spatialSTORM

SERVICE-ORIENTED ARCHITECTURE FOR PHYSICAL NETWORK INVENTORY

Service-oriented architecture has become a fundamental part of the communications industry, enabling organizations to deliver true end-to-end support for business processes. To support these technological needs, Synchronoss has SOA-enabled its spatialSUITE network asset management portfolio through the spatialSTORM platform.

Created through a standards-based, service enabled architecture model, spatialSTORM allows companies to quickly and easily adapt to changes in their business and IT environment. As a result, spatialSTORM improves access to data and lowers the costs of integration, significantly increasing the value and return on investment.

Utilizing an API-based approach, spatialSTORM delivers business agility, improved customer experiences, and a competitive advantage in a constantly evolving industry. spatialSTORM's API-enabled assets allow users to unlock the value of spatialNET data, connecting it seamlessly and securely with the cloud and mobile devices.

SERVICE AREAS

spatialSTORM provides a rich set of web service APIs that enable system integrators and application developers to interact with the platform and integrate systems, develop clients, and manage physical network asset data.

Data Management: Services for database creation, replication, extraction, and other tools for managing the database and data model within various database technologies

Workflow (JMS) Management: Services for managing Job Management System (JMS) workflow between clients and external systems

Mapping: Services for delivering spatially enabled information to other applications and systems, leveraging standards suchs as OGC (WMS, WFS), etc. Management of data with different coordinate projections

Network Analysis: Network tracing, dark fiber, diversity, trace to common point, etc.

Field Data Markup: Support for processing data updates through to the network asset model in a secure workflow that supports data validation and maintains data integrity

Reporting: Basic reporting services and integration to 3rd party tools

OSS/BSS Integration: Standards-based integration tools to specific business functions including provisioning, logical network inventory, billing, CRM, and ERP

Scheduled Processes: Support for scheduled processes that enable regular updates from/to affected systems

KEY BENEFITS

spatialSTORM delivers value to any organization by providing a standards-based SOA platform that meets the requirements of a modern IT environment and delivers rich integration and application functionality for operational users. Futhermore, spatialSTORM provides a unified approach for all network asset management integration requirements which reduces risk, speeds time to market, allows faster response to new business requirements, and lowers the total cost of ownership of network asset management systems. Key benefits of spatialSTORM include:

> Read/write services designed specifically to maintain database integrity

> Supported, sustainable integration points that adhere to complex business processes

> Standards-based services that lower integration, upgrade, and ongoing maintenance costs

> Interface standards and protocols that are used across a number of OSS/BSS vendors

> Development tools that deliver PNI information as part of a robust OSS/BSS services orchestration
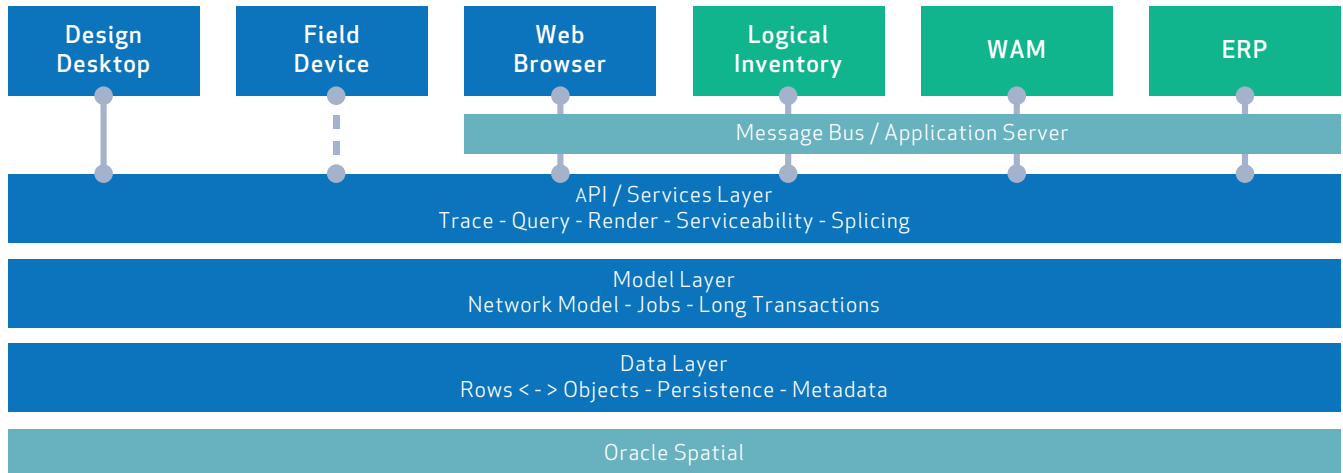
Use Case #1

Enterprise Network Inventory Data Server

> spatialSTORM enables network information to be served throughout the enterprise using well adopted mapping standards
> > *WMS, WFS, WMTS*
> > *GML, GeoJSON*
> Leveraging accurate and complete network inventory results in significant downstream benefits
> > *Eliminates ad-hoc data or map extracts in various formats*
> > *Consumers always access the current state of the network*
> Example applications:
> > *Real estate/easement*
> > *Planning*
> > *Marketing*
> > *Tax reporting*
> > *Business intelligence, analytics*

Use Case #2

Mobile Workforce Deployment

> Data workflow integration and automation
> > *Replaces the file/spreadsheet data transfer paradigm*
> > *Presents technicians with accurate and current views of assets*
> Designed for a heterogeneous BYOD environment
> > *Diverse clients can integrate through standard markup services*
> Seamless data flow of managed data updates
> > *All clients interact with data in the same lightweight job mechanism*
> Enforce business rules and processes
> > *Centralized and configurable rules engine ensures all changes are validated and follow approved processes*

Design Desktop	Field Device	Web Browser	Logical Inventory	WAM	ERP

Message Bus / Application Server

API / Services Layer
Trace - Query - Render - Serviceability - Splicing

Model Layer
Network Model - Jobs - Long Transactions

Data Layer
Rows < - > Objects - Persistence - Metadata

Oracle Spatial

STANDARDS SUPPORT

spatialSTORM supports an extensive set of standards which allow read/write access to all network entities. For spatial transactions, spatialSTORM supports OGC WFS (Web Feature Service) and WFS-T (Web Feature Service – Transactional) services which allow 3rd party tools to interact with spatialSUITE data via standardized interfaces. Specific standards supported include:

> SOAP 1.1, SOAP 1.2

> WSDL 1.1

> WSDL 1.1

> GML

> REST (both JSON and XML formats)

> WMS, WFS, WMTS

> Java Messaging Service (JMS, J2EE)

> GeoJSON

spatialSTORM is part of the spatialSUITE portfolio of network asset management products available from Synchronoss. For more information on spatialSTORM and the other broadband solutions available from Synchronoss, please visit our website at http://www.synchronoss.com.