

MapInfo® SpatialWare®

THE INFORMATION MANAGEMENT TOOL FOR STORING, MANAGING AND MAINTAINING LOCATION-BASED DATA

MAPINFO SPATIALWARE SOFTWARE ENHANCES THE VALUE OF YOUR SPATIAL DATA BY ENABLING IT TO BE STORED, MANAGED AND QUICKLY RETRIEVED FROM LEADING COMMERCIAL DATABASE MANAGEMENT SYSTEMS INCLUDING IBM® INFORMIX® AND MICROSOFT® SQL SERVER.

MAPINFO SPATIALWARE IS THE FIRST SPATIAL INFORMATION MANAGEMENT SYSTEM TO IMPLEMENT SQL-BASED ADVANCED SPATIAL ACCESS, ANALYSIS AND MODELLING IN A DATABASE ENVIRONMENT. FOR THE OCCASIONAL USER, OR THE SOPHISTICATED DATABASE PROGRAMMER, IT SETS A NEW STANDARD IN EASE OF USE AND SEAMLESS INTEGRATION. SIMPLY STATED, SPATIALWARE ALLOWS YOU TO ENHANCE KEY BUSINESS PROCESSES BY CONNECTING DATA AND LOCATION.

BENEFITS

- ▶ Extend Functionality—Stores spatial data in your database for better data management extending the core capabilities of your database to your spatial data
- ▶ Better Data—Eliminates redundant geographic data files to provide better data integrity, recovery and security
- ▶ Flexibility—Analyze data at the database tier and the client tier, depending upon your architecture
- ▶ Cost-Effective—Centralize data and reduce the resources needed to store and maintain data—saving both time and money
- ▶ Scalability—On the desktop or throughout the enterprise, *SpatialWare* can be integrated into any environment
- ▶ Ease of Use—*MapInfo SpatialWare* allows native SQL to access spatial functions so existing applications can access spatial and non-spatial data from your database the same way they always have

OVERVIEW

MapInfo SpatialWare enhances the value of your corporate data by extending the storage and analysis capabilities of your database environment. *SpatialWare* enables location-based, or spatial data, to be easily integrated with non-spatial data both on the desktop and across the enterprise ensuring data accessibility, scalability, integrity, reliability and security.

Storing key business information and customer location information in your database allows users to query both spatial and non-spatial data types within a single SQL Server query. *SpatialWare* provides a consistent and standard-based environment allowing an enterprise to integrate spatial data within the corporate database environment. This empowers corporations to collect, manage, analyze and visualize data in a spatial context, as well as the traditional non-spatial context. Decision makers can now visualize and analyze large amounts of complex data—better, faster and easier than ever before.

FEATURES

- Complete server-based spatial information management system
- Efficient, flexible spatial data storage for MapInfo and other spatial data storage in leading commercial database management systems

- Powerful, fully-integrated Standard Query Language (SQL) extensions for spatial operations
- Highly scalable to thousands of users and terabytes of spatial data
- Integration and management of spatial and business data in a single database environment
- Central storage and management of large volumes of spatial data
- Align with ISO/IEC 13249-3-1999; Spatial Standard and the Open GIS Consortium's Simple Feature Specification
- Standards-based spatial operators such as buffer, contains, adjacent to, overlap, length, union, slope, area and perimeter
- Sophisticated *SpatialWare* Operator extensions like Difference, Convex Hull, Clean, Relate, Cross and many others
- 1000 predefined coordinate systems are supported as well as custom user-defined projection systems
- *SpatialWare* supports data extract and import in both OGC WKB (Well Known Binary) and WKT (Well Known Text) formats

THE SOFTWARE

MapInfo SpatialWare is made up of three main components:

- **Spatial Data Type**—provides the storage mechanism and necessary functionality to store, retrieve and maintain the content of spatial data. It also allows the data type to be cast to useful derivative types for use by client software. The geometries stored in this data type, can either be two- or three-dimensional. The data type and the SQL functions are based on ISO SQL/Multimedia standards and OpenGIS Consortium standards.
- **Spatial Indexing**—Implements a special indexing scheme based on Range—Tree (R-Tree) technology, designed to index spatial data. R-Tree indexing is well suited for distribution patterns typical for spatial data, and designed so no knowledge of the data is required to achieve optimum performance.
- **Spatial Operators**—Contains over 150 extensions to retrieve data from tables with the ability to compute new geometric values or qualify data based upon geometric relationships. These include extensions defined in the ISO standard, as well as additional operators, known by MapInfo to be required by its customers, such as coordinate system support, distance, centroid and convex hull calculations and others.

EXTENSIBLE, ADAPTABLE SPATIAL OBJECT STORAGE AND ACCESS

Multiple Client Support —Supports MapInfo products including MapInfo Professional®, desktop mapping software; MapInfo MapX®, an OCX component, allows you to integrate a mapping object into new and pre-existing business applications; and MapInfo® MapXtreme® for Windows® or MapInfo® MapXtreme® Java™ Edition, a mapping application server to add interactive maps to your web site.

ODBC Client Connectivity—Provides an open connection to *SpatialWare* through the use of any ODBC compatible software. Data can be accessed using the tools provided by the database vendors. For example, Microsoft SQL Server Query Analyzer can be used to submit traditional SQL statements using spatial operators and predicates.

Powerful Standard SQL for Data Access—Uses standard commands to create, update, insert, delete and select spatial objects in a table. It makes adapting to spatial information applications easier for users and developers—lowering training costs and overall investment.

SpatialWare facilitates the addition of powerful location analysis extensions to a relational database, simplifying both query and analysis of complex location data. It also extends popular relational database tools so you can manipulate and analyze location data simply and efficiently.

SpatialWare has over 150 functions allowing you to analyze and manipulate location data. Grouped into six categories, they include:

- **Spatial Predicates**, such as Overlaps and Contains, analyze location data types to see if they meet specific conditions—a true or false is returned.
- **Spatial Measurement Functions**, including length, perimeter and height, return number values describing a spatial data type's shape, size, angle, rotation or position.
- **Spatial Functions** perform operations on spatial data types and return a new spatial data type. For example, Union joins two spatial objects and returns the combined result as a new spatial object, or buffer which “expands” the shape of an object by a user specified distance.
- **Constructor Functions** create new spatial objects. For example, Circle is a spatial data type using a point and radius to create the circle.
- **Observer Functions** return numbers, objects, or conditions from within a spatial object. Number of coordinates, begin point, end point and assemble status are examples of Observer Functions.

- **General Functions** include mathematical functions, identifiers, and indexing functions. For example, Pi, Degrees and functions that may be specific to a particular database environment.

FLEXIBLE DATA LOADING & DATA INTERCHANGE

As *SpatialWare* fully utilizes SQL, to add ASCII data, you simply format the data with standard SQL commands—no special converters or formatting is required. By employing emerging industry standards, *SpatialWare* assures your future needs can be met while avoiding obsolescence. *SpatialWare* also makes it easy for you to load MapInfo tables, AutoCAD dxf and SDTS files by providing utilities, such as “EasyLoader” to import spatial data directly into your database.

SYSTEM REQUIREMENTS FOR OPTIONAL DATABASE & OPERATING SYSTEMS

IBM INFORMIX

- IBM® Informix Dynamic Server with the Universal Data Option Version 9.21 and either Sun® Solaris 2.7, Windows NT® 4.0 or HP/UX 11.0 operating environment

MICROSOFT

- Microsoft® SQL Server 2000 and either Microsoft® Windows® XP, Windows® 2000 or Windows NT® 4.0

Required Elements

- TCP/IP Network
- System administration and database privileges for installation and setting up the database environment
- Internet browser to access documentation
- Email connection to obtain a license file
- CD recommended on server, or cross mountable, for installation

