



# SDM™

## Technical Specification

### Enterprise Open Spatial Data Support

SDM (Spatial Data Manager) is a comprehensive suite of spatial middleware, significantly enabling a commercial Relational Database Management System such as ORACLE® or Microsoft SQL Server® to store and manipulate spatial data, thereby eliminating the use of proprietary formats for spatial data storage.

SDM is typically installed with SPATIALnet™ and operates as its RDBMS preprocessor. SPATIALnet is SPATIALinfo's complete enterprise AM/FM/GIS system providing data capture, design, edit and display capabilities. SPATIALnet provides complete and timely access to network facilities data for planning, design, construction, and maintenance of both Inside and Outside Plant.

Spatial information as diverse as telecommunications and cable networks, utility assets, and land-base is supported, with all entity attributes, including graphical presentations, stored in the RDBMS using open format data types. Implementation is rapidly achieved using template data models available for Telecommunications, Cable, Power, Water and Gas.

SPATIALnet operating in conjunction with SDM makes rapid storage and enterprise retrieval of spatial data from pre-existing databases a reality, and is the next generation network information management system that quickly and cost-effectively manages the network spatial information of a service provider's organization.

All data created and maintained by SPATIALnet and managed in the RDBMS by SDM can be distributed to all parts of the organization and externally over the web using the companion SPATIALweb™ product.

The Client/Server architecture of SDM provides transparent access to the underlying RDBMS. The modular architecture complies with open systems and de-facto standards to accommodate independent application development.

Developers familiar with the Microsoft® ODBC standard can use SDM's Application Program Interface (API) from within industry standard development environments, using industry standard languages.

### Key Features

Key features of SDM include:

- Client/Server architecture
- Enterprise wide access to *all* data
- Full compatibility with supported database management systems
- Very large spatial databases and distributed databases with multi-user concurrent access
- Fast data retrieval and processing, including Spatial Indexing for rapid retrieval based on spatial selection
- Use of an Extended Relational Data Model incorporating comprehensive spatial data primitives, integrated geometry processing and optional server-side topology
- Full topological data support and long transaction management
- Spatial data validation through Geometric and Referential Integrity checking (topological validation)
- Spatially Extended SQL (SESQL) for RAD and ad hoc queries
- ODBC or Client Framework API
- Temporal Version Management support (past and future)
- Availability on both UNIX® and Windows NT®
- Raster and vector map backdrops
- Mature technology and technology independence
- Powerful utilities plus standard application development tools

SDM employs the full set of efficient RDBMS management facilities available in the commercial RDBMS, including security, integrity, concurrency, locking and multi-user access, transaction management, journaling, and backup and restoration.



## Platform Support

Server (minimum requirements)

Hardware	O/S	RAM	Required Disk Space	RDBMS
SPARC	Solaris 8 (SunOS 5.8)	64MB	60MB	ORACLE 64-bit Enterprise Edition 9.0.1
PA-RISC	Hewlett-Packard UNIX 10.20	64MB	60MB	ORACLE 32-bit Enterprise Edition 8.0.6
Intel	Microsoft Windows NT 4.0 Service Pack 6	128MB	60MB	ORACLE Enterprise Edition 8.0.6
Intel	Microsoft Windows NT 4.0 Service Pack 6, Windows 2000 Service Pack 2, Windows XP Professional	128MB	60MB	ORACLE Enterprise Edition 8.1.6, 8.1.7, 9.0.1
Intel	Microsoft Windows NT 4.0 Service Pack 6, Windows 2000 Service Pack 2, Windows XP Professional	128MB	60MB	Microsoft SQL Server 7.0 Service Pack 3, 2000 Service Pack 2

Note that the memory requirements specified are additional to the memory required for the operating system, database manager and any other software to be run on the computer. These memory requirements are indicative only – actual memory requirements will depend on server usage. In common operations where SDM is on the same server as the database manager, and with larger data sets, experience has shown that 1-2 GB of RAM is necessary. Please discuss any proposed hardware configurations with SPATIALinfo. Some patches or patch sets may be required for different databases on some platforms and these are detailed in the Release Notes for the software.

### For more information

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