ProjectWise V8*i* (SELECTseries 4) User Essentials

GDOT ProjectWise Training Video

Bentley Institute Course Guide

Bentley Institute

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Table of Contents

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Course Overview

Course Description

This course is for individuals who need to manage documents throughout a project cycle. It presents many aspects of document management using ProjectWise.

Target Audience

This course is recommended for the following audience(s):

- Those who will use ProjectWise Explorer in a managed environment

Prerequisites

- Familiarity with Windows Explorer
- Familiarity with Microsoft Office applications
- A basic understanding of MicroStation

Course Objectives

After completing this course, you will be able to:

- Log in from the desktop and work with integrated applications
- Navigate using ProjectWise Explorer and use its features
- Use workflows
- Search for documents

- Scan for References and Link Sets and use other utilities
- Navigate ProjectWise Web Parts

Note: This course update for (SELECTseries 4) contains information about new features available in the release. Obviously not all new features added to the ProjectWise suite of products are pertinent to this course, but those that are will be indicated by the tag *New for (SELECTseries 4):*

9
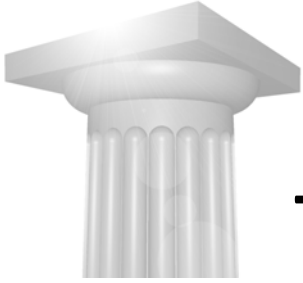
The Managed Environment

Module Overview

This module discusses a managed environment in which documents can be shared among team members.

Module Prerequisites

- Knowledge of the Windows operating system

Module Objectives

After completing this module, you will be able to:

- Understand the concept of the ProjectWise managed environment

Document Concepts and Creation Methods

When a file is uploaded from a file system into ProjectWise, it becomes a "document". The ProjectWise definition for a document is, essentially, a record in the database. Documents contain metadata about the file, such as document description, associated application, document status, the date the file was imported, and custom attributes. The files themselves are stored on a file server, whereas document metadata is stored in the ProjectWise database.

The database record may or may not be associated with an actual file, so you can create something called a placeholder document. This is simply a container of metadata with no electronic file attached. Placeholder documents can be used to

represent electronic files you are planning to import into ProjectWise, or hard copy documents or drawings that remain in a file cabinet.

This concept is unique to the managed environment and is extremely powerful when managing documents with ProjectWise. You never need to know where the file is physically located. In fact, you do not have direct access to a file. It can only be accessed through ProjectWise using the security assigned in the datasource.

When you create a document its name and file name are often the same, but the property fields are independent of each other so you can give a document a different name than its attached file. A cryptic file name can actually have a descriptive name.

New for (SELECTseries 4):

You can lock the document name and file name properties together, so that whatever you set for the document name is automatically set for the file name. This can make naming and renaming documents and their attached files easier as you move forward.

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Document Access

Documents are generally passed from their creator to the necessary members of a team during the life of a project. This involves making copies of the original document and giving a copy to each of the team members.
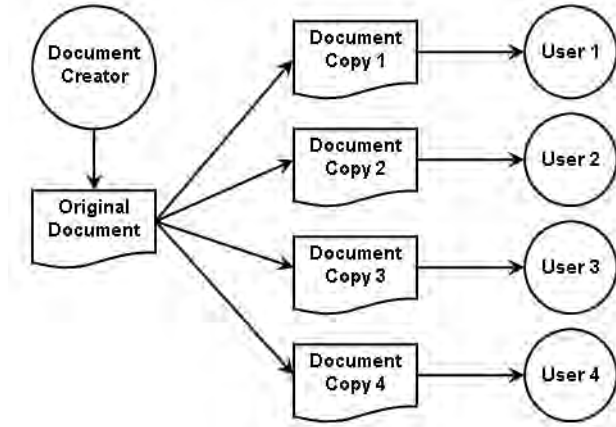
This creates many individual copies of the same document, which increases the potential for inconsistency. Someone must keep track of the file that contains the most up to date information and coordinate all changes.

Using ProjectWise, documents exist in a managed environment. During projects, a single instance of a document is available to members of the project team.
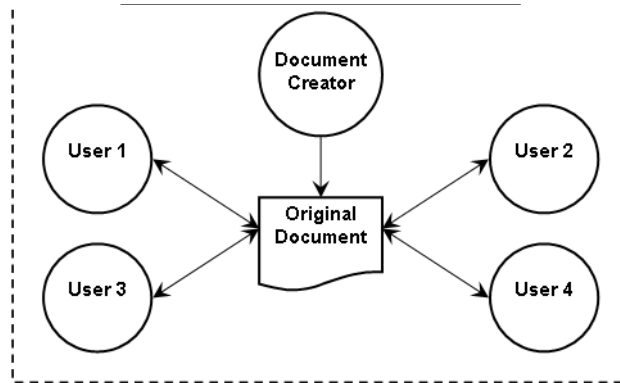
The document is stored in a location accessible to all team members. It can be viewed by all members, but it can be checked out for use by one team member at any time.

Check out and check in

When a team member wants to edit a document, they can check it out. Checking out a document downloads a copy of the document to your working directory. When you perform a check out the database record for the document is marked accordingly.
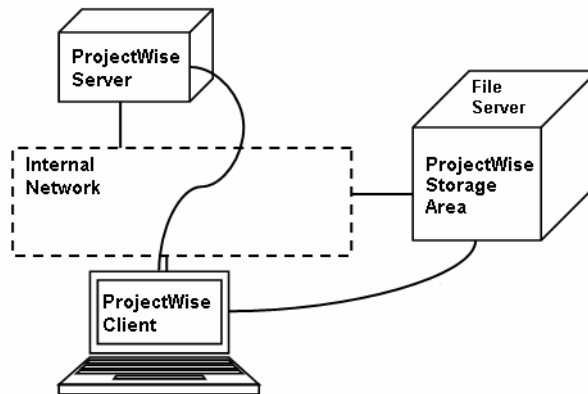
When another team member needs access to the file, or when all work is completed, the document is checked in. A team member can always refresh the server's copy using tools in ProjectWise Explorer or an integrated application so that other team members can view or reference the latest version.

Controlled access

ProjectWise is a controlled access system. Project team members are assigned rights to various documents and these rights can change at various stages throughout the project.

There are five broad levels of access when using the ProjectWise Explorer client.

- No access: The folder structure or documents will not be seen.

- Viewing access: The folder structure or document file names and properties can be seen in ProjectWise, but document content cannot be viewed.

- Read access: A document may be opened read-only. No changes can be made to the document.

- Commenting or redlining access: A document can be opened read-only. Comments can be made about the document, but no changes can be made to the content.

- Editing access: A document can be opened and edited.

User settings and access controls are an administrative function of ProjectWise. The administrator defines these settings in advance.

Workflow and life cycle

Your rights to a document may change as the document passes through the various stages that are the life cycle of the project. In ProjectWise, this concept is known as a workflow.

An administrator defines workflows appropriate for a project. The workflow can be as detailed or as simple as the project requires. Workflows consist of a number of states, such as Draft, Pending Approval, Approved and Obsolete. Access controls are typically implemented on each state to ensure that project participants have access to documents at appropriate states in the workflow. They are two directional. Documents can move forward and backward.

Example states in a document life cycle:

- Draft: A document has been created, but it is not complete. Most edits are done in this state.

- Pending Approval: A document is available for review. Most redlining is done in this state.

    If there are modifications to be made, the document's state is changed back to Draft.

- Approved: A document has been approved and is available for distribution. This state is typically read-only.

- Obsolete: A document is no longer valid, but is kept for reference. This state is typically read-only.

Document versions

ProjectWise handles the document life cycle by having a single document with as many versions as required. All previous versions are locked as read only, and the current version is the only version that can be edited.

New for (SELECTseries 4):

The Version field in the New Document Version dialog is editable, allowing you to change the current active version's label when you are creating a new version.

Integrated Applications

ProjectWise can track documents in any file format and can track abstract documents. Abstract documents are documents that do not have an associated electronic file, such as paper drawings.

Although MicroStation design files and Microsoft Office files are common, ProjectWise will track any other type of file and can display many without the native application installed.

Once the correct connections between software applications and ProjectWise are configured, double clicking on a document of a specified type will automatically activate the linked application.

Information Structure

ProjectWise Explorer is the primary interface for the document repository. This interface is similar to the Windows Explorer, and provides a hierarchical view of the file system.
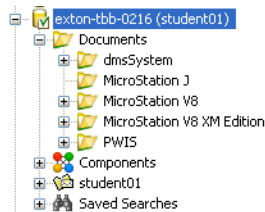
Folders and projects

In ProjectWise Explorer, documents are associated with individual folders or projects in a datasource.

In its simplest form, each datasource represents a working area. When ProjectWise is launched, the available working areas, or datasources, will be listed in ProjectWise Explorer's datasource list, which is on the left side of the application window. Each datasource is associated with a separate database and one or more storage locations.
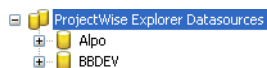
Two datasources are visible

A key difference between ProjectWise and Windows folders is that ProjectWise folders and sub-folders are records in the ProjectWise database, not an actual directory structure. Projects are folders that have added intelligence.
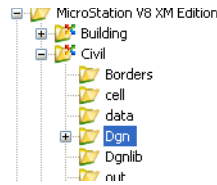
The Building and Civil projects and Civil sub-folders

Sub-folders are not required, but just as in the Windows operating system, the best browsing performance results when each folder further describes the documents and sub-folders that it contains. Each folder contains a relatively limited number of documents.

Any document to which you have access can be located by browsing the document hierarchy or by using a query based on a variety of search criteria.

Results of a search for Acrobat PDF documents

Editing

Once the desired document is located, you can edit it without knowing its exact location in the ProjectWise hierarchy or the actual storage area. The document may actually reside on a server on a different continent.

Hint: When you perform a check out, documents go to a folder in your working directory. When you perform an Export, you can select a destination folder for documents.

Attributes

Because ProjectWise is a database system, it is able to store information, or attributes, for each document. There are standard or built-in attributes, which are stored by default such as document name, filename, document creator, file

creator, last update time or version. ProjectWise can track file properties defined at the operating system level, and even index common files types and CAD files for full text search if configured by the ProjectWise administrator.

It can track information defined in advance by the ProjectWise administrator. This is information such as a project number, project specific information, paper document location or the even the organization receiving exported files.

Document Audit Trail

Document audit trail provides you with a list of all activities that have taken place for the selected document. Your administrator enables or disables this feature and determines the type of information that will be tracked. They also determine whether you have permission to see the audit trail.

An audit trail record is created as an action takes place. You can view a document's audit trail report by selecting the Audit Trail tab in a document's properties dialog. You can customize the report, print it, or save it to a file.

Action Name	Date/Time	User Name	Comments
Created	5/8/2004 23:15:55 PM	student01	
Checked out	5/9/2004 11:26:01 AM	student01	
Checked in	5/9/2004 11:26:51 AM	student01	Changed size of box per CR#1234
Viewed	5/9/2004 11:27:00 AM	student01	
Viewed	5/9/2004 11:28:36 AM	student02	

Module Assessment

Assessment is often equated with evaluation, but the two concepts are different. Assessment is used to determine what an individual knows or can do.

Complete the assessment to see what you have gained from reviewing this module.

Managed Environment Assessment
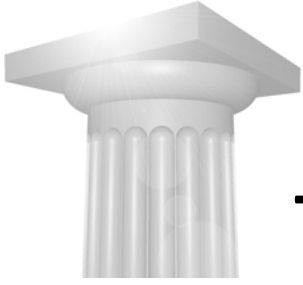
The Integrated Environment

Module Overview

When an application is integrated with ProjectWise, you can search for, open, check out and check in documents directly from the application. You open the integrated application directly from the desktop and log in to a datasource. Integration is accomplished using iDesktop integration, which is part of the ProjectWise Explorer client installation.

Module Prerequisites

- Familiarity with opening, creating, and editing files in MicroStation
- Familiarity with MicroStation tools and procedures
- Familiarity with MicroStation view controls
- Knowledge about MicroStation reference files
- Some knowledge about MicroStation cells
- Some knowledge about MicroStation tags

Module Objectives

After completing this module, you will be able to:

- Work with integrated MicroStation
- Work with integrated Microsoft Office applications
- Work with integrated Microsoft Outlook

Module Glossary

Access control: The method for controlling which users have access to documents and folders.

Attribute: A custom supplemental property for a document. You enter the values for a document's custom properties on the Attributes and More Attributes tabs of the document's properties dialog.

Audit trail: The mechanism for recording document and folder activity in the datasource. The items tracked by an audit trail are specified in ProjectWise Administrator. The audit trail itself is viewed in ProjectWise Explorer.

Check in: To upload your modified document.

Check out: To lock a document and download a copy of it to your working directory. No other user can check out or edit the document until you complete your work and check it back in.

Copy out: To download a copy of a document into your working directory without checking out the document.

Environment: An environment is a collection of custom supplemental document properties established by a ProjectWise administrator. They apply to folders and projects. Once applied, the documents therein inherit the attributes of that environment, and can be seen in the document's properties dialog. Environments are optional in a datasource and are not required for your folders and projects.

Export: To check out a document and download it to a folder outside of your working directory, and therefore outside of ProjectWise. The document can then be used by those not using ProjectWise. Exporting a document locks the document so that no other user can check out and edit it until you import it back into ProjectWise or free it.

Free: To remove a lock on a document. Freeing a document undoes a check out or export. This is a good option when you have opened a document, or checked it out, but have made no changes.

Local copy: A copy of a document that has been downloaded from the server, whether by check out, copy out, or export.

Logical set: A DGN document that has other documents referenced into it.

ProjectWise Explorer: The main client interface for ProjectWise, from which you can check out, open, modify, and otherwise manage ProjectWise documents, folders, and projects.

Update server copy: To replace the server copy of a document with your modified local copy of the document without changing the document's checked out status on the server.

Introductory Knowledge

Before you begin this module, let's define what you already know.

Questions

1   How do you attach a reference file (or Xref)?

2   How do you manipulate references once they are attached?

3   What is a nested reference attachment?

4   What is a tag (or attribute)?

5   What is a cell (or block)? A cell library (block definition table)?

6   What is a model (or modelspace/paperspace)?

Answers

1   Open the References dialog (or EXTERNALREFERENCES) and select *File > Attach* (or XATTACH).

2   Use the tools in the References dialog, or the References toolbox to move, copy, clip etc. (or Refedit tools).

3   You can see the contents of files that are attached to other references. Changes to reference attachments in designs that are referenced to other designs are reflected the next time either the active model's views are updated or the file is reopened.

4   Non-graphical attributes that may be attached to elements drawn in designs.

5   A cell is a complex element composed of a group of primitive or other complex elements that is stored in a cell library for repeated placement.

They are stored in library files (.cel) or in DGN libraries (.dgnlib) (or an invisible data area called the block definition table).

6 An independent container within a file that stores graphical information and specific settings.

Supported Applications

The ProjectWise readme lists the primary applications and versions known to be supported with ProjectWise V8*i* at the time of release.

Supported Applications

Application	Supported Versions
MicroStation	V8*i* (SELECTseries 3), V8*i* (SELECTseries 2), V8*i* (SELECTseries 1), V8*i*, V8 XM Edition (8.9.4.x), V8 2004 Edition, MicroStation/J
MicroStation PowerDraft	V8*i* (SELECTseries 3), V8*i* (SELECTseries 2), V8*i* (SELECTseries 1), V8*i*, V8 XM Edition (8.9.4.x), V8 2004 Edition, PowerDraft/J
Bentley View	V8*i* (SELECTseries 3), V8*i* (SELECTseries 2)
Bentley Navigator	V8*i* (SELECTseries 4), V8*i* (SELECTseries 3)
Bentley i-model Composer	V8*i* (SELECTseries 4), V8*i* (SELECTseries 3)
ProjectWise Publishing Server	V8*i* (SELECTseries 4)
ProjectWise InterPlot Organizer	V8*i* (SELECTseries 4)
ProjectWise InterPlot Server	V8*i* (SELECTseries 4)
AutoCAD (32-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2), 2009 (Update 3), 2008 (SP1)
AutoCAD (64-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD Architecture (32-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD Architecture (64-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD Civil 3D (32-bit)	2012 (Update 1), 2011 (Update 2), 2010 (Update 3.1)
AutoCAD Civil 3D (64-bit)	2012 (Update 1), 2011 (Update 2)
AutoCAD Map 3D (32-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD Map 3D (64-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD Mechanical (32-bit and 64-bit)	2012 (SP1), 2011 (Update 2)
AutoCAD MEP (32-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD MEP (64-bit)	2012 (SP1), 2011 (Update 2), 2010 (Update 2)
AutoCAD P&ID (32-bit)	2012 (SP1), 2011 (SP1), 2010 (Update 1)
AutoCAD P&ID (64-bit)	2012 (SP1), 2011 (SP1), 2010 (Update 1)
AutoCAD Raster Design (32-bit and 64-bit)	2012, 2011, 2010
Revit Architecture (32-bit and 64-bit)	2012 (Update 2), 2011 (Update 2), 2010 (Update 2)
Revit MEP (32-bit and 64-bit)	2012 (Update 2), 2011 (Update 2), 2010 (Update 2)
Revit Structure (32-bit and 64-bit)	2012 (Update 2), 2011 (Update 2), 2010 (Update 2)
Microsoft Office (32-bit only) (Word, Excel, Outlook, PowerPoint)	2010 (SP1), 2007 (SP3), 2003 (SP3)
Microsoft Project	2007 (SP3), 2003 (SP3)
Microsoft Visio	2007 (SP3), 2003 (SP3)
SharePoint	Microsoft SharePoint Server 2010 SP1, Microsoft SharePoint Search Server 2010 Express SP1, Microsoft SharePoint Foundation 2010 SP1, Microsoft Office SharePoint Server 2007 SP3, Windows SharePoint Services 3.0 SP3

Logging in to Integrated Applications

When opening integrated applications from the desktop, you select the datasource to which to log in from the Log in dialog. Then you enter your user name and password. This can be a logical account, which is a ProjectWise user account created for logging in to a ProjectWise datasource and used only for that purpose, or it can be a Windows-based account.

If the option is there, you can enable "Use Windows Single Sign-On for authentication", which lets you use your Windows user credentials to log in to ProjectWise. This option displays only if an administrator enabled single sign on for the datasource. Using this option disables the User Name and Password fields. When you click the Log in button, ProjectWise attempts to log you in to the datasource using the same Windows user name and password that you used to log in to the operating system.

If you want to automatically log in to the same datasource using the same user name and password the next time you open an application from the desktop, enable "Auto-login to this datasource the next time I work with this application".

Changing the log in preference

If you have permission to do so, you can change your auto-login settings for an integrated application.

➔ **How to change your auto-login settings:**

First, open the ProjectWise V8*i* Network Configuration Settings dialog by selecting *Tools > Network Configuration Settings* in ProjectWise Explorer. Select the iDesktop Auto-Login tab. Then, select the integrated application for which you want to change the auto-login settings and click Modify.

• Use the "Use computer setting" or "Do not login automatically" options to force a manual log in.

• Use "Auto-login to datasource" and "Use Single Sign-On" to take advantage of those options.

When you are done, click OK, and then Apply.
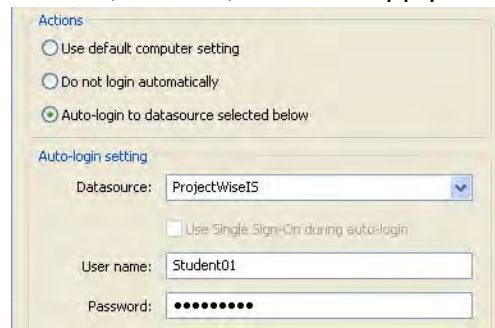
Integrated MicroStation

When launching integrated MicroStation from the desktop or Windows Start menu the ProjectWise Log in dialog opens first.

➔ **Exercise: Launch MicroStation and log in to the integrated environment**

1 Double click the MicroStation icon on the desktop, or launch MicroStation from the Start menu.

2 Select the class datasource from the datasource list.

3 Supply your user name and password.

For example, student01/student01, or student02/student02. The instructor will provide your login name and password.

4 Enable "The Auto-login to this datasource the next time I work with this application" and click Log in.

You see a message that indicates that you will be saving your credentials on the computer.

5 Click Yes.

If you want to auto-login, ProjectWise needs to store your login credentials for later reuse. ProjectWise takes the login credentials, encrypts them and stores the encrypted values in the Windows registry. This means that only the user that is logged in will be able to use the saved credentials to auto-login, and all other users can't see what the saved credentials are. ProjectWise shows a warning dialog to remind them that they are storing encrypted passwords on the system.

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Integrated dialogs

In integrated MicroStation, the file open dialogs are replaced by ProjectWise dialogs, enabling you to check out and open documents from inside MicroStation. The dialogs show you the datasource location of the file, its description, and file name.

Use the Application list to limit the available files to those of the selected application and the extension list to filter by extension.
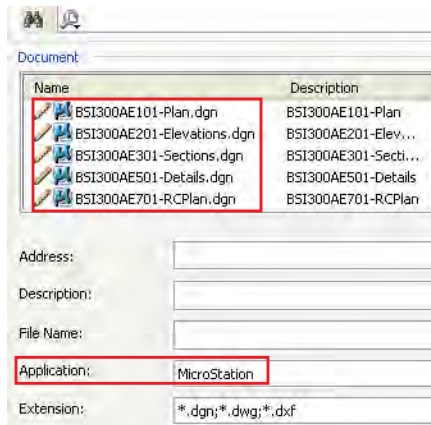
Choosing to see only MicroStation files listed

Searching using integrated dialogs

The Quick Search bar in the File Open, Select Document, and Open dialogs lets you perform quick searches for documents, folders, and projects. The search returns all documents, folders and projects that match the entered text. Searches run from the Quick Search bar are not case sensitive.

➔ **How to use quick searches:**

First, enter the criteria by which you want to search and click the Start Search arrow at the right of the Search field. The Quick Search bar supports wildcards (*) and the use of AND, OR, and NOT.
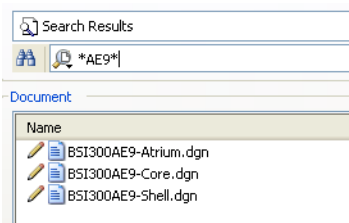
Searching for files containing the string AE9

Then, click the downward arrow next to the magnifying glass to change the type of search.
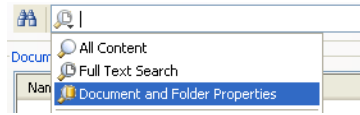
- Select All Content to search document names, descriptions, file names and extensions, the text inside documents, folder and project names and descriptions, custom project properties and environment attributes. An environment is a collection of custom supplemental document properties that an administrator establishes. Once specified for documents, you can search on them.

- Select Full Text Search to search for the same criteria as All Content, excluding environment attributes.

- Select Document and Folder Properties to search for the same criteria as All Content, excluding the text inside documents, environment attributes, or custom project properties.

Integrated commands

Several commands on the File menu are integrated with ProjectWise.

➔ **Exercise: navigate to the project and open a file**

1   In the File Open dialog, navigate to the folder with the latest version of the MicroStation example files to see the example projects.

The instructor will provide the exact location.
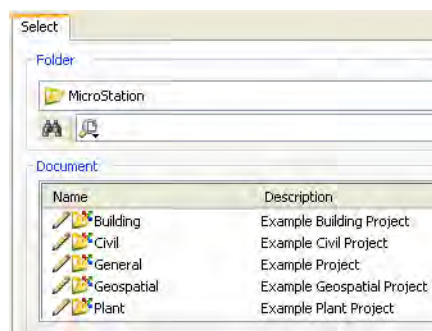
Delivered example projects

2   Double click the Building project.

3   Double click the \seed folder, select sheetseed-##.dgn, where ## corresponds to your student identification, and click Open.
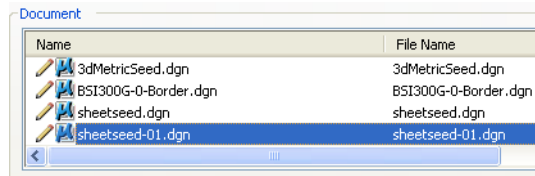
The file is now checked out to you.
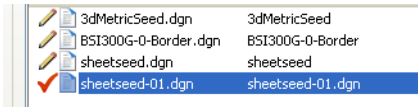
When other team members navigate to this folder they will see a lock icon preceding the file name.

Note: Once you have opened a DGN document, that document is added to the Address bar in ProjectWise's Select Document dialogs for quick access in the future.
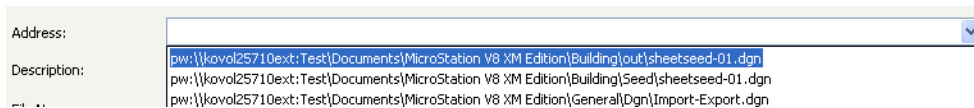
File > Update Server Copy

Use this command to update the server copy of a file that is stored in the ProjectWise storage area without checking the file in. Using this command, the file is still checked out to you, but others will be able to see the changes you have made if they open the file read-only or attach it as a reference.
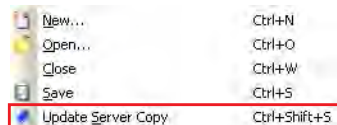
File > Refresh Local Copy

If another user checks in a document that you have copied out, you can update your local copy with the newer server copy by using *Document > Refresh Local Copy*.

File > Save As

When you create documents in ProjectWise, you can use a wizard to help you define its properties or you can create documents without using the wizard.

When you select *File > Save As* the Select a Wizard dialog will appear if no Document Creation wizard is yet set as the default.

These options specify how you want to create a new document.

If you click the No Wizard icon, no document creation wizard will be used when you create a new document. Selecting No Wizard here ensures that, if you attempt to create a new document in an integrated application, the application will open whatever ProjectWise dialog it normally uses to create new ProjectWise documents.

If you click the Advanced Wizard icon, the Advanced Document Creation Wizard presents the steps. You will store a document record in the ProjectWise database as well as saving the file in MicroStation. You can change the document name and description, or the file name, as well as assigning other attributes or changing the application used to open the file.

➔ **Exercise: Save a DGN to another folder**

1   In MicroStation, select *File > Save As* from the main menu bar.

2   Click No Wizard and click OK.

    You will create a document without using a wizard to guide you through the process. The Advanced Wizard is discussed in the ProjectWise Explorer module.

3   In the Save Document As dialog, click Select.

4   Select the Building project's \out folder and click OK.

5   Add the following in the Save Document As dialog:

    Name: <your name>seed.dgn

    Description: <your name>seed

    File Name: <your name>seed.dgn

Department: Proposals - Proposals
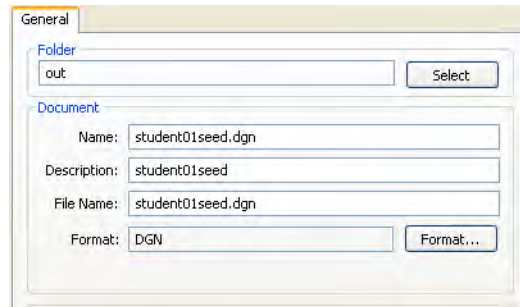
6   Click Save.

In the Check In dialog you see the check mark indicating that, when you opened the DGN file in integrated MicroStation, the file was checked out to you.

7   Click Check In.

You are checking in the first file you opened, sheetseed-##.dgn, from the \Seed folder. The copy you made using Save As is still open.

Attaching ProjectWise documents as references

Using the References dialog you can attach DGN documents stored in ProjectWise to the open document. You can also attach ESRI shapefiles. Similarly, you can attach raster image documents stored in ProjectWise using the Raster Manager.

In ProjectWise, this is referred to as creating a logical set. Once the attachment is made, ProjectWise stores the reference information in the ProjectWise database, as well as inside the master DGN file. This lets you perform searches in ProjectWise Explorer that look for all of the master documents to which a particular reference is attached.

➔   **Exercise: Attach a file managed by ProjectWise as a reference**

1   Continuing in <your name>seed.dgn, select *File > References* to open the References dialog.

2   in the References dialog, click Attach Reference.

The ProjectWise Attach Reference dialog appears.

3   Open the Building project's \Dgn folder.

4   Select BSI300AE101-Plan.dgn, click Add, and then click OK.

You now attach the file using normal MicroStation procedures. Note the attachment settings.

5   Set the following in the Reference Attachment Settings dialog:

Model: Ground Floor Plan

Detail Scale: 1:100

Nested Attachments: Live Nesting   *Depth*: 2

6   Click OK.

7   Fit View.

Best Practice: To detach references from a logical set, use MicroStation's References dialog so that MicroStation is aware of the transaction.

Checking out references

When you open a file with references, the references are copied out by default. If you want to edit those files, they must be checked out. There is an option in the Select Reference Documents dialog that lets you check the files out.
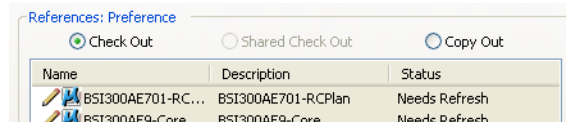
References and versions

In ProjectWise you can create many versions of a document. The latest version is the only one that's active, the others are read-only. However, you may want to view information from another version as a reference.

(New for SELECTseries 4)

You can update a master document to use a different version of the same reference document. The version that you choose will be copied out when the master document is opened and used instead of the active version. This version of the reference will be used by the master document until you select another version to lock to the master document.

Reference exchange

Use this option to switch into a referenced model.

➔ **Exercise: Exchange to a reference file, checking it out**

1   Continuing in <your name>seed.dgn, in the References dialog, right click on the reference BSI300AE101-Plan.dgn, and select Exchange.

Exchange opens the reference file and closes the file you were in. You are prompted to check the file out. If you click No, the file will open, but it will be read-only.

2   Click Yes.

3   Check in <your name>seed.dgn and the referenced file opens.

Missing references

➔ **Exercise: Reference documents**

1   Continuing in BSI300AE101-Plan.dgn, you can see that there are referenced files.

If this information is red for any file, it means that the file cannot be located.

This can be resolved two ways. You could run the delivered reference scanning utility, which will search ProjectWise and resolve missing references automatically. This is discussed in the ProjectWise Explorer module. You can also resolve the problem manually. For a single file, you will most likely resolve the problem manually.

2   In the References dialog, right click a missing reference and select Settings from the pop-up menu.

The full path to a file is listed at the top of the dialog. It indicates that it cannot be found.

3   Click the Browse button at the top of the dialog.

4   In the Reattach Reference dialog, navigate to the location of the missing file, select it, and then click Open.

BSI300G-0-Border.dgn is in the Building project \seed folder.

5   In the Attachment Settings dialog, click OK.

Attachment settings will be the same as for the originally attached reference. Once the correct file is identified, the problem is resolved.

> **Note:** If the reference has a file referenced to it, the Select Reference Documents dialog appears so you can choose to locate all references. Live nesting is respected.

6   Click Previous Model in the View Groups dialog at the bottom left of the application window to return to <your name>seed.dgn, checking that file out and checking BSI300AE101-Plan.dgn in.

In place reference activation

In place reference activation lets you make edits to a reference without leaving the file you are in; the master file. The master file is not checked in; you retain a check out on the file. Activating a reference checks it out.

To use this, open a master file with references from ProjectWise. Right click on an element that is in the reference you want to activate, or right click the file name in the References dialog, and select Activate.

Once a reference is activated, the position of the graphics on the screen don't change. The graphics that are not part of the activated reference turn grey so you can see the editable elements. There is also a mark in the Activate column in the References dialog. If you mouse over the check mark you will see that the file is write locked. In ProjectWise Explorer, you can see that both files are still checked out.

Use Deactivate, on the References dialog's right click menu to return focus to the master file. Deactivating the reference does not check the document back in. It remains checked out, but it is editable. The reason that deactivate does not automatically release the lock is that once the lock is relinquished, it is not possible to undo changes. If you are actively working on 3 files, moving from one to another using activation, it makes sense to hold the locks until you decide you are ready to release them.

To check in an activated reference, check it in when you exit the master file. An Alert indicates that you will no longer be able to make changes. When the Check In dialog appears, click Check In.

If you right click on an activated file in ProjectWise Explorer and select Check In, an Alert indicates that the file is already open any further modifications you make from MicroStation will be lost. Use one of the other methods to release the lock.

Important: References that have been activated are not available for editing in another session. This also applies to references that have been deactivated. To make a reference available for editing in another session, you must release the lock on it. If you use activation, remember to release the locks in the References dialog or by checking in all documents when you exit the master file.

Modifying reference properties

You modify reference properties the same way you do when using MicroStation without ProjectWise.

➔ **Exercise: Modifying reference properties**

1   Continuing in <your name>seed.dgn, in the References dialog, click the Show hierarchy icon.

2   Expand <your name>seed.dgn by clicking the +, and then expand BSI300AE101-Plan.dgn.

   The attached models are listed. The file PlanClip is expandable, indicating second depth nesting.

3   Right click on BSI300AE101-Plan.dgn in the right frame of the References dialog and select Settings from the pop-up menu.

4   In the Attachment Settings dialog, change Nested Attachments to a Depth of 1 and click OK.

   The files at second depth nesting disappear.

5   Leave the References dialog open.

6   Select *File > Save Settings*.

Attaching shapefiles

ESRI shapefiles can be attached as vector references in integrated MicroStation V8*i*. When you are in integrated MicroStation and you attach a shapefile to a DGN, ProjectWise creates two sets of files when you check in the master DGN.

•   One set describes the relationship between the master DGN and the attached shapefile.

•   One set describes the relationship between the shapefile and its own related files.

Also, when you attach a raster file to a DGN, and that raster file has its own related files, ProjectWise again creates two sets on check in of the master DGN.

There is one for the relationship between the master DGN and the attached raster file, and one for the relationship between the raster file and its own related files.

Design History

MicroStation design history lets you track what has been changed in a file. Changes are tracked, and periodically you commit them. This saves the changes into a history log and lets you view what has changed in the file over time.

When you open a file that has uncommitted changes in it you are asked to take ownership of those changes. If you refuse, the file is opened read-only.

Make and record changes in the integrated environment using normal MicroStation procedures.

➔ **Exercise: Open a file and view changes**

1   Continuing in <your name>seed.dgn, select *Utilities > Design History > Initialize*, type Initialized DH in the Initialize History dialog, and click OK.

The status bar icon indicates that the Design History has been initialized for the file you created.

2   Select *Tools > Tool Boxes > Design History* to open the Design History toolbox.

3   Select Show design history.

Show Revisions in Reference Files is enabled in the Design History dialog, so you can see the revisions that have occurred in the reference you attached, BSI300AE101-Plan.dgn.

4   Right click on BSI300AE101-Plan.dgn in the right frame of the References dialog and select Settings from the pop-up menu.

5   In the Attachment Settings dialog, change Nested Attachments to a Depth of 2 and click OK.

The files at second depth nesting reappear.

6   Click the Commit Changes tool in the Design History toolbox and type:

Changed nest depth

7   Click OK.

This revision is added.

8   Select *File > Close*, checking the documents in.

Now the lock is removed from BSI300AE101-Plan.dgn.

9 Note the icon preceding the file name in the Select Document dialog.

The icon shows a sheet of paper indicating that the file has references; it is a set.
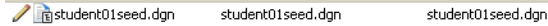
ProjectWise-managed cell libraries

You can attach a cell library from ProjectWise using its' Attach Cell Library dialog and normal MicroStation procedures.

When you select *File > Attach,* or *Attach folder*, in the Cell Library dialog, the ProjectWise Attach Cell Library dialog appears. When you attach a cell library through ProjectWise, the cell library is always read-only.

To attach a cell library that is not ProjectWise-managed, meaning directly from MicroStation, click Cancel in the ProjectWise Attach Cell Library dialog. The MicroStation Attach Cell Library dialog will appear.

Creating ProjectWise-managed cell libraries

You can create a ProjectWise-managed cell library directly in MicroStation.

➔ **How to create a ProjectWise-managed cell library:**

First, in the MicroStation (*Element > Cells*) Cell Library dialog, select *File > New*. The Select a Wizard dialog will appear if no Document Creation wizard is set as the default. This is the same as creating any other new ProjectWise document.

If you select No Wizard, the ProjectWise Create Cell Library dialog appears. Otherwise, you must enter the necessary data in the Advanced Wizard and then the Create Cell Library dialog will appear. Then, select the folder in which you want to store the library. Supply a name, description and file name, and then click Save.

Title Block integration

Title block integration allows ProjectWise to populate title block information in MicroStation. Once the administrator has set up title block integration, tag elements contained within files are automatically populated with data from the DGN file or from within ProjectWise.

Updating ProjectWise attributes from MicroStation

You may have information in an existing title block that you want to use to update the ProjectWise database, rather than updating the title block from the ProjectWise database.

➔ **Exercise: Update an attribute from MicroStation**

1   In the Select Document dialog, move up one level, and then open the \Dgn folder.

2   Open BSI300AE101-Plan.dgn.

A message in the status bar informs you that title blocks were updated successfully.

3   Use the view controls to zoom in on the border's title block.

4   Select the Edit Tags tool from the Tasks dialog.

5   Click on the text AE101 in the Rev. box.

6   In the Edit Tags dialog, click in the Value column for the DRG. NO. tag and change it to AE101-1.

7   Click OK.

8   Select *Utilities > Key-in*.

9   Type the following in the Key-in browser:

titleblock updatedms

10 Press Enter.

A message in the status bar informs you that the update is successful.

11 Select *File > Save Settings*.

12 Exit MicroStation, checking the document in.

Note: There is more on this feature in the ProjectWise Explorer Client module.

Titleblock key-ins

TITLEBLOCK PLACE is used to place the cell that contains the attribute tag set in the DGN. When the cell is placed, the attribute values are automatically updated with the current values from the ProjectWise database.

TITLEBLOCK MODIFY opens the ProjectWise Document Properties dialog for the open document. Attribute values edited through the Document Properties dialog are saved directly to the ProjectWise database and appear in the active model when you click Save on the dialog.

TITLEBLOCK UPDATEDMS is used to save title block attribute values edited from the active model to the ProjectWise database, after editing the values using MicroStation's Edit Tags tool.

TITLEBLOCK UPDATENOW is used to refresh the active model to show the current title block attribute values in the ProjectWise database. TITLEBLOCK UPDATENOW is useful when you have open a master DGN with references, and another user updates the attribute values in any of those references.

Printing

- In integrated MicroStation, you can select *File > Print* and use MicroStation's printing system to print files.

- If you use InterPlot Utilities, there are two additions to MicroStation's File menu; IPLOT and Print Organizer.

  Select Print Organizer to open that utility for printing and reprinting sets of models stored in a print set (.pset) file. A print set is a collection of print definitions and folders. After composing a print set, you can print the set or publish the prints to a PDF document.

The IPLOT item opens the IPLOT dialog, which lets you submit prints from within MicroStation. You can publish prints to a PDF document or add them to an Organizer Plot Set (.ips) file.

- You can also run .PSET print jobs from the Batch Print menu in ProjectWise Explorer.

Integrated ProjectWise Navigator

When launching integrated ProjectWise Navigator from the desktop or Windows Start menu, the ProjectWise Log in dialog opens first. Within integrated ProjectWise Navigator, you use the ProjectWise File Open dialog to open files from the datasource and, when you save, you see the ProjectWise Save As dialog so you can save back into the datasource.

When you launch ProjectWise Navigator from the desktop, integration with ProjectWise Explorer is turned off by default. To turn on desktop integration, your administrator must modify the PW.CFG file delivered with ProjectWise Navigator.

When ProjectWise Navigator is integrated with ProjectWise you can use it to markup DGN documents stored in a datasource. When you markup a DGN document, ProjectWise Navigator creates an overlay document to contain the markup.

Marking up documents with ProjectWise Navigator

When you markup a document, the mark up is stored in a new document, called the overlay document. This lets you add comments without altering the original document content. Once you create an overlay document, the original document is referred to as the reviewed document.

To markup a DGN document, select the document and then select *Document > Markup.* This downloads a copy of the document to your working directory. At the same time, ProjectWise Navigator creates a copy of this document in a temporary local folder that is outside your working directory. It is given the extension .overlay.dgn.

The new overlay document is opened in ProjectWise Navigator, and the reviewed document is attached as a reference to the overlay document. (You can verify this by opening the References dialog in ProjectWise Navigator.) Note that when the

overlay document first opens in ProjectWise Navigator, it is not yet stored in ProjectWise, it only exists in the temporary local folder. To save it to ProjectWise, you need to select *File > Save* or *File > Save As* in ProjectWise Navigator.

➔ **Exercise: Markup a DGN document**

If ProjectWise Navigator is installed and integrated on your system, you can complete the following exercise.

1   In ProjectWise Explorer, click BSI400-W01-Contours.dgn in the Civil project's \Dgn folder.

2   Select *Document > Markup*.

A new overlay document is created for the selected document and is opened in ProjectWise Navigator. The reviewed document is attached as a reference to the overlay document so you can see the content.

3   Click the Create Markup task.
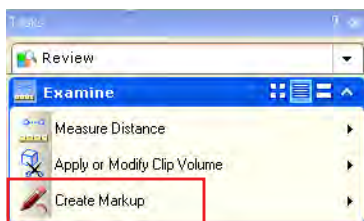
4   In the tool settings, add the Description Color change and assign it to drafter1.

5   Enter a data point in the file.

6   From the Redline task, click Place Text.

7   Type the following:

Change color of contours on level Plan Prop Contour Minor to 2

8   Place the text in the file and reset.

9   Select *File > Save* to save the new overlay document.

If the Save Document As dialog opens, change any information as necessary, then click Save.

If the Advanced Document Creation wizard opens, follow the steps in the wizard to completion.

10 Exit ProjectWise Navigator and click Check In when the Check In dialog opens.

By default, the overlay document will be stored in the same folder as the reviewed document, and the document name and file name for the overlay document are the same as that of the reviewed document, except that the overlay document name and file name now both have the extension .overlay.dgn.

Note: There is an option on ProjectWise Explorer's right click menu, Set > Show Markups that works the same as the Set > Show References command.

To save the new overlay document to a location outside of ProjectWise, select *File > Save As*, then click Cancel in whichever ProjectWise dialog opens, or press the <Esc> key on the keyboard. This returns you to ProjectWise Navigator's Save As dialog.

Related document markups

You can create multiple overlay documents from the same reviewed document if necessary. To do this, you can either select File > Save As again while the overlay document is still open in ProjectWise Navigator, or if you are back in ProjectWise Explorer, you can select the reviewed document again and select Document > Markup.

You can search for and find all the overlay documents that were created from a single reviewed document.

➔ **How to find overlays created from the same document:**

First, select a reviewed DGN document in ProjectWise Explorer, and select *Document > Set > Show Markups*.

A window opens listing all the overlay documents that exist for the selected DGN document.
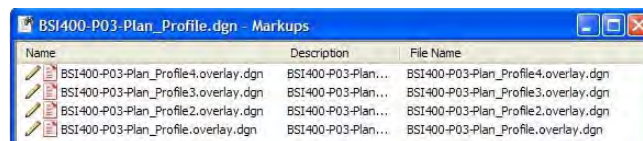
If the selected DGN document does not have any overlay documents, a message appears stating "No Documents Found."

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You can also find the reviewed document from which a particular overlay document was created.

➔ **How to find a reviewed document:**

First, select an overlay document and select *Document > Set > Show References*. A window opens displaying the selected overlay document. Below it, you see the reviewed DGN document. To see details, select *View > Details*.

Integrated i-model Composer

An i-model is a format used for project information exchange, such as when project information needs to be reviewed at a milestone. An i-model is a copy meant for information exchange. It is not the source content that users create and modify.

An i-model is read-only and is always saved with an .i.dgn extension. It converts information to a simpler representation, with smaller file size and easy navigation. No matter what format the input data is in, the i-model unifies it in a simple form. The process of converting the .DGN file into an I.DGN file is called publishing. It publishes the master file and each of its (displayed) references, resulting in a corresponding i.dgn file for each.

All design files that can be opened in MicroStation can be published to an i-model. You can also combine several published i.dgn files into a single, protected file.

When launching integrated i-model Composer from the desktop or Windows Start menu, the ProjectWise Log in dialog opens first. Within integrated i-model Composer, you use the ProjectWise File Open dialog to open files form the datasource and, when you save, you see the ProjectWise Save As dialog so you can save back into the datasource.

The ProjectWise Browser utility in ProjectWise i-model Composer lets you browse and review the documents and component data managed in a ProjectWise repository. You browse and review from within ProjectWise i-model Composer. Before you can use the utility, an administrator must configure it to work with ProjectWise.

➔ **Exercise: Create an i-model**

If i-model Composer is installed and configured on your system, you can complete the following exercise.

1 Note the icon preceding the file BSI300AE301-Sections.dgn in the Building project's \Dgn folder.

It is a logical set, meaning that it has references attached.

2 Double click it to open it in MicroStation, copying the references out.

3 Open the References dialog and note the attached .dgn references.

1		PW_WORKDIR:dms00139\BSI300G-0-Border.dgn
2	✓	BSI300AE301-Sections.dgn
3	✓	BSI300AE301-Sections.dgn
5	✓	BSI300AE301-Sections.dgn

4 Exit MicroStation, freeing the file.

5 Launch i-model Composer from the desktop, logging in to the class datasource.

6 Navigate to \Building\Dgn\BSI300AE301-Sections.dgn in the File Open dialog and click Open.

7 Make sure all references are selected, and then click OK in the Select Reference Documents dialog.

8 Select *File > Publish i-model* and just click OK to create the i-model.

Note the message Center. The references are being stored in your working directory. The .i.dgn will be placed in the same folder as the original file in ProjectWise.

9 When you see the message in the Message Center stating that it has finished building a ProjectWise logical set, exit i-model Composer.

10 Open BSI300AE301-Sections.dgn.i.dgn in MicroStation.

11 Open the References dialog and note the .i.dgn references.

1	PW_WORKDIR:dms0...\BSI300G-0-Border.dgn.i.dgn
2	BSI300AE301-Sections.dgn.i.dgn
3	BSI300AE301-Sections.dgn.i.dgn
5	BSI300AE301-Sections.dgn.i.dgn

Even though they are not in the ProjectWise folder, they are visible in the i-model file.

12 Exit MicroStation, freeing the file.

Integrated Microsoft Office Applications

Microsoft office applications can be integrated with ProjectWise. When they are, a ProjectWise menu is added to the application.

Logging in from the desktop

If automatic login is configured for integrated Microsoft Office applications and you launch one of those applications from the desktop, when you select (File >) New or (File >) Open you will be automatically logged in to the selected datasource using the specified user name and password. Once you are logged in, ProjectWise's Open Document dialog opens.

If automatic login is not configured, when you select (File >) New or (File >) Open the ProjectWise Log in dialog appears.

Datasource: PWISessentials ▾	Log in
User Name: student01	Cancel
Password: ●●●●●●●●●	
☑ Auto-login to this datasource next time I work with this application.	

As with other integrated applications, you can enable "Use Windows Single Sign-On for authentication", and "Auto-login to this datasource the next time I work with this application".

Working with documents

Once you have opened an Office document stored in ProjectWise, it is added to the Address bar in the Open Document dialog.

To browse for and open Office files that are not stored in ProjectWise, click the Open from Disk button. Even if you open a file that is not stored in ProjectWise, your Microsoft Office session remains integrated with ProjectWise. You can later save the document into ProjectWise using the (File >) Save As command.

Saving and creating documents

Selecting (File >) Save saves your changes to the current file location. For example, if the open document came from ProjectWise, selecting (File >) Save saves the changes to the file in your ProjectWise working directory.

Changes are only saved to ProjectWise when you Check In or Update Server Copy of the document.

Selecting (File >) Save As lets you save the open document with a different name or to another location inside or outside of ProjectWise, or you can use it to save the open document into ProjectWise for the first time.

➔ **How to save the open document under a different name or to another location:**

First select (File >) Save. Any changes are saved locally.

- If the open document is a ProjectWise document and you want to check it in, select (File >) Close, or (File >) Exit.

- If the open document is not yet stored in ProjectWise but you would like it to be, select (File >) Save As. The Select a Wizard dialog will appear if no Document Creation wizard is set as the default. Then, select the Folder in which to store the document and provide the document information.

Closing and checking in from Microsoft Office

You must close a document open in any Office application to check it in.

➔ **How to close and check in:**

First, if you have made any changes to the document, first select (File >) Save to save your changes locally. Then, select (File >) Close, or (File >) Exit to close the ProjectWise document. In the Check In dialog, enter any comments if required by your administrator, and click Check in.

If you select (File >) Close or (File >) Exit before (File >) Save, you will be prompted to save your changes locally first. If this happens, click Yes to save your changes locally. You must click Yes if you want your changes to be saved to ProjectWise.

Your administrator can configure simple or automatic check in for Office Applications.

- When simple check-in is enabled and you close a checked out document, the standard ProjectWise Check In dialog is replaced with a simple confirmation dialog that prompts you, "Check in closed document?" You can then click Yes or No.

- When automatic check-in is enabled and you close a checked out document, the document is automatically checked in without any prompting.

Inserting pictures

ProjectWise lets you insert an image stored in ProjectWise into another Office document stored in ProjectWise.

➔ **How to insert a picture:**

First, place the cursor at the point in the document where you want the image to be placed. Then, select ProjectWise > Insert > Picture.
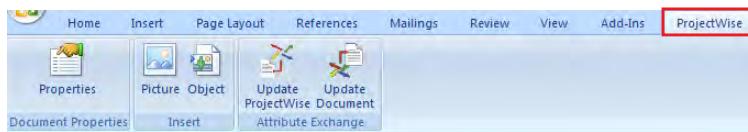
In the Insert Picture dialog, select the image document from ProjectWise and click Open. The image is placed in the document. Note that this image is not linked to the original document, it is simply a copy of that image, and is now entirely an object of the Word document.

Linking documents

ProjectWise integration also supports the pasting of one Microsoft Office document into another as a link. You can open linked documents from their container documents by double clicking the document's link icon in the container document. When you open a container document from ProjectWise, its linked documents are copied out.

When linking documents you can use a local document, external to ProjectWise, as the linked document.

➔ **How to link documents:**

You must open the documents from inside ProjectWise Explorer client to do this. To do so, select Start menu > Programs > Bentley > ProjectWise V8*i* > ProjectWise Explorer, and open the two Office documents.

A link to Document B will be pasted into Document A. So, from Document B, copy some text to use as the link. This is the spot where the document will open when the link is clicked. Then, In Document A, place the cursor at the point where the link will reside and select Home > Paste Special.

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In the Paste Special dialog, select Microsoft Word Document Object from the list, enable the Paste Link radio button and Display as icon, and click OK.
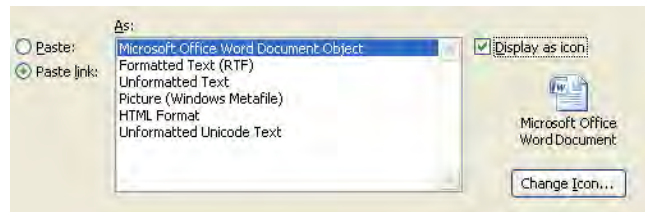
Note: If Display as icon is off, the copied text will display as the link in the container document.

Save Document A and save and close Document B, but don't check it in. To test the link, in Document A, double click the link icon. The linked document opens directly to the text you used to create the link.

Microsoft Outlook

You can save messages into ProjectWise.

➔ **How to save messages into ProjectWise:**

In Microsoft Outlook 2007, select a message from the message list and select File > Save As, or open the message and select File > Save As. In Microsoft Outlook 2003 or earlier, select a message from the message list and select File > Save to ProjectWise, or open the message and select File > Save to ProjectWise.

The Select a Wizard dialog will appear if no Document Creation wizard is set as the default. Select the wizard your organization uses, entering the necessary data in the Advanced Wizard if used. In the Save Document As dialog, select the folder in which you want to store the message and provide the name, description and file name.
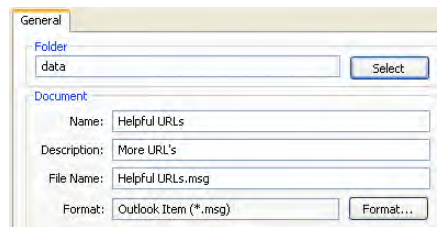
You can save Outlook messages to ProjectWise by dragging messages from Outlook and dropping them into the appropriate folder in ProjectWise Explorer.

Saving attachments to ProjectWise

You can save attachments to Outlook messages to ProjectWise by selecting a message with a file attached and then selecting File > Save Attachments > Save Attachments to ProjectWise, or by opening the message and selecting File > Save Attachments to ProjectWise.
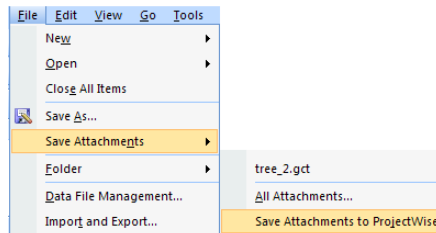
Inserting images and documents

ProjectWise is integrated with Outlook's Insert > Picture > From File command. This integration lets you insert an image stored in ProjectWise into the open message.

ProjectWise integration also supports the insertion of a ProjectWise document into the open message, using Insert > Object. Once the link is inserted, you can double click the link to open the document.

Inserting ProjectWise properties through attribute exchange

The attribute exchange feature of ProjectWise lets you insert ProjectWise properties as text fields inside your Microsoft Office Word and Excel documents. The text fields are linked to ProjectWise, so that if the value of the property changes in ProjectWise, the text field will be updated accordingly in the document. Likewise, you can update property values in ProjectWise by modifying the value of the property from the document itself.

Before you can use attribute exchange

To use attribute exchange, your administrator first must set up Attribute Exchange Rules for Microsoft Office in ProjectWise Administrator. By default, Attribute Exchange Rules for Microsoft Office contain a set of custom properties, attributes, that you can insert into your Word and Excel documents. These custom properties all relate to ProjectWise properties of the document. For example, you can insert the Folder_Name property into your document, so that the current location of the document in ProjectWise is always displayed inside the document.

Initializing documents for attribute exchange

Before you can insert a ProjectWise custom property into a document, you must initialize the document so that the ProjectWise custom properties defined in the delivered Attribute Exchange Rules template are available for insertion.

➔ **How to initialize a Word or Excel document for attribute exchange:**

Open a Word or Excel document stored in ProjectWise. On the ProjectWise tab, click Update Document. You can now insert any of the available custom properties into the document.
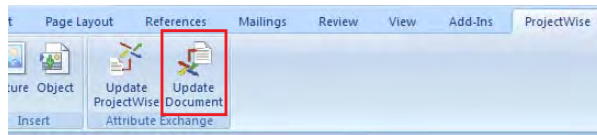
Inserting custom properties

Inserting a ProjectWise custom property as a text field will insert the current value of the selected property into a document. If there is no current value, then the text field will be blank. For example, if you insert the Folder_Description property and the document's folder has no description.

However, since that text field is linked to the Folder_Description property, once a value is defined for that property in ProjectWise, then the field will be updated in the document next time you click Update Document.

➔ **How to insert a ProjectWise custom property into a Word document:**

In an open Word document that has been initialized, place the cursor at the point you would like to insert a ProjectWise custom property. On the Insert tab, select Quick Parts > Field. In the Field dialog, Field names list, select DocProperty. In the Property list, select the ProjectWise document property you want to insert. For example, Folder_Name. Click OK. The value of the selected property is inserted into the document.
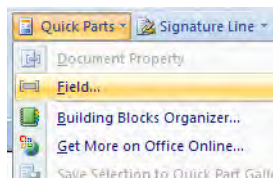
Inserting the Folder_Name attribute

➔ **How to modify the value of a custom property from Word or Excel:**

Click the Office Button and select Prepare > Properties. When the Document Properties section appears across the top of the page, click Document Properties > Advanced Properties.

In the Properties dialog, select the Custom tab. All of the ProjectWise custom properties defined in Attribute Exchange Rules for Microsoft Office display on this tab. If they do not display, close this dialog, select the ProjectWise tab, click Update Document, and then open the dialog again.

From the Properties list, select a custom property. Change the Value field as necessary and click Modify. Click OK when finished. On the ProjectWise tab, click Update ProjectWise. This updates the ProjectWise datasource with the new value. Now click Update Document on the ProjectWise tab to update the document with the new value.

Important: When you are modifying custom property values from inside the document, make sure you do not click Update Document before you click Update ProjectWise. If you do, any changes you made through the Custom tab will be overwritten with the current values from the datasource.

➔ **How to insert a ProjectWise custom property into a cell in an Excel document:**

In an open Excel document that has been initialized, select the cell in which you would like to insert a ProjectWise custom property. Then, in the Formula field, type =GetDocumentProperty("PROPERTY_NAME") where PROPERTY_NAME is the custom property you want to insert.
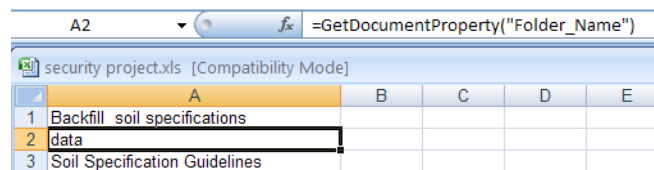
The document resides in the \data folder

Updating custom properties

After you insert a custom property into a document, the value of that property can be updated manually after you open the document, or automatically whenever the document is opened, checked out, copied out, or exported. Whether the property values are updated automatically is determined by the administrator.

The steps for manually updating ProjectWise custom properties in the document when the values have been changed in ProjectWise are the same as the steps for

initializing the document to insert custom properties. Select the ProjectWise tab, and then click Update Document.

You can modify the value of any of the custom properties from inside the document, without returning to ProjectWise Explorer.

Adding new custom properties

If you want to insert ProjectWise properties that are not in the default list of custom properties, you can add them. There are two parts to this process.

One part involves creating a new attribute under Microsoft Office Attribute Exchange Rules in ProjectWise Administrator, which is done by your administrator. The other part is creating a custom property of the same name from inside the integrated Word or Excel application.

Once the property exists in both ProjectWise Administrator and the integrated application, you can insert the custom property and update it.

➔ **How to create a new custom property from Word or Excel:**

Click the Office Button and select Prepare > Properties. When the Document Properties section appears across the top of the page, click Document Properties > Advanced Properties.

In the Properties dialog, select the Custom tab. In the Name field, type the attribute name which must be identical to the name of the custom property the administrator created. For example, if the property is named Document_Workflow_State in ProjectWise Administrator, then you name the property that here. In the Value field, enter a text string as a placeholder value. Word or Excel will not let you add the property without specifying a value.

Click Add, and then OK. Now click Update Document on the ProjectWise tab. This updates the value of all the custom properties with their current values from ProjectWise, and the placeholder value is overwritten with the correct value from ProjectWise.

Module Assessment

Assessment is often equated with evaluation, but the two concepts are different. Assessment is used to determine what an individual knows or can do.

Complete the assessment to see what you have gained from reviewing this module.

[Integrated Environment Assessment](#)
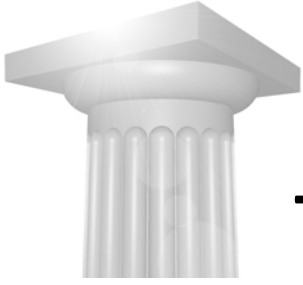
The ProjectWise Explorer Client

Module Overview

ProjectWise Explorer is the main user interface for ProjectWise, from which you access the datasources that contain your projects, folders and documents. This module discusses the interface and its use.

Module Prerequisites

- Familiarity with Windows Explorer
- Familiarity with Microsoft Office applications
- Familiarity with MicroStation
- Knowledge about References (Xrefs) and models (paperspace)

Module Objectives

After completing this module, you will be able to:

- Log in to ProjectWise Explorer and create a Working Directory
- Navigate the interface, create Projects and Folders
- Set document properties
- Define and change Attributes
- Set and work with interfaces

Module Glossary

Background map: A background map is a backdrop, a key map that lets you locate a spatial location in a geographical environment.

Copy out: To download a copy of a document into your working directory, without checking out the document.

Datasource list: The left side of the application window, which lists all of the datasources whose servers are detected and running.

Document list: The right side of the application window in which the selected folder's documents are displayed.

Environment: An environment is a collection of custom supplemental document attributes established by a ProjectWise Administrator. They are applied to folders and projects. Once applied, the documents therein inherit the attributes of that environment. The attributes can be seen by opening the document's properties dialog. Environments are optional in a datasource, and are not required for your folders and projects.

Export: To check out a document and download it to a folder outside of your working directory, and therefore outside of ProjectWise. It can be sent out for edit by those who do not use ProjectWise.

You can choose to lock a file when it is exported (Export options) or you can save a copy without locking the file (Sen to folder option).

Final status: A state in which a document can no longer be modified.

Link set: A set of links to files, models, and supporting documents. Create and open link sets using MicroStation's Project Explorer dialog (*File > Project Explorer*). Link Sets are stored in DGN Libraries and make the data contained in them available to the entire project.

Placeholder document: A ProjectWise document that does not have an electronic file assigned to it.

Reference: A model attached to, and displayed with, the active model for printing or construction purposes. A reference cannot be modified. You can attach a model that resides in either the open DGN file or some other DGN file.
When files that have references are imported into ProjectWise, ProjectWise is not

aware of the references until you run the Scan References and Link Sets utility on the folder in which they reside.

Introductory Knowledge

Before you begin this module, let's define what you already know.

Questions

1 In ProjectWise, what is a document?

2 What is a simple definition for a datasource?

Answers

1 The ProjectWise definition for a document is, essentially, a record in the database. It is an item This can be an electronic file in a ProjectWise folder, or a placeholder for an electronic or hard copy file not stored in ProjectWise.

2 Each datasource represents a working area. When ProjectWise is launched, the available working areas, or datasources, will be displayed. Each datasource is associated with a separate database and one or more storage locations.

Logging in to a Datasource

Before you can use ProjectWise Explorer, you must log into a datasource. At log in time, ProjectWise verifies your user name and password and determines your access rights. These access rights depend on your user group assignment, the user settings assigned to you by the administrator, the security on a particular folder or document, and other settings.

If single sign in is not enabled for your datasource you will log in to the datasource by entering your user name and password. When a datasource has single sign on enabled by an administrator, and the Windows account you used to log in to the operating system matches a user account in the datasource, you will be logged in automatically using the same credentials.

Note: Single sign on is enabled by your administrator on a server system.

The first time you log in to a datasource under a particular user name on any system, you are prompted to create a working directory. This working directory is a folder somewhere on your system to which documents will be automatically downloaded whenever you open, check out, or copy out documents from ProjectWise. You will not be prompted about the working directory again when logging in to the same datasource with the same user name, on the same system, unless you rename, move, or delete the working directory.

➔ **Exercise: Log in to the datasource**

1   Click the ProjectWise Explorer icon on the desktop or select Start > Programs > Bentley > ProjectWise V8*i* SELECTseries > ProjectWise Explorer.

    Available datasources are listed in the datasource list on the left.

2   Right click on the class datasource and select Log in from the pop-up menu.

    The first time you log in to a datasource using the ProjectWise Explorer Log in dialog, you need to enter your user name. After that, it will default to the last used user name entered for that datasource.

3   Enter your user name and password.

Note: Windows domain users must first enter the domain followed by a backslash character "\" and then your user name; DOMAIN\myusername.

4   Press Enter or click Log in.

Note: ProjectWise user names and passwords are case sensitive.

Once you are logged in, the icon to the left of the datasource name changes and the root level nodes available to you are displayed in the datasource list. If you log in to more than one datasource, the datasource icons will indicate which datasource is active by adding a check mark to the icon.

ProjectWise Explorer Window

The ProjectWise Explorer window has two main sections, the datasource list on the left and the document list on the right.

- The datasource list lists all of the datasources whose servers are detected and running. Once logged in to a datasource, a Documents and a Saved Searches folder displays under that datasource. Depending on your user settings, a folder with your user name may also display under the datasource so you can create custom folders. If there are engineering components stored in your datasource, you will also see a Components project in the datasource.

  Click the + symbol to the left of the Documents root folder to expand the list of folders in the selected datasource.

- When you select a folder, the folder's documents display in the document list. When *View > Preview Pane* is enabled, a preview pane displays in the lower portion of the document list when a document, folder, or project is selected. It shows properties of the selected item.

The tasks you can perform in ProjectWise Explorer can be initiated from an item on the menu bar, or through the standard toolbar. For quick access, you can right click any item in the datasource list (left pane) or document list (right pane) and select items from the pop-up menu that appears.

Refreshing the datasource list

You can refresh the datasource list by right clicking the ProjectWise Explorer Datasources label at the top and selecting Refresh. This will not be something you do often, but you may need to do it occasionally to accomplish one of the following things.

- To display new datasources that were created after you opened ProjectWise Explorer.

- To display datasources based on changes in your access after you opened ProjectWise Explorer.

- To display remote datasources after pointing your system to a remote server using the ProjectWise V8*i* Network Configuration Settings dialog. Check with an administrator.

- To display only local or only remote datasources if configured using the ProjectWise V8*i* Network Configuration Settings dialog. Check with an administrator.

- To display datasources based on whether they have been started or stopped after you opened ProjectWise Explorer.

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Logging out

You can log out of a datasource when you complete a session.

➔ **How to log out of a datasource:**

Select *Datasource > Log out* from the menu bar, or right click on a datasource icon and select Log out. Click Yes in the prompt.
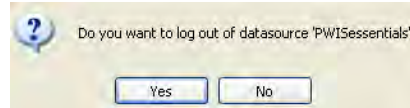
Working directory

Your working directory is a location that contains temporary copies of the files that you check or copy out from a ProjectWise server. It can be on your local hard drive or a network drive so administrators can back up files. Applications launched from ProjectWise Explorer will use these files automatically.

If a working directory was not defined by your administrator you will see a browse dialog when you first log in to a datasource. You then browse to the location in which you want to store the local files. Or, if a defined working directory does not yet exist, you will see a dialog asking you to confirm its creation. The option to change your working directory is set by the administrator.

Note: Always check documents out from ProjectWise. Working on local copies stored in your working directory may result in data loss. This is because other team members may make changes to the document within the ProjectWise environment, and those changes are not added to a local copy. They also will not be able to see your changes.

Warning: Users must never share a working directory, as it can cause problems with check outs and exports.

Purging the working directory

Every time you check or copy out a document, a copy of it is placed in your working directory. Depending upon how your user settings are configured, local copies of documents may remain in your working directory when you check in or free documents. This improves performance, because delta file transfer will

compare the local file to the one on the server and only transfer the changes. However, over time, a very large working directory can result.

To make sure there is not wasted space on your system, you may want to clean up your working directory occasionally. You perform this clean up task in ProjectWise Explorer.

➔ **How to purge the working directory:**

First select a document, or documents, and select *Document > Purge Local Copy* from the menu bar. If your working directory contains a copy of the document, the copy is removed.
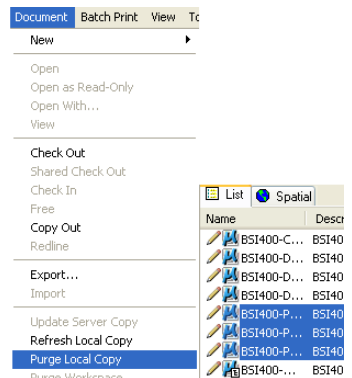
To remove all local copies of documents for a folder, right click on it and select Purge Copies. If the folder contains sub-folders, click Yes when prompted to confirm that you want to purge them.

Note: A document cannot be purged from the working directory if the document is open.

Warning: Never delete the directories or files created by ProjectWise directly from Windows Explorer. Deleting these folders or files can cause data loss. To maintain your working directory, use the Local Document Organizer (a dialog accessible from ProjectWise Explorer that is used to manage documents), or the check in and purge commands.

Warning: Purge only copies of files whose changes have already been sent back to the ProjectWise server.

The Datasource List

The datasource list lists all of the datasources whose servers are detected and running.

Default datasource list icons

Datasource: Indicates an individual datasource.

Active datasource: The check mark indicates that the datasource is open and in use.

Open datasource: An open icon indicates that the datasource is open but not in use.

Folder: Indicates folders and sub-folders.

Saved Searches parent folder.

Saved Searches folder: Each user also has a Personal folder.

Custom Folders

This folder only displays if your administrator gives you access to this option.

Custom folders can be thought of as favorites where you keep the documents you are working on most often. These folders serve as an alternative to the standard folder hierarchy, so you can quickly locate frequently used documents. You can create your own personal custom folders, or if you are an administrator, you can create global custom folders that all users can see and use.

When you place documents in a custom folders, it is only a link to the file. ProjectWise doesn't move or make a copy of the file when it is placed in a custom folder. If you delete the file in the custom folder, it actually deletes from the file from the location where it was originally linked. If you check a file out from a custom folder it is also marked as checked out from the original location so no one else can modify it.

Message Folders

Message folders allow you to view the contents of messages sent and received using ProjectWise Messenger. Message folders appear in ProjectWise Messenger and in ProjectWise Explorer, if your user settings permit their display.

Each user has their own message folder, which is represented by a message icon and your user name. By default, your message folder contains an Inbox folder, a Sent Items folder, and a Global Folders folder.

The Document List

If ProjectWise Explorer is installed with the Spatial option enabled the document list has two tabs, one to list documents and information about them and one for spatial functionality.

Document information

When you select a folder, its contents are listed in the document list. If you do not have the necessary permissions for a document or sub-folder, the document or sub-folder will not appear in the document list.

The bottom of the document list has tabs that contain information about the selected folder and/or project, or when a document is selected, tabs provide information about it.
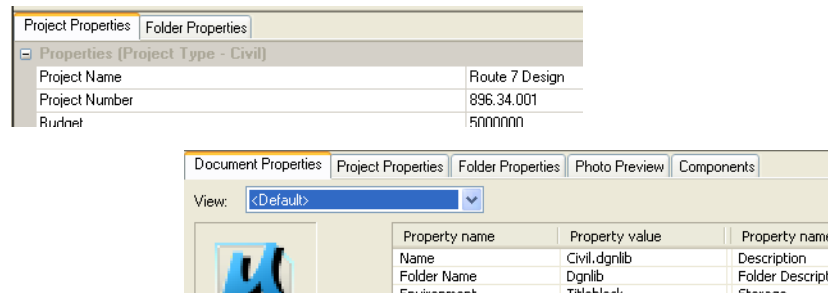
Each document listed in the document list has two icons associated with it. The first icon indicates the general permissions and status for the document. The second icon indicates the document's type and its associated application.

You can select the icons that represent the applications associated with a document, such as the MicroStation "M" or the Microsoft Word "W" icon. If no icon has been linked to an application, you see a default icon.

If icons have not already been selected, complete the exercise to do so.

➔ **Exercise: Select icons**

1 Select *Tools > Associations > Icons*.

   The dialog has different categories, Default Datasource Icons, Default Icons used in the ProjectWise interface, and icons for each defined application. You want to assign familiar icons for the applications you use.

2 Double click on Acrobat PDF.

3 In the Select Image dialog, navigate to \Program Files\Adobe\Acrobat 9.0\Acrobat, and click Acrobat.exe.

Available icons display in the Select Icon section of the dialog. To select, double click or select and click OK.

4 Click the icon and then click OK.

5 Scroll to Microsoft Excel.

Hint: You can press M on the keyboard to skip to the applications with names beginning with M.

6 In the Select Image dialog, navigate to \Program Files\Microsoft Office\Office12, select EXCEL.EXE, choose and icon and click OK.

7 Select Microsoft Word.

8 In the Select Image dialog, navigate to \Program Files\Microsoft Office\Office12, select WINWORD.EXE, choose and icon and click OK.

You can easily assign all the Microsoft Office icons here.

9 Scroll to MicroStation.

10 Double click on MicroStation, navigate to the local install and assign an icon.

Typically, \Program Files\Bentley\MicroStation\ustation.exe.

11 Click OK when you are done to close the Icon Associations dialog.

Note: It is recommended that you not change the Default Datasource Icons as this may confuse other users or hinder troubleshooting.

Default document list icons

The first icon indicates the general permissions and status for the document.

 Pencil: The document is checked in and you have permission to modify the document or the document's properties

Open book: You have read-only access to this document.

Lock: Document either is checked out exclusively or has been exported exclusively by another user. You can still open this document as read-only.

Disk: Document has been exported exclusively by you. Other users will see a lock.

Check mark: Document is checked out exclusively to you. Other users will see a lock.

Final: Document is in Final Status.

The second icon indicates the document's type and its associated application.

The Default icon indicates a document is associated to an application, but the application itself has no associated icon.

The Unassociated icon indicates a document not associated to any application, or to one that has no file attached.

A ProjectWise markup document.

The Flat Set icon indicates a document group; several documents grouped together.

Represents a logical set for MicroStation. A logical set is a master file with references attached.

Note: Select *View > Thumbnails* to change the icons in the document list to display thumbnail images. (If there is no thumbnail image, a default image displays in its place.)

Working with ProjectWise Explorer

You can change the ProjectWise Explorer window to suit your preferences. This makes it easy to manage documents and to view and edit their properties. When the details view is selected, the columns in the document list are customizable.

You can create your own tool bars to hold tools that you use frequently. As with any Windows application, you can maximize, minimize or resize the window, as well as move the bars between the datasource list, the document list, and the preview pane.

Showing information about what is in the datasource

You can choose the types of general information you want to see about documents or folders, such as who created the item, its size, or the owner name and store them in a personal "view". When it is active, the columns you selected will be seen in the document view.

➔ **Exercise: Select information columns to display in the document view**

1   Select *View > Manage Views* from the ProjectWise Explorer main menu bar.

2   Click New.

3   In the Create View dialog, expand the Select an Environment options.

This is a list of all the environments in the datasource. An environment is a collection of custom supplemental document attributes that can be defined by a ProjectWise administrator. They can be used to track additional project, user or file information. The environment options in the Create View dialog let you add columns to view this custom information for documents assigned to a specific environment.

4   Set the environment to Titleblock.

5   In the View name field, type your student identification (student01, etc.).

This is the name of the view you are creating.

Hint: It is helpful to use a descriptive name such as "Date and User Information" or "Folder Information". There can be spaces in the name.

6   In the left frame, expand Basic Columns by clicking the +.

To add a column, double click the column name or highlight the column name and then click the green arrow pointing to the right frame. Or, drag and drop the column into the Show Columns of frame.

You want to add columns that provide the information that you, personally, want to see.

7 Add the following columns: Application, Created, Created By, File Size, File Updated, File Updated By, State, Version, and Workflow.

8 Expand Titleblock by clicking the +.

9 Add the Checked By column.

10 When the desired columns have been added, click OK.

11 Leave the Manage Views dialog open.

To change the order in which the columns will be displayed, use the up and down arrows or drag and drop. To remove a column, highlight it in the right frame and click the arrow pointing to the Available Columns frame, or drag and drop back to the left frame. You can set a column's width using the Width field at the bottom right of the dialog. Once established, you can resize the columns by dragging the column headers' edges.

Global and personal views

You can create your own personal views in ProjectWise Explorer and these views are saved in the ProjectWise database, making them available no matter what system you use to log in to a datasource.

In addition, administrators can create global views from either ProjectWise Explorer or ProjectWise Administrator. These are for all users to use in a given datasource.
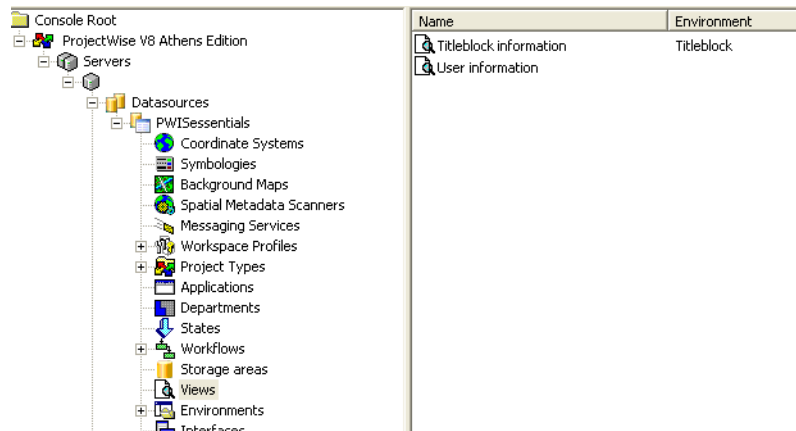
Views for a datasource created in ProjectWise Administrator

➔ **Exercise: Create a second view**

1   In the Manage Views dialog, click New.

2   In the View name field, type:

Folder Information

3   Expand Folder Columns in the left frame.

The Folder Columns options list information you can display about folders.

4   Add the Environment, Folder Name, Folder State, and Folder Workflow columns.

5   Make Folder Name the first column to display and click OK.
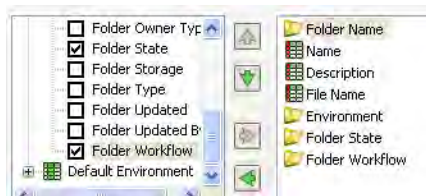
6   Click Close.

You click on the View option list at the upper left of ProjectWise Explorer to select a view you have created or one that was created by your administrator.

7   Select the latest delivered MicroStation example files folder in the datasource list, and then select the Folder Information view.

Note: You many need to select *View > Toolbar > View* to add the toolbar where you change the view.

Note the change in the information displayed in the document list.

8 Select your student identification view.

Sorting documents in the document list

You can sort documents by an individual attribute by clicking on the column heading. Clicking a second time will reverse the order. There is also a menu option that lets you sort the document list based on as many of the displayed columns as you like. For example, you could sort first by document name in ascending order, and then by document version in descending order.

→ **How to sort based on several columns:**

First, select *View > Sort*. In the Sort dialog, the Sort option is set to the last attribute by which you sorted. Then, select the attribute you want to sort by from the Sort by options. Enable the ascending or descending radio button and click OK.
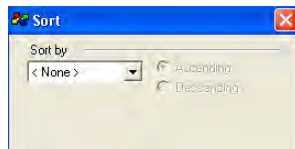
When you click Add, "Then by" options appear. Select the next attribute by which you want to sort.

Copying paths to documents and folders

You can right click in the address bar when a document, folder, or component is selected to copy and paste the location as a shortcut somewhere outside of ProjectWise.

Once you select Copy URL or Copy URN, you can paste the item as plain text or as a link into a document or file outside of ProjectWise. Perhaps inside the body of a Microsoft Outlook E-mail message or Microsoft Word document. You can paste the link into the Windows Explorer or Internet Explorer address bar, as well as the Run dialog (Windows Start menu > Run).

Pasting as a link

If pasted as a link (Edit > Paste), clicking on the link opens the ProjectWise Explorer client on your system, prompts you to log in if you are not already logged in to the datasource containing the item, and then takes you to the item.

Pasting as plain text

If you paste a URL as plain text (Edit > Paste Special > Text), you will see the entire datasource path to the item, just as it appears in the address bar in ProjectWise Explorer.

When you paste a URN as plain text, you will see the item's ID instead of the full datasource path to the item.

Drainage.doc
Vegetation.doc

pw://server:PWClass/Documents/Students/Student-01/3329-#/Design&space;Documents/Drainage.doc

pw://server:PWClass/Documents/D{98e1eb22-4672-42b9-953c-4f5984da5d69}

Drainage.doc copied as URL and Vegetation.doc copied as URN
pasted as links and as unformatted text

Custom tool bars

You can create additional tool bars for easy access to the commands that you use often.

➔ **Exercise: Create a custom tool bar**

1   Continuing in ProjectWise Explorer, select *Tools > Customize*.

2   In the Customize dialog, select the Toolbars tab and click New.

3   Type Document tools in the Toolbar Name field and click OK.

An empty tool bar appears.

4   Select the Commands tab.

5   Select the All Commands category.

6   Scroll down the list of commands to Free and click on it.

7   Drag it to the new tool bar, and drop it and the tool is added to the tool bar.

8   Add the Check In, Check Out, and exclusive (second) Copy Out commands and click Close.

9   Dock the new tool bar at the top of the ProjectWise Explorer.

10 Close the Customize dialog.

Once a tool bar is created you can edit it by opening the customize dialog and adding or removing commands. You can add menus and command buttons to tool bars.

➔ **How to add menus and command buttons to tool bars:**

To add a menu to a toolbar, on the Commands tab of the Customize dialog, select the New Menu category.
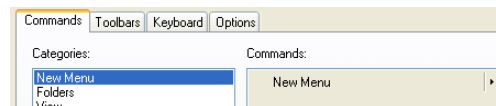
Drag the New Menu command from the Commands list into a ProjectWise Explorer toolbar, such as the Standard toolbar.
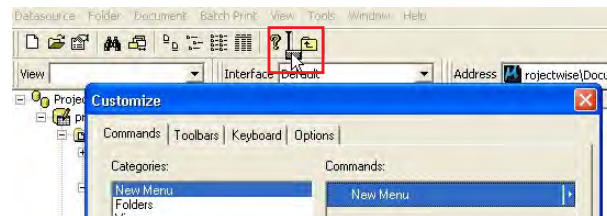
To customize the appearance of a new menu item on a toolbar, right click the new menu button in the toolbar and select Button Appearance.

Note: Note that the right click customization menu is only available when the Customize dialog is also open.

To add command buttons, on the Commands tab of the Customize dialog, select a category, and then select a command from that category. Drag the command either to a new menu on a toolbar, or to an existing toolbar.

The Preview Pane

The preview pane at the bottom of the document view is similar to the AutoPreview in Microsoft Outlook. This pane gives you attribute information

about a file or folder without having to open a properties dialog. To toggle its display, select *View > Preview Pane*.

When you select a project, folder or document, the preview pane has tabs that show various properties.

Folder and Project properties tabs

The Folder and Project Properties tabs display the project specific properties, general properties, and statistics of the selected project, or of the project in which a selected document exists.

These properties are the same ones you would see if you opened the properties dialog, only they are not editable from this location.

Document Properties tab

When a document is selected, this tab displays general properties of the selected document.

When a document is selected, extracted thumbnail images display in the preview pane and in integrated applications' document selection dialogs. Thumbnails can make it easier to identify a document you are looking for without opening files. If thumbnails are enabled in your datasource, they are created in the background on a schedule created by your ProjectWise administrator. It may take a while before you will see one for a new or updated document.

Extracted file properties data also displays. Text extracted from files is stored in ProjectWise's database and can be searched on just like any other property.

To enable these features, select *Tools > Options* and select the Settings tab of the properties dialog. Under User Interface, you can toggle the settings for file properties and document thumbnails.
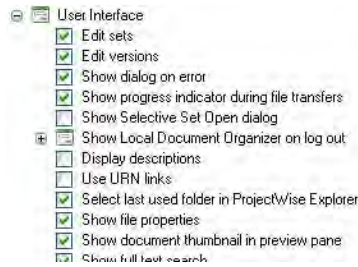
Photo Preview tab

The Photo Preview tab is designed to let you preview image documents, such as digital photographs, without opening the document itself. When you select an image document and then select the Photo Preview tab, a copy of the document is downloaded to your working directory and a preview of the image displays. You can open the document properties dialog and use the forward and backward arrows to move through a slideshow.

Photo Preview supports standard image file formats, including BMP, JPEG, GIF, TIFF, and PNG. You can add additional plug-ins to your browser to view other file types. Photo Preview uses Internet Explorer controls to display content, which lets these additional file types be displayed either natively or through an Internet Explorer plug-in

You can use the Photo Preview tab to display the contents of non-image files, such as text files, PDFs, HTML files, and Word, Excel, and PowerPoint documents. To display Microsoft Word, Excel, and PowerPoint files in the Photo Preview tab, the

respective application must also be installed. To display PDF files, Acrobat Reader must be installed. When you select an Office document, a read-only view of the document is displayed.
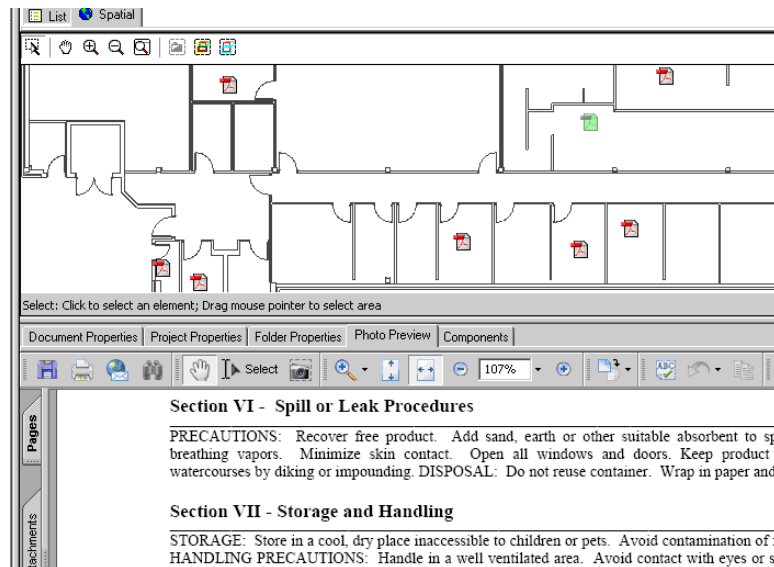
Note: Office documents are disabled from displaying in the Photo Preview tab by default. An administrator must enable viewing.

If the document you are trying to preview is opening inside the native application instead of the Photo Preview tab, do the following. In Windows Explorer select *Tools > Options*. In the Folder Options dialog, select the File Types tab. In the Extensions list, select the file type of the document you are trying to preview, and click Advanced. In the dialog that opens, enable the "Browse in same window" option.

Note: Photo Preview is not intended for the display or management of large image files, such as aerial photography, satellite imagery, or high-resolution scans. Attempting to preview such a file will likely result in extremely poor performance.

Creating Folders

There are two ways to create folders. You can create an empty new folder, or create a folder containing documents and sub-folders using drag and drop.

Create a folder using Folder > New Folder

➔ **How to create a folder using Folder > New Folder:**

Select the Documents root folder, or any project or folder below it and then select *Folder > New Folder*. The Name is limited to 63 characters. The Description is limited to 127 characters.

Important: Whenever a folder description exists and the user setting "User Interface -> Display descriptions" is enabled for a user, the description will display next to the folder instead of the folder's name.

- To change the location where the folder will be created, click Change in the Parent section.

- From the Storage list, select a storage area.

- When the Create Folder dialog first opens, you are assigned as the owner of the folder. You can leave this as is, or assign someone else.

➔ **Exercise: Create two folders**

1   In the delivered MicroStation examples, right click the Civil Project and select New Folder.
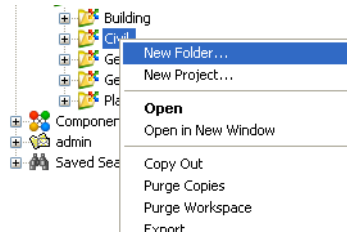
This creates the folder under the Civil project without having to change the location.

2   Name the folder with your student identification (student01, etc.) and click OK.

3   Right click your student<#> folder and, under this folder, create a sub-folder named specifications.

Creating folders using drag and drop

Using this method creates the documents contained in the folders and sub-folders.

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➔ **Exercise: Create a folder using drag and drop**

1 In Windows Explorer, navigate to the \Bentley\MicroStation\WorkSpace\Projects\Examples\Civil\dgn\folder, drag the \Designs folder to your student<#> folder, and drop it. Do not click OK yet.

(By default, C:\Documents and Settings\All Users\Bentley\MicroStation...)

Note: The destination can be any project or folder in the datasource, but not the Documents root folder itself.

2 In the Import Directories dialog, make sure the Import Files Only check box is disabled.

If this option is enabled, the files in the folder will be imported, but the folder that contains them will not be created.

3 Click OK.

In the Import Directories dialog, if the folder you are importing has sub-folders and you want to retain the directory structure in ProjectWise, enable the Include Subdirectories check box.

Important: If Import Files Only and Include Subdirectories are both enabled, ProjectWise will import the files from all of the sub-folders, but none of the sub-folders themselves will be created in ProjectWise.

Enable Import and rename duplicates to rename duplicate files if they are found during the import.

Copying out and exporting Folders

When you select a folder and select *Folder > Copy Out*, copies of the documents in that folder are downloaded to your working directory. Note that you cannot Copy Out folders that have sub-folders.

When you select a folder and select *Folder > Export*, the Folder Export Wizard opens, allowing you to download copies of the documents in the selected

or folder. In ProjectWise Explorer, these documents will be marked as exported and locked to other users until you re-import them.
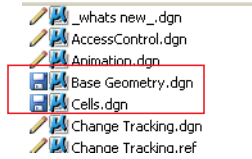
To import them, on the system on which they were exported (the copies reside in that system's working directory), right click and select Import.

Documents

When a file is uploaded from a file system into ProjectWise, it becomes a document. Documents contain metadata about the file in the form of general properties, such as a description, the associated application, the date the file was imported, and custom supplemental environment attributes. The files themselves are stored on a file server, whereas document metadata is stored in the ProjectWise database.

You can create something called a placeholder document, which is simply a container of metadata that does not have an electronic file assigned to it. Placeholder documents can be used to represent electronic files you are planning to import into ProjectWise, or hard copy documents or drawings that are stored in a file cabinet.

Creating documents

You can create documents by dragging files from Windows Explorer into ProjectWise Explorer, or by using the various *Document > New* commands in ProjectWise Explorer. You can create your documents with or without the assistance of ProjectWise's Advanced Document Creation Wizard. It presents the steps necessary to create one or more documents. You can set this as the default method for creating documents, or you can decide on a case-by-case basis which method you want to use.

When creating documents, the document name and file name must be unique to a folder. If you attempt to create a document in a folder that already contains a document with the same document or file name, ProjectWise will resolve the conflict for you, or you will be prompted to resolve the conflict yourself.

When you create documents using *Document > New*, before you associate a file documents are named automatically. The first file will be given the lowest number available, for example, doc00001, and the remaining document names will each increment by 1, for example, doc0002, and so on. So, if a folder already contains a document named doc00001, the next document you create in that folder will be named doc00002. When you associate a file to the document, the number is replaced by the name of the imported file.

➔ **Exercise: Create new documents**

1   Select the \specifications folder below your student<#> folder.

This is the folder in which to create the document.

2   Select *Document > New > Document* from the menu bar.

3   Select No Wizard and click OK.

4   In the Create Document dialog, in the File section, click the Advanced button and then select Import.

You will associate an existing file to the document.

5   Navigate to the class data set \specifications folder, select Vegetation.doc, and click Open.

The Document section is populated with information about the imported file. You can change this if necessary.

6   Click Save, and then click Close.

7   Continuing in your specifications folder in ProjectWise Explorer, select *Document > New > Multiple Document*s.

The destination folder in the Create Multiple dialog is set to the current folder.

8   Change Number of documents to create to 2 and click OK.

9   Select No Wizard and click OK.

These documents do not have any files associated to them. They are placeholders.

Document Creation wizard

This wizard presents the steps necessary to create a ProjectWise document.

Using this wizard, you can select the folder in which to create documents, and specify custom attributes.

→ **Exercise: Create documents using the Advanced wizard**

1   In Windows Explorer, navigate to the class data set \dgn folder.

2   Drag the two files into your \student<#>\Designs folder, selecting the Advanced wizard and clicking OK.

3   On the Welcome page, click Next.

   Your \student<#>\Designs folder is selected.

4   Click Next.

5   Leave the use external file as a template radio button enabled. Note the name of the file being used as the template.

   "Use ProjectWise document as a template" creates a new document based on an existing ProjectWise document. "Select from recent used templates" creates a new document using a file or document that has already been used by the wizard to create a new document.

6   Click Next.

7   Set the following information on the Attributes tab:

   Title: BSI400-W01-I9NB.dgn

   DWG_No: I9NB

   Revision: 2

   Drawn By: your student identification

   These are extra attributes for this file.

8   Click Next.

   The Document Properties page is used to edit the document name, description, file name and version.

9   Click Next.

   The Create a document page gives you the option to open the file in its associated application when the document is created. Do not check this now.

10 Click Next, and then click Finish.

The wizard will restart so you can enter information for the second document.

11 Use the same settings as before, except enter the following on the Define Document Attributes page for BSI400-W01-I9SB.dgn:

Title: BSI400-W01-I9SB.dgn

DWG_No: I9SB

Revision: 3

Drawn By: your student identification

➔ **Exercise: Review the data**

1 Right click BSI400-W01-I9NB.dgn and select Properties.

2 Examine the Attributes tab in the properties dialog.

The information you entered appears.

3 Close the dialog.

Resolving document creation conflicts

Document names and file names can only be used once in a folder. If you attempt to create a document in a folder that already contains a document with the same document or file name, ProjectWise will flag the document in conflict and either resolve the conflict for you, or prompt you to resolve the conflict yourself.

What happens when a document creation conflict occurs depends on your Document Creation Conflicts user settings.

➔ **How to resolve conflicts:**

When there is a conflict and your user settings are configured so that you are prompted to resolve the conflict yourself, there are options.

- To ignore just the first document that is creating the conflict, enable "Skip this item" and click OK.
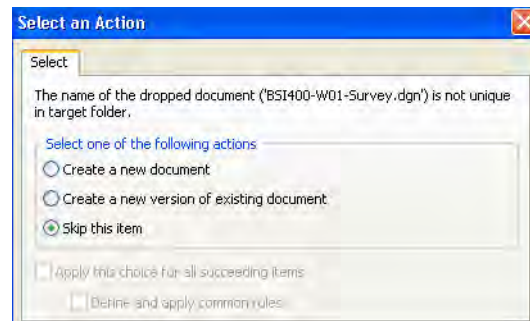
The document in conflict will not be copied or moved, but all other documents involved in the operation will be successfully copied or moved to the target folder.

- To create a new document when a document creation conflict occurs, enable "Create a new document" and click OK.

- To create a new version of a document when a document creation conflict occurs, enable "Create a new version of existing document" and click OK.

Warning: Always check with an administrator regarding versioning. The version identifier and other options may be pre-determined or may need to be confirmed.

If you think there might be multiple documents in conflict, after you select an option, enable the "Apply this choice for all succeeding items" check box, and then click OK.

Document properties

The document properties dialog is used to view or modify properties of documents one at a time. The dialog shows all properties of a document, which include general properties, environment attributes, file properties, the document's history (audit trail), any related components, associated workspace settings, and which users have which permissions to the document. When using the Create Document dialog, the moment you save the new document for the first time, the Create Document dialog becomes the document properties dialog. The name and description of the currently selected document displays in the title bar of the dialog. You can step through all the documents in the current folder by using the forward and backward arrows at the bottom of the dialog.

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➔ **Exercise: Accessing and changing document properties**

1 Continuing in ProjectWise Explorer, open your specifications folder, right click on Vegetation_doc and select Properties.

The properties dialog for the document appears.

Hint: You can select the document and press the space bar to open the properties dialog.

2 On the General tab, change Department to Planning - Planning.

An asterisk appears in the dialog's title bar indicating that properties have been changed but not saved.

3 Click Save.

4 Do not close the dialog.

The General tab contains information about system attributes. These attributes are related to the management of the document. Some of these are editable and some are not.

Warning: If you change the Application, the selected application will be used when you attempt to open the file. Make sure the application is compatible.

➔ **Exercise: Modify other document properties**

1 Continuing in the properties dialog, click the back button.
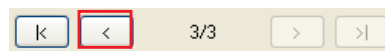
The preceding document's properties are displayed.

2 Set the following:

Name: Soil.doc

Description: Specifications

Department: Planning - Planning

3 In the File section, click the Advanced button, and then select Import.

4 Navigate to the class data set \specifications folder, select Soil.doc, click Open, and then click Save.

5 Click the back button, and set the following:

Name: Drainage.doc

> *Description*: Specifications
>
> *Department*: Planning - Planning

6 Import Drainage.doc and click Save.
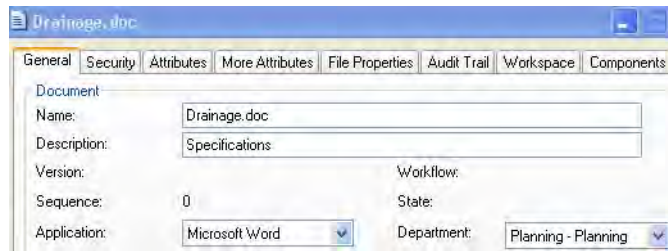
7 Do not close the dialog.

You can import, replace, rename, or remove files using the document properties dialog.

Document security properties

The document security type and properties can be viewed or changed on the Security tab of the properties dialog. If no security is set, everyone has complete access to the document. If there is at least one access control set on the document, any individual or group that is not given explicit access is denied access. Permissions are assigned as follows.

- Full control: You can perform every document function

- Change permissions: You can change document permissions

- Delete: You can delete documents.

- Read: The document is visible in document list, you can view the document's properties and attributes

- Write: You can modify document properties and attributes

- File Read: You can open the document's file in Read-only mode. You can copy out the document, but not check it out

- File Write: You can modify the document's file. You can check out the document, make changes, and then check it back in

- No access: You have no access to the document

Whether you can change these settings depends on the rights granted by your administrator, and possibly by the owner of the document.

Document Attributes

Document attributes are supplemental to the general document properties that all documents have, such as file name, size, and date and time last updated. They exist so that an organization can tailor document attributes to the requirements of their projects.

Attributes are used to track document information, to search for documents, or to enter information in the title blocks of designs. Selecting the Attributes tab in the properties dialog displays any custom attributes in a form that is created by the administrator. Additional custom attributes can be shown on the More Attributes tab.

You can edit any value that is not grayed out by selecting it, entering a new value, and then saving the change. The new attributes are applied to the document.

➔ **Exercise: Assign attributes**

1   Continuing in ProjectWise Explorer, in the properties dialog for Drainage.doc, click the Attributes tab.

2   Enter the following:

Title: Drainage specifications

Drawn By: your student identification

3   Click Save.

4   Click the Forward button and enter the following:
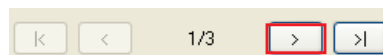
Title: Soil specifications

Drawn By: your student identification

5   Click Save.

6   Click the Forward button and enter the following for Vegetation.doc:

Title: Vegetation survey

Drawn By: your student identification

7   Click Save.

Leave the dialog open.

Attribute sheets

When editing a document's properties on the Attribute and More Attributes tab pages, there may be times when you want to enter multiple values for the same attribute. You do this by creating more attribute sheets for the selected document.

Attribute sheets let you refer to particular areas of a document separately. For example, many documents contain details of more than one item. A drawing of a site might contain a number of elevations or several large scale details of construction features. Since each sheet contains its own attribute data, each sheet can be directed towards a particular part of the document. For example, you might add a sheet for each of the elevations and details.

➔ **How to add an attribute sheet:**

First, select a document in the document list, right click and select *Attributes > Add Sheet*. You can right click inside the properties dialog. The Document properties dialog opens to the Attributes tab. Then, enter values on the Attributes tab and the More Attributes tab, click Save, and then Close. The new sheet is created and appears below the selected document in the document list.
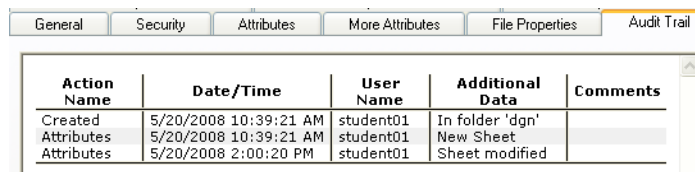
Repeat the procedure to create additional sheets. Multiple sheets are listed in the order in which they are created.

Note: In order to add an attribute sheet, the document must have space for it created by your administrator.

Audit Trail

This is the mechanism for recording document and folder activity in the datasource. The items tracked by an audit trail are specified in ProjectWise Administrator. The audit trail itself is viewed in ProjectWise Explorer.

A document's audit trail provides you with a list of all activities that have taken place regarding the document. An audit trail record is created as an action or activity takes place. Your administrator determines which document activity is recorded, and whether you have permission to see the audit trail. If enabled, select the Audit Trail tab in the properties dialog to see the audit trail.

General	Security	Attributes	More Attributes	File Properties	Audit Trail

Action Name	Date/Time	User Name	Additional Data	Comments
Created	5/20/2008 10:39:21 AM	student01	In folder 'dgn'	
Attributes	5/20/2008 10:39:21 AM	student01	New Sheet	
Attributes	5/20/2008 2:00:20 PM	student01	Sheet modified	

Creating new versions of documents

Version control is the ability to store and manage multiple versions of the same document.

You can create new documents based on existing documents, while preserving the original document.
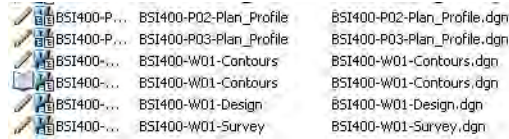
If the "Create new version during Check In" check box is enabled in the Check In dialog, a Check In will create a new version of this document. Any changes you made while the document was checked out are saved to the new version. The version field lets you enter a custom version identifier, which displays in the document properties dialog. If you leave this field blank, a default version identifier is appended to the new document.
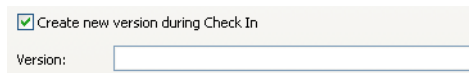
When you create a new version of a document, the original document automatically becomes read-only, maintaining the condition it was last in before versioning. This protects it from further modification. The new version is now the active version of the document and you can edit that document as necessary.

Since creating new versions retains the original document, you can always go back and review previous versions of a document, or if necessary, you can restore an older version to become the current, active, version of the document.

Note: Check with your administrator regarding versioning.

Exporting and importing documents

When documents must be edited by someone who is not using ProjectWise, you can export those documents outside ProjectWise.

To export a document exclusively, the document must be checked in and you must have Read, File Read, and File Write privileges for that document. An export is similar to a check out, only it downloads the selected documents to a folder you specify that is outside your working directory, therefore outside of ProjectWise.

You can export documents individually, or you can export an entire folder or project. Once outside of ProjectWise, you can zip the files up and send them out for editing. After exporting a document, you see a diskette icon next to the name. Other users will see a lock icon. Other users can copy out locked documents, or open them as read-only.

Document Export wizard

The document export wizard presents the steps necessary to export documents.

➔ **How to export documents:**

First, select the documents and select *Document > Export*. Then, click Next in the Document Export wizard.

On the Define the export settings page, enable the Export radio button, click Browse to select the export location, or type the location to which to export the documents. If the folder name you enter does not exist, it will be created on export.

Click Next and the documents eligible for export are exported to the export location. The results are displayed in the wizard. Click Finish. You can select a folder or project and select *Folder > Export*.

Working with references and logical sets

A logical set is a DGN document that references other documents. It has other documents attached to it. The DGN document to which other documents are attached is referred to as the master document of a logical set. The document icon for a master document will have a hierarchical tree symbol in the lower right corner of the icon.

Creating logical sets

The actual referencing of one file into another is performed in MicroStation When you open a DGN document from ProjectWise and then attach other ProjectWise documents to it in MicroStation, saving changes to the master document automatically creates the logical set in ProjectWise.

If you are importing DGN files and their references into ProjectWise, those master documents will not become logical sets and their icons will not have

the hierarchical icon until you, or your administrator, runs a reference scanning tool on them.

Scanning for references and link sets   Help

There are two main parts to setting up the Scan for Reference Files and Link Sets wizard. First, identify folders or documents containing master documents and link sets, and then setting up a method for searching. The utility finds DGN, raster and shapefile references and available link sets, depending on the options you set.

When you attach a reference to an open file using the References dialog, the ProjectWise Attach Reference dialog will appear. Select the file you wish to attach as a reference, click Add and then click OK when you are done. The standard Reference Attachment Settings dialog will open and you can attach the reference. ProjectWise will now recognize the logical set.
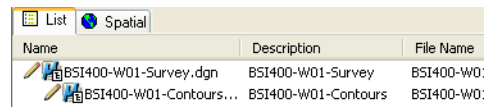
Viewing documents in a logical set

You can find out which documents are referenced in a logical set.

➔ **How to find out which documents are referenced in a logical set:**

First, select the master document of a logical set. Then, select *Document > Set > Show References* or right click on a document and select *Set > Show References.* The set contents window opens displaying the master document, and under it, all the documents referenced into the master document.
If the references are not indented under the master document, right click in the set contents window and select *View > Details*.

Note: You can check the references in ProjectWise Explorer. However, if they are in different folders it is easy using the logical sets dialog.

Opening logical sets

For each master MicroStation document you check out, an XML file is created in your working directory (it may be in a sub-folder of the dmsxxxxx folder). This file lists all the master document's references, and records all reference-related changes to the master document. When you select Check In or Update Server Copy, the changes documented in the XML file are saved to the logical set in the database. If you free the master document, changes documented in the XML file are discarded and not saved to the database. Each XML file will have the name of the master file prepended to the file name. For example, master1.dgn.fileinfo.xml.

Reference check out

When you open a file with references, the references are copied out. If you need to edit those files, they must be checked out.

If you double click on a DGN file with references, you see the Select Reference Documents dialog if the option to show it is enabled in your user settings. This dialog offers the option to set the reference file to a checked out state. When you check the master file in, references and their changes will be checked in.

➔ **Exercise: Checking references in and out**

1   Continuing in ProjectWise Explorer, select *Tools > Options*.

2   On the Settings tab of your user Properties dialog, expand the User Interface category.

3   Enable the check box for Show Selective Set Open dialog, click Apply, and then click OK.

4   In your student<#> \Designs folder, double click on BSI400-W01-Survey.dgn.

   You see the reference, BSI400-W01-Contours.dgn, listed in the Select Reference Documents dialog. The Copy Out radio button is enabled by default.

5   Enable the Check Out radio button and click OK.

   The master document opens, and the selected reference documents are downloaded accordingly. If you do not have access to some of the documents referenced by the master document, only the documents to which you have access will be downloaded.

6   Return to ProjectWise Explorer.

   BSI400-W01-Contours.dgn is checked out, along with the master file.
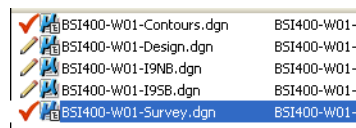
7   In MicroStation, select *File > Exit*.

8   Check BSI400-W01-Survey.dgn in.

   In ProjectWise Explorer, you can see that the Reference is still checked out.

9   To release the check out on the reference in, right click on it and select Free.

If no changes have been made, you may want to Free the reference. Freeing will not be logged if your administrator is keeping an audit trail. If you made no changes, freeing the document is less confusing.

Hint: If reference is in another folder, you can open the logical sets dialog, right click on any checked out files and check them in from there.

Notes about raster references

When working with raster references and ProjectWise, you need to make sure the raster references are always copied out instead of checked out. Otherwise, a copy of the entire raster will be downloaded when you open the master document. Therefore, when you initially attach the raster file, you need to set the attachment as read-only in the Raster Manager dialog. Also, when opening master documents that have raster references, make sure you always select to copy out the rasters rather than checking them out.

When copy out occurs, a small copy, the header file, of the raster is downloaded to your working directory. As you pan and zoom in MicroStation, the portions of the raster document necessary to complete the view are downloaded to a special cache file on your system.

When you open a document from ProjectWise Explorer, if the document has a raster attached and there is no local copy of the raster in your working directory, ProjectWise will download a full size copy of the attached raster, rather than the small header file that is downloaded when performing the same action from MicroStation.

➔ **How to attach a raster image to the open document:**

First, in MicroStation, select *File > Raster Manager*. Then, in the Raster Manager dialog, select *File > Attach.* Next, from the Folder list in the ProjectWise's Attach Raster Reference File dialog, select the folder in which the document to attach is located. Select the document and click Add. They are set to be read-only by default. When finished adding documents, click OK. If you only added one document, MicroStation's Reference Attachment Settings dialog opens.

Working with flat sets

A flat set is a group of documents that are placed into a container for some purpose, such as for printing, or to simplify the check out of multiple documents

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across folders. When you right click a flat set, you will see all of the options available to you for working with the flat set. When you have a flat set open, you can select and right click the documents in the set and perform actions on them just as you would from any folder in ProjectWise Explorer.

You can place a single document into as many sets as you want. The document is not physically copied into the set, but a record of the document is added to the set. Because of this, removing a document from a set does not remove the document from the folder in ProjectWise in which it exists. However, deleting a document that is in a set will permanently delete that document from ProjectWise.

When you add a document to a flat set, you can specify the following.

- Whether the set will always include the active version of that document if additional versions of it are created after the original document is added to the set.

- Whether the set is always going to include the version of the document that was active at the time it was added to the set.

New for (SELECTseries 4):

Note: Turn on Lock to Version if you want the version of the document that was active at the time it was added to always be the version included in the set.

Turn off Lock to Version if you want the active version of the document to always be included in the set.

Note the following when adding documents to flat sets:

The Always Use Active Version check box will be enabled if you add a document that has no versions, or if you add the active version of a document.

If the Always Use Active Version check box is enabled, the check box will be on or off depending on how your administrator has configured it.

The Always Use Active Version check box will automatically be disabled (and off) if you add an inactive version of a document.

Whenever you have a document for which the Always Use Active Version check box is enabled and off, the check box automatically becomes disabled then the next time you create a version of that document. This is because the

version of the document included in the set (which was formerly either a document with no versions, or the active version) is now an inactive version.

When you check out a flat set, all documents in the set are checked out. When you check in a flat set, and if you are required to enter change comments upon check in, you are only presented with one Check In dialog.

➜ **How to create a flat set:**

First, select *Document > Set > New*. Then, type a name for and description for the set and click OK. An empty set window opens so you can add documents. The title bar of the set window shows the name of the folder followed by the name of the set. Next, select documents from any folder in the datasource and drag them into the set window.
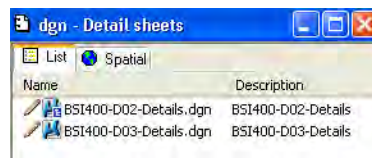
Once the first document is added, the flat set displays in the document list of the originally selected folder. Each document's name and status icon appear in the flat set's window.
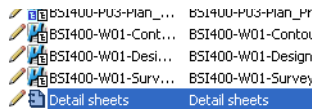
Note that if you have a document selected when you create the set, the document is added to the set. Select *Document > Set > Remove from set* to remove documents.

Note: If you close a flat set before adding documents to it, the empty flat set will not be saved to ProjectWise. Further, once the last document is removed from a flat set, the empty set is automatically deleted.

Find a set containing a document

Opening a document set shows you which documents are in the set. You can reverse the process and determine which document sets, logical or flat, contain or reference a particular document.

➜ **How to find all sets which reference a particular document:**

First, select a document, and then select *Document > Set > Referenced By*. If the document is a member of any set, those sets are found and displayed in a

new window. If the document is not a member of any set, a message appears stating "No Documents Found."

Working with link sets

As the name implies, the Scan for Reference Files and Link Sets wizard can be used to scan newly imported DGN documents for the presence of link sets. Just enable the option on the Specify Scan Options page. The rest of the wizard pages work the same as they do when scanning for references.

MicroStation link sets are supported in ProjectWise. A link set is a group of links to other files, models, references, and/or saved views that can be stored in a DGN file or a DGN library. In MicroStation, the Link Set dialog is used to create and manage link sets, and the Project Explorer dialog is used to create the actual links. In ProjectWise Explorer, link sets and their links display in the Link Sets tree under the project in which the link set exists. Any link sets that exist in folders that are not in any project are displayed in the main Link Sets tree, which is a sub-folder of the Documents root folder.

Using the Link Sets tree

Link sets are created in ProjectWise automatically when you create link sets in MicroStation in existing ProjectWise documents, or when you run the Scan for References Files and Link Sets wizard on newly imported DGN files that contain link sets. In ProjectWise Explorer, link sets and their links display in the Link Sets tree under the project in which the link set exists. Any link sets that exist in documents that are not in any project are displayed in the main Link Sets tree, under the Documents root folder.

If ProjectWise is not aware of link sets in a project, then that project will not have a Link Sets tree. If there is no awareness of link sets existing in folders outside of any projects, the main Link Sets tree will not display.
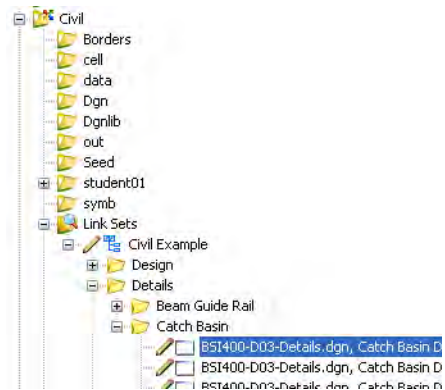
You can expand any Link Sets tree to display all the link sets in that ProjectWise project, and the specific links in each set. Since link sets are stored in ProjectWise documents and contain links to other ProjectWise documents, right clicking an item in the Link Set tree is the same as right clicking a document in the document list and therefore opens the same right click menu. The options enabled on this menu depend on what your user settings and what your permissions are for the selected link set or linked document.

Note: Links sets and links cannot be created, changed, or deleted in ProjectWise Explorer. You must use MicroStation to perform these tasks. However, if you use ProjectWise Explorer to delete a DGN document that contains a link set, the link set also will be deleted.

Selecting the correct link set source

Link sets come from one of three sources. When you are using ProjectWise Explorer to check out link sets and DGN files containing link sets, it is important that you select the correct source in the Link Sets dialog.

• If you plan to change a link set, it is easiest to use the **Selected File** option as the source of your link set. After you select a DGN file and check it out, the Check In icon in the Link Sets dialog is available. You can check in changes to the link set, or update the server copy at any time.

• Select the **Active File** option if you want to check out a link set but do not need to save any changes to it until you check in the DGN file or update the server copy, you can use Active File as the source of your link set. Note that the Check In icon in the Link Sets dialog is gray and is unavailable. When you are using link sets in the active file, you cannot check in changes to the link set at this point because the link set resides in the open DGN file, which is not being

checked in yet. If you make changes to a link set in the active file, they cannot be saved until you select *File > Update Server Copy* or check in the DGN file.

- If the **Configured Libraries** option is the source of your link set, you will be unable to modify the link set at this point. This functionality is the same as if you were using only MicroStation to open the link set.

Checking link sets in and out in MicroStation

When you are in an integrated session of MicroStation, a Check In / Check Out icon appears on the Link Sets dialog. When the icon displays a blue upward arrow, you can either check in or update the server copy of the link set document when you have made changes to it. When the icon displays a green downward arrow, you can either check out or refresh the local copy of the link set document. The following are situations that cause this icon to display and activate.

- If you have the link set's DGN document checked out, a blue upward arrow, the Check In icon appears. Clicking the small arrow to the right of this icon lets you select whether to check in the DGN document or to just update the server copy and keep the document checked out.
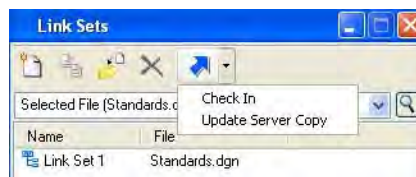
- If you have the link set's DGN file open but it is not available to be checked in, the Check In icon is gray and is unavailable.

- If you have the link set's DGN document open and someone else has checked it out and made changes to it, a green downward arrow, the Check Out icon, appears. Clicking the small arrow on the right side of this icon lets you check out the DGN file or refresh the local copy.

If you have the link set's DGN file open in read-only mode, the Check Out icon is gray and is unavailable. All other icons on the icon bar are unavailable as well.

Note: If the link set is stored in the configured DGN libraries, an additional icon does not appear in the icon bar. All other icons on the icon bar are unavailable.

➔ **How to check out a link set or a linked document:**

First, expand the Link Sets tree containing the link set or linked document you want to check out. Then, right click the item you want to check out and select Check Out.

Once you have made changes to a link set document in MicroStation, you can check it in from MicroStation or you can check it in from ProjectWise Explorer. When you check in a link set document, you can see the changes it produces in the Link Sets tree in ProjectWise Explorer by refreshing the view.

Titleblock integration

Titleblock integration allows ProjectWise to populate title block information in MicroStation. Once the administrator has set up title block integration, tag elements contained within files are automatically populated with data drawn from tables in the ProjectWise database.

➔ **Exercise: Populate a title block**

1   In ProjectWise Explorer, make sure you are using the Default interface.

2   In Windows Explorer, navigate to the class data set \borders folder.

3   Drag C-border.dgn to your \Designs folder, using the Advanced Wizard.

4   Enter the following on the Define Document Attributes page:

Title: Project border

DWG_No.: BSI400

Drawn By: Your student identification

5   Click Next until the final page, and then click Finish.

➔ **Exercise: Review the data**

1   Double click on C-border.dgn to open the file in MicroStation.

A message in the status bar informs you that title blocks were updated successfully. The title block is populated with information from ProjectWise.

2   Select *Element > Tags > Define*.

The tag set named TitleBlock contains the tags that hold the title block information. The individual tags hold the values.

3   Close the dialog.

➔ **Exercise: Update Attributes from MicroStation**

1 Continuing in MicroStation, select Edit Tags from the Tasks dialog.

2 Click on the text BSI400 in the DWG NO. box.

3 In the Edit Tags dialog, click in the Value column for the projectno tag and change it to BSI400-1.

4 Click OK.

5 Select *Utilities > Key-in*.

6 Type the following in the Key-in browser:

titleblock updatedms

7 Press Enter.

A message in the status bar informs you that the DMS value is successful.

8 Open the Properties dialog for the file in ProjectWise Explorer.

You see that the DWG_No attribute has updated.

9 Exit MicroStation, checking the file in.

Note: Only attributes that you have write access to can be changed from ProjectWise or from MicroStation.

New for (SELECTseries 4):

Renditions in ProjectWise Explorer

A rendition is a visual representation of a document. When ProjectWise Dynamic Composition Server for PDF is installed and configured you can publish renditions from documents you select in ProjectWise Explorer. You can also publish renditions by selecting a flat set or by selecting a folder or project. All documents in the selected item will be processed.

When configuring jobs in ProjectWise Explorer, you will simply select an available rendition profile you want to use, and then select the proper destination folder.

Select *Document > Create Renditions,* or right click a project, folder, or flat set and select *Create Renditions* to open the dialog.
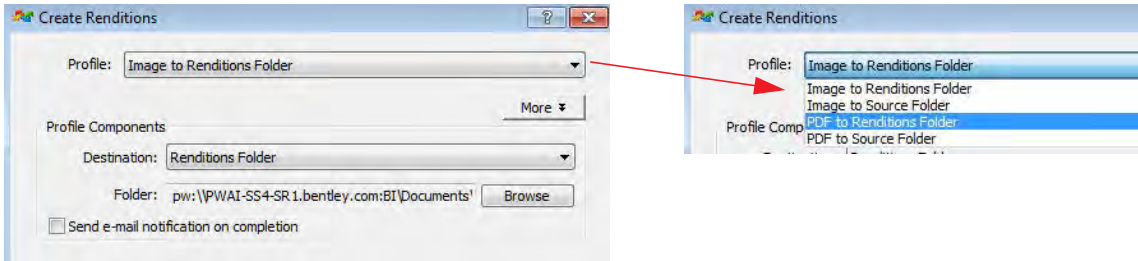
Click the **More** button in the dialog to set additional options.

- Presentation specifies the presentation component that will be used when creating renditions. The presentation component specifies which InterPlot Settings file(s) to use (if any) to create renditions. InterPlot Settings files can define such things as the plot area, size/scale, pen table, design script, and so on.

- Format specifies the format component that will be used when creating renditions. The format component specifies the file type or types that will be created from the selected source files.

- File name specifies the file name component that will be used when creating renditions. The file name component specifies how the newly created rendition documents will be named.

New for (SELECTseries 4):

Printing

You can print documents while you have them open in their associated application, or you can print them from ProjectWise Explorer.

Printing from ProjectWise Explorer

The type of document you select determines the way it is printed. Right click the document, and select Send To > Printer.

- If you select one or more Microsoft Office documents, the documents are automatically printed to your default system printer.
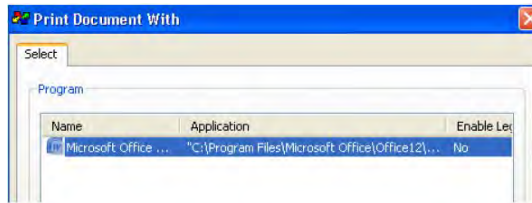
- If you select a MicroStation and it is installed on your system, you will print directly from MicroStation. For AutoCAD or other document types, the Print Document With dialog lets you select the application. Then the document opens in the associated application, allowing you to adjust print settings specific to the files.
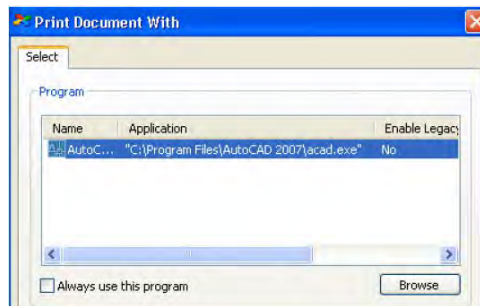
Batch Printing

The Batch Print menu in ProjectWise Explorer is used when you want to print the documents of a print set file (.pset) created in MicroStation V8i, or the documents of a job set file (.job) created from earlier versions of MicroStation.

Just select a print set file (.pset) or a job set file (.job) and select Batch Print > Print. The documents in the print set or job set are sent to the printer and printed according to the print set's or job set's specifications.

Note: The only option on the Batch Print menu related to .pset files, is Batch Print > Print.

Using ProjectWise InterPlot Organizer

ProjectWise InterPlot Organizer is an application for composing plot sets from DGN files, as well as a variety of raster format files. After composing a plot set, you can print the plot set or publish the plots to a PDF document. It lets you use design scripts, color tables, rendering attributes files, and settings files to resymbolize when creating a plot.

Files from multiple ProjectWise datasources cannot be referenced in a single plot set file.

Adding and creating plot sets

When ProjectWise InterPlot Organizer is integrated with ProjectWise Explorer *Document > New > Plot Set* and *Document > Add To Plot Set* are added to ProjectWise Explorer's Document menu.

Note: If you are using MicroStation V8 XM Edition with ProjectWise Explorer V8*i* SELECTseries1, you will not be able to work with plot sets.

➔ **How to create and populate a plot set from ProjectWise Explorer:**

First, use *Document > New > Plot Set* to create a plot set. Then, use *Document > Add To Plot Set* to add documents to the plot set. Next, use the tools in ProjectWise InterPlot Organizer to set up your printing parameters and preferences.

➔ **How to add a ProjectWise InterPlot Organizer Plot Set File to ProjectWise Explorer:**

There are several ways to add a ProjectWise InterPlot Organizer Plot Set file to ProjectWise Explorer.

- Select *Document > New > Plot Set* in ProjectWise Explorer

- Use ProjectWise InterPlot Organizer outside the ProjectWise environment to create an empty plot set file, then drag and drop it into ProjectWise Explorer

- Invoke ProjectWise InterPlot Organizer outside the ProjectWise environment and select *File > ProjectWise Login* to login to a ProjectWise datasource. You can then save the plot set file to a ProjectWise datasource

Invoking ProjectWise InterPlot Organizer in ProjectWise Explorer

There are two ways to invoke ProjectWise InterPlot Organizer in the ProjectWise environment.

- Double click a ProjectWise InterPlot Organizer Plot Set file inside ProjectWise Explorer. MicroStation launches, just as if you had double clicked a DGN file, and the print set opens in Organizer.

- Launch ProjectWise InterPlot Organizer from the desktop and select *File > ProjectWise Login*.

Both methods let you find files in ProjectWise using ProjectWise InterPlot Organizer's *File > Open* and *File > Save* dialogs. When finding files in ProjectWise, Browse rather than using the key-in fields. If you need to access files outside of ProjectWise, click the Cancel button in the dialogs.

When you open a ProjectWise InterPlot Organizer Plot Set file in ProjectWise, the default behavior is that the file is checked out. It can also be copied out. This is controlled in Explorer by selecting *Tools > Options*, Settings tab, and setting the Document List –> Double Click Action –> Default setting.

Files that are referenced in a ProjectWise InterPlot Organizer Plot Set file are copied out from the ProjectWise datasource on demand. If you are modifying or printing a job, only the files referenced by that job are copied out.

ProjectWise InterPlot Organizer can detect if a ProjectWise file has been renamed, moved, or deleted and replaced with the same file name. In each case, ProjectWise InterPlot Organizer displays a dialog informing you that files have changed or files have been removed. ProjectWise InterPlot Organizer will optionally attempt to correct the problem.

When you exit a ProjectWise InterPlot Organizer Plot Set file in the ProjectWise environment, ProjectWise checks in the plot set file but leaves the copied-out files in the working directory. If the user settings are set to Leave local copy on free, a copy of the plot set file will remain in the working directory along with the files that were copied out.

Hint: A useful user setting in ProjectWise Explorer is Use up-to-date copy on copy out. If you double click a plot set file from ProjectWise Explorer to invoke

ProjectWise InterPlot Organizer, files that were previously copied out to the working directory on a client machine will not be copied out again if they are up-to-date.

Module Assessment

Assessment is often equated with evaluation, but the two concepts are different. Assessment is used to determine what an individual knows or can do.

Complete the assessment to see what you have gained from reviewing this module.

[Explorer Client Assessment](#)
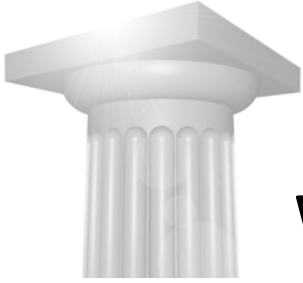
Workflows, States, and Messaging

Module Overview

Workflows are created in ProjectWise Administrator and are assigned to folders and projects in ProjectWise Explorer. They guide documents through different milestones, known as states.

ProjectWise Messenger is used to manage email messages between ProjectWise users. This lets you communicate with other ProjectWise users without leaving the ProjectWise environment.

This module discusses these features.

Module Prerequisites

- Familiarity with Windows Explorer
- Familiarity with the ProjectWise Explorer interface

Module Objectives

After completing this module, you will be able to:

- Assign workflows and states
- Work with ProjectWise messaging

Module Glossary

Messaging Service: The feature which allows messages to be sent and received in ProjectWise Messenger

ProjectWise Messenger: The optional mechanism available on each ProjectWise Explorer installation for sending and receiving messages between other ProjectWise users, and for receiving messages generated by messaging agents in ProjectWise Administrator.

State: A milestone within a workflow.

Workflow: An ordered group of milestones through which a document passes on its way to completion.

Introductory Knowledge

Before you begin this module, let's define what you already know.

Questions

1   How do you log in to a datasource in ProjectWise Explorer?

2   How do you navigate the datasource list?

Answers

1   Launch the ProjectWise Explorer client, right click on the datasource name, and select Log in or Log in as. Supply your user name as password.

2   Click the + to expand Documents. Click the + or - symbol to expand or collapse folders and projects.
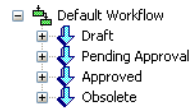
Workflow Overview

Workflows are created in ProjectWise Administrator, and are assigned to folders and projects in ProjectWise Explorer. They are a way to guide documents through various milestones, or states. States are points in a workflow such as Draft, Review, Approval, and so on to completion.

States in the Default Workflow

As you work on a document, you can declare when you have reached certain milestones by changing the state of the document. When a document has reached the final state in the workflow and you want to prevent any further edits on this document, you can place the document in final status.

Assigning Workflows to Folders and Projects

When you assign a workflow to a folder or project, all documents at the root of the folder or project inherit the assigned workflow and are automatically placed in the first state defined for that workflow. Existing sub-folders or sub-projects do not inherit the workflow assigned to their parent folder or project. You have to explicitly assign it. New folders or projects you create will automatically be assigned the same workflow as its parent folder or project.

Exercise: Assign a workflow to a folder

1 In ProjectWise Explorer, right click on your \student<#>\Designs folder and select Properties.

2 In the Properties dialog, select the Workflow & State tab.
  The Workflow list at the top lists all the workflows defined in the datasource. You see <none> because there is no workflow assigned to this folder. If a workflow is assigned, its name displays and the list below will contain all of the states in the workflow.

3 From the Workflow list, select the Default Workflow. A message appears, asking you to confirm that you want to change the workflow, setting all documents to the

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Changing document state

To change states of a document, its parent folder or project must have a workflow assigned. You must have write permissions to the document and your user setting, Document -> Change State, must be enabled.

While documents at the root of any given folder or project can be in different states, they must all share the same workflow. To change a document's workflow, you must change the document's parent folder or project workflow.

Changing a document's state can result in an email notification being sent to designated users if the workflow has a messaging agent assigned to it in ProjectWise Administrator.

➔ **Exercise: Change state from the Folder Properties dialog**

1 Continuing in the Folder Properties dialog, the Workflow & State tab, expand the Draft state by clicking the +.

2 Select the first file and then click the down arrow on the right side of the dialog to move it to the Pending Approval state of the workflow.
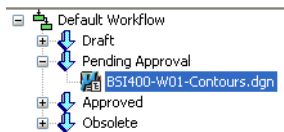
You can also drag and drop documents into another state.

If the audit trail Comments dialog opens because it was configured by your administrator, you will enter comments and click OK.

3 Click OK in the Folder Properties dialog.

➔ **Exercise: Change state from the Change Workflow State dialog**

1   Select BSI400-W01-Design.dgn.

2   Select *Document > Change State > Change*.

The Change Workflow State dialog opens, with the selected document highlighted in its current state in the workflow. You can select additional documents, or you can select different documents to move.

3   Click the down arrow to move it to the next state of the workflow and click Close.

Note: You can use *Document > Change State > Next* and *> Previous* to change document state too.

Final status

If your user setting 'Set final status' is on, you can place a document in final status to prevent further modifications by any user, regardless of their privileges. When a document is in final status, the document's read/write or read-only icon is replaced by the final status icon. If your user setting 'Remove final status' is on, you can take a document out of final status.

➔ **Exercise: Set a document to final status**

1   Select BSI400-W01-I9NB.dgn.

2   Select *Document > Change State > Set Final Status*.

The document moves into final status and the final status icon replaces its current icon.

To take documents out of final status, first select one or more documents that are in final status. Select *Document > Change State > Remove Final Status*. When prompted to confirm removal of final status, click Yes. You cannot change the state of a document that is in final status.

Sending ProjectWise Messages

ProjectWise Messenger is used to manage the sending and receiving of messages between ProjectWise users. This lets you communicate with other ProjectWise users without leaving the ProjectWise environment, and without the need for any other email application on your computer. You can attach documents and

distribute them with your message. You may want to use this feature to send your comments along with a document to another reviewer.

Note: ProjectWise Messenger is an optional feature of the ProjectWise Explorer installation.

Document links

When you receive messages with document link attachments, you can double click the link attachments to open the document. This checks out the document if you have appropriate rights and permissions on the document. You can right click the attachments and then work on them as you normally would from a ProjectWise folder.

➜ **Exercise: Send a message with a document link**

1   Continuing in ProjectWise Explorer, in your \student<#>\Designs folder, right click on BSI400-W01-Survey.dgn, and select *Send To > Messenger*.

2   Click the To button, select another student, click To->, and then click OK.

3   In the Subject field, type Please review.

4   Click the Send button.

5   When you see the message "You have received new messages, do you want to read them?" click Yes.

Your Inbox opens. You can also check it by expanding your Student<#> folder at the root of the Documents folders and click Inbox.
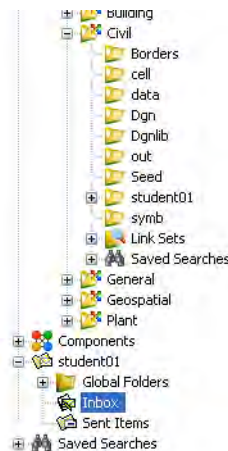
6   Double click the message to open it, and then right click on the document and select Open to open it in MicroStation.

In ProjectWise Explorer, others will see that the document is locked.

7 Exit MicroStation, freeing the document.

8 Close the message and your Inbox.

Note: You can remove a message attachment selecting it in the message and pressing the Delete key on the keyboard.

Sending email messages

You can send email messages with ProjectWise documents attached, or you can send email messages containing links to ProjectWise documents. When you send a link to a user who has the same version of ProjectWise Explorer installed, clicking on that link will launch ProjectWise Explorer, navigate to, and select the appropriate document.

Microsoft Outlook's Tools > E-mail Accounts, Use Cached Exchange Mode setting must be enabled for ProjectWise Explorer's *Document > Send To > Mail Recipient As Link* command to function properly. When this is not set, any text added to an email will not be sent by Microsoft Outlook.

Note: See Microsoft Outlook's documentation for instructions about how to enable Use Cached Exchange Mode.

➔ **How to send email messages:**

First, in ProjectWise Explorer, select one or more documents and select *Document > Send To > Mail Recipient*. Your standard email client opens a new, untitled message with the selected document(s) attached.

You can also open your email client, create a new message, and on the ProjectWise tab, select Attach Document (in the case of Microsoft Outlook). In the dialog that opens, select the ProjectWise document(s) to attach to the email.

Then, select the recipient(s) for the message, type the accompanying message and send the message.

Using message folders

Message folders allow you to view the contents of messages sent and received using ProjectWise Messenger. Message folders appear in ProjectWise Messenger, and in ProjectWise Explorer if your user settings permit their display.

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Each user has their own message folder, which is represented by a message icon and your user name. By default, your message folder contains an Inbox folder, a Sent Items folder, and a Global Folders folder.

When you receive a new message in your Inbox, you are notified "You have received new messages, do you want to read them?" Copies of messages you have sent through ProjectWise Messenger are saved to your Sent Items folder. Global folders are message folders that all users can see. Under Global Folders, if your user settings allow, you can create folders that all users can access, and in which all users can store existing messages for all to access. At the root of the parent message folder, you can also create private message folders for your own use.

You can open, reply to, forward, or delete any of these messages. You can move messages into any private message folders you have created, and if your user settings allow, into existing global folders. If a message has a link to a document attached, you can right click the attachment from inside the message and perform actions on it as you normally would on documents in a ProjectWise folder.

Module Assessment

Assessment is often equated with evaluation, but the two concepts are different. Assessment is used to determine what an individual knows or can do.

Complete the assessment to see what you have gained from reviewing this module.

Workflows, States, and Messaging Assessment
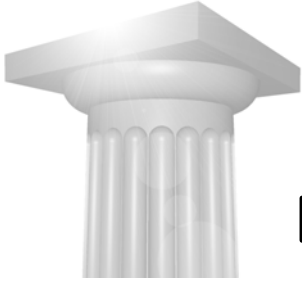
Executing Searches

Module Overview

The Quick Search bar lets you perform quick and easy searches for documents, folders, and projects. For advanced searches, the Search by Form and the Search Builder (Define Search) dialogs let you construct queries that are more complex. This module describes how to use these tools.

Module Prerequisites

- Familiarity with the ProjectWise Explorer interface

Module Objectives

After completing this module, you will be able to:

- Execute quick, general, and advanced searches

Introductory Knowledge

Before you begin this module, let's define what you already know.

Question

1   How can you tell which interface you are using and how can you change the interface?

Answer

1   Select *Tools > Interface* or check the Interface options at the top of ProjectWise Explorer. Use the option list in either place to switch interfaces.

Locating Documents

You can locate documents by navigating through ProjectWise Explorer's hierarchical folder structure. However, as documents can be stored in any folder or sub-folder, this process could be tedious.

If you do not know where a document is stored, or you need to find a document with a combination of attributes, you can use a search. You can search on system attributes, on custom attributes, or both. Note that if you search on custom attributes, the results of the search will only be as accurate as the data entered by other users.

Quick Searches

The Quick Search bar lets you perform quick and easy searches by typing the text you want to search by and clicking the Go arrow. The search returns all documents, folders and projects that match the typed text.

Note: The Quick Search bar is also available in file selection dialogs for integrated applications.

Searches run from the Quick Search bar are not case sensitive, therefore they are not affected by the datasource setting 'Force case-insensitive search'. This setting only affects advanced searches run using the Search by Form and Define Search dialogs.

Quick Search Settings

Through Search Settings, you can set the extent of the search you want to run from the Quick Search bar.

To open the Search Settings dialog, click the search icon in the quick search field and select Settings from the menu.
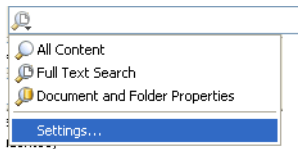
On the General tab, you can opt to search the entire datasource or just in the current folder and its sub-folders.
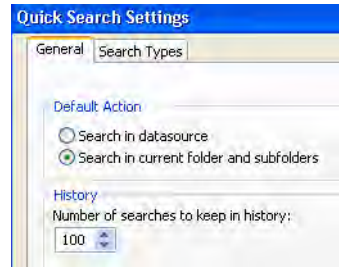
You can change this setting quickly by right clicking in the quick search field and selecting different extents from the pop-up menu. There is an option to restrict the search by environment here.
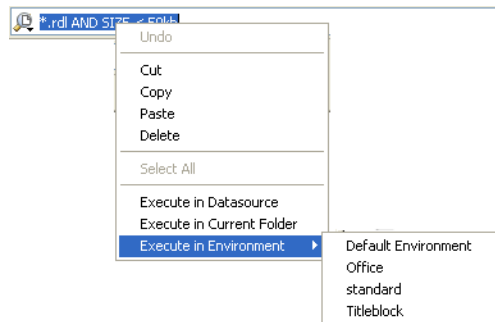
The History option on the General tab lets you set the number of searches you want to keep in history. Click the downward arrow on the right side of the Quick Search bar to access these.

On the Search Types tab, there are search types from which to choose. When you select one of the options (All Content, Full Text or Document and Folder Properties), you can see the parameters of the search in the right pane.

- All Content searches document names and descriptions, file names and extensions, the text inside documents, environment attributes, folder and project names and descriptions, and custom project properties.

- Full Text Search is the same as All Content, except it does not search environment attributes.

- Document and Folder Properties is the same as All Content, except does not search the text inside documents, environment attributes, or custom project properties.

Whenever one of these types is set, searches run from the Quick Search bar will search only those items specified in the search type. You can set any one of these to be the default search type by right clicking on it in the Search Settings dialog and select set as default.
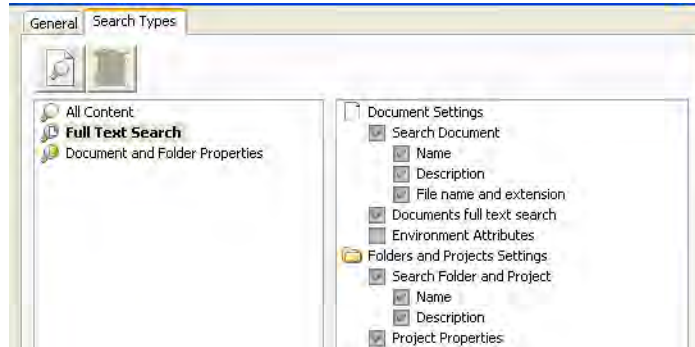
Search expressions

* and **%**

These can be used to replace multiple characters in a text string. To use, place either the * or % character in front of, at the end of, or both in front of and at the end of your text string in the Quick Search bar.

- *.dgn finds all documents that have the extension DGN.
- overview.* finds all documents that have the file name OVERVIEW, regardless of file type.
- plan* finds all documents, folders and projects that begin with PLAN.
- *plan finds all documents, folders and projects that end with PLAN.

? and **_**

These can be used to replace any one character in a text string.

- ?ast can produce last, past, fast, mast, cast.

and

Two separate expressions can be combined with AND in one field.

or

Two separate expressions can be combined with OR in one field.

not

Can be used with all criteria.

- NOT *pump
- NOT P01

Note: The Search by Form or Define Search dialogs are still available for advanced searches.

➜ **Exercise: Run a quick search**

1   In ProjectWise Explorer, click on the folder with the latest version of the MicroStation example files and then type the following in the Quick Search bar:

    seed

2   Click the Start Quick Search arrow.

    This returns all the files and folders that have seed in the name.

3   Type the following and execute for the selected folder to find only DGN seed files:

    seed .DGN

    If your search was restricted to a folder, you will be prompted about whether you want to search it again, or search the whole datasource.

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Note: The option to ignore case sensitivity for searches is enabled or disabled by your administrator.

Advanced Searches

For advanced searches, the search dialog you use is mostly a matter of preference. The Search by Form dialog has the same interface as the Document properties dialog, whereas the Search Builder (Define Search dialog) may be a more familiar interface for users of Microsoft Office applications.

Hint: The Define Search dialog can be used to search for documents, as well as for projects or folders. The Search by Form dialog can only be used to search for documents.

If you decide that you prefer one dialog to the other, you can set that dialog as the default search dialog. It will then open when you select *Folder > Advanced Search*, when you click the Advanced Search icon, or when you right click on a project or folder and select Advanced Search. If you do not set a default search dialog, you will always be prompted to select one of the two dialogs.

The search form

Search criteria can be based on any general property or environment attribute of a document. The general tab of the Search by Form contains system attributes. Each attribute has its own section.

- Document: This section sets the search criteria for a document record. You can search by document name and description, document version as well as many other system attributes.

- File: This section sets the search criteria for a physical file. The name entered here should be the actual file name, not the document name.

- Folder: This section will allow you to limit your search to a specific folder or sub-folder by name or description. You can search by the environment applied to the folder.

➔ **Exercise: Use a search to find a document**

1 Click Find Documents, the binoculars, next to the quick search field.

As you will use the Search Form several times, you will make it the default wizard.

2 In the Select Search Definition Dialog, select Search Form, Enable the Make this wizard the default check box, and then click OK.

3 In the Document section, type *sheet* in the Name field.

4 In the Folder section, click the Change button to the right of "Look in", select the latest MicroStation example files folder, and click OK.

5 Enable the Include subfolders check box to search them.

6 Make sure all other options are blank or display <none>.

Note: You can ensure that all the options on the General tab are blank or display the option <none> by clicking the Clear button.

7 Click Apply.

The system searches for documents that match the defined attributes. Results are displayed in the Search Results window.
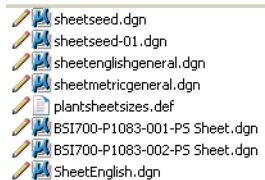
Clicking Apply leaves the form in search mode. This lets you easily modify the search criteria if you want to refine your search.

8 In the Document section, set the Application option to MicroStation.

If you click OK, the search is executed and the attributes of the first returned document are displayed in the document properties dialog format. You can use the arrows to page through the results.

Hint: File details can be reviewed using this method.

9 Click OK to display results in the properties dialog format.

Use the arrows at the bottom to page through results.

10 Click Close when you are done reviewing properties.

Open folder

Once you obtain search results, it may be difficult to tell where the files are located. You can check the address bar for the location or you can use the Open Folder command.

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➔ **Exercise: Using the Open Folder command**

1   Right click one of the documents that were found in the search and select Open Folder from the pop-up menu.

Focus moves to the folder that contains the document. The contents of the folder containing the selected document are displayed in the document list.

The Search by Form has different tabs listing attributes on which you can base a search. Available fields are white. Gray fields are unavailable to the search.

When you select an attribute to search on and right click, you will be presented with different options depending on what type of field you have selected.

When you select a field that is not an option list, you can open a Format Criteria dialog. This dialog lets you enter more complex search criteria using comparison operators.

➔ **Exercise: Use format criteria to find documents and the refine the search**

1   Click Advanced Search.

In the Folder area of the General tab, the "Look in" field is blank and the Include subfolders check box is grayed out. This is because the form has no starting point for this search.

2   Click Cancel, and then click Close.

3   Right click the latest MicroStation folder and select Advanced Search.

Now the Folder area contains the path to the MicroStation folder and the Include subfolders check box is enabled.

Hint: When you want to search a branch of the folder hierarchy, it is easier if you right click the top folder and use the Advanced Search menu option. This automatically enters the starting point for you. If you have not selected a default search dialog, the Select Search Definition dialog will open so you can select one

4   On the General tab in the File section, place the cursor in the File Name field.

5   Right click and select Format Criteria.

You can click on the browse button next to a field, too.

6   Expand the Relation option list.

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The comparison operators you can use to compare values are noted in the following table.

Expression	Comments
*, ?, %, _	Either * or % can be used for multiple wildcards. Either ? or _ (underscore) can be used for a single wildcard
>, >=, <, <=	> Greater than >= Greater than or equal to < Less than <= Less than or equal to
NULL/ NOT NULL	Returns Null value or excludes null values
AND	Two separate expressions can be combined with AND in one edit box
OR	Two separate expressions can be combined with OR in one edit box
NOT, <>	Can be used with all criteria
BETWEEN/ NOT BETWEEN LIKE/NOT LIKE IN/NOT IN	>= AND <= can also be used to find a range

7 Select LIKE.

8 Click in the Value text box, enter the string *survey*, and then click OK.

9 Make sure all other options are blank or display <none>.

10 Click Apply.

The search will return all documents with names like survey.

11 On the General tab, in the Document section, set Updated By to your student<#>.

12 Click Apply.

You updated a file that has survey in its name.

13 Click OK, and then click Close.

➔ **Exercise: Execute a relational search**

1 Right click your student<#> folder and select Advanced Search.

2 In the Document section, select your student<#> from the Created By options.

3 Right click in the On input field that is next to the Created By options and select Format Criteria.

4 Set the following:

Relation: <

Value: tomorrow's date

Specify: enable the Hours radio button

Set the Hours field to 12 AM
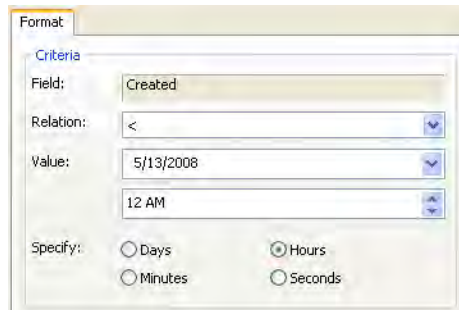
5 Click OK.
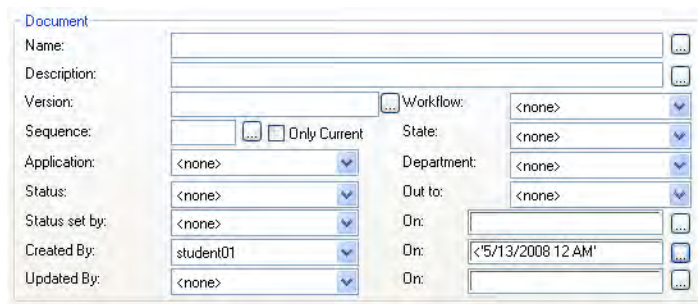
6 Click Apply.

The result is a list of the files that you created prior to that date and time.

7 Close the Search by Form.

If a search does not return any documents, click browse again, modify the search criteria to something appropriate, and execute the search again.

Printing search results

You can print documents while you have them open in their associated application, or you can print them from ProjectWise Explorer. By printing search results, you can create reports. The contents of the Search Results window can be printed.

➔ **How to print the contents of the Search Results window:**

First, select all of the files displayed as search results in the Search Results window. Then, right click and select *Copy List To > Printer*.

The type of document you select determines how it is printed. If you select one or more Microsoft Office documents, the documents are automatically printed to your default system printer. If you select a MicroStation document, you can open it in the associated Bentley application, allowing you to adjust print settings specific to design files.

Hint: Before executing your search, set the View so that the columns for the attributes that you want to include are displayed. You may want to create a document view for this purpose.

Copy data to Excel

➔ **Exercise: Create a report**

1   Launch Excel.

2   Select the documents displayed as search results in the Search Results window.

3   Right click and select *Copy List To > Clipboard Tab Separated*.

4   In Excel, select the uppermost cell on the left side of the sheet.

5   Select Paste, to paste the clipboard contents into the spreadsheet.

Format or otherwise modify the data as desired. You can either print the results or even save into ProjectWise using the File > Save As in Excel.
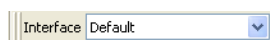
6   Exit Excel.

Attributes and More Attributes tabs

These pages of the Search Form give you access to the custom attribute fields in your environment so you can search based on these values. Their appearance is controlled by the active interface.

➔ **Exercise: Custom attribute search**

1   Continuing in ProjectWise Explorer, make sure the active interface is Default.

2 Right click your student<#> folder and select Advanced Search.

3 On the Attributes tab, type *BSI400* in the Title field.

4 Click Apply.

Documents fitting the criteria are listed in the document list. These are the documents for which you specified attributes using the Advanced document creation wizard.

5 Leave the Search by Form open.

It is possible to further refine your queries by using the joining expressions And and Or. When you link two parameters with And, your search will result in all of the files that meet both conditions. When you use Or, your search will result in all of the files that meet either of the conditions. You can use the Format Criteria dialog to employ operators such as Between or Like.

➔ **Exercise: Using an or search**

1 Continuing on the Attributes tab of the Search by Form, click Add OR Group at the bottom.

A fresh page appears for each tab.

2 On the General tab, Document section, set the Application to Microsoft Word.

3 Click Apply.

How many documents were found this time?

4 Click Cancel and then click Close.

Any time you add AddOrGroup pages, you can specify any attribute on any tab.

Range searches

When searching on a date or numeric field, it is possible to find all of the documents that fit within a range of dates or numbers.

➔ **Exercise: Create a complex search**

1 Create a search that will find all documents in your student<#> folder that are:

In the Pending Approval state of the Default Workflow

Where the file size is greater than 250

2 Run the search

3 Leave the Search by Form open.

Saving searches

If you will be using a search frequently, you can save it in your personal saved search folder. You can then reuse it when needed by clicking on it. You may also find that there are global searches set up by the ProjectWise Administrator that all users can use. If you need additional global searches, request them from the administrator.

➔ **Exercise: Save a search**

1 In the Search by Form, click Saved Search at the bottom of the dialog, and select Save As from the menu.

2 In the Save Search dialog, select the Personal folder.

3 Enable the Saved Search Name check box and type the Saved Search Name:

Pending Approval

You can also select a View to use when the search results are presented.

4 Select Folder Information as the default view.

5 Click Save.

6 Click Cancel, and then click Close.

The search is saved under Saved Searches > Personal in the current folder.

➔ **Exercise: Run a saved search**

1 Under Saved Searches, expand Global.

2 Click on the global search Architecture Department documents.

A saved search runs every time you select it.

Hint: To review a saved search, select the search, right click and select Show in Search Form.

The Search Builder

The Search Builder (or Define Search dialog) lets you build a search based on any system or custom attribute. This tool is makes it easy to create complex queries.

➔ **Exercise: Switch wizards**

   1   Open the Wizard Manager by selecting *Tools > Wizard Manager.*

       Since you made the Search Form the default search wizard, you need to change that.

   2   Select the Search Definition tab.

   3   Click Search Builder, click Set as Default, and then click Close.

Hint: Regardless which wizard is the default, you can access the other tool by clicking on the arrow next to the Advanced Search icon on the Quick Search bar and selecting it.

Use the Define criteria section of the Define Search dialog to add boolean statements to the Find documents that match these criteria section.

- Criterion Type: Select general properties, full text, file properties, or environment attribute.

- Property: Select the property to be used in a statement.

- Environment: Select the environment from which to select custom attributes. Options vary depending upon the criteria type selection.

- Attribute: This selection is available when selecting Environment Attribute > Environment. It lets you select a custom attribute.

➔ **Exercise: Search for a similarly named files**

   1   Right click on your student<#> folder and select Advanced Search.

       The first criteria are already entered. "In folder student<#> or in any subfolder."

   2   In the Define Search dialog, set the following:

       Look for: Documents

       Criterion Type: Environment Attribute

       Environment: Titleblock

       Attribute: Drawn By

       Value: your student<##>

3 Click Add Criteria.

4 Click OK.

You can double click on a criterion that has been added and the Define Criteria area will populate. You can then modify as desired and click Add Criteria to update the search criteria.

➔ Exercise: Create a complex search

1 Right click on your student<#> folder and select Advanced Search.

2 Set the following:

Look for: Documents

Criterion Type: General Properties

Property: Created By

Value: select your login from the list

3 Click Add Criteria.

This searches for documents created by you.

4 Now set the following:

Property: Application

Value: MicroStation

5 Click Add Criteria.

This narrows the search to MicroStation files that were created by you.

6 Click Add OR Group.

This is where you add an Or condition.

7 Now set the following:

Criterion Type: Environment Attribute

Environment: standard

Attribute: revno

Value: 2

8 Click Add Criteria.

9 Click Apply.

How many documents were found?

Project Searches

You can search projects and every project contains its own Saved Searches folder. Using the Define Search dialog, you can create a search that specifically looks for projects, as opposed to a search the looks for documents. When searching for projects, you can search based on any general property of the project, any custom project property, or any project type.

Create project-aware saved searches using either the Search by Form dialog or the Define Search dialog. These searches are defined to search for documents, starting from the project in which the search itself is saved. When you copy a project-aware saved search to another project, the search path of the new saved search is updated to reflect the project to which it was copied.

You can create searches from anywhere in the datasource and save them to the Global or Personal folder under any project's Saved Searches folder. You can copy saved searches from one project to another, or from a project to the main Saved Searches folder.

You can set up a search that looks for all projects associated to a particular project type in the Define Search dialog by setting the Look for option to Projects and Folders. Set the Criterion Type to Project Type and select a project type. The Type list contains all of the project types currently defined in the datasource in ProjectWise Administrator.

When you run the search, any projects that have the selected project type associated to them are returned.

Finally, click the Add Criteria button, and click OK to launch the search operation.

If the Use MicroStation Fence option is always disabled when defining spatial search criteria, it is because either the active MicroStation document does not have a spatial location in ProjectWise, or there is no fence defined in MicroStation. If there is no fence defined, adding a fence in MicroStation should fix the problem. If a fence is defined and the toggle is still disabled, a spatial location should be assigned to the document in ProjectWise to enable this feature.

Notes About All Searches

Warning: All documents, folders, and projects that match your search criteria are returned, with no regard for their hierarchy in the datasource. These are the actual items, not just links to them, so be careful not to accidentally delete something from the Search Results window.

Documents, folders or projects that match your search criteria, but to which you do not have access, will not appear in the Search Results window when you run a search.

The text you type in search fields may or may not be case sensitive, depending on whether or not your administrator enabled the option in the datasource to enforce case sensitivity for searches.
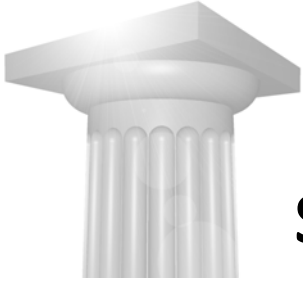
Module Assessment

Assessment is often equated with evaluation, but the two concepts are different. Assessment is used to determine what an individual knows or can do.

Complete the assessment to see what you have gained from reviewing this module.

 Executing Searches Assessment

Settings and Utilities

Module Overview

This module explains how to use priority and proximity searches when scanning for references and how to scan for and use link sets. It also discusses scanning for spatial locations.

The Local Document Organizer and parallel installations are also discussed.

Module Prerequisites

- Familiarity with Windows Explorer
- Familiarity Microsoft Office applications
- Familiarity with the ProjectWise Explorer interface

Module Objectives

After completing this module, you will be able to:

- Use the Local Document Organizer

The Local Document Organizer

This utility is used to list and manage the documents that you currently have checked out, copied out, or exported. You can configure Local Document Organizer to open automatically when you log out of a datasource if there are still documents checked out or exported, using the user setting, User Interface -> Show Organizer on log out. This lets you see the status of the files you have been working with at the end of a day.

The Local Document Organizer dialog always opens with the View set to display Checked Out Documents. The actions you can perform depend on the view icon that is active.
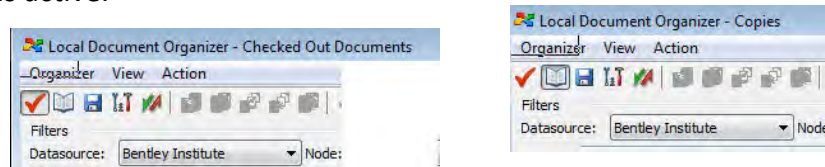
In the first image the Checked Out icon is active, in the second the Copies icon is active
The third icon is the Exported icon

When the organizer opens, the default display shows the files that you have checked out. This is indicated in the tool bar at the top.

You can select multiple documents in the Local Document Organizer's file list and apply a command to all of them simultaneously.

➔ **Exercise: Open the Local Document Organizer**

    1   Open your \student<#>\Designs folder.

2 Select all documents in the document list except the Final Status document.

3 Right click and select Check out.

4 Select the Local Document Organizer tool on the Standard tool bar at the top of ProjectWise Explorer.

You can sort the contents by Datasource or by the system on which documents reside. The body of the dialog has columns that provide information about the documents. You can right click on a document and select Open Containing Folder to move to the folder containing the document.

Applying commands

You can select multiple documents in the organizer window and apply a command to all of them simultaneously. You can filter the list of documents by the datasource from which they are checked out, exported, or copied. When a file is selected, additional tools are available.

- Update Server Copy updates the copy of the document in the storage area on the server with the copy currently on your local system. The status of the document does not change, it remains checked out.

- Check In Leave Copy copies the document back to the central storage area and makes it available to other users. This option retains the local copy. This is the best choice for using delta file transfer which only transfers changes that have been made to documents, rather than the whole document. It begins working when it sees a file with the same name in your working folder.

- Free Leave Copy changes the status of the document to checked in without copying it back to the server. This option retains the local copy.

- Free changes the status of the document to checked in, without copying it back to the server. This option deletes the local copy.

➔ **Exercise: Check in and free documents**

1 Select some of the documents in the Organizer.

2 Click Check In - Leave Copy.

3 Enter an appropriate comment.

4 Click OK.

The files are checked in.

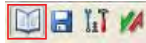**5** Select the remaining documents in the Organizer.

6 Click Free.

The remaining documents are freed.

Copies

When Copies is selected and a copied out file is selected, the Copy options are activated.

* Check out changes the status of a copied out document to checked out without copying the document from the central storage area.

  You can use this while the document is open in an application, as no files are transferred and the status of the document is only altered in the database. Use this function if you have accidentally made changes to a document that is not checked out. You will not be able to lock a document which is currently checked out to another user, or one which has been checked in by another user since you copied the document out (if the server copy is more recent than the local copy).

* Refresh Copy means refresh the local copy with the copy of the document held in the central storage area on the server.

* Purge Copy removes the copy of the file from the working directory.

➔ **How to remove copies of documents from your hard drive:**

First, click the Copies icon so that the list of documents copied out to your working directory displays. Then, select all the document copies. Next, click Purge and the copies are removed.

Working with exported files

When the Exports icon is selected, a list of any files that have been exported outside of ProjectWise will display. Select an exported file and the available options display.

- Import imports the files from the location where they were exported and releases the lock.

- Import From lets you browse to another location in case you have moved the file.

Note: When you import it is important that you keep track of the directory that you used for export, and make sure that you put the updated files back into that directory.

Warning: Always use the Local Document Organizer. Never clean up your hard drive by deleting files directly from your working directories. ProjectWise keeps track of which files have been copied out or exported. Deleting these files directly may cause the loss of data.

Workspace copies

If you click the Workspace Copies icon, you can see all workspace documents that are currently copied out due to opening a document that has a managed workspace associated.

Error Descriptions

Enter a ProjectWise Error code into the Display Error Descriptions dialog to generate a description of an error. It will be a brief description of the error, so for more information, contact your ProjectWise administrator.

➔ **How to generate a description of an error code:**

First, select Start > Programs > Bentley > ProjectWise V8*i* > Tools > User Tools to open the ProjectWise Tools dialog. Then, select the Error Descriptions tool and click Execute. Next, enter the error code generated in ProjectWise Administrator or Explorer and click Show.

You can directly copy error messages and paste them into documents or e-mails for troubleshooting.

Module Assessment

Assessment is often equated with evaluation, but the two concepts are different. Assessment is used to determine what an individual knows or can do.

Complete the assessment to see what you have gained from reviewing this module.

[Settings and Utilities Assessment](#)