

Microsoft® MapPoint® Location Server



Supporting Real-Time Location for Business Applications

MapPoint Location Server (MLS) is a component of MapPoint Web Service (MWS) that allows the integration of real-time location into business applications. It provides access to location providers such as mobile network operators and acts as a proxy between applications and MapPoint Web Service.

Key Benefits of MLS

Cost-effective integration of real-time location information into applications. With MLS, enterprises and developers can easily integrate real-time location information into their business applications and processes. MLS provides a single, mobile-operator-independent API for obtaining location from different mobile operators. Therefore, developers do not have to write operator-specific code to integrate location into their applications. The mobile-operator independent API is mapped to individual mobile operators through operator-specific location providers.

Easy, flexible programming. Using such standards as Simple Object Access Protocol (SOAP) and Extensible Markup Language (XML), MLS puts real-time location solutions within the grasp of virtually any developer, without the need to develop specific geographic information system (GIS) or mapping knowledge. And MLS-based applications can be developed in a wide range of programming languages, including all .NET programming languages, Java, or Perl.

Enterprises and users in control of privacy. Enforcement of user privacy preferences takes place within the enterprise's networks, and the enterprise has control of default privacy settings. With the Mobile Locator application running on a computer or Pocket PC Phone Edition, users control their privacy preferences and can choose to be informed when they are being located. Privacy preferences include, for example, the ability to appear offline (by turning visibility off) and block individual users or all users from obtaining location. All location information or personal information (such as a mobile phone number) is encrypted when passed from MLS to MapPoint Web Service or to the mobile operator. Only information needed to perform the service requested by a user is exchanged between the enterprise and MapPoint Web Service (e.g., latitude/longitude) or mobile operator (e.g., mobile phone number).

Seamless integration with Microsoft infrastructure. MLS integrates with existing Microsoft infrastructures such as Windows Server™, Microsoft SQL Server™, Active Directory®, and Microsoft .NET Framework, thus using investments that many companies have already made.

APIs to MapPoint Web Service. MLS acts as a proxy to MapPoint Web Service, leveraging powerful mapping capabilities, cost-effectiveness, service-level commitment, Microsoft .NET connectivity, and integration with other Web services. MWS currently serves more than 15 million transactions daily. More information about MWS can be found at the MapPoint Web site at <http://www.microsoft.com/mappoint/webservice/>.

MLS-Based Applications Run the Gamut

MLS, as a component of MWS, enables a broad range of enterprise applications to benefit from the integration of real-time location information and mapping/routing capabilities. MLS and MWS can be integrated into almost any Internet-enabled application. With the same core technology, customers can easily deploy the following applications throughout an organization:

Asset tracking and fleet management. When managing a fleet of vehicles, knowing the real-time location of all drivers allows management to respond to customers' needs more efficiently. Whether they deliver goods or offer a service, drivers in the field now need only a cell phone that supports their mobile operator's location-based services

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platform, thus dramatically reducing the expense associated with tracking fleet location in real time. Central dispatch can monitor all vehicles and make dynamic adjustments to routes, service calls, and deliveries as conditions change throughout the day at customer or store locations. In addition, drivers can communicate with other nearby drivers when they need parts or assistance, and customers can be told exactly when the representative will arrive and who will be coming.

Field sales. Mobile sales professionals can access real-time locations. For example, in unfamiliar areas, they can locate themselves as well as their customers and prospects, get driving directions to customers or hotels, and add nearby last-minute appointments to their itineraries. Benefits include increased productivity, reduced driving time, and increased time with customers and prospects.

MLS Components

Businesses can have powerful and cost-efficient location information. Microsoft® MapPoint® Location Server (MLS) includes Microsoft MapPoint Location Server management console, Microsoft MapPoint Location Provider, Notification Providers, Microsoft MapPoint Location Server Web Service, Microsoft MapPoint Location Server database, Microsoft MapPoint Server Management API, Microsoft MapPoint Mobile Locator for PC, and Microsoft MapPoint Mobile Locator for Pocket PC Phone Edition.

Location Server management console. This Microsoft Management Console (MMC) snap-in enables MLS administrators to configure and administer MLS and allows for user provisioning and privacy management.

Location Provider enables MLS to get real-time location from mobile operators.

Notification Providers enables MLS to send notifications to its users via SMS or e-mail.

Location Server Web Service provides SOAP APIs for obtaining location and user-privacy management, and proxy APIs to the MapPoint Web Service for Find, Route, and Render functionalities.

Location Server database is an SQL Server 2000 database that stores information about users, Find Nearby categories, and other information related to MapPoint Location Server. The database is administered using SQL Server tools such as Enterprise Manager and Query Analyzer.

Location Server Management API. This set of APIs is used to create custom provisioning, privacy, and user management tools.

Mobile Locator is a client application for Windows® 2000 and Windows XP or Windows Mobile™ software for Pocket PC Phone Edition. Functionalities for the desktop and Pocket PC Phone Edition version are similar; however, the user experience and type of applications used may differ. Features include the following:

- Login authentication
- Privacy management
- Real-time location
- GPS integration (Mobile Locator for Pocket PC Phone Edition only)
- Find/directions mode
- Display maps and driving directions, zoom functionality, panning, and pushpins for marking locations

More information on MLS is available at: <http://www.microsoft.com/mappoint/mls>.

More About MapPoint Location Server

Currently MapPoint Mobile Locator for PC and Pocket PC Phone Edition supports English only. MapPoint intends to offer location providers for several North American and European mobile operators.

MapPoint Location Server software development kit (SDK) includes detailed documentation that supports developers in building powerful location-based applications and services using MLS.

Location Server Web Service is for the development of location-based services (LBS)-enabled applications such as mobile sales force or dispatching.

Location Server Programming is for developing tools and/or utilities to automate the management of Location Server such as adding new employees to MLS, updating user profiles, or removing existing users.

MapPoint Location Server can only be used with a valid agreement for MapPoint Web Service. More information on the MWS licensing model can be found at <http://www.microsoft.com/mappoint/webservice/howtobuy.msp>.