

Technical Summary

Your Best Choice for Mobile Mapping Solution

mPocket enables software developers to integrate GIS/Mapping functionalities with their mobile applications. Instead of an off-the-shelf software product, mPocket is an engine which allows customisation of different location based applications for handheld or mobile devices using Microsoft Embedded Visual Tools or Visual Studio .Net. In addition, a

Fast-Start Demo Kit is provided for developers to quickly deploy applications with standard GIS/Mapping functionalities. Applications built on mPocket can run on wide range of Microsoft Windows Mobile devices such as Pocket PC and Smartphone, with both online and offline data access capabilities.

mPocket provides comprehensive application programming interfaces for COM, C++ and etc. that let application programmers easily build their GIS and mapping solutions. It comes with many sophisticated geo-spatial features that empower your mobile applications, such as

- ❑ Comprehensive map viewing functions
- ❑ Fast spatial and textual data search
- ❑ Layer display on/off
- ❑ Sophisticated encoding for data protection
- ❑ Efficient indexing for optimised performance
- ❑ Redlining and exchange of mark-up information
- ❑ Built-in Global positioning system (GPS) connectivity
- ❑ Support variety of vector and raster data formats
- ❑ Dynamic and configurable map definitions and display controls using XML
- ❑ Support different coordinate systems
- ❑ Desktop utilities for simple data encoding
- ❑ Security control for applications deployment and distribution
- ❑ On-line server connection for wireless and remote applications



mPocket Features

Comprehensive map viewing functions

mPocket enables professional map display in your mobile applications. Developers can easily control and manipulate the map-viewing environment through mPocket's comprehensive API functions, like zooming, panning, window area, view rotate, and etc.

Fast spatial and textual data search

mPocket incorporates an advanced engine for both spatial and textual data search. With mPocket, your application can readily provide powerful mapping and enquiry functions such as graphics locate, spatial search, map inquiry, tool-tips and etc.

Layer display on/off

Like most desktop GIS software, mPocket organises data by layers. The API allows application to toggle on / off layer(s) for display basing on your business workflow and presentation requirements.



Sophisticated encoding for data protection

Data are always invaluable asset of an enterprise and must be well protected from illegal access or accidental loss of mobile devices. mPocket applies encoding function to encrypt commonly used data into proprietary format based on a given key.

Efficient indexing for optimised performance

Due to resource constraints of embedded device in storage and processing capability, mPocket's efficient indexing on both spatial and textual data offers you a desktop performance in a mobile device.

Redlining and exchange of mark-up information

mPocket offers basic editing functions for graphical mark-up and redlines on map. One can add symbols, lines or notes with definable attributes for commenting purposes. Redline data can be saved in GML format, for the exchange with any desktop GIS software or other mPocket applications.

Built-in Global positioning system (GPS) connectivity

mPocket lets you connect your application with GPS for dynamic location information. Besides capturing position data from GPS, mPocket provides basic interfaces to configure the communication ports and protocols. mPocket currently supports most common protocols such as NMEA-0183.

Support variety of vector and raster data formats

In addition to display spatial data in vector form, mPocket allows the overlay of vector data on raster images. It supports commonly used image file format such as BMP, JPG, PNG. Additional raster formats will also be available with dynamic loaded library such as GIF, ECW.



Dynamic and configurable map definitions and display controls

All data and map display definitions of mPocket are stored in an XML file. You simply modify the XML file to re-configure your mapping applications. The XML file lets you define layers, displayable scale ranges, colour definitions and symbol properties, data file definitions, registered locations of raster images, default settings and etc. For security purpose, you may also encode your XML file into binary format.

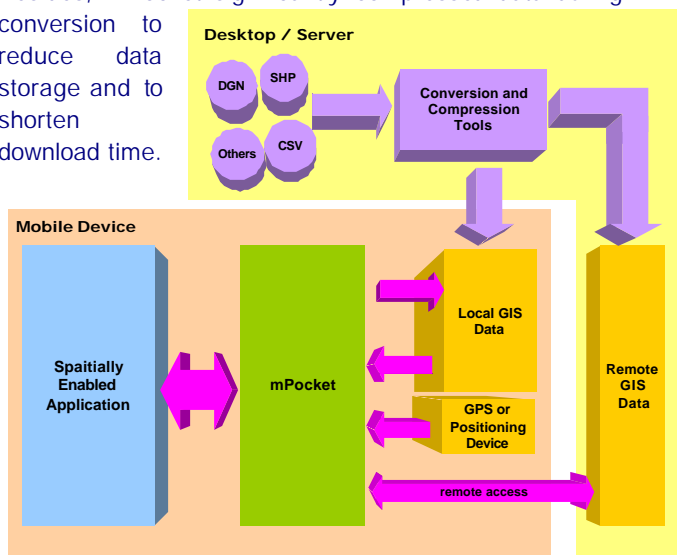
Support different coordinates systems

mPocket provides flexible and configurable coordinate system for the storage and processing of geographical data. Depending on your positional requirements, you can store and manipulate data in projected (easting and northing) or geographic (longitude, latitude) space. mPocket also supports the customisation of formula for user-defined projections.

Desktop utilities for simple data encoding

mPocket encodes commonly used GIS data such as SHP files into mPocket format for protection and to optimise performance. Desktop conversion tools in both executable files and COM objects are provided for customisation and automation of the conversion process.

Besides, mPocket significantly compressed data during conversion to reduce data storage and to shorten download time.



Security control for applications deployment and distribution

mPocket protects both data and executable files from illegal uses. The library functions will only be enabled once license is validated. It enables developers to securely deploy and distribute their applications and data.

On-line server connection for wireless and remote applications

Due to the storage limitation of mobile devices, seldom-used data may not be able to always store in the device. mPocket resolves the problem by supporting dynamically loaded data, which data are added into the applications during run-time. For example, with wireless connection, missing data sets can be downloaded from a remote server for display and processing in the mPocket application.



Platforms

mPocket is now available in different platforms, including Microsoft Pocket PC, Microsoft Smartphone and Symbian Smartphone. With the same architecture, functionality and interfaces, developers can easily build mobile solutions for multiple environments.



System Requirements

Pocket PC: PDA/Embedded Device with Windows CE 3.0 / Pocket PC 2002 / Pocket PC 2003, 32MB RAM

Smartphone: Microsoft Smartphone with Smartphone 2002 / Pocket PC 2003 Windows Mobile, 32MB RAM

Desktop: Pentium based PC, Microsoft Windows XP / 2000 / NT 4.0, 64 MB RAM, Microsoft ActiveSync 3.0 or above

Customisation Tools: Microsoft Embedded Visual Tools 3.0 / Embedded Visual C++ 4.0, Visual Studio 6.0 / Visual Studio .NET 2003

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