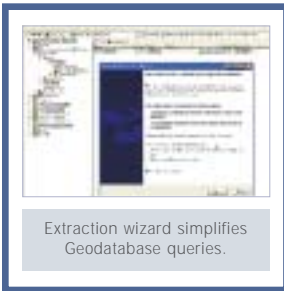


# BENTLEY® ARCGIS CONNECTOR™

## Workflows Spanning Bentley and ESRI Environments



The ArcGIS Connector™ supports user-initiated or event-driven interoperability between Bentley ProjectWise® (with the Geospatial Management™ extension) and the ESRI ArcSDE Geodatabase. The ArcGIS Connector supports an intelligent Extract and Post paradigm. Bentley users can retrieve Geodatabase data for use in AEC and mapping workflows, and later post the appropriate information for use by ESRI users.

The ArcGIS Connector supports true semantic interoperability. Features can be extracted from the Geodatabase into managed DGN files and used as references in design sessions. Domain constraints and rules are preserved in the extraction process, and respected during feature creation or modification with MicroStation GeoGraphics® and other Bentley products supporting XML Feature Modeling. Administrative tools permit configuration and management of extractions and posts, and the extensive capabilities of ProjectWise can be leveraged in customized workflows.

### XML Feature Modeling

XML-based Feature Modeling (XFM) manages attribution, set properties, relationships and placement behaviors. Through this mechanism, XML metadata drives dialog choices and design behaviors to provide an intelligently directed design environment. It also ensures that disconnected design sessions inherit appropriate database schema and conform to domain constraints. XML Feature Modeling is a standard capability of the 2004 Edition of MicroStation GeoGraphics and therefore products built upon this platform.



### An Extract and Post Paradigm

Users of the ArcGIS Connector interact with the Geodatabase using an Extract and Post paradigm. This paradigm ensures that the process is completely managed and facilitates disconnected use of Geodatabase data in a MicroStation GeoGraphics environment. Extractions from the Geodatabase are configured via an easy-to-use wizard interface, which guides the user in selecting geospatial and non-geospatial query criteria. Users can modify the data and post back the changes to the Geodatabase. A wizard also guides the posting process.

The ArcGIS Connector helps the user to adhere to Geodatabase versioning. The target version is identified for the initial extraction. The user may opt to hold a copy of copy of the extraction, which allows other Geodatabase clients to access parent features without being affected by pending modifications. The user can commit modifications directly to the parent version, or route modifications to an ArcMap administrator for posting. Where conflicts occur in an automatic posting, the commit is rolled back to permit an ArcMap administrator to resolve the conflicts.

### Adherence to Geodatabase schema

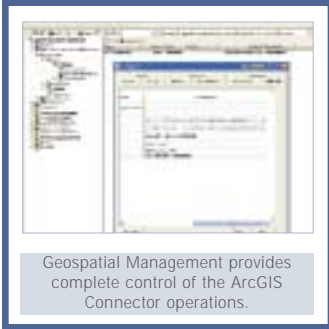
During the extraction process, Geodatabase constraints, domains, parameters and rules are read, maintained and written to the GeoGraphics Workspace as XML and are managed through GeoGraphics XFM capabilities. Point, line, polygon and annotation feature classes and categorization are supported, including the domain constraints and subtypes that can be associated with those features.

While symbology for point, line and polygon features is not stored in ArcSDE 8.2 and 8.3, the Geodatabase provides symbology support for annotation classes. The ArcGIS Connector offers symbology support for text-based annotations, but not for graphic symbol-based symbology. However, symbology to be assigned to point, line and polygon features during an extraction can be defined with the Geospatial Administrator, thus automating a fully symbolized DGN.

Once the data is extracted, users of MicroStation GeoGraphics XFM based products can use the data for design review or modification. Driven by the XFM engine, the MicroStation GeoGraphics feature placement tools and dialogs strictly adhere to the Geodatabase schema and limit the user to performing design operations within specified domains and constraints. Standards-based design between the two environments is a reality.



## BENTLEY ARCGIS CONNECTOR AT-A-GLANCE



### Interoperability between Geospatial Management and ArcSDE Geodatabase

- Extract Geodatabase content into MicroStation GeoGraphics DGN files
- Post MicroStation GeoGraphics DGN content into the Geodatabase

### Geodatabase content supported

- Feature datasets, feature classes, subtypes and attribute domains
- Point, line, polygons, annotations and associated relationships
- Versions and spatial reference system

### Richer DGN content with MicroStation GeoGraphics

- Define symbology rules to be applied to features
- Geometries and attributes integrated to support disconnected editing, design history and digital signatures
- Metadata associated with DGN documents are managed in Geospatial Management



### A Framework for Automated Workflows

- Extraction or posting operations involving hundreds of files can be automated.
- Server infrastructure allows reliable management of large scale jobs

### Easy Administration and Customization

- Subject matter experts can define rich features and automated intelligent workflows (association of geometries and attributes, placement rules, validation rules, and so forth)
- Productive customization through the usage of the Geospatial Administrator as well as Web Services, XML and .NET languages

## BENTLEY ARCGIS CONNECTOR SYSTEM REQUIREMENTS

### Bentley ProjectWise Server

- Processor: Pentium II Processor
- Operating System: Microsoft Windows 2000
- Memory: 256MB
- Software Requirement: Internet Explorer 5.5 or higher (including WebFolder Support)

### Bentley ProjectWise Client Workstation

- Processor: Pentium Processor
- Operating System: Microsoft XP Professional, Microsoft Windows 2000, Microsoft NT 4.0
- Memory: 64MB
- Software Requirement: Internet Explorer 5.5 or higher (including WebFolder Support), Support for Java 2 runtime environment 1.4 (Web Explorer client)

## ABOUT BENTLEY

Bentley Systems, Incorporated provides software for the lifecycle of the world's infrastructure. The company's comprehensive portfolio for the building, plant, civil, and geospatial vertical markets spans architecture, engineering, construction (AEC) and operations. With 2003 revenues reaching \$260 million, Bentley is the leading provider of AEC software to the Engineering News-Record Design 500 and major owner-operators.

For more information, visit [www.bentley.com](http://www.bentley.com) or call 1-800-BENTLEY.

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