



SuperGIS Mobile Engine 3.1 Specification

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Description

- Development environment and reference documents, including Object Reference, are available in Chinese and English.
- Manual (in Chinese and English) and sample codes are available.

Development Environment

- .NET Compact Framework as the development core, it allows developers to run Mobile GIS application development under the desktop program development environment, such as Microsoft Visual Studio 2005/2008, Borland Delphi 2006, etc.
- The developed mobile GIS application is authorized to be deployed to mobile devices that support .NET Compact Framework 3.7 and higher.
- Provide six kinds of object classes: Map Layer Objects, Tool Objects, Command Objects, Geometry and Symbol Objects, GPS Objects and Spatial Reference Objects. There are hundreds of objects and controls in total.
- Developers can build up a basic mobile GIS application quickly only by adding a few lines of code.
- Provide more than 80 kinds of toolbar buttons and developers are able to use them directly by dragging.

Spatial Reference Objects

- Spatial Reference Objects support the conversion between geographic and projected coordinate systems, which can be applied to overlap and export layers as the map displays.
- Hundreds of worldwide common projected coordinate systems are supported, such as Bonne, Mollweide, Robinson, Cassini and etc.
- The common format--*.prj is supported, and methods for customizing parameters are provided as well.

Tools for Map Manipulation and Display

- Multiple kinds of layers overlapping and displaying together is



supported, including feature layers and raster layers.

- Various basic map browsing tools are supported, such as pan, zoom in/out, full extent, and so on.
- Provide Rotate Map function.
- Provide Slide Zoom function.
- Symbology Objects support the basic symbol display for point, line and polygon. Point symbol supports picture symbol and simple symbol, while polygon symbol supports picture fill feature.
- Renderer Objects run the symbol settings based on the attributes of the features, including single symbol, unique symbol.
- Feature Annotator function provides the annotator for the three types of data, point, line and polygon, and the related settings.
- Camera function is provided, which supports to write GPS information into photo layers.
- Graphics Layer is supported; users are allowed to add diverse graphics on the same graphics layer, like point, line, polygon, rectangle, and ellipse. Also, users can add text annotations on each graphics.
- Photo Layer is supported; users can combine the photo containing coordinates with the layer. Therefore, as users tap the feature (the location where the photo was taken) on the photo layer, the photo will be opened by hyperlink.
- supports network analysis function to help users to set stops and barriers to have superior planning.

Tools for File Editing and Query

- Spatial Geometric Objects are provided and allow users to draw, edit and modify geometric shapes, including point, line and polygon.
- Users are able to query the features and attributes. Updating layer data and editing functions, including spatial and attribute data, are supported.
- High flexible and high speed feature selection and query functions enable developers to customize the selection and query mode to meet the client end's request.



GPS Tools

- With GPS Objects, various GPS related functions can be developed, including GPS information acquisition, GPS status display, creating wapoints, etc.
- GPS Objects support the NMEA 0183 standard, and users can also develop extension for other brand's standard.

System Architecture

- The developers can choose whether to use debug mode. During the development period, debug mode assists the bug correction. If developers use non-debug mode, Mobile Engine will not automatically return exceptions. In deployment, developers can choose non-debug mode to reduce the sudden interruption caused by bug.
- The built-in property settings of objects support 14 languages, including Traditional Chinese, Simplified Chinese, English, French, German, Arabic, Portuguese, Spanish, Italian, Japanese, Korean, Polish, Russian, and Turkish.
- The high flexible open object architecture allows developers to design plug-in extensions and also use the functions provided by Mobile Engine, such as the self-defined layer format, thematic map display and the customization of property page and so on.

Supported File Format

- Feature Class and Raster Class Objects support GEO (SuperGeo GEO Format) , SHP, JPEG, LAN, GEOTIFF, ECW, SID, SGR and DXF.
- Support the object settings to load and export XML format, allowing the object settings to be saved and re-used in other machines.

Prerequisites

- During the development period, the computer should be equipped with all of the three prerequisites:
 - ✓ Visual Studio 2005 SP1 or higher
 - ✓ Windows Mobile SDKs (Pocket PC/Smartphone)



- ✓ .NET Compact Framework 3.7
- In deployment, users only need to equip the computer with .NET Compact Framework 2.0 SP2 or higher.

Supported Platforms

- Pocket PC 2003
- Windows Mobile 5.x/6.x based Pocket PC and Smartphone