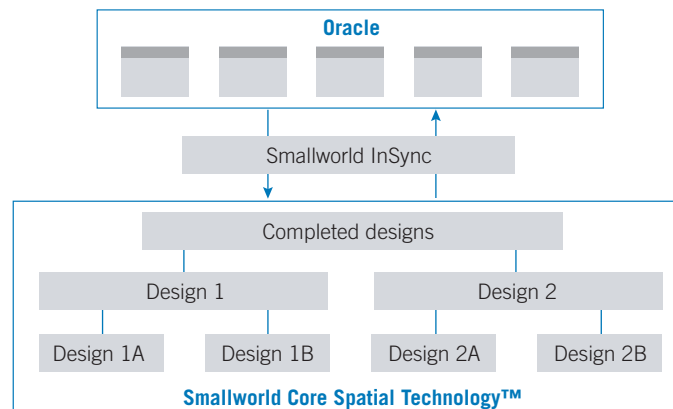


Smallworld InSync™ On Oracle®, from GE Energy, is part of the Smallworld On Oracle family of products and is a key tool for integration with Oracle databases.

The Smallworld InSync product can significantly reduce the time and cost of integration with other enterprise systems – Work Flow Management, Asset Management, Customer Relationship Management. Smallworld InSync enables live data in operational and other systems that manage their data on Oracle, to be available in the managed design environment, and vice versa.

Overview

The information in a Smallworld application is usually complex. Activities such as design and planning could tie up large parts of the database for periods detrimental to other users. To solve this problem, a Smallworld application groups together a user's changes during any activity, so that no other user is affected, until completion. This version management makes sophisticated applications possible by giving each user their own private design environment. Changes occur in this design environment, whilst other users are updating data in the operational Oracle database. To keep changes in both the design environment and operational database synchronized, Smallworld InSync uses two-way replication.



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Features

Two Way Replication

Two way, or symmetric replication is supported – changes in both databases are replicated with conflict detection and resolution carried out via the existing Smallworld difference stream mechanisms. Changes recorded in the Oracle 'Changes' table are synchronized with the Smallworld synchronization alternative.

Data Model Mapping

A data model mapping engine is provided for mapping between the two datamodels – no reverse engineering is required.

Tracking changes to Oracle tables

Changes to the Oracle table are tracked by the use of standard Oracle triggers and 'changes' table.

Synchronization Process

The whole two-way synchronization process is considered to be a single, complete transaction. During synchronization the relevant tables are write-locked, if failure occurs at any point the transaction will be rolled back.

Conflict Detection and Resolution

It is inevitable that some conflicts will occur which need to be resolved. Conflicts can be resolved in favour of the design data or asset / live data, depending on the configuration. Code customization hooks to pass information on conflicts for logging by the application are provided.

Performance

Smallworld InSync will typically achieve a synchronization rate of 1800 updates in 10 minutes. This update rate will be typical of a day's operations and has been demonstrated by application level implementations at customer sites.

Smallworld InSync for Oracle Spatial

Smallworld InSync for Oracle Spatial adds the capability to publish Smallworld geometries into Oracle Spatial Simple Features geometries. InSync for Oracle Spatial supports one-way – Smallworld to Oracle – publishing of Smallworld geometry to Oracle Spatial (objects) geometry whilst allowing two-way synchronisation of physical attributes of Oracle and Smallworld records. This functionality supports the concept of the Oracle Spatial Data Warehouse. The Spatial Data Warehouse has arisen from a growth in demand for location-enabled capability within mainstream business applications such as call centres, data warehousing, customer relationship management, service delivery and e-commerce. Spatial data can be managed, queried, and displayed using SQL from any enterprise application such as financial, data warehouse, supply chain, CRM, and industry standard reporting tools.

Data Model Mapping GUI

A user interface for data model mapping functionality is now available, allowing for easier configuration and set-up of Smallworld InSync.

Data Model Replicator

The Data Model Replicator supports a faster set-up and start-up time – an existing Smallworld data model and data can be easily replicated to Oracle. For example, using the Data Model Replicator, complex network geometry and topology can be published by Smallworld InSync for Spatial to Oracle Spatial simple features tables.

Smallworld InSync Availability

Smallworld InSync is an integral part of Smallworld Core Spatial Technology 4 with no additional charge.

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