

MapInfo® *MapXtend*™

Wireless spatial technology for delivering enterprise applications to field workers.

MapInfo® *MapXtend*™ is a wireless spatial technology that enables organizations to deliver their enterprise applications over the Internet to field workers. Applications built with MapXtend wireless spatial technology can allow field workers, such as service technicians, to access live corporate data via handheld Personal Digital Assistants (PDAs) for faster and more efficient scheduling and servicing operations. MapXtend leverages MapInfo's entire suite of market-proven Internet geocoding, routing and mapping technologies to provide location-based intelligence for the enterprise field worker.



Industry Trends

Convergence of Internet and wireless communication technologies is creating huge demand for access to Internet services from wireless handheld devices. This convergence creates a significant opportunity for telecommunications providers to build a competitive advantage by deploying their own enterprise applications via handheld devices to mobile field workers. The net result can be a more efficient field operation, and ultimately, a more satisfied, loyal customer base and reduced churn.

Location-based data

The common thread among wireless applications for handheld devices is location-based data. Field workers need to relate their present location to where they are going next and where infrastructure is located. They also need access to important data associated with each customer or piece of equipment they are servicing.

MapXtend is developed on MapInfo's 100% Java Internet platform, enabling immediate access to precise and up-to-the-minute location-based data on customers and infrastructure.

MapXtend wireless spatial applications can significantly improve telecommunications field service operations such as service calls and infrastructure repairs.

MapXtend Benefits

- **Greater efficiencies.** Field workers can handle more service calls due to better scheduling and routing, and last-minute calls can be added and handed to the nearest field worker.
- **Less network downtime.** Field workers can access live network alarm information, and locate and repair trouble spots before network failures occur.
- **Updated, accurate databases.** Field workers can send updated information on call or infrastructure status to the

corporate database from their PDAs.

- **More satisfied, loyal customers.** Improved, faster customer service and more reliable networks can lead to satisfied, loyal customers and reduce churn.

Customer Applications

MapXtend wireless spatial technology is ideally suited for telecommunications network and service providers who have a large contingent of field workers that need access to live corporate data.

Field Asset Management

- **Network alarm response.** Field workers can have access to severity and status of network alarms and can be dispatched faster.
- **Infrastructure repairs.** Field workers can be routed to facilities to perform repairs.
- **Infrastructure updates.** Field workers can update corporate

databases on repairs performed or service calls completed.

- **Call-before-you-dig.** Field workers can access or update corporate data on underground infrastructure to avoid costly cuts in lines.

Customer Service

- **Scheduling & Routing.** Field workers can be routed to next service call and complete more calls including last minute additions.
- **One-step provisioning from the field.** Field workers can access centralized provisioning systems saving time and money.

MapXtend Functionality

MapXtend offers two way wireless communication between a handheld client and a server over the Internet.

Client Functionality (Palm OS and Windows CE)

- Displays raster and vector maps as well as attribute data.
- Save downloaded data to local storage.
- Query and display the local data.
- Create thematic maps on locally stored data based on attribute values.
- Update, capture and store local attribute data.

- Update and capture spatial data (points, lines, polygons).
- Upload updated and captured data to server.
- Supports all coordinate systems supported by MapXtreme Java Edition.

Server Functionality

- Java-based servlet technology, runs on any supported servlet enabled Web server.

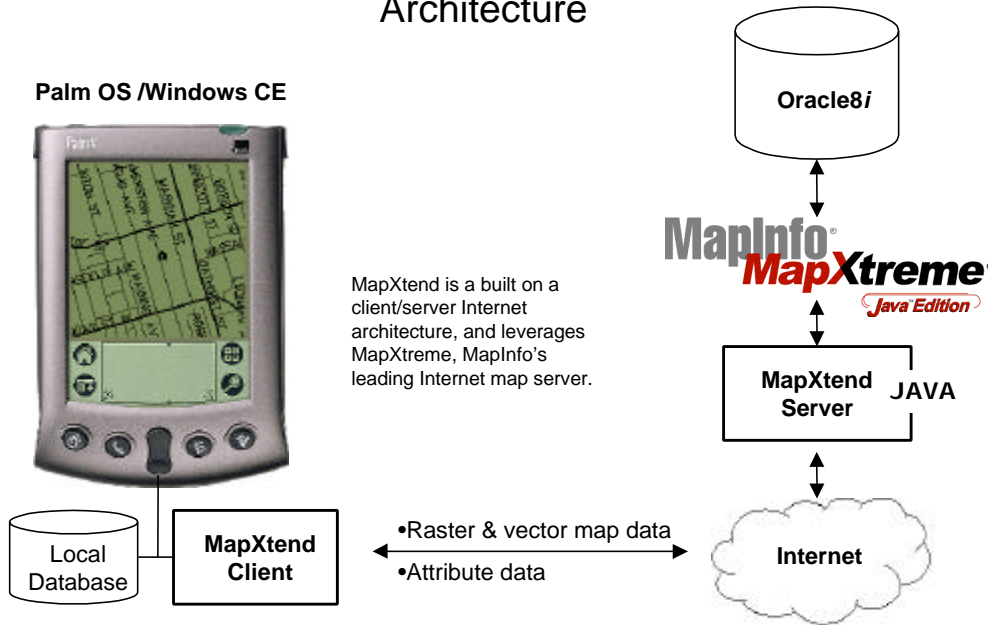
- Can handle queries from multiple concurrent clients.
- Can utilize any data source supported by MapInfo MapXtreme™ Java Edition, including Oracle8i.
- Transmits raster (gray scale and color) map, vector map and attribute data to clients via a compressed binary stream.
- Converts images generated by MapXtreme Java Edition into client-specific formats.

- Highly compressed data stream for efficient & secure map/data downloads.
- Performs client authentication, and restricts data access based on a set of security rules.

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MapXtend Architecture



MapXtend is a built on a client/server Internet architecture, and leverages MapXtreme, MapInfo's leading Internet map server.