Integrating Autodesk® for the Enterprise

Enterprise Spatial Information Breakthrough

SPATIAL*info* has achieved an enterprise information breakthrough by integrating its SPATIAL*net*™, SPATIAL*web*™ and SDM™ products with market-leading CAD and GIS software from Autodesk, and the world's most widely used RDBMS software and technologies from Microsoft® and ORACLE®.

All aspects of an AM/FM/GIS solution, from the client application to the storage system, can be open, flexible and enterprise-enabled.

Product Objective

SPATIAL*info*'s high level product objective:

- permits rapid deployment of systems;
- simplifies system maintenance and extensibility;
- leverages Autodesk and Microsoft market penetration;
- provides the framework for cost-effective spatial information across and beyond the enterprise, including via web technology.

The following design objectives contribute fundamentally to this outcome:

- maximizing existing customer investments in IT infrastructure, spatial data and work processes;
- using 'industry standards' wherever possible including Oracle, Microsoft SQL Server®, UNIX® and Windows NT®;
- adopting component standards such as CORBA® and DCOM®;
- using industry-standard tools and languages for data modeling, application development and configuration.

Autodesk Integration Objective

Autodesk is the world's leading supplier of PC design software. Autodesk's GIS products include AutoCAD® and Autodesk Map® for CAD-based design and precision map creation and maintenance.

Independent evaluations have shown Autodesk MapGuide® to be the most powerful web-based GIS in the world.

SPATIAL*info* is recognized as amongst the largest Autodesk Registered Developers in the world.

Autodesk Integration Approach

SPATIAL*info*'s objective of integrating with Autodesk technologies was enabled by providing a single, configurable spatial middleware layer of components that provide the market-leading Autodesk CAD and GIS products with a sharable storage model.

This sophisticated, configurable middleware layer was first implemented between Autodesk Map and the RDBMS, taking advantage of Autodesk's ObjectARX® technology.

This layer has two major components:

- the configurable interface that abstracts or separates the client application from the storage medium;
- SPATIAL*net*'s spatial data preprocessor, SDM, that enables the RDBMS to store intelligent spatial information.

ObjectARX includes an object-oriented API that fully supports the use of C++ programming. This enables integration of true 32 bit Windows applications, including Active X (OLE) support, DDE, Internet functionality, as well as the use of the familiar Windows user interface.

A further product was developed between the RDBMS and Autodesk MapGuide for web publishing of spatial data, using a data warehousing approach. Whether inside or outside the enterprise, users of Autodesk MapGuide can see up-to-the-minute spatial data as soon as transactions occur, using SPATIAL*web*.

SDM

SDM is SPATIAL*info*'s comprehensive suite of spatial middleware that enables a commercial RDBMS to store and manipulate spatial data in a truly open geo-relational model, thereby eliminating the use of proprietary formats and relational models for spatial data storage.

Bundled and installed with SPATIAL*net*, SDM provides the equivalent of business rules for spatial data, embodied in a set of enhanced, end-user, middleware-oriented functionality that incorporates spatial data model management.

The client / server architecture of SDM provides transparent access to the underlying commercial RDBMS for security, integrity and mission-critical storage. The same skill sets are required for its maintenance as for any other relational database.

An API designed on Microsoft's ODBC standard can be used to develop applications accessing SDM, using industry standard development environments and languages.

Data Sheet

SDM is vendor-neutral in terms of client application. Whilst a sophisticated interface to Autodesk products exists, SDM's interface environment and development tools enable an organization to use its existing investment in other popular client applications, for example, Microstation®, each accessing the same corporate RDBMS.

SPATIAL*net*

SPATIAL*net* is a comprehensive rules-based AM/FM/GIS, which captures, edits and displays geo-relational data (for example Telecommunications, Cable and Utility Outside and Inside Plant Networks), modeled in a relational database. SPATIAL*net* can be supplied with fully configurable datamodel templates for telecommunications, cable, power, gas, and water networks. It significantly enhances conventional GIS systems in its capacity to operationally support the most complex real world networks used for distributing communications, energy, and fluids.

SPATIAL*net* integrates and significantly enhances AutoCAD or Autodesk Map as its graphics editing engine and is "all-relational", storing all graphics, attributes and connectivity directly in a relational database. This means other popular GIS applications can access RDBMS-resident spatial data using SPATIAL*info*'s client display toolkits, along with forms-based and reporting applications such as Crystal Reports®.

Integration Benefits

The Autodesk integration achieved by SPATIAL*info* means spatial data served by SPATIAL*net* from a RDBMS can be edited and viewed by a number of different client applications. AutoCAD or Autodesk Map can be used to update graphics in 'real-time' within the RDBMS. Elsewhere, viewing, analysis and reporting clients (such as Autodesk MapGuide and even Crystal Reports) can be used to examine up-to-date changes in the database.

Organizations with an investment in Autodesk technologies and work practices now have an enterprise spatial data expansion and integration path available to them.

Moreover, given the extensive API support offered by SPATIAL*info*'s products, SPATIAL*info* is happy to discuss opportunities to broaden this unique 'plug-and-play' integration environment.

For more information

SPATIAL*info*

NORTH AMERICA

9635 Maroon Circle
Suite 420
Englewood CO 80112
Office: 720-873-6880
Fax: 720-873-6885

ASIA PACIFIC

Level 14
459 Little Collins Street
Melbourne VIC 3000 Australia
Telephone +61 3 9670 3555
Facsimile +61 3 9602 1349

Web www.spatialinfo.com
Email inquiries@spatialinfo.com

Data Sheet