



PROJECTWISE® CONNECTOR

ENABLES ENTERPRISE WORKFLOWS WITH ORACLE SPATIAL

The ProjectWise Connector for Oracle enables seamless information integration between Bentley engineering and mapping applications and Oracle's 10G and later databases. It allows live and disconnected, long and short transactional editing of organization defined Oracle Spatial data.



Connect to Oracle Locator or Oracle Spatial using simple-to-use dialog, supported by live or disconnected connections.



The connection can be filtered spatially or by using attribute criteria.



Data extracted from the Oracle database may be edited in the feature-rich environment of Bentley Map.

Support for Integrated Engineering and Geospatial Workflows Using Oracle Spatial

The connector is a high-performance server product ideal for organizations that use MicroStation applications with Oracle as their main data repository in integrated engineering and geospatial workflows. Information is extracted to the XML-enabled (XFM) environment supported by Bentley Map, Bentley PowerMap and applications built upon them (Bentley Cadastre, Bentley Electric, Bentley Water, Bentley Wastewater, and the Bentley Communications products). The connector is semantically rich; the database schema, domain constraints, and other information needed to maintain data integrity according to enterprise definitions is extracted along with the spatial and attribution information. Modifications are tracked so that only changes are sent back to Oracle upon completion. All the updates are managed through Oracle versioning via Oracle Workspace Manager, allowing multi-user editing in long-transaction workflows. Reconciliation tools are provided that allow inspection of versions, version reconciliation, conflict visualization, and conflict resolution for both geometric and attribute information.

Live Editing of Oracle Spatial Databases

Perform live viewing and editing of an Oracle Spatial database simply by opening a DGN document stored in ProjectWise or the Bentley Geospatial Server. This allows users to take advantage of the editing productivity of MicroStation while working directly with the Oracle Spatial information. The approach supported by ProjectWise Connector for Oracle also allows users to take advantage of the native versioning capabilities of Oracle.

Disconnected Editing Workflows

Perform fully reliable disconnected field editing and re-synchronize your device once back in the office. This avoids repetitive or unnecessary trips to the office by allowing field workers to carry the most current information into the field and therefore improves data quality by capturing in-the-field edits.

Security and Workflow Management

Integrate security and workflow management with spatial database management. ProjectWise Connector for Oracle is fully integrated with the security and workflow capabilities of ProjectWise or the Bentley Geospatial Server.

Native Oracle Spatial Topology

ProjectWise Connector for Oracle supports the Oracle Spatial persistent topology model. It allows querying and editing the topology model in connected or disconnected mode. Oracle Spatial's topology model supports topological relationships such as adjacency, containment, and connectivity, and describes how different spatial features are related to each other, for example, how a land parcel shares a boundary with a road.

Temporal Data Management

Historical maps and reports needed to support studies, planning, or meet government regulations can be produced by leveraging the historical data management capabilities. ProjectWise Connector for Oracle leverages the time component capabilities of Oracle that allow storing historical data in the database. It is also possible to make edits in the present but have them reflected only in the future.

Multi-User Editing via Oracle Versioning

ProjectWise Connector for Oracle works with the standard Oracle Workspace Manager to enable multi-user editing workflows. It provides for versioning and long transactions with pessimistic locking or optimistic locking. This means versions created by the connector can be accessed by any other SQL clients.

Fully Customizable

ProjectWise Connector for Oracle can be customized in many ways at different levels: with the Bentley Geospatial Server or ProjectWise client, Bentley Map and the ProjectWise Connector for Oracle server.

SYSTEM REQUIREMENTS

Note: The requirements below assume the server is dedicated to the Oracle Connector server only. If other applications are running, additional server requirements may exist.

Processor:

Pentium Processor.

Operating System:

Windows 2003 Server.

Memory:

1GB Minimum, 2GB recommended (approx 200MB per extraction engine).

Software Requirement:

IIS and MSMQ and ASP.NET. Access to Oracle Locator or Spatial Release on 10.2.0.4 (requires 11g clients with any server version) and higher or 11g Release 1 (11.1.1.0 and up).

ABOUT BENTLEY

Bentley Systems, Incorporated is the global leader dedicated to providing comprehensive software solutions for sustaining infrastructure. Architects, engineers, constructors, and owner-operators are indispensable in improving our world and our quality of life; the company's mission is to improve the performance of their projects and of the assets they design, build, and operate. Bentley sustains the infrastructure professions by helping to leverage information technology, learning, best practices, and global collaboration – and by promoting careers devoted to this crucial work.

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PROJECTWISE CONNECTOR FOR ORACLE AT-A-GLANCE

Enterprise Workflows with Oracle Spatial

- Enables seamless enterprise grade integration between Bentley applications and Oracle Spatial
- Live enterprise connection for editing, or, work in a disconnected mode, in an extract, modify, post workflow
- A simple wizard can order extractions from Oracle into managed DGN and facilitate posting back to Oracle
- An Advanced Extraction Dialog defines saved connections to Oracle
- Filtering extraction spatially and using attributes
- Supports workflows with any MicroStation applications
- Ensures fidelity of the information during MicroStation editing by bringing over relations, validation rules, projections, and other information from Oracle Spatial
- Batch Data loading tools for large conversion projects
- Fully secured server roles based on end users actions
- Workflow and collaboration managed by ProjectWise Geospatial Management, an extension of ProjectWise
- Multi-user editing, long transaction, short transaction, locking, and versioning
- Valid time and history management support
- Server infrastructure allows reliable management of large scale jobs (scale out using a server farm environment)
- Customization through the Geospatial Administrator, as well as Web Services, XML and .NET languages

Native Oracle Support

- Supports Native Oracle Spatial Geometry Data Types
- Supports Oracle Spatial Topology
- Supports Oracle Valid and Oracle History

Object Oriented Modeling Tool

- XML Feature Modeling (XFM)
 - » Model features and their behaviors
 - » Symbology rules
 - » Property driven symbology
 - » Placement rules
 - » Editing rules
 - » Placement library
 - » User interface
- Spatial and property information can be integrated in a self-contained DGN to support disconnected editing if desired

Multi-User Editing via Oracle Standard Versioning

- Works with Oracle Workspace Manager to enable multi-user editing workflows
- Supports long transaction workflows
- Study different scenarios with an optimistic approach, no information is locked from users at any time
- Includes reconciliation tools to resolve conflicts

Short and Long Editing Sessions Using Database Standard Oracle Database Lock

- Works with Oracle session locking for enabling short editing sessions
- Works with Oracle Workspace Manager to enable long editing session where persistent locking is required

Time Component Support

- Track Edit History in the Database
- Query back in time – for example: “show me the census blocks as they were on the Census 2000”
- Act on a feature now and have it reflected in the future
- Query in the future – for example: “show me this planned section of highway as it will be in 2007”

Easy-to-Use Connector Administration Tool

- Configure the parameters controlling the workflow
- Specify database connection information and metadata
- Register or un-register Oracle tables as features
- Add end user connections to the configuration set

On-the-Fly Coordinate Systems Transformation

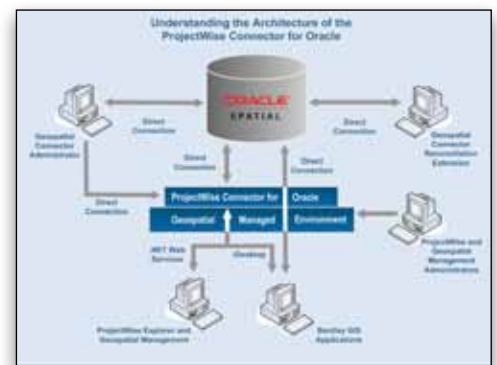
- Transform Oracle database features pertaining to one or more coordinate systems to the system of the target DGN
- Conversion back to original or desired Oracle Spatial coordinate system occurs “on-the-fly”
- Over 5500 systems supported by the MicroStation Geospatial Extension are available and 1000+ supported by Oracle
- User defined coordinate systems

Web Services Based

- Service Oriented Architecture allows performing extraction and posting using standard SOAP Web services
- Creates simplified user interface and then simply call the Web services for performing operations



Quickly post data back to the Oracle database after editing.



The robust architecture of the ProjectWise Connector for Oracle allows it to scale-up to any workload.