

## Smallworld GeoSpatial Server\*

Today's business organizations are rising to the challenge of establishing and maintaining integrations between IT systems, creating additional value and realizing cost benefits by building business process based solutions for tomorrow.

Smallworld GeoSpatial Server from GE brings the benefits of Smallworld\* based complex spatial and asset modelling directly into your evolving Service Oriented Architecture (SOA) by building on industry and de-facto enterprise standards.

The SOA is an evolution of IT landscapes from application or product centric to process centric requiring a transition to service-enabled products and systems.

Smallworld GeoSpatial Server is the enabling platform for system integration and business process integration for Smallworld into the SOA based enterprise.

Smallworld GeoSpatial Server provides a platform:

- for integration with business processes throughout the enterprise based on SOA
- for common business services for all Smallworld applications
- for service – enabling the Smallworld product portfolio including Smallworld Electric Office\*, Smallworld Gas Distribution Office\*, Smallworld Global Transmission Office\*,

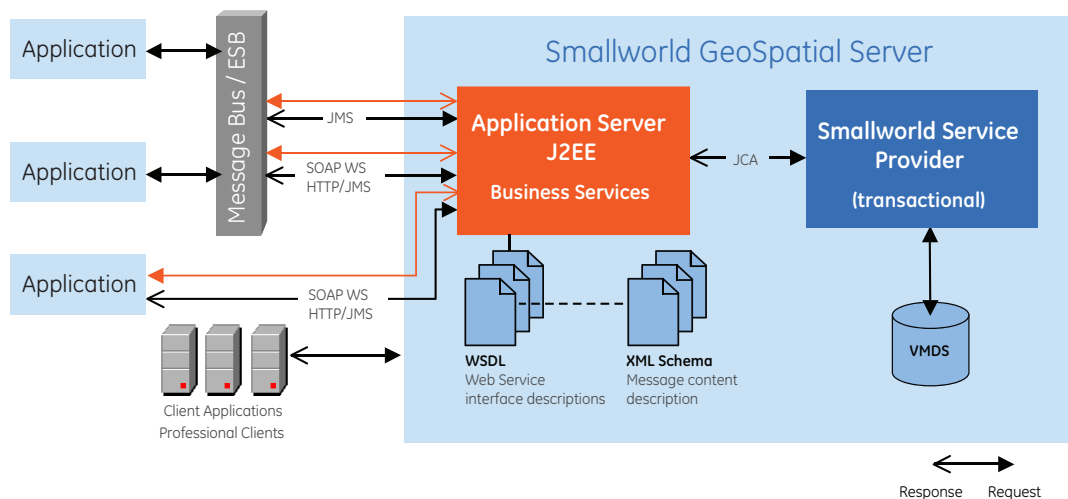
Smallworld Network Inventory\*, Smallworld Network Resource Manager (NRM)\* and Smallworld Design Manager\*

- which enables Smallworld Electric Office to provide IEC® Common Information Model (CIM) data via web services to the Smallworld Network Model Manager \*
- for Smallworld integration products based on business process integration such as the Smallworld Business Integrator\* for use with SAP® NetWeaver®
- which forms a foundation for a suite of SOA integration products providing geospatial and domain specific services
- for Field Force Automation (FFA) integration
- for Smart Grid integration

Smallworld GeoSpatial Server is intended for use alongside products such as business process integration suites, Enterprise Service Buses and Master Data Management solutions.

The Smallworld Service Provider provides Smallworld Magik services that are hosted on the J2EE® application server as Java™ Smallworld business services. The application server allows the business services to be exposed as SOAP web services via http or JMS, as well as providing direct http access to the business services with results in XML and Open Geospatial Consortium®, Inc (OGC®) Geography Markup Language (GML) 3.1.1.

## Smallworld GeoSpatial Server Architecture Overview



- Transactional services can be exposed on an application server
- The application server provides web services communication via http and JMS messaging
- Business process integration via message bus or enterprise service bus



## Features

The key features of Smallworld GeoSpatial Server include

- SOA infrastructure and business services
  - Smallworld Service Provider provides robust Magik services
  - Load balancing for smooth operation of server farms
  - Remote administration for simple management of Magik server farms
  - Business services provide a Java service API to business activities
  - Virtual Servers provide both versatile and flexible access to business services
- Web Services Framework
  - SOAP Web Services via http or JMS
  - Based on Apache™ Axis 2
- Support for write transactions and alternative access including support for atomic transactions with multiple service calls
- Support for Smallworld as web service consumer (bi-directional communication)
- Support for WS\* Security and other WS standards including support for message level WS Security
- Support for JBOSS® and IBM® Websphere®
- Certified support for OGC Web Map Service (WMS), Web Feature Service (WFS) and Web Coverage Service (WCS)
- Support for OGC Geography Markup Language (GML)

Smallworld GeoSpatial Server delivers a web service infrastructure and service examples for Code-first (existing service published as web service) and Contract-first (web service definition in WSDL [Web Services Definition Language]) is used to implement corresponding service). There are a number of business services provided, including:

- Map
- Query
- Network Analysis
- Object Info

There are a number of example web services provided, including

- Map Web Service
- Message Web Service
- Reply Web Service

## Customer Value

Today's IT departments must move as swiftly as the business has to, in adapting to changing market needs. Deploying a standards-based service-oriented architecture increases flexibility and controls costs.

SOA enables the creation of new applications on existing enterprise solutions, which increases the value of current systems and automates new business processes.

The need for cost reduction, business flexibility, competitive advantage and improved employee productivity are some of the key business challenges faced today. The SOA solution and Smallworld GeoSpatial Server meets these challenges by providing IT simplification, agile workflow, dynamic services and composite applications which provides better and faster services to the customer, at a lower cost.

Smallworld GeoSpatial Server enables Smallworld applications to participate in Enterprise business processes and provide true end-to-end support for business processes.

To learn more about this offering, contact your GE Energy sales representative or visit [http://www.gepower.com/prod\\_serv/products/gis\\_software](http://www.gepower.com/prod_serv/products/gis_software)

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