to set the field format in Field Setting.

Field nameField property

ID

ID

Integer

>

NAME

Name

String / Length: 20

>

MEMO

Memo

String / Length: 50

>

PHOTO

Photo

Photo

>

DATE

Date

YYYY/MM/DD

>

TIME

Time

24 HR

>

X

X

LocationXValue

>

Y

Y

LocationYValue

>

Z

Z

LocationZValue

>

OK

Cancel

Field name:

DATE

Note:


Date

☒ YYYY/MM/DD

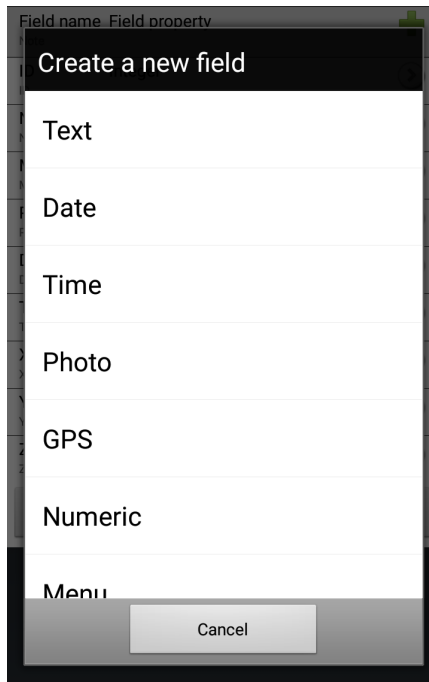
☐ MM/DD/YYYY

☐ MM/DD

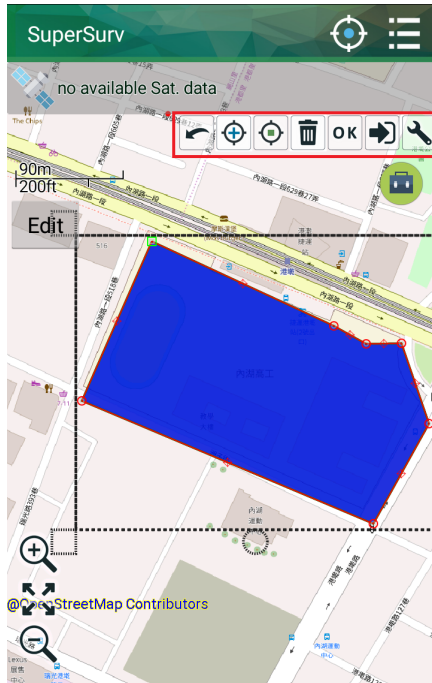
☐ DD/MM/YYYY

To create a new field, please tap  , “Create a new field” appears. Please select a field type and set the format. About the details of the field type and format, please refer to [Custom Table](#).

Detailed Function Description

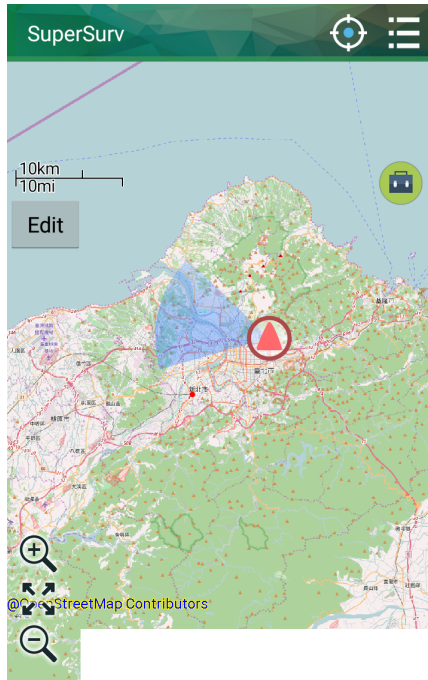


After the setting is finished, please tap OK and back to the map. Survey toolbar shows up on the top of the map.





Then, there are two modes. One is add **Add**. The other one is edit **Edit**. When it is add mode, you can choose type of layer, and create features.


Detailed Function Description



After a feature is created, if you would like to enter attribute data, you can long-press the feature you created in edit mode. Then the attributes page will show up.


You can edit the attribute data in Enter Attributes page.

ID:	<input type="text" value="p"/>
Name:	<input type="text"/>
Memo:	<input type="text"/>
Photo:	<input type="text" value="Choose a photo or take a photo."/>
Date:	2017/02/13 
Time:	11:28:47 
X:	<input type="text" value="13,520,866.2300312"/>
Y:	<input type="text" value="2,875,961.32396534"/>
Z:	<input type="text" value="0"/>
<input type="button" value="OK"/> <input type="button" value="Cancel"/>	



Also, you can edit the attributes right after a feature is created. Please tap Survey



Setting , and set "Input attributes after creating a feature" as On and tap OK. Back to the map, you can see Enter Attributes page right after a feature is created.

Survey toolbar setting

Input attributes after creating a feature.

On

Outline color when editing feature

Snap to vertex when editing feature

Off

100 pixels

Add a vertex by GPS average

Time

0

 sec

Position :Point

0

Vertex

0

Continuous GPS Position

Time interval

1

 sec, Distance

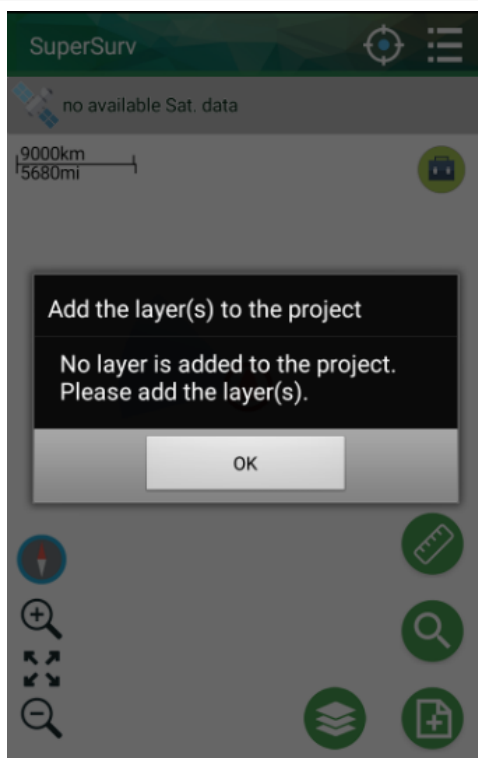
0.1

Add GeoSpatialPDF Layer

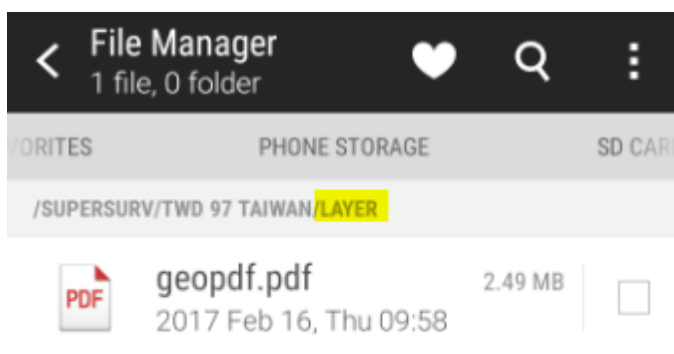
Add GeoSpatialPDF Layer




1. Go to menu and create a new project. Then tap . If there is no layer exist, the notice window will show up.

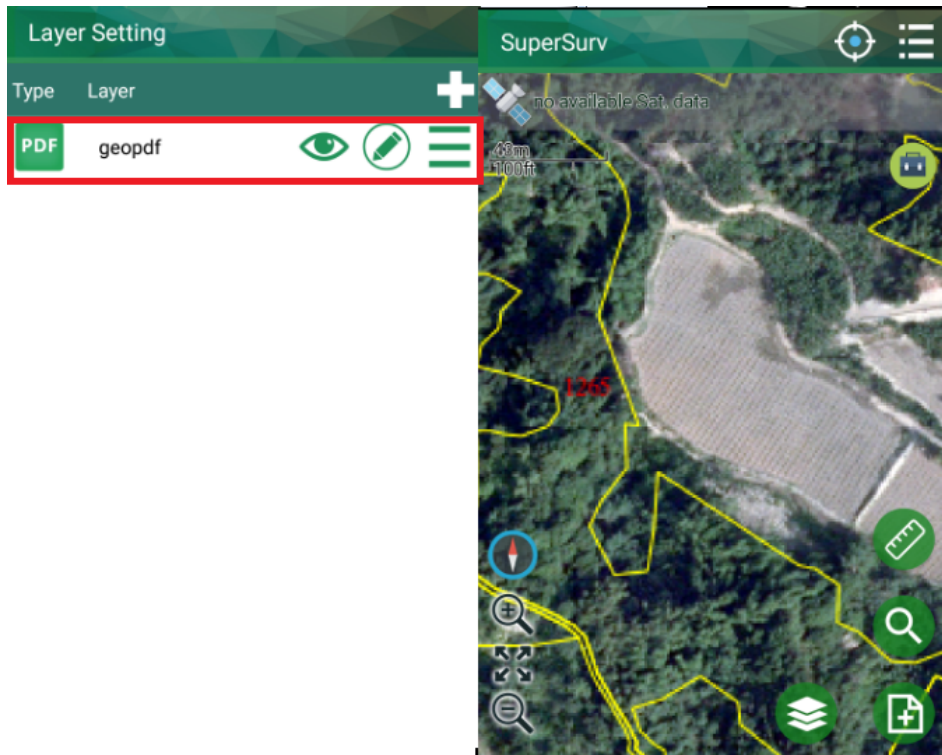


2. Copy GeoSpatialPDF file and paste it into the specified folder.
For example, if the name of your project is "AAA", you can find a "AAA" folder in your mobile device. Then open it, you can find a 'layer' folder.
Paste the GeoSpatialPDF file into the layer folder.



Detailed Function Description

3. Tap  , then you can see the result.





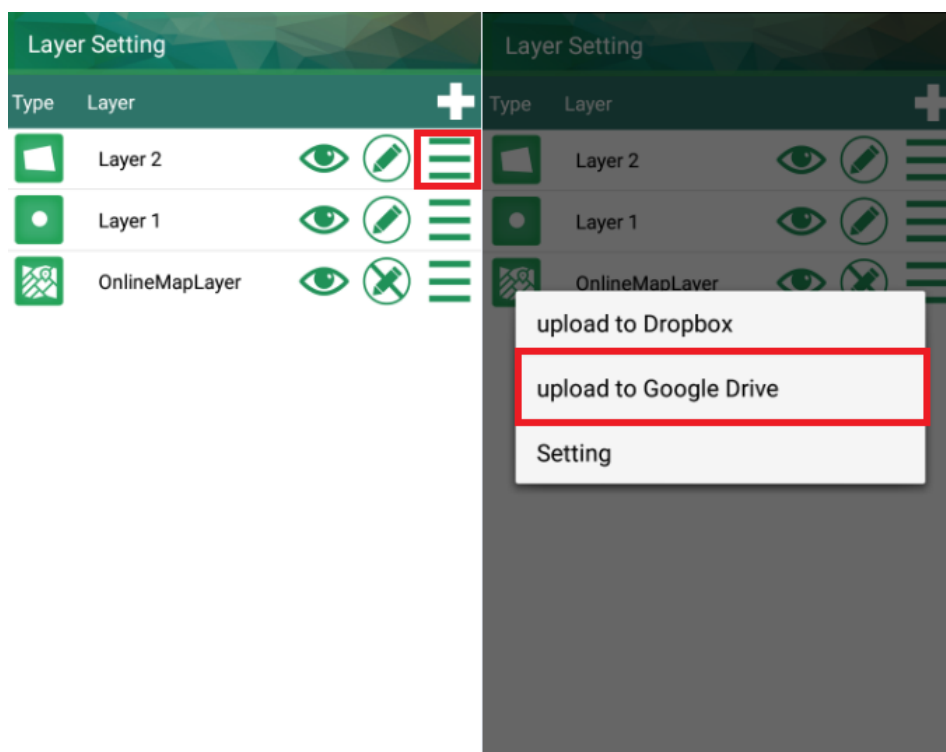
Upload Layer to Google Drive and Dropbox

Upload Layer to Google Drive and Dropbox

You can add layer from google drive or dropbox.

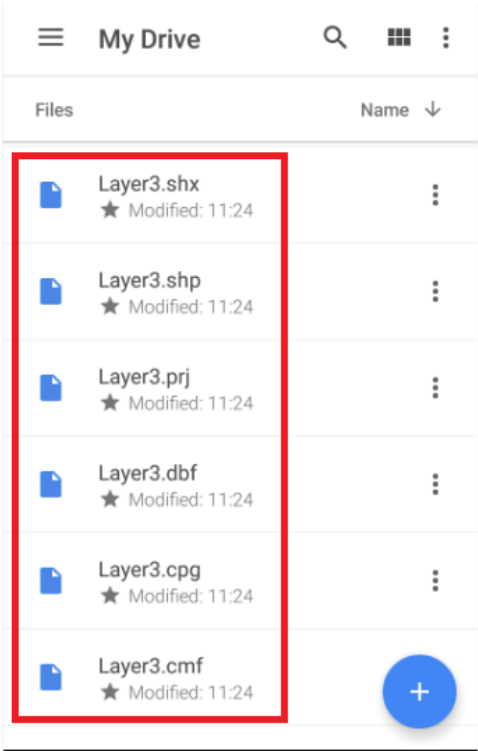
1. Google Drive

Tap  . Go to layer setting page. Then tap  . Chose "upload to Google Drive."





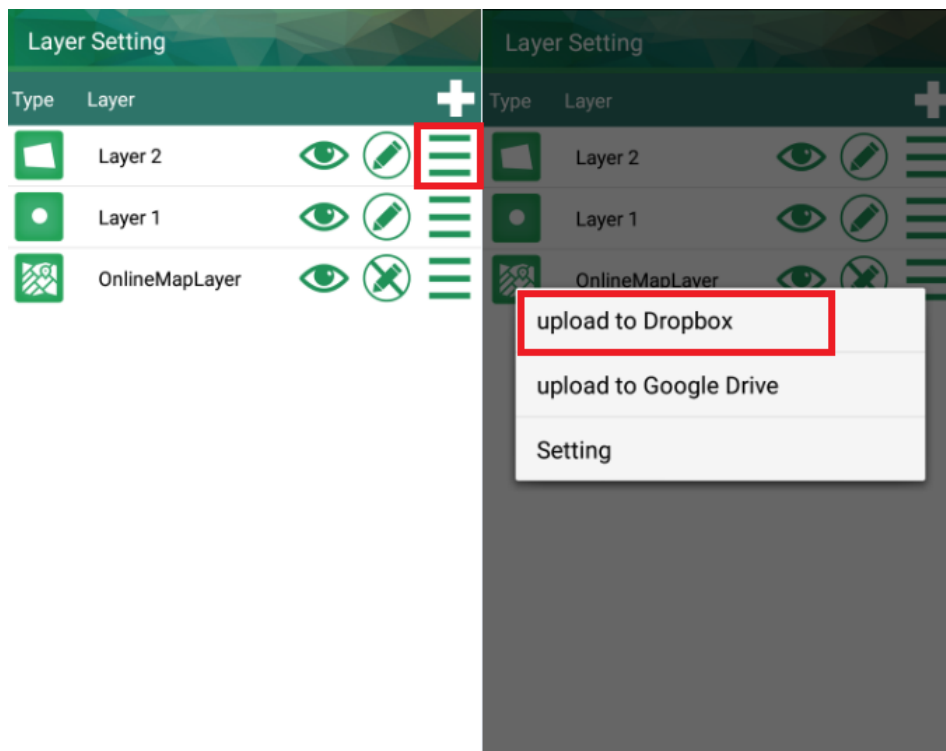
Open your google drive, then you can see the uploaded files.

Detailed Function Description



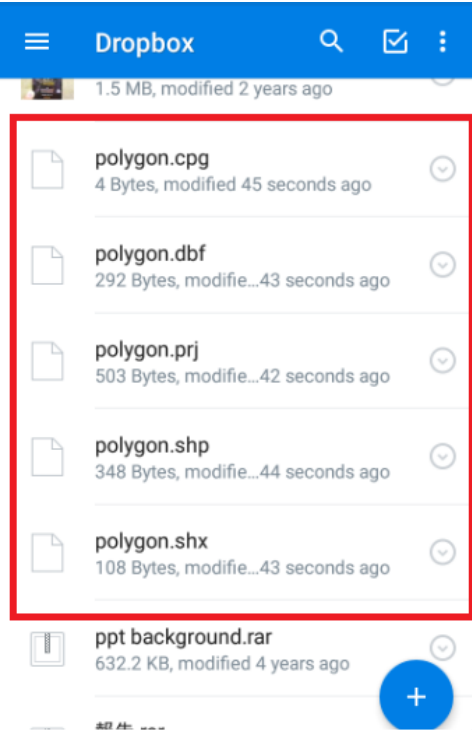
2. Dropbox

Tap  . Go to layer setting page. Then tap  . Chose "upload to "Dropbox.""



Open your Dropbox, then you can see the uploaded files.

Detailed Function Description



Layer Setting

Layer Setting

With Layer Management, you can add a layer to the map and set the properties of the layer. If you create a new layer, you can customize tables to enter the attribute data rapidly.

Layer Setting

TypeLayer+

Layer 2

Layer 1

OnlineMapLayer

2/1311:28:471.35208662300312E72875961.3239653400

2/1311:43:101.3533593550945E72885717.9868589300

File Name: Layer 1.shp

Layer Name: Layer 1

Label Setting: Off

Current style:

Use default style:

OK

Cancel

Take layer of polygon for example. There are six items.

178

Detailed Function Description

File Name: Layer 2.shp

Layer Name: Layer 2

Label Setting:

Current style: 

Use default style:

Frame 

Size 

Pattern 


OK Cancel

- File name : show the file name.
- Layer name : show the layer name.
- Label setting : swift on/off label setting, and select the items you want.





File Name: Layer 2.shp





Layer Name: Layer 2




Label Setting: **Off**




Current style: 

Use default style:

Frame  Size  

Pattern   

OK Cancel








Please select a field.

ID

Allow Overlap

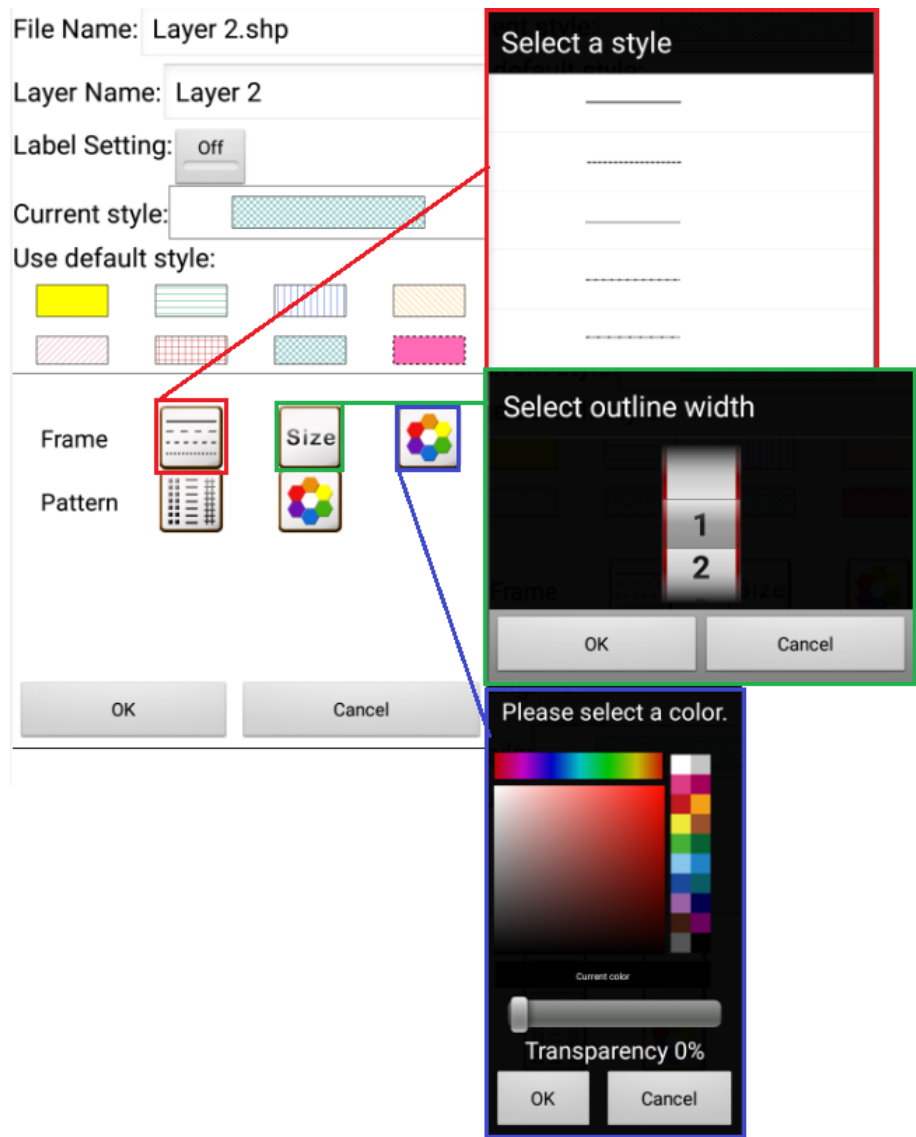
Allow Duplicate

OK Cancel

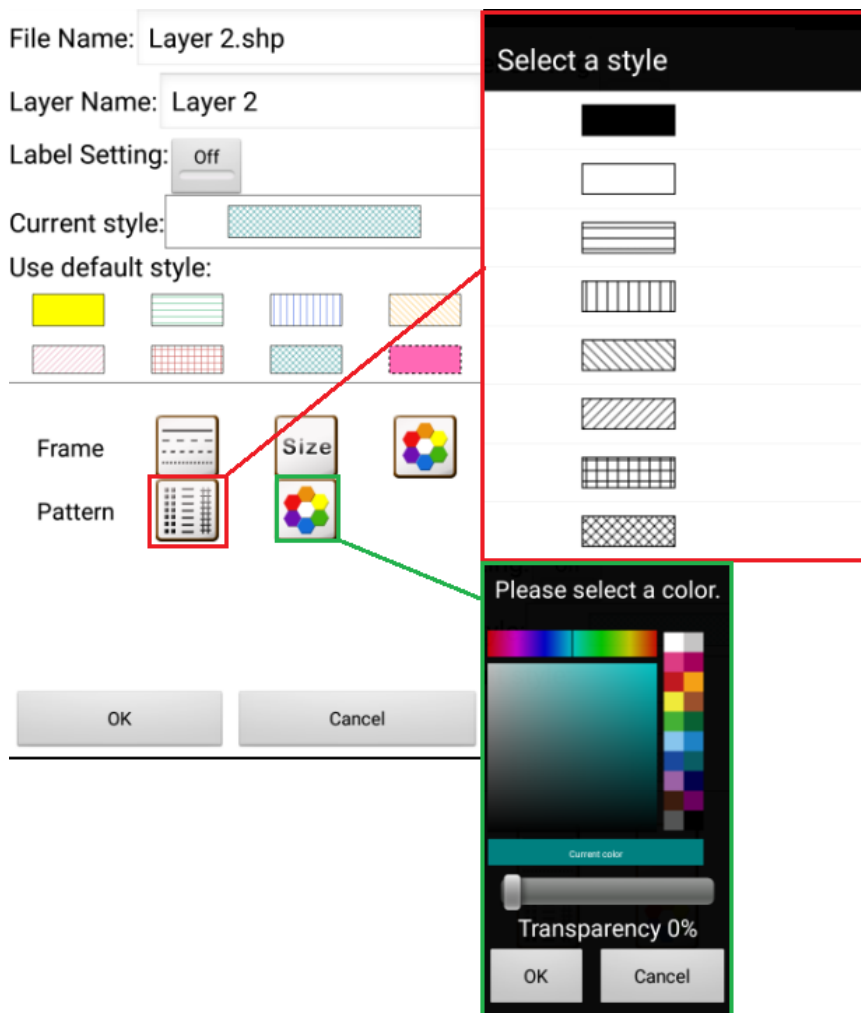
ID	
NAME	
MEMO	
PHOTO	
DATE	
TIME	
AREA	

- Current style : choose the style.
- Frame : including three items, style, width of line and color.

Detailed Function Description



- Pattern : including two items, style and color.



3.7 GPS


GPS

GPS functions enable you to rapidly recognize the current position when you are surveying outdoor. With Waypoint, the status bar can show the guidance (refer to [Waypoint](#)). With track, users can record the path users passed by (refer to [Track](#)). GPS functions include whether to user GPS, GPS position, and View location

Detailed Function Description



information.

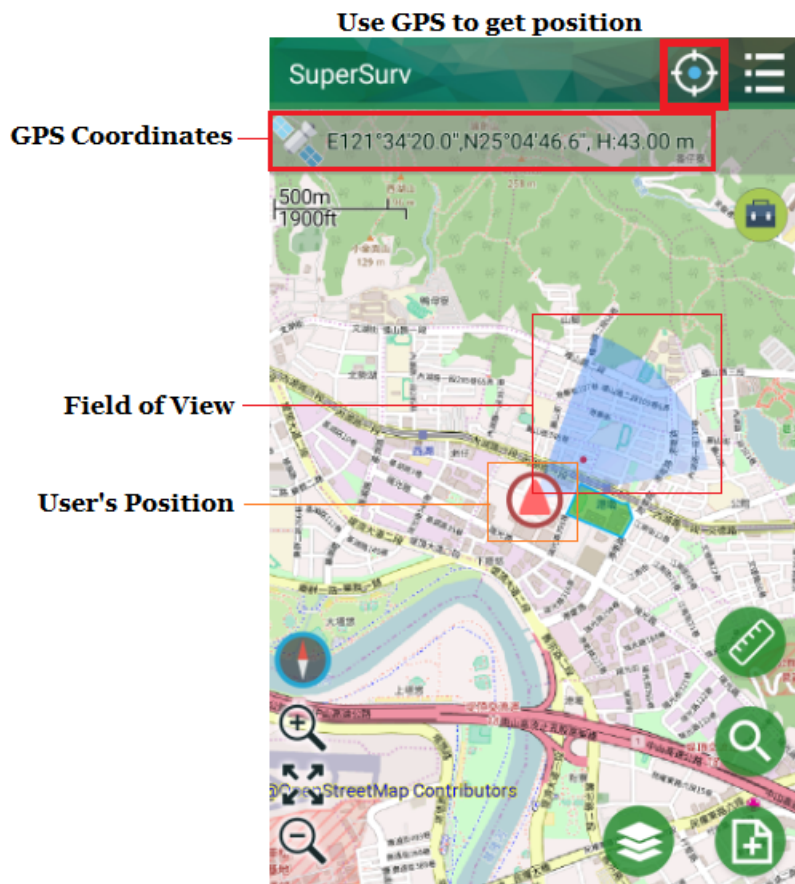
SuperSurv supports to position with GPS by using satellite or using internet. If you are in a area where the mobile device can receive satellite signal well, SuperSurv will

position with satellite and display GPS position with  on the map. If the satellite signal is poor, SuperSurv will start AGPS function automatically to help find the GPS position.

Whether to Use GPS

Whether to Use GPS

1. To display the current GPS position on the map, please tap  on the upper-right corner to pan to the current GPS position. Then, a purple mark  will be displayed on the map. The fan-shaped area is the visual angle. The longitude and latitude information will be displayed on the top of the map; tapping the information can convert to project coordinate system.

**Note:**

- After using GPS, you can use waypoint guidance and track record to help you have the guidance and track recording.
- If GPS is not used or no GPS signal is poor, waypoint guidance will be closed, track recording function will be stopped as well.

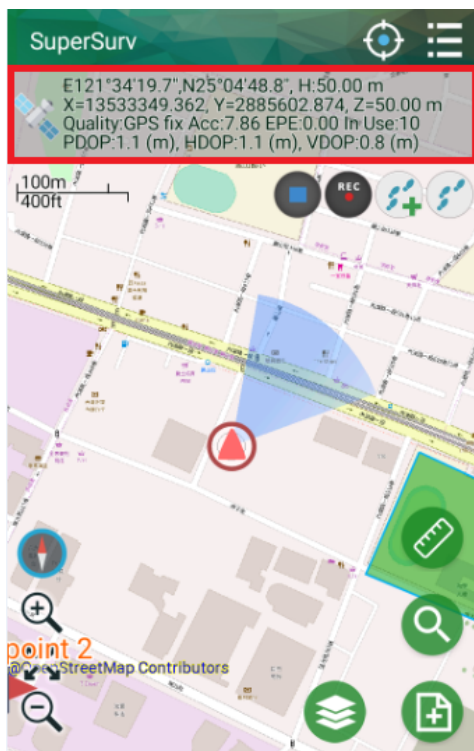
GPS_StatusBar**GPS Status Bar**

After activating GPS, the GPS status bar will show on the main screen and display

Detailed Function Description

location and satellite information. You can continuously tap status bar to view different location and satellite information, including longitude/latitude, XYZ (coordinate information from current projection), satellite information and accuracy.



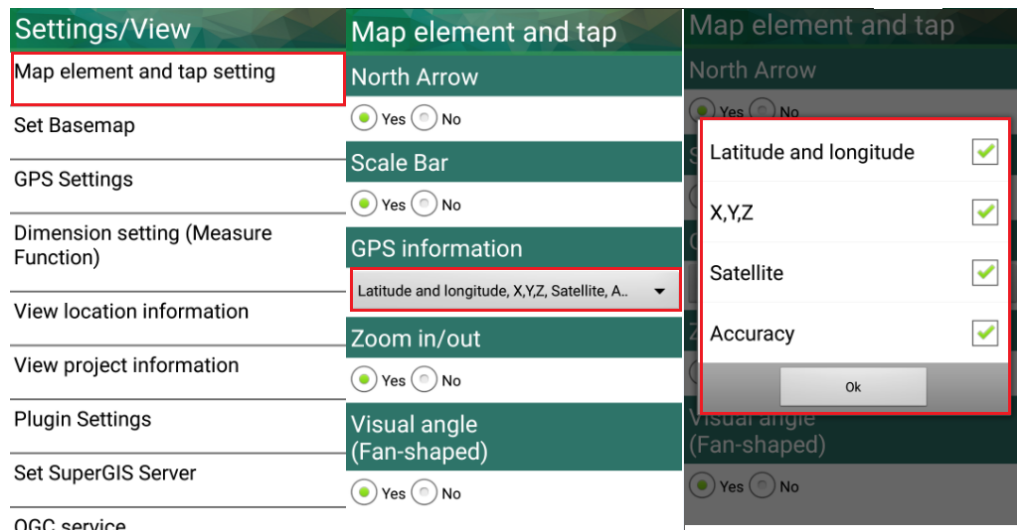


If you want to view all information at once, tap satellite button



Users can set display information in **Menu > Settings/View > Map element** and tap **setting > GPS information**.

Detailed Function Description



GPS Positioning

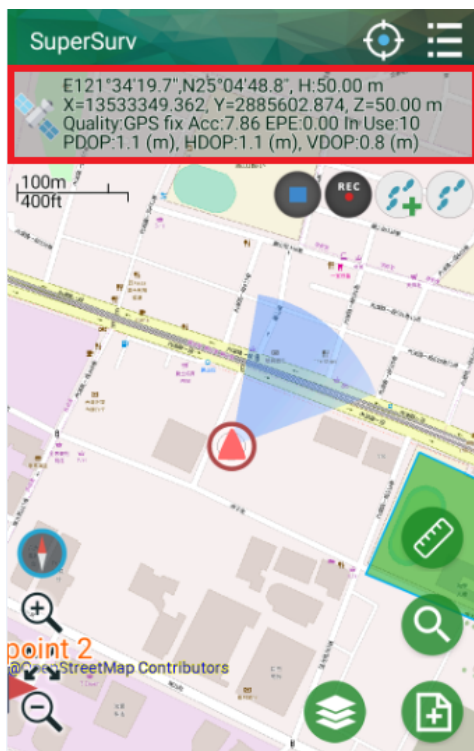
GPS Positioning

GPS Positioning allows to place GPS current position to the map center according to the current scale. The function only works when GPS is used. If you have not used GPS, please refer to [Whether to Use GPS](#). After GPS positioning works successfully, you can see the coordinates of the current position on the GPS status bar on the top of the map.

- 1. Tap GPS positioning on the toolbar.



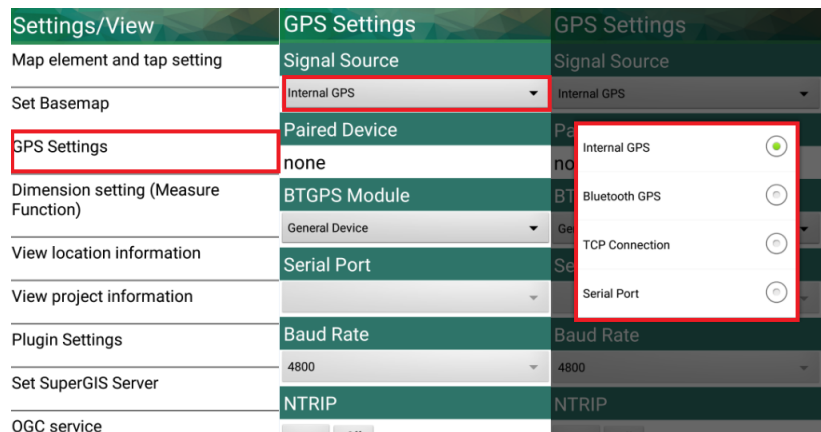
- 2. According to the current scale of the map, SuperSurv pan the GPS position to the map center. The GPS status bar displays the coordinates of the current position. You can tap the blank of the bar to switch longitude and latitude to projected coordinate system and GPS status.



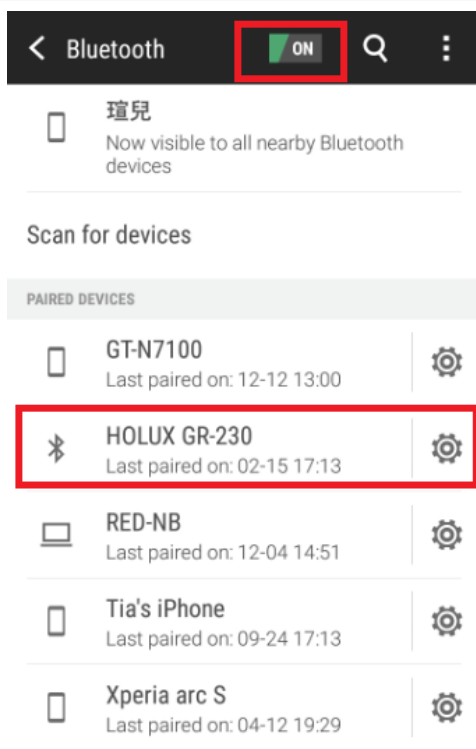
You can also have GPS show your current position and GPS position remain in map center.

1. Users can choose a GPS signal through GPS Settings. You can setup the detailed positioning data source you need, and SuperSurv is using Internal GPS signal as default.

Detailed Function Description



For using the external positioning sources, SuperSurv 10 allow user to connect to various of external GNSS receiver via Bluetooth communication. Please make sure the Bluetooth function had been turned on and already finish pairing with the external GNSS receiver. (Please notice: If you occur any trouble while pairing the Bluetooth external GNSS receiver with your Android device, we suggest you contact your hardware provider for further support.)



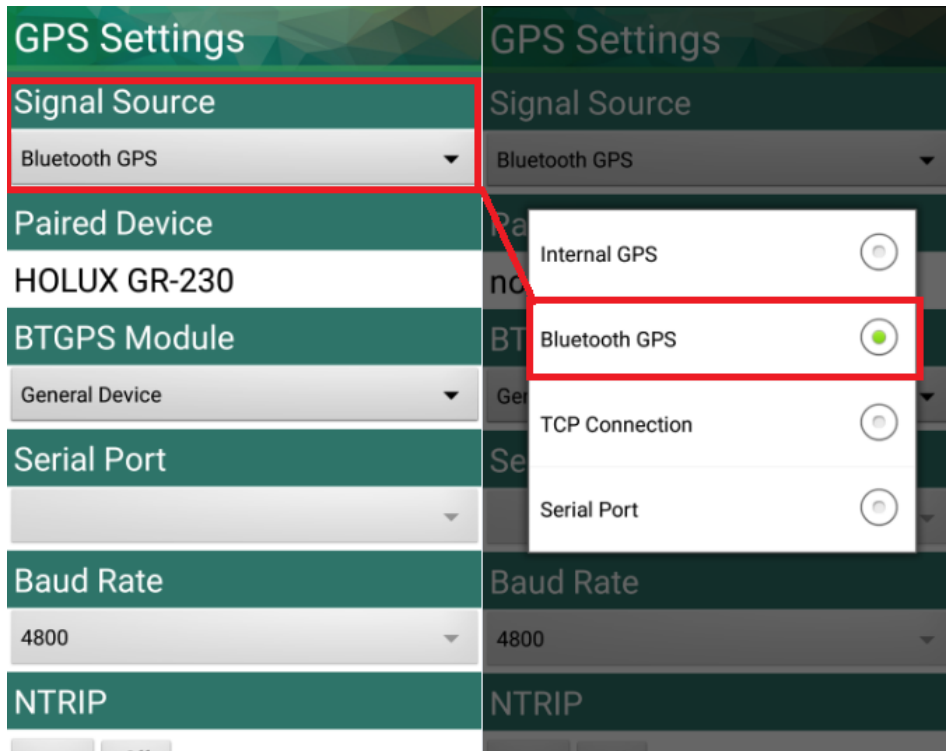
Next, please select the type of your external GNSS receiver. If the device you are using is the basic or consumer type of GNSS and will output the NMEA automatically, please select the General Device. If the device you are using is the mainstream profession high-accuracy GNSS receiver and is supported by SuperSurv, please select the corresponding option in the drop down list.

Detailed Function Description

GPS Settings	
Signal Source	
Bluetooth GPS	
Paired Device	
HOLUX GR-230	
BTGPS Module	
General Device	
Serial Port	
Baud Rate	
4800	
NTRIP	

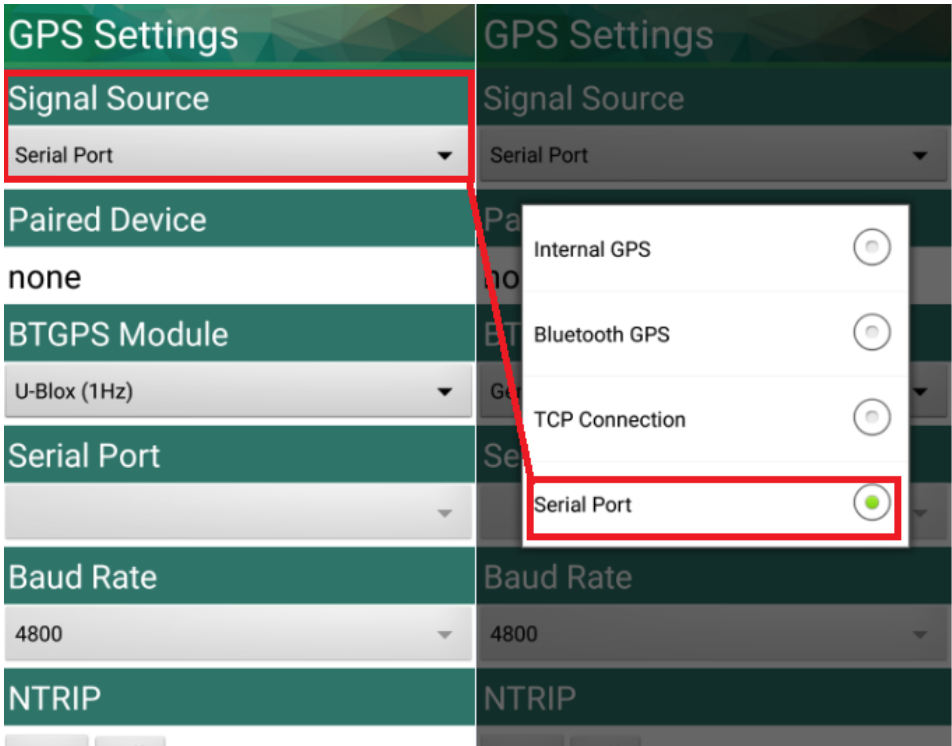
General Device	<input checked="" type="radio"/>
JAVAD (1Hz)	<input type="radio"/>
U-Blox (1Hz)	<input type="radio"/>
Skytraq (1Hz)	<input type="radio"/>
Hemisphere Crescent (1Hz)	<input type="radio"/>
Novatel OEM3 (1Hz)	<input type="radio"/>
Novatel OEM4 (1Hz)	<input type="radio"/>
Novatel OEM6 (1Hz)	<input type="radio"/>

Now you can select the Bluetooth GPS in the Signal Source drop down list, and SuperSurv will start linking to the external Bluetooth GNSS receiver automatically. Start positioning and survey with your external Bluetooth GNSS device now!



If your external Bluetooth GNSS receiver support NTRIP service and RTCM, you can simply setup the detailed settings and apply the linkage. Now SuperSurv 10 support about 80% GNSS module from 3 mainstream manufacturers: U-Blox, Hemisphere and NovAtel. After you enter the IP and Port of your NTRIP service caster, tab on the Get MountPoint button to receive the service list and select the option you want to apply with. After finishing setup, turn on the NTRIP service and SuperSurv will automatically receive the RTCM data and sent them to your external GNSS receiver via Bluetooth communication. If the RTCM data could be solved by the GNSS module, you will be having more accuracy positioning data for your field work.

Detailed Function Description



The screenshot displays the 'GPS Settings' and 'NTRIP Settings' panels. In the 'GPS Settings' panel, the 'Setting' toggle is highlighted with a red box. In the 'NTRIP Settings' panel, the 'Module' dropdown is set to 'NovAtel' (highlighted with a red box), the 'Server' is '210.241.63.193' (highlighted with a green box), the 'Port' is '81', the 'Username' is 'supergeo', and the 'password' is masked with dots. The 'Mount Point' dropdown is set to 'Taiwan(..)' (highlighted with a red box). To the right, a list of correction services is shown, with 'Taiwan(RTCM 3.1)' selected and its status indicator highlighted with a red box. Other services listed include 'Ublox', 'NovAtel', 'Hemisphere', 'ENRIQUE -Trimble BD9XX', 'DGNSS(RTCM 2.3)', 'Mazu_Penghu(RTCM 2.3)', 'TTG_2010(RTCM 3.1)', 'TTG_TWD97(RTCM 3.1)', 'KCG(RTCM 3.1)', 'Taiwan_RTCM23(RTCM 2.3)', and 'Kinmen(RTCM 2.3)'.

2. Tapping **OK** to complete the configuration. And you can view GPS position refreshed automatically on map in traveling.

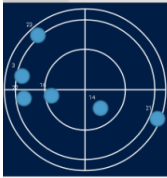
View Location Information

View Location Information

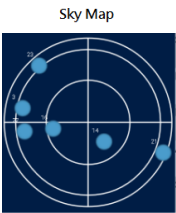
The information related to GPS satellite contains General, Details, and Satellite. The information can be viewed only when GPS is being used.

1. Tap Menu key > Settings/View > View location information.
2. View location information.

Detailed Function Description

General	Detail	NMEA	General	Detail	NMEA	General	Detail	NMEA
Position2017-02-14 16:23:46			Location source			278,*62		
			NETWORK			SGPGGA,0,*,*66		
Satellites 17			Date and time 2017-02-14 16:23:55			SGNGNS,NN,*,*53		
Longitude 121.572632			Longitude 121.572632			SGPVTG,T,M,N,K,N*2C		
Latitude 25.079728			Latitude 25.079728			SGPRMC,V,*,*53		
Altitude(m) N/A			Altitude(m) 25.079728			SGPGSAA,1,*,*1E		
Speed(km/h) N/A			Speed(km/h) N/A			SGPGSV,3,1,11,03,18,279,14,61,143,16,53,264,21,03,111,*79		
PRN Azimuth System Elevation SNR			Direction N/A			SGPGSV,3,2,11,22,20,261,23,12,319,26,65,329,27,23,188,*7C		
03 282 GPS 18			VDOP N/A			SGPGSV,3,3,11,29,21,046,31,48,039,32,33,147,*44		
14 140 GPS 63			PDOP N/A			SGLGSV,2,1,08,74,37,340,75,14,288,65,14,323,84,33,115,*66		
16 260 GPS 52			HDOP N/A			SGLGSV,2,2,08,83,22,053,85,11,165,71,35,205,72,46,*,*00		
21 112 GPS 03			VDOP N/A					
22 262 GPS 21						Start Clear Save		
23 319 GPS 10								
25 GPS								
26 323 GPS 66								

(1) General



Sky map displays satellites connected with the device at the current position.

Each spot represents one satellite and users can distinguish the satellite services from its color.

SuperSurv supports to capture location information from :

- GPS (Blue)
- GLONASS (Green)
- Galileo (Yellow)
- BeiDou (Red)
- SBAS (violet)

GPS Information	
Satellites	17
Longitude	121.572632
Latitude	25.079728
Altitude(m)	N/A
Speed(km/h)	N/A

Location source: to get the location source

- Satellites : Number of satellites
- Longitude: longitude position
- Latitude: latitude position
- Altitude: the altitude calculated from sea level
- Speed: the speed your move

(2) Details

General	Detail	NMEA
Location source		GPS
Date and time	2017-02-15 13:47:35	
Longitude	121.572293	
Latitude	25.080595	
Altitude(m)	76.0	
Speed(km/h)	0.000	
Direction		N/A
PDOP	1.4	
HDOP	1.1	
VDOP	2.0	

You can view the common GPS information here.

- Location source : to get the location source
- Date and Time : date and time
- Longitude : the longitude position you are
- Latitude : the latitude position you are
- Altitude : the altitude of the position you are. The way to calculate is from the sea level; the unit is meter.
- Speed : the speed your move
- Direction : the direction you face
- PDOP : Positional Dilution of Precision
- HDOP: Horizontal Dilution of Precision
- VDOP: Vertical Dilution of Precision

(3) NMEA

General	Detail	NMEA
278,*C2		
\$GPGGA,0.0,*66		
\$GNNGNS,NN,*53		
\$GPVTG,T,M,N,KN*2C		
\$GPRMC,V,*53		
\$GPGSA,A,1,*1E		
\$GNGSA,A,1,*00		
\$GPGSV,		
3,1,11,03,18,279,14,61,143,16,53,264,*21,03,111,*79		
\$GPGSV,		
3,2,11,22,20,261,23,12,319,26,65,329,27,23,188,*7C		
\$GPGSV,		
3,3,11,29,21,046,31,48,039,32,33,147,*44		
\$GLGSV,		
2,1,08,74,37,340,75,14,288,65,14,323,84,33,115,*6F		
\$GLGSV,		
2,2,08,83,22,053,85,11,165,71,35,205,72,46,115,*6F		
Start	Clear	Save

The protocol, made by National Marine Electronics Association, NMEA, is used to define the communication among data and data format.

Tap **Save**, you can save the data as a file in txt format.

3.8 Track

Track

Track functions include “track recording” and “Import/ close reference track.” Track




Detailed Function Description

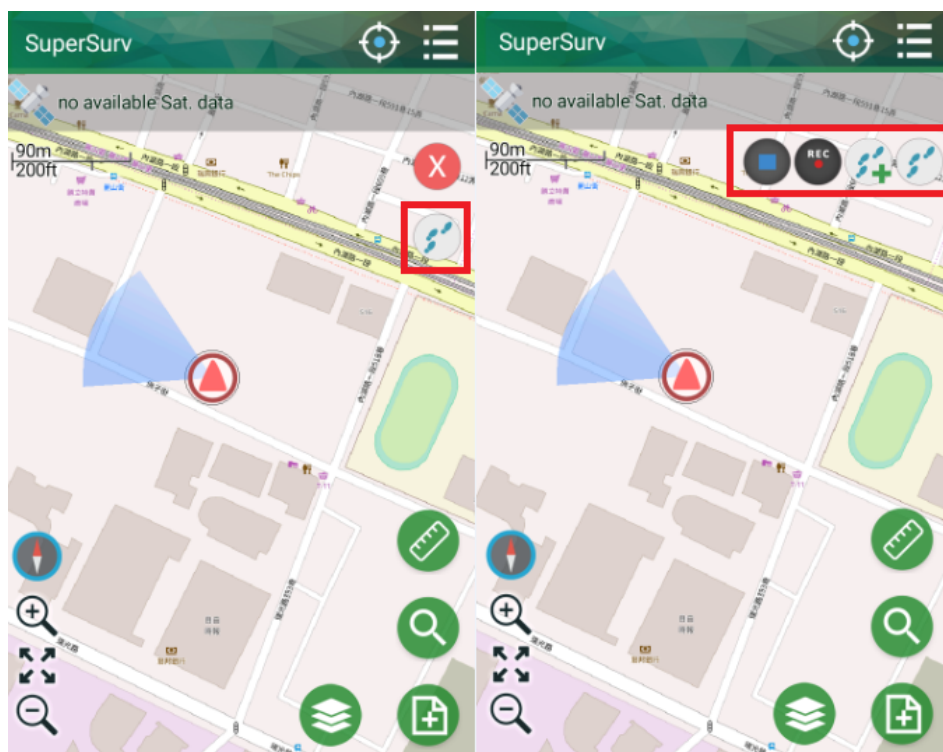
recording helps you record the path you pass by outdoor, and the track can be used for further application. Or next time when you are in field survey, you can apply display track on the map for references. The detailed functions will be described below.

Start to Record Track

Start to Record Track

“Start to record track” enables you to record the track received by GPS and helps you know the path you pass by.


1. Tap Menu > Settings > Plugin Settings > Check Track.
2. Back to main window, tap Plugin Settings  > Track  > Record , and track toolbar appears on the right.






Pause/Start to Record

Pause/Start to Record



“Pause/start to record” enables you to pause to record track and start to record track after pausing. In a survey, if you pass some areas where GPS signal is weak (e.g.

tunnel, forestry), you might want to pause to record. Then, you can tap  on the upper-right corner, the track record will be paused. The upper-left information will be

. When you want to keep recording, please tap , the upper-left corner will become  and the system keeps record. You can pause and record track more than once, but the track will be saved in the same file.

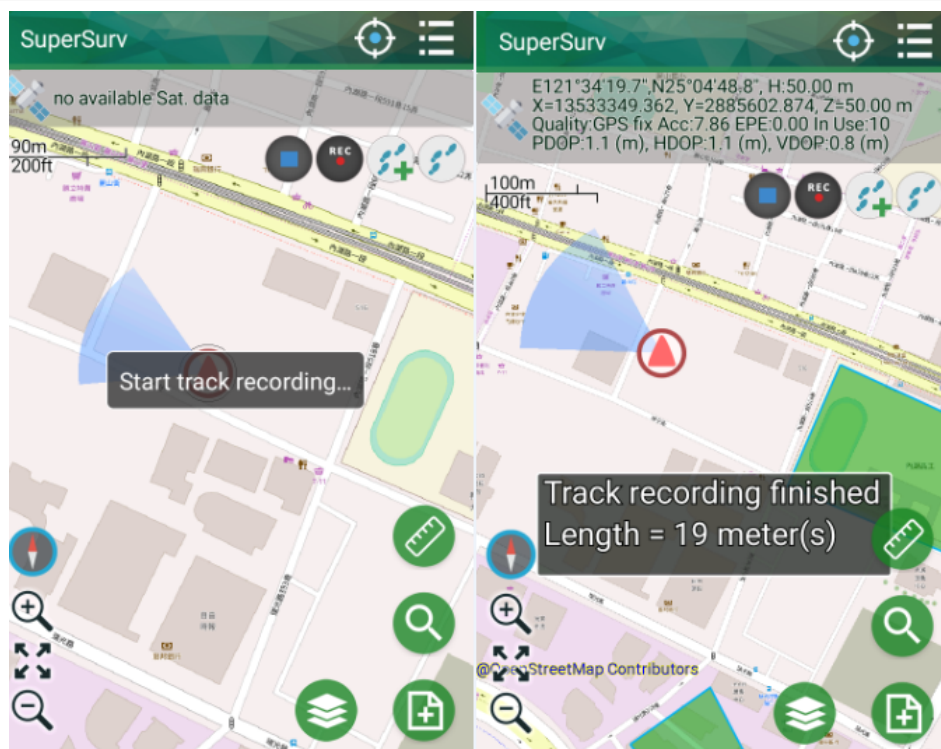
Stop Recording

Stop Recording

When the system is recording track, you can stop recording anytime. Tap , the system will save the current track. The upper-left information will become . The file will be named with year, month, date, and order. The file can be saved as point layer (*.kml) and line layer (*.shp). The file will be saved in the Track folder in the project folder.

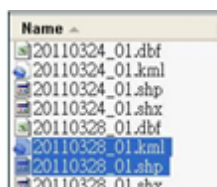
In addition, after stopping recording, the **Tracking Record Finish Length** will display on screen. To close track recording function, please tap **Track > Record** again.

Detailed Function Description



Note:

The track file is named with YYYYMMDD_XX. YYYY is year; MM is month; DD is date; XX is the order of the files created on the same date. The number starts from 01. For example: 20110328_02.



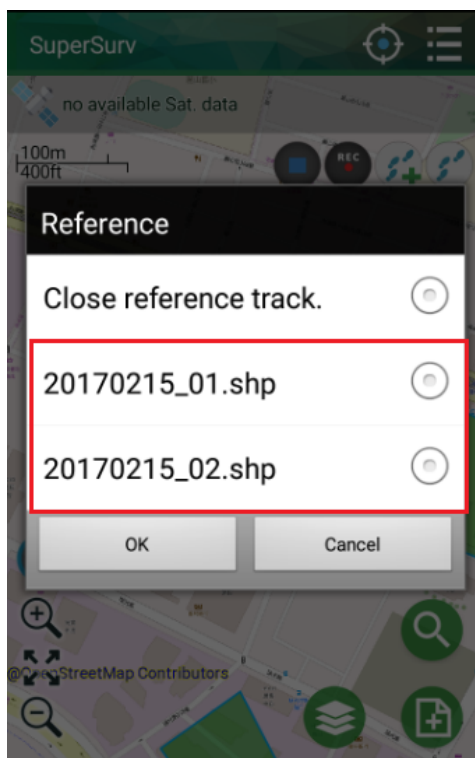
Import Reference Track

Import Reference Track

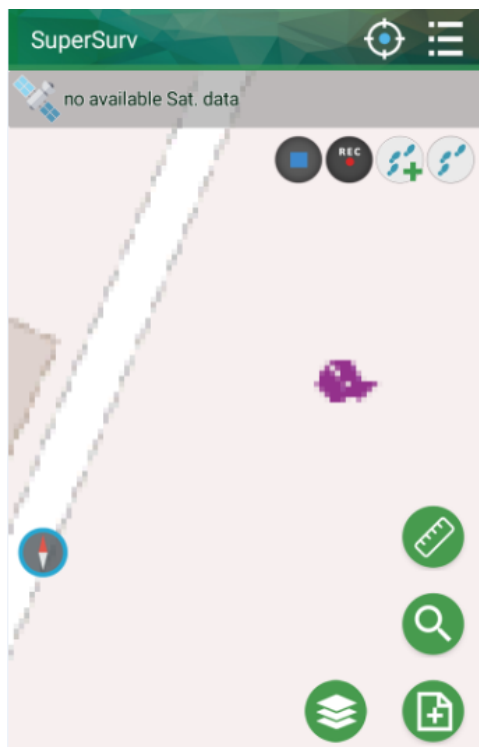
Reference Track allows you to import the saved track file (the file format should be SHP), and the map can be panned to the track.



1. Tap Track > Reference. If there is no track file in the folder, the message “there is no available track” will appear.
2. The window “Import reference track” appears. Select the track file you would like to import and tap OK.




3. Import reference track, and the map will be panned to the track and displayed with purple line.



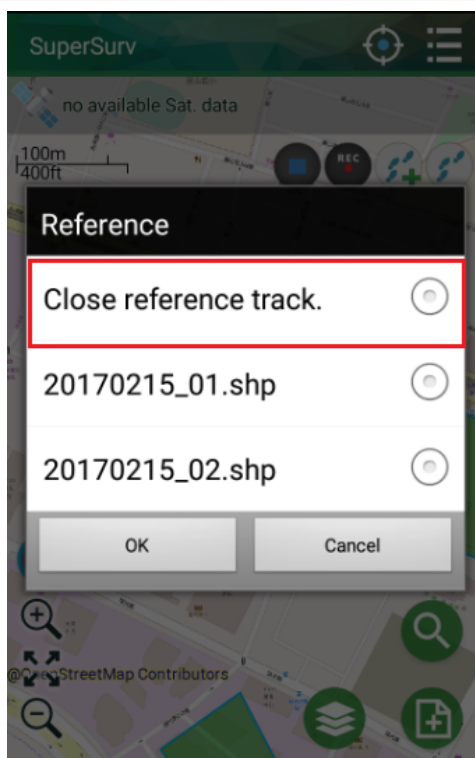
Close Reference Track

Close Reference Track

“Close reference track” can clear the imported reference track on the map. As the reference track is imported, you can close the reference track anytime.

1. Tap Track > Reference .

2. Tap “close reference track” in the menu, and tap OK.



3. The imported track is cleared.

3.9 Query


Query

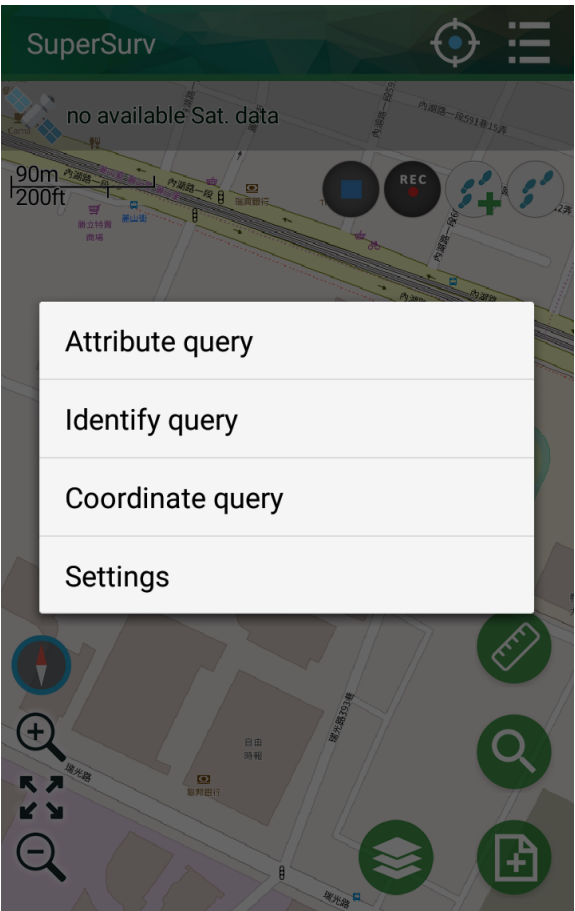
The system provides 2 methods to query: Attribute Query and Identify Query. If you would like to use Attribute Query, you need to set the conditions first. Then, the feature (s) that meet the conditions and its attributes will be displayed on the map. Attribute Query only allows users to query a single layer. If you use Identify Query, you need to specify the fields you would like to query. Then, tap the feature you would like to query, and the results will be displayed on the map. Identify Query allows users to query multiple layers. If you would like to use query function, please set the layer and fields first. SuperGIS Server layer (Feature Service) is able to be queried as ordinary layer.

Set the Layer and Field

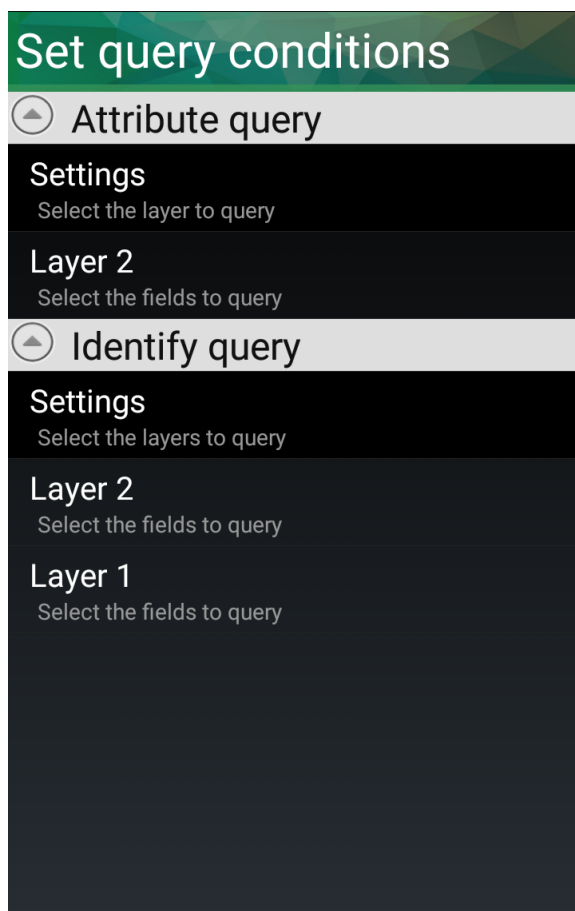
Set the Layer and Field

The system provides 3 methods to query: attribute query, identify query and coordinate query.

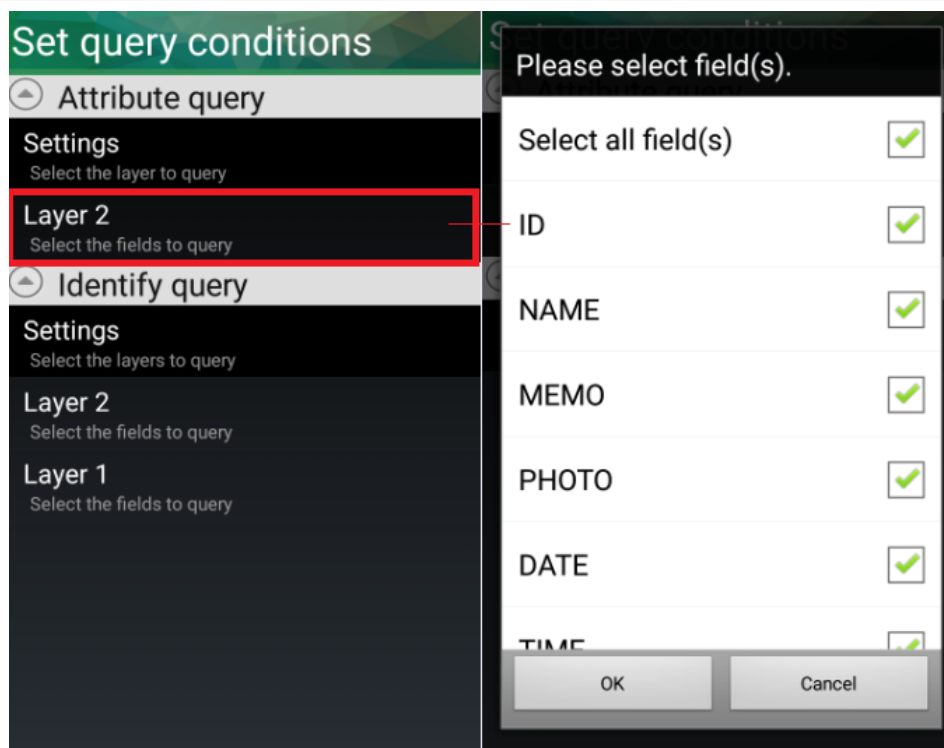
1. Firstly, you need to set the query conditions, tap Query  , and then query selection will pop up.



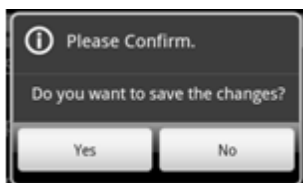
2. Tap settings to set the settings. Attribute Query only allows users to query a single layer; Identify Query allows users to query multiple layers, you can select all layers by checking "Select All." Coordinate query enables users to query the coordinate information by tapping.




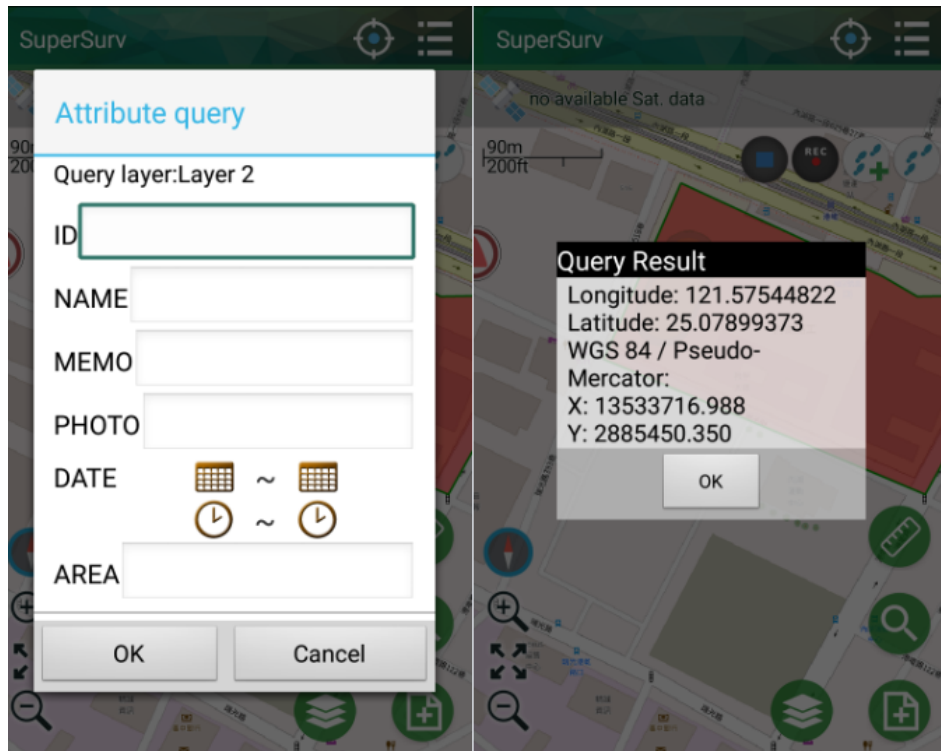
3. After setting the layers, the layer you set to query will be displayed below Setting. Then, you can set the fields you would like to query of each layer. Both Attribute query and Identify query are able to set to query multiple fields or you can check "Select All" to select all fields. Attribute Query and Identify Query both allows users to set multiple fields. After setting, please tap OK. Then, back to Set Query Conditions page, the fields you set to query will be listed here as well.



4. As the setting is finished, please tap Back key on the mobile device, and tap yes in the dialog.




5. Back to the map, and you can start to query. Tap Query  > Select Attribute Query. Then, the dialog shows up; please set the key words, value, or range. Or you can fuzzy inquiry by entering some key conditions. Tap OK. The features that meet the conditions will be displayed and panned to the map center.



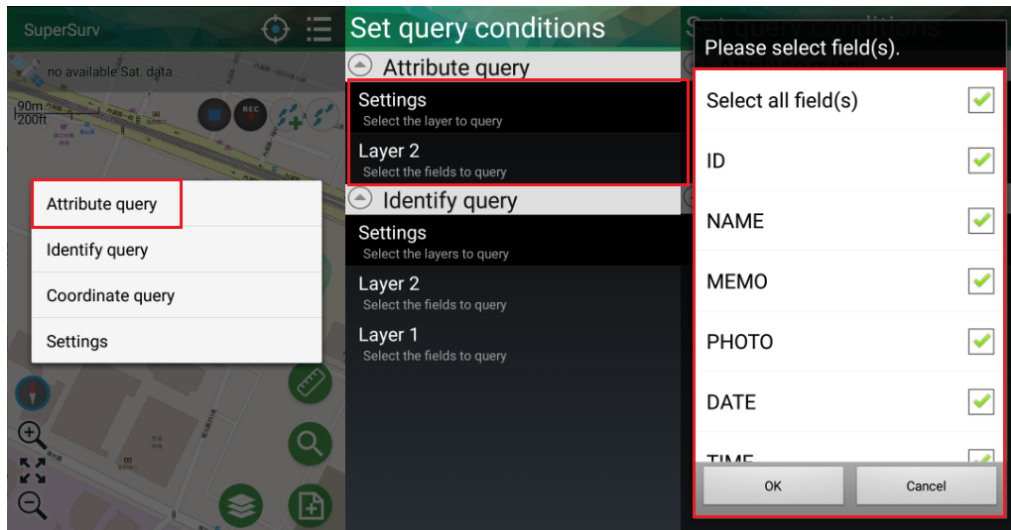
SuperGIS Server layers can be queried as the ordinary layers. All layers contained in the SuperGIS Server layer will be listed for user to select. And the way to query SuperGIS Server layers are the same as to query ordinary layers.

Attribute Query

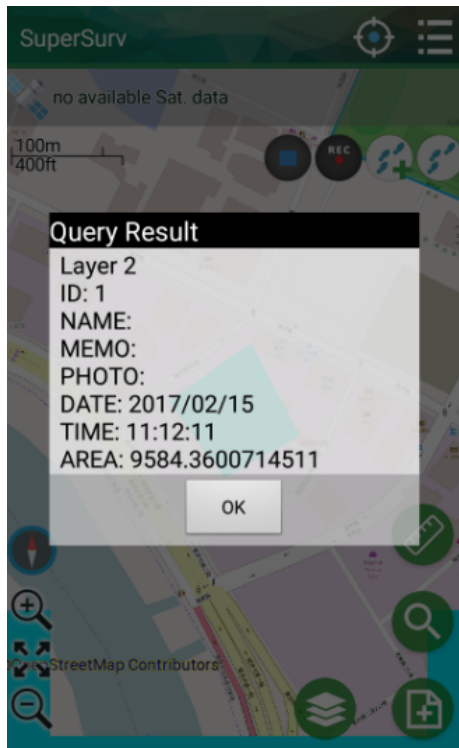
Attribute Query

1. Tap , and then select **Attribute query**, query conditions window appears.

Detailed Function Description




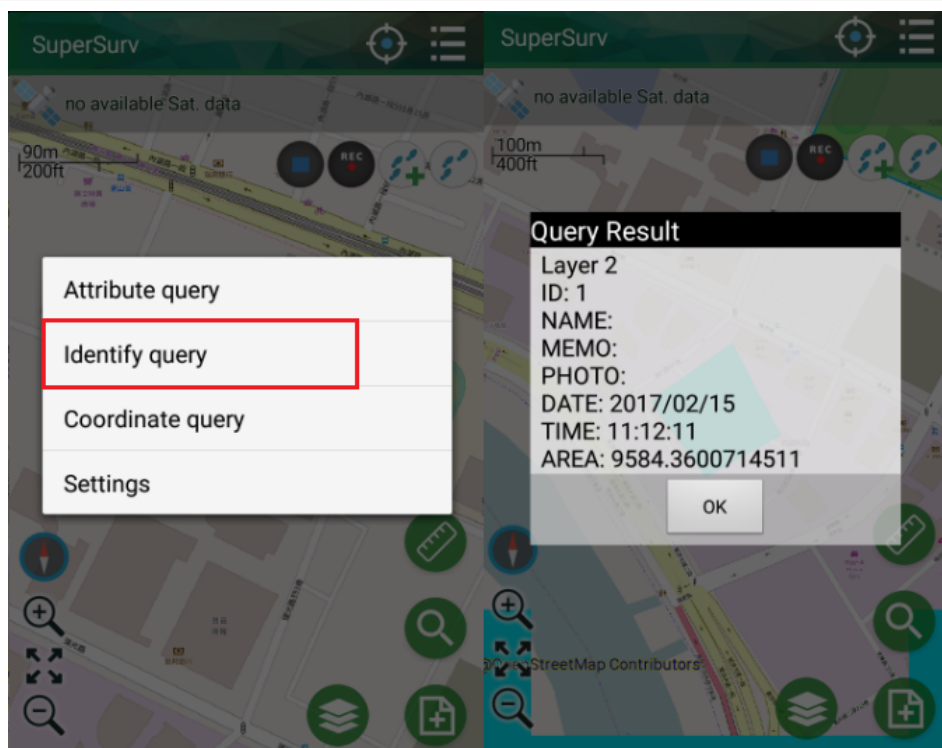
2. Please enter the conditions, or use fuzzy inquiry, and tap OK. The feature(s) that meet the conditions will be marked, and the attributes of the features will be displayed.



Identify Query

Identify Query

1. Tap  > select identify > tap the feature you would like to query, and the feature will be marked.

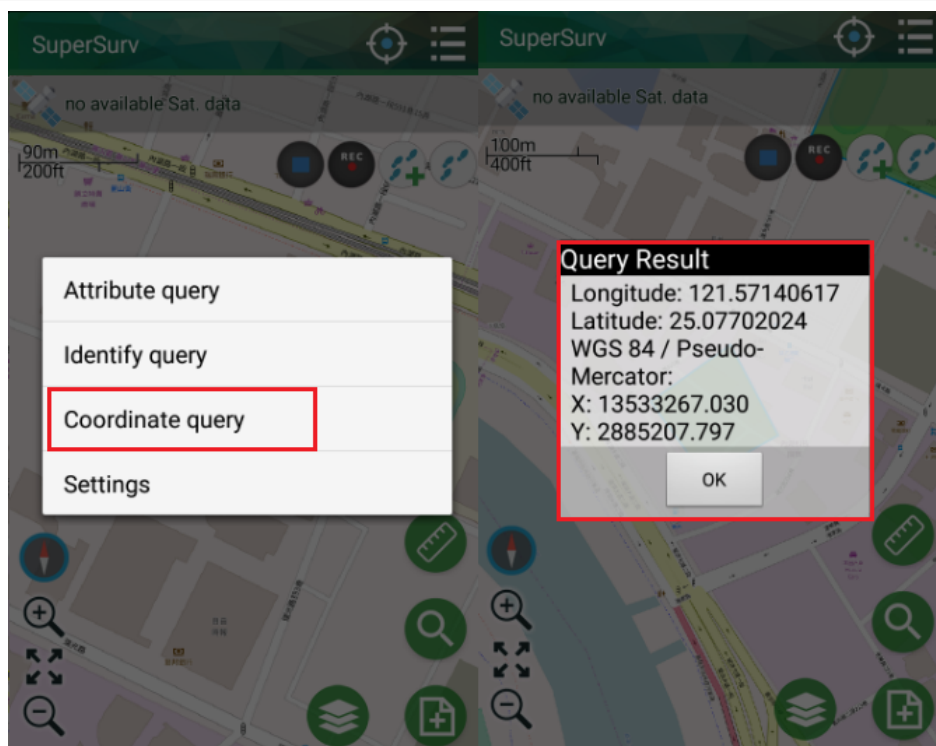


Coordinate query

Coordinate query



1. Tap 「Query」.
2. Select Coordinate query from the pop-up window.
3. Tap on screen where you want to query.
4. SuperSurv will show the query result, including Longitude/Latitude and coordinate information from current projection system.



3.10 Measure

Measure


The measure tools provide length measurement and area measurement. The units for length measurement include meter, kilometer, mile, and feet. The units for area measurement include square meter, hectare, square kilometer, square feet, and acre. To know how to switch between metric units and imperial units please refer to [Dimension Setting\(Measure Function\)](#).

Length Measurement

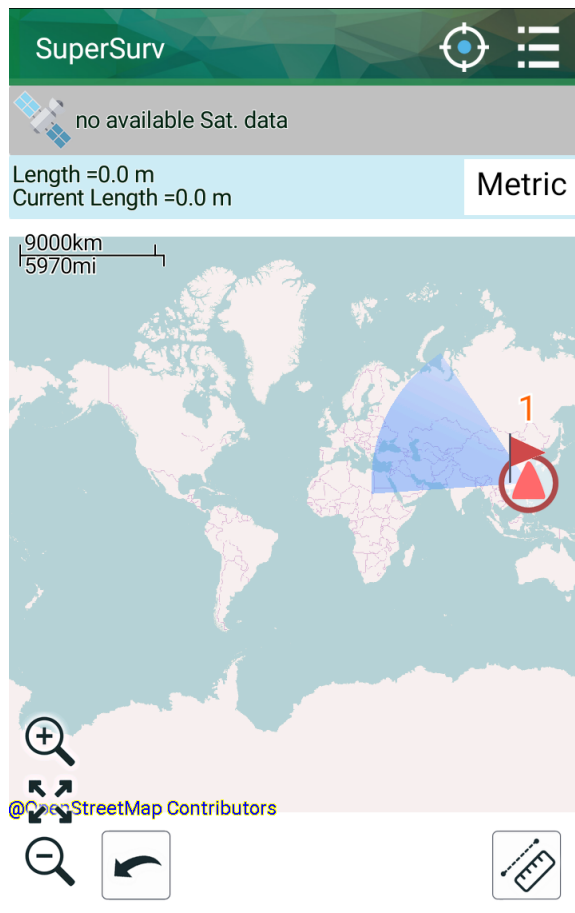
Length Measurement


Detailed Function Description

While manipulating with SuperSurv, you can measure the map anytime.

1. Tap Measure .


2. Enter into Measurement mode.

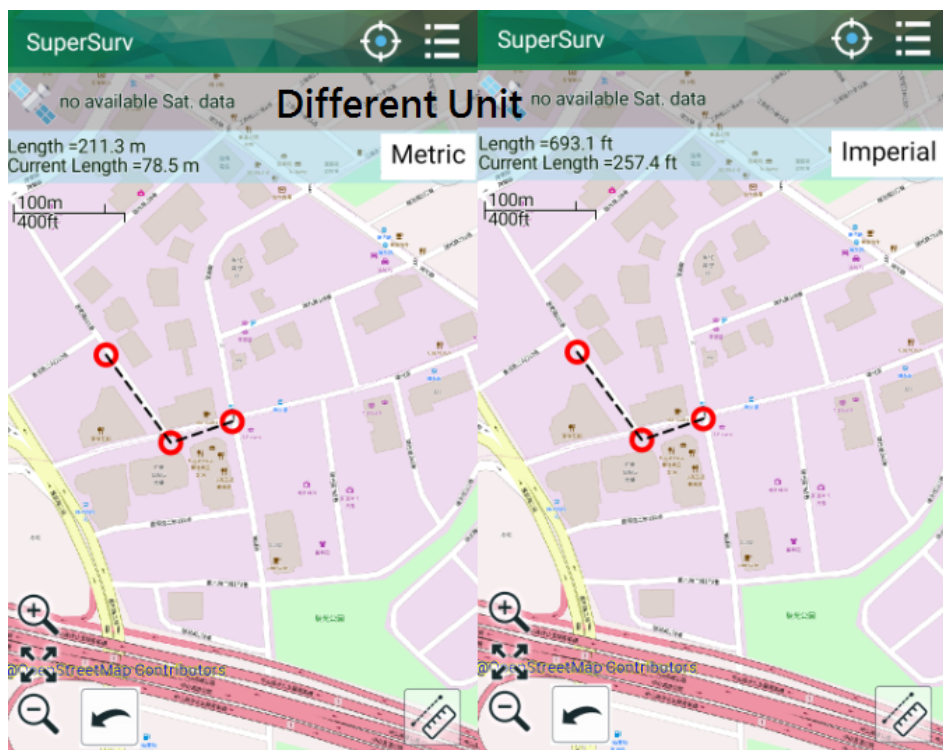


3. Tap Length Measurement .

4. Tap the map repeatedly to draw the segment you would like to measure. The

segment you draw will be displayed as a red line.

5. Tap Undo , and you can undo the previous measurement.
6. The system will calculate the total length of the segment you draw on the map. The results will be displayed on the map.



Area Measurement

Area Measurement

While manipulating with SuperSurv, you can measure the map anytime.


Detailed Function Description

1. Tap Measure  Tap  button until the button icon change to Area

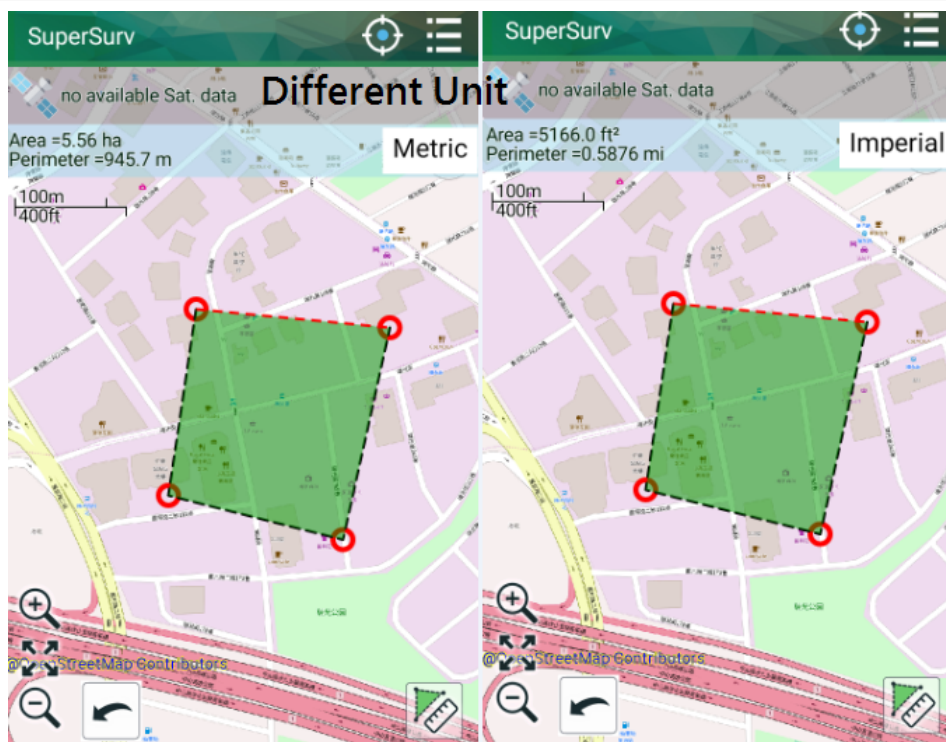
Measurement



2. Tap the map repeatedly to draw an area you would like to measure. The area will be framed with red lines.

3. Tap Undo , you can undo the previous measurement.




4. The system will calculate the area of the rectangle you draw on the map. The measure results will be displayed on the map.



Feature Measurement

Feature Measurement

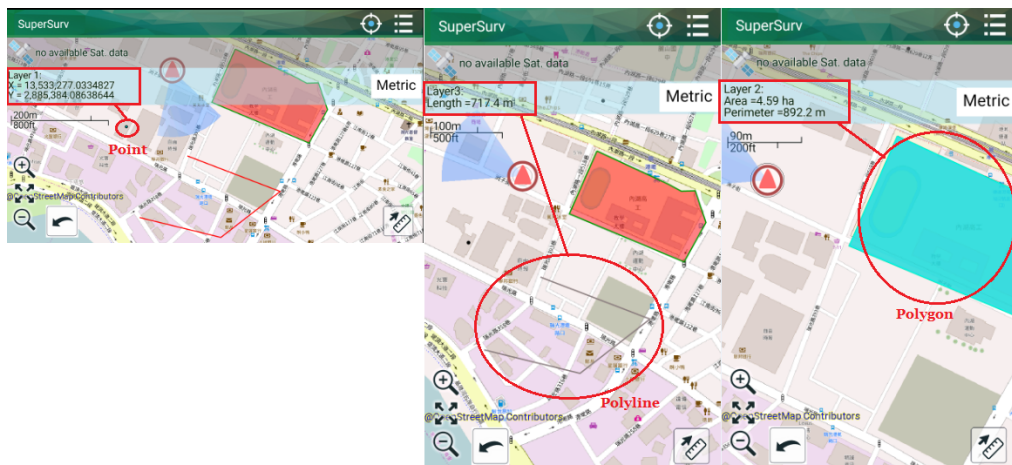
This tool allows you to measure features. To SuperGIS Server layer features, Feature Measurement tool also works on it.

1. Tap Measure  > Tap  until the button icon change to Measure Features .

Detailed Function Description



2. Tap on the feature you want to query and the result shows up in different type depending on the feature type.



Note:

- The length units include: meter and kilogram. (The length longer than 1000 m will be displayed with km.)
- The area units include square meter (the area larger than 10000 square meters will be displayed with hectares), hectare, and square km (the area larger than 1000 hectares will be displayed with square kilometers).
- The message below will show up if you are measuring but switch to different measurement or tap finish measurement. Tap OK and the current measurement will be canceled.

