Function	Description
Check In…	Checking in a file uploads the file from the user's hard drive into the vault and creates a new file version with any changes to the file that have been saved. To avoid possible file-resolution issues, all CAD files must be checked in through their native application. Check In is only available for files that are checked out by the current user.
Get / Checkout	Checking out a file downloads the latest version of the file from the vault to the user's hard drive and enables the user to edit the file and save changes. It also denies other users access to the file for editing purposes (it can still be opened read-only for viewing). Check Out is only available for files that are not currently checked out by any user. Getting a file downloads the latest version or any previous version of a design from the vault to the local drive without checking out the design.
Undo Check Out…	Undo Check Out removes the file reservation from a file that the user has checked out without uploading any changes to the vault. Use this command if you wish to check a file in without saving any changes to the file or creating a new version. Undo Check Out is only available for files that are checked out by the current user.
Copy Design…	The Copy Design function allows users to make an exact independent copy of all or part of an existing design. Copy Design is treated in greater detail in section 5.1.

WARNING! Copy Design creates new files and new file relationships. If used improperly, it can link new files to existing files and make a mess of the vault file organization. Only experienced vault users should use the Copy Design function.

Function	Description
Create Shortcut	Clicking this command will create a shortcut to the selected file. This shortcut is found in the shortcuts pane noted by item 4 in Figure 3 on page 3-3. Clicking the shortcut will jump the folder tree browser to the file's location and highlight the file in the file viewing pane.
Delete	This function will delete the selected file. The user must have permission to delete a file. Deleting files is covered in section 3.11.
Purge…	The purge command allows a user to delete older versions of a file. This function is only available to vault administrators. Purging files is covered in section 3.12.
Rename…	This command will rename a file. The user must have permission to rename a file. Renaming files is covered in section 3.13.
Go To Working Folder	Clicking this function will open a Windows Explorer session in the folder in which the selected file resides on the user's local drive. This is useful for quickly navigating to the vault file's corresponding local copy.
Go To Folder	Selecting Go To Folder will jump the folder tree browser to the file's location in the vault and highlight the file in the file viewing pane. This is very useful for quickly finding the location of a file that is listed in the Uses or Where Used tabs of the file information pane.

3.9　Working with Folders in the Vault

Right-clicking a folder in the vault client application brings up a context menu as seen in Figure 8.
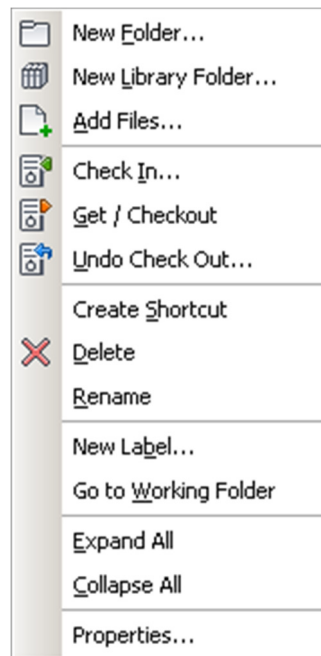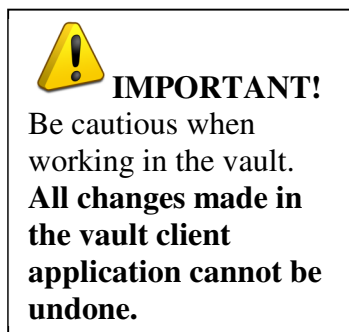

	New Folder…
	New Library Folder…
	Add Files…
	Check In…
	Get / Checkout
	Undo Check Out…
	Create Shortcut
✕	Delete
	Rename
	New Label…
	Go to Working Folder
	Expand All
	Collapse All
	Properties…

Figure 8 – The Vault Folder Context Menu

⚠ **IMPORTANT!**
Be cautious when working in the vault. **All changes made in the vault client application cannot be undone.**

The following table gives a description of each function in the folder context menu.

Function	**Description**
New Folder…	Clicking New Folder creates a new folder directly below the selected folder. This command is only available for non-library folders.
New Library Folder…	Selecting New Library Folder creates a new library folder directly below the selected library folder. This command is only available for library folders.
Add Files…	Add Files allows the user to add new files to the vault. This command is described in more detail in section 3.5.

3-15

Function	**Description**
Check In…	This function allows the user to check in all files contained in the selected folder and each of its subfolders that are checked out by the current user. To avoid possible file-resolution issues, all CAD files must be checked in through their native application.
Get / Check Out	This function allows the user to check out all files (that are not currently checked out by any user) that are contained in the selected folder and each of its subfolders. Getting a folder downloads the contents of the selected folder to the local hard drive without checking out the files. This will download all files contained in the selected folder and each of its subfolders.
Undo Check Out…	This function allows the user to undo check out on all files the user has checked out from the selected folder and each of its subfolders.
Create Shortcut	Clicking this command will create a shortcut to the selected folder. This shortcut is found in the shortcuts pane noted by item 4 in Figure 3 on page 3-3. Clicking the shortcut will jump the folder tree browser to the folder.
Delete	This function will delete the selected folder. The user must have permission to delete a folder. Deleting folders is covered in section 3.11.
Rename	This command will rename a folder. The user must have permission to rename a folder. Renaming folders is covered in section 3.13.
New Label…	Labels provide a means of marking, or "labeling", particular stages of a design. See the vault client application's help documentation for a detailed explanation of labels.
Go to Working Folder	Clicking this function will open a Windows Explorer session in the selected folder on the user's local drive. This is useful for quickly navigating to the vault folder's corresponding local path.

Function	Description
Expand All	This command expands the entire folder structure below the selected folder.
Collapse All	This command collapses the entire folder structure below the selected folder.
Properties…	This command opens a dialog that shows the folder's properties.

3.10 Moving Files and Folders

Files stored in the vault can be moved from one folder to another. To move a file, drag the file from the file viewing pane and drop it into the desired destination folder in the folder tree. Vault analyzes the file for any parent/child dependencies to other files and then updates those dependencies. Inventor files cannot be moved to a folder outside of the scope of the corresponding project file.

NOTE: Files generated as members of an iPart factory cannot be moved within the vault.

Two other methods for moving files exist. They are essentially identical but have slight differences. Firstly, a file can be moved by selecting the file in the file viewing pane and then, from the Edit menu, clicking Move to Folder. A dialog prompts the user to browse for the new location. Secondly, drag and drop a file using the right mouse button, then from the context menu, select Move.

When a file is moved and the files that reference it are updated, the update creates a new version of each of the updated files (but not the moved file).

Folders in the vault are moved in the same manner. When a folder is moved, all files contained in that folder are analyzed for parent/child dependencies and those dependencies are updated. Library folders cannot be moved.

3.11 Deleting Files and Folders

WARNING! Deleting a file will permanently remove it from the vault storage database! **This cannot be undone!**

Files may be deleted from the vault by a permitted user. Any files that are checked out must be checked back in before they are deleted. Files that are referenced by another file cannot be deleted. A collection of related files must be deleted from the top down. For an Inventor

example, any drawing files must be deleted first, then assembly files in the order of the highest in the hierarchy to the lowest, and finally the part files. When a file is deleted, all of its versions are deleted.

Sometimes an Inventor file needs to be deleted, but the file's parents must not be deleted. In this case, the parent-child relationship needs to be removed and the parent must be purged of all versions that reference the part to be deleted. Then the part may be deleted.

For example, an assembly contains an obsolete part. This part no longer needs to be in the vault and the user wishes to delete it. The part cannot be immediately deleted because the assembly still references this part. The assembly must be opened in Inventor, checked out, and the part removed from the assembly.

After saving the assembly and checking it in, a new version of the assembly is created that no longer references the obsolete part file. However, at least the next previous version still references the part file so it still cannot be deleted from the vault. The assembly must be purged of all versions that reference the obsolete part file. Once this is done, the part file is no longer being referenced by any other files and may be deleted. Use the "Uses" and "Where Used" tabs of the file information pane to determine if a file is being referenced by any other files.

Folders may be deleted from the vault by a permitted user. When a folder is deleted, all of its subfolders and all versions of the files it contains are deleted. Any checked out files in the folder must be checked in before the folder can be deleted. A folder cannot be deleted if any of the files that it contains are referenced by other files outside of the folder.

3.12 Purging Files

The purge command allows a user to delete older versions of a file from the vault. This function is only available to vault administrators.

To purge a file:
1. Right-click a file (or files) in the file viewing pane and select Purge from the context menu. This launches the Purge Wizard.
2. The Purge Wizard begins with the Specify Files window. This window displays a list of the files to be purged. The user can add or remove files from this list by using the commands provided in this window.
3. In the Specify Versions window, the user specifies criteria that control which versions of the selected files will be purged.
4. The Restricted File Versions window displays a list of the files' versions that cannot be purged because other files are using those versions. After clicking Finish, the Purge Wizard will purge any unrestricted file versions, but the restricted versions (if any) will be maintained. Once the purge is complete, the wizard will display a list of all of the file versions that were successfully purged.

3.13 Renaming Files and Folders

Files stored in the vault can be renamed by a permitted user. Files must be checked in before they can be renamed.

To rename a file:
1. Right-click a file (or files) in the file viewing pane and select Rename from the context menu. This launches the Rename Wizard.
2. The Rename Wizard begins with the Specify Files window. This window displays a list of the files to be renamed. The user can add or remove files from this list by using the commands provided in this window.
3. The Related Files window lists all of the files that reference any of files to be renamed. These are the files that will be updated by having their references repaired. Expanding each parent file node shows that file's children that were selected for renaming.
4. The Enter Names window provides tools to help the user rename the files. Files can be given a common prefix or suffix (or both) or be numerically incremented by clicking the Numbering Scheme button. Files may also be modified individually by typing in each file's New Name field. Find and Replace tools are accessed by right-clicking in the New Name field of any file. This is a convenient way to change an existing prefix or suffix such as a job number, especially if the list of files is very large.
5. When the Finish button is selected, the Rename Wizard analyzes the files for any parent/child dependencies to other files and then updates those dependencies with the new file name. Once the Rename operation has finished, the wizard will display a list of all of the files whose references were updated.

> **NOTE**: Files generated as members of an iPart factory that uses the key-based naming convention or as a custom iPart member cannot be renamed.

When a file is renamed and the files that reference it are updated, the update creates a new version of each of the updated files. The renamed file's version is also incremented.

Folders in the vault can be renamed by right-clicking the folder in the tree and selecting Rename from the context menu. There is no wizard for renaming folders. The folder name will become editable directly in the folder tree. Type the new name of the folder and press Enter. When a folder is renamed, all files contained in that folder are analyzed for parent/child dependencies and those dependencies are updated with the new folder name. Any files outside of the renamed folder that reference files within the renamed folder also have their references updated. Each of the updated files is incremented to a new version.

3.14 Replacing Files

The Replace tool allows the user to replace one child file with another child file. The reference in the parent file is changed from the old child to the new child. It is the parent file that is being changed, so it must be checked in before replacing any of its children.

To replace a file:
1. Select the file (or files) and choose Edit > Replace from the menu bar. The Replace Wizard begins.
2. The first window in the wizard is the Specify Files window and it shows a list of files that will be replaced. These are the files that were selected to begin the Replace command. The user can add or remove files from this list by using the commands provided in this window.
3. The Identify Parents window shows all immediate parents of each selected file. These are the files that will be updated by having their references repaired. Expanding each parent file node shows that file's children that were selected for replacement. Un-checking a parent file will exclude that file from the replace command (i.e. that parent will not have its child file replaced).
4. In the Replace Files window, the user specifies the replacement files by clicking the browse button (…) for each file then selecting the replacement file in the browse dialog.
5. Clicking finish will initiate the replacement operation. A warning will be given alerting the user that replacing a component in an Inventor assembly file may break constraints. Once the Replace operation has finished, the wizard will display a list of all of the files whose references were updated.

The parent files that had their children replaced will be updated to a new version that references the new child. The previous version will reference the old child.

4 Inventor-Vault Integration

4.1 Using a Vault Project

To simplify using the vault with Inventor files, it is highly recommended that a single Inventor project file (IPJ) be used for all Inventor files that are intended to be stored in the vault. This project file is created and managed by the vault administrator.

Before using the vault with Inventor, each user must obtain a local copy of the vault project file. This is done through the vault client application by browsing to the root directory of the vault (indicated by $) and then right-clicking the file and choosing Get / Checkout. This will download the file to the local drive where it can be activated in Inventor's Project Editor.

The vault project file tells the vault server how the folders in the vault associate with the folders on the user's local drive. Each of three basic vault folders are "mapped" to folders on the local drive, and these folders are the project root, the Content Center folder, and the Libraries folder (see Figure 4 on page 3-6).

4.2 Accessing Inventor Files Stored in the Vault

The Vault tab on the ribbon provides the main commands used to access Inventor files stored in the vault (see Figure 9).
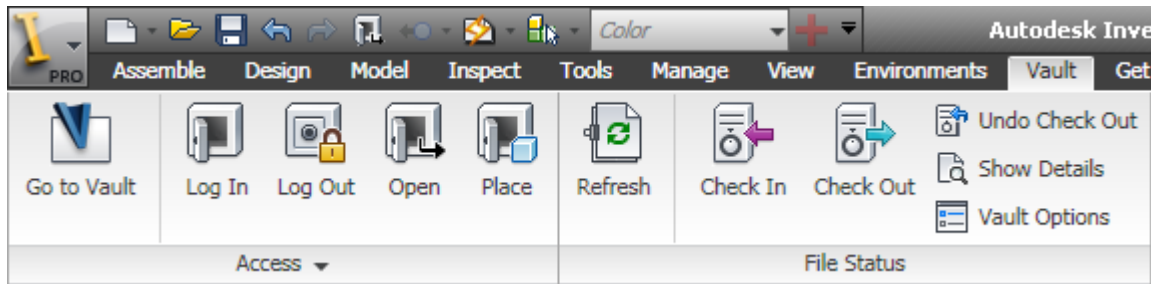

Figure 9 - Vault Tools on the Ribbon

The following table gives a description of each command in the Vault Ribbon tab. Further details for some of these commands may be found in the following sections.

Command	Description
Go to Vault	This command launches the Vault client application.
Log In	This command provides access to the vault server. Clicking this command opens the Log In dialog (see Figure 2 on page 3-2). If this command is grayed out, either the user is already logged in to the vault server or there is no access to the server available (e.g. the vault project is not active).
Log Out	Clicking this command logs the user out of the vault server.
Open	Use this command to open Inventor files located in the vault.
Place	Use the Place command to open Inventor files located in the vault to place as components in an assembly.
Refresh from Vault	The Refresh from Vault command checks for newer versions of the currently open file (and its references) on the vault server. If the version in the vault is newer that the version on the local drive, then this command will download that newer version, overwrite the local version, and reload the open document and any open reference documents that also need to be refreshed.

> **NOTE**: The effects of the Refresh from Vault command are NOT the same as the effect of clicking the Refresh button on the Vault browser (see section 4.9).

Check In	This command checks in the current file. Check In also adds new files to the vault. Check In is only available for files that are checked out by the current user or are not yet vaulted.
Check Out	This command checks out the current file. Check Out is only available for files that are not currently checked out by any user.

Command	Description
Undo Check Out	Undo Check Out removes the file reservation from the current file that the user has checked out without uploading any changes to the vault. Use this command if you wish to check in the current file without saving any changes or creating a new version. Undo Check Out is only available for files that are checked out by the current user.
Show Details	Clicking the Show Details command opens a window that displays the version history of the current file. The information displayed is identical to the information displayed for that file in the History tab of the vault client.
Vault Options	Clicking this command opens an options dialog for the Vault add-in for Inventor.

4.3   Logging In to the Vault Server through Inventor

Before vaulted files can be opened in Inventor, the user must log in to the vault server through Inventor. Even if the user has the vault client application opened and is logged in to the server through that program, he/she must log in through Inventor. To do this, select the Vault tab on the ribbon and click the Log In command found in the Access panel. This will open a Log In dialog identical to the one in the vault client application (see Figure 2 on page 3-2) except for the "Content Center library read only user" option.

The "Content Center library read only user" option is used if the user needs to access the content center libraries stored on the vault server but is not using the vault otherwise. The typical workflow does not call for this option, so leave it unchecked unless there is a specific need for it.

For convenience, the "Automatically log in next session" option may be checked. If it is, the user is automatically logged in each time Inventor is launched, but the username and password must be remembered for future use.

Leave the "Windows Authentication" option unchecked.

Since the Content Center database is stored on the vault server, the user must have access to the vault to use the Content Center. If an attempt is made to access the Content Center when the user is not logged in to the vault server, the Log In dialog will appear prompting the user to log in.

4.4   Opening Inventor Files from the Vault

The standard Inventor "Open" command allows the user to browse the local drive for Inventor files. In order to access files that are stored on the vault server, the vault "Open" commands are provided.

The vault can be browsed for Inventor files in several ways:
1. The Open command on the Vault ribbon will open the "Select File from Vault" browser. This browser displays the folders and files found in the vault.
2. Click the big "I" in the upper-left corner of Inventor, click the arrow next to the Open command, and then select "Open from Vault".
3. In the standard Inventor "Open" command browser, selecting the vault icon in the Quick Launch section (circled in Figure 10) will change the browser from the local drive to the vault.
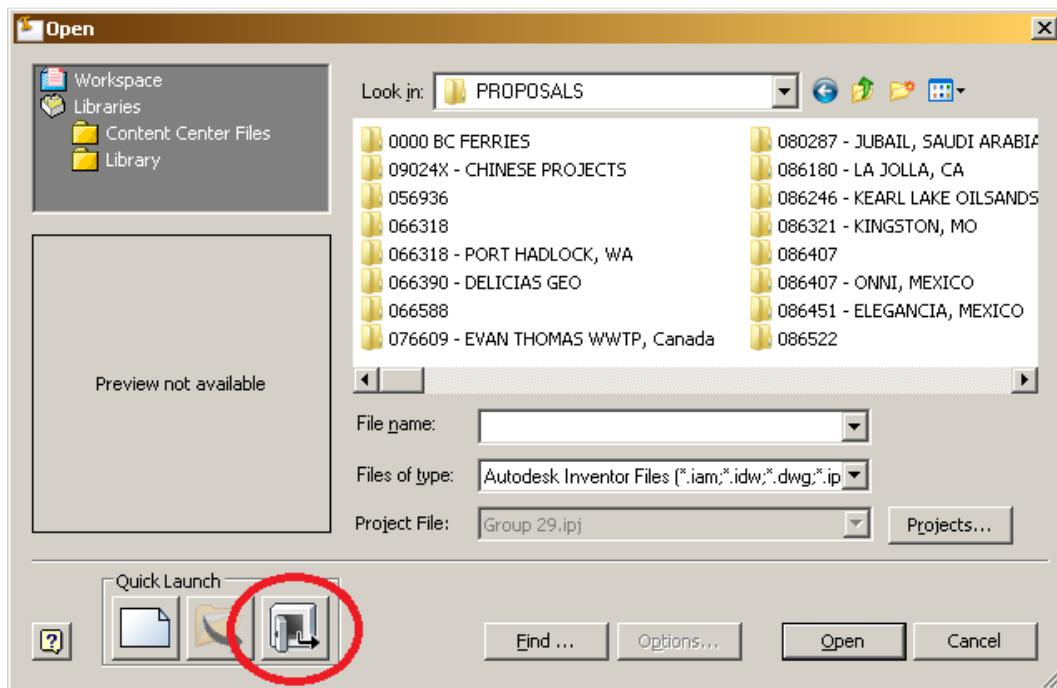
Figure 10 - Opening a File from Vault

New assembly components are placed from the vault in any of the following ways:
1. The Place command on the Vault ribbon will open the "Select File from Vault" browser.
2. On the Assemble ribbon, click the arrow next to the Place Component command, and then select Place from Vault.
3. Clicking the standard Place command on the Assemble ribbon will open the standard Place Component browser. This browser only shows the contents of the local drive, but selecting the Vault icon in the Quick Launch section will change the browser from the local drive to the vault.
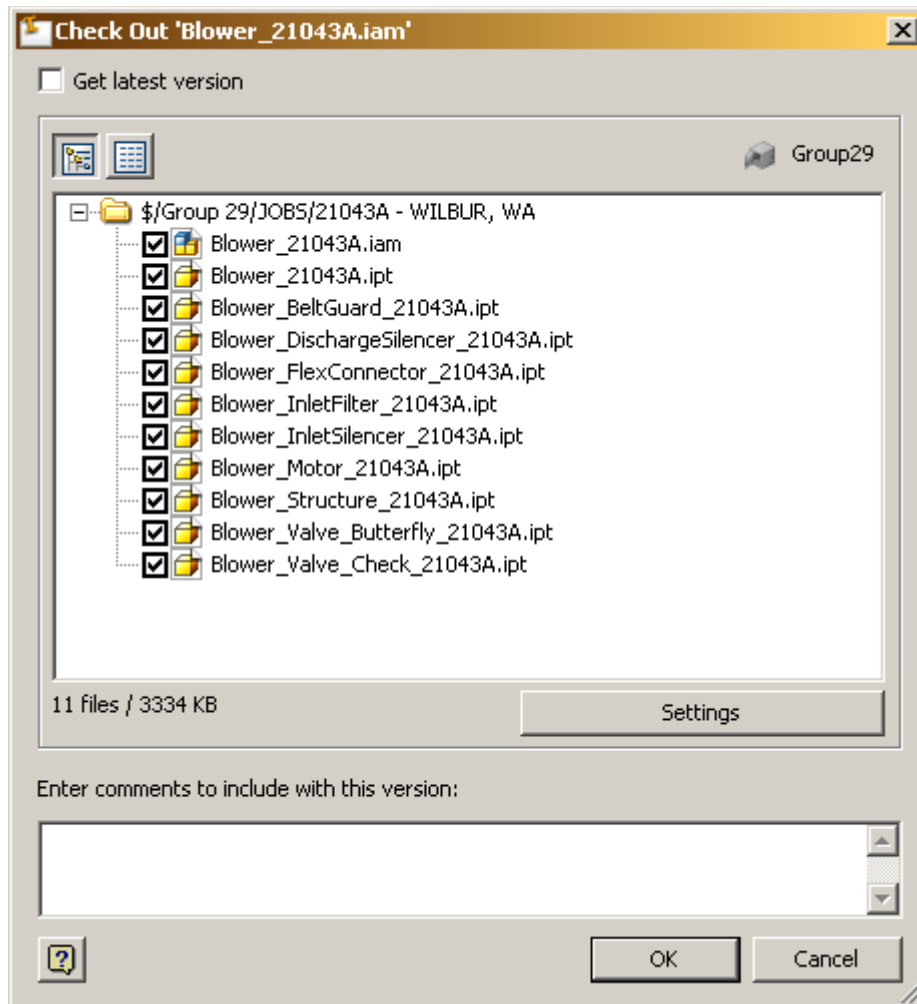
Figure 11 - The File Check Out Dialog

4.5   Checking Out Inventor Files

Opening an Inventor file from the vault can have a number of consequences on the file:

1. If the user does not have permission to check out the file, the file may still be opened with a read-only status.
2. If the user has permission to check out the file and the file is not currently checked out to another user, then opening the file from the vault will typically open the Check Out dialog (see Figure 11). Clicking OK will check out the file as it opens. Clicking Cancel will still open the file but it will not check out the file.
3. Any file that is currently checked out to another user can be opened with a read-only status.

A file that is already open but is not checked out may be checked out in a couple of ways (that is, if the user has permission to check out the file and it is not checked out to another user):
1. Clicking the Check Out command on the Vault ribbon.
2. In the Vault Browser (described in section 4.9), right-clicking the file and selecting "Check Out".

Either of these methods will open the Check Out dialog shown in Figure 11. If the file being opened is referencing other files (i.e. it has children), then the dialog can be configured to check out the children as well by clicking the Settings button. The file being checked out it Figure 11 (Blower_21043A.iam, an assembly file) has children (its assembly components) and the Check Out dialog has been configured to include those children in the check-out process. Individual files can be selected or unselected for check-out as needed by clicking the box next to each filename.

Selecting the "Get latest version" option in the Check Out dialog will instruct the vault server to download to the local drive the latest version of the file or files being checked out if the version on the local drive is different from that in the vault.

4.6 Adding & Checking In Inventor Files

An open Inventor file that is currently checked out (or a file that has not yet been added to the vault) may be checked in (or added) by any of the following ways:
1. Clicking the Check In command on the Vault ribbon.
2. In the Vault Browser (described in section 4.9), right-clicking the file and selecting "Check In".
3. Closing an Inventor file that is currently checked out. (This will not work for a file that has not yet been added to the vault.)

Any of these methods will open the "Check In" dialog shown in Figure 12. If the file being checked in is referencing other files (i.e. it has children), then the dialog can be configured to check in the children as well by clicking the Settings button. Figure 12 shows the Check In dialog configured to include the check-in of the children of the Blower_21043A.iam assembly file. As with the Check Out dialog, individual files can be selected or unselected for check-in as needed by clicking the box next to each filename.

Selecting the "Keep files checked out" option will instruct the vault server to upload the current files to the vault as new versions, and will keep the files checked out to the current user. This option is helpful if the user wishes to save file changes to the vault but needs to retain the reservation on the files to continue working on them.

If the "Close files and delete working copies" option is selected, when the check-in process is complete, Inventor will close the files and delete the local copy of the file from the user's local folder. Because the master files have been saved to the vault, keeping copies of them on the local drive is not necessary and this option can help keep the local workspace clean. This frees

up local disk space and helps prevent version conflicts if the user modifies a local file without intending to save those changes to the vault.

> ⚠️ **IMPORTANT!** In order to maintain inter-file relationships, Inventor files must be checked in through Inventor by one of the methods described in this section. DO NOT check in Inventor files through the vault client application.
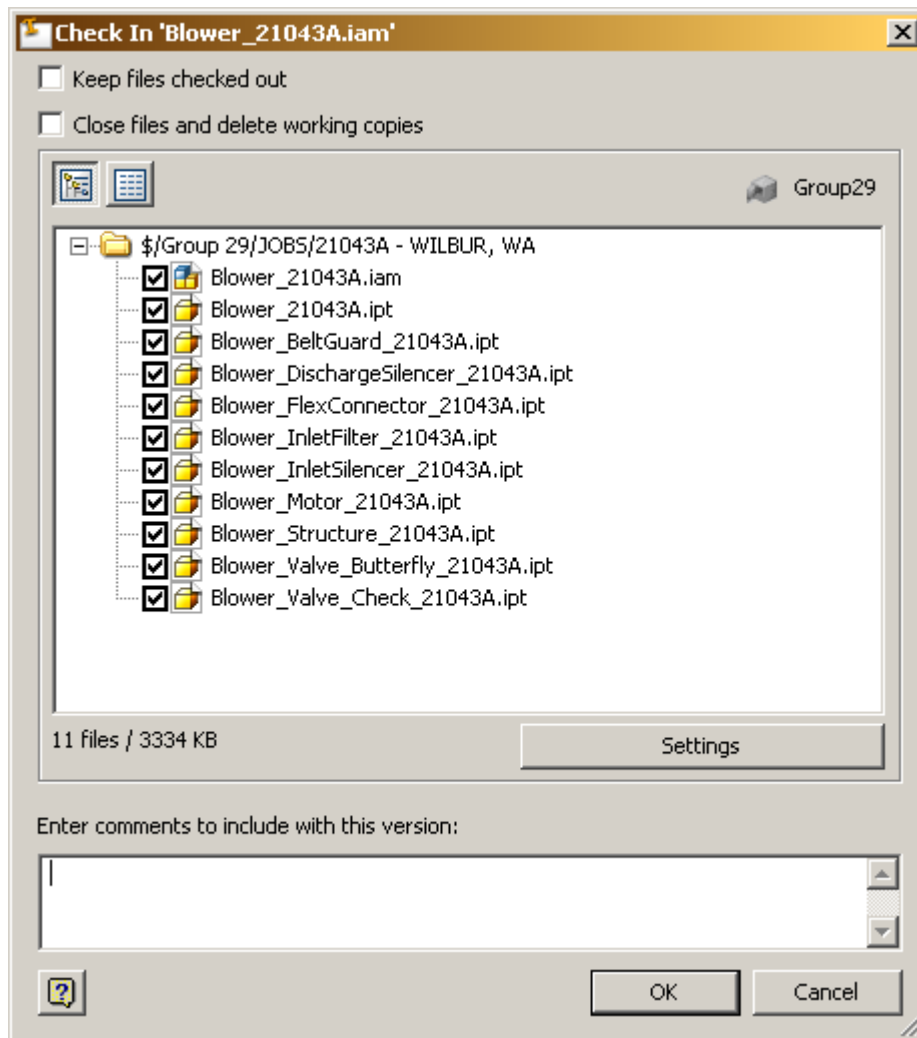

Figure 12 - The File Check In Dialog

4.7 Undo Check Out of Inventor Files

The Undo Check Out command allows the user to release the file reservation on a checked-out file without saving any changes or creating a new version of the file in the vault. The check-out of a file can be undone in the following ways:

1. Selecting the Undo Check Out command on the Vault ribbon
2. In the Vault browser (described in section 4.9), right-clicking the file and selecting "Undo Check Out".
3. Through the vault client application as described in section 3.8.

The Undo Check Out command opens the Undo Check Out dialog as shown in Figure 13. As with the Check Out and Check In dialogs, the Undo Check Out dialog can be configured through the settings button to include parents or children if needed. Figure 13 shows the Undo Check Out dialog for the Blower_21043A.iam assembly without including the assembly's children as compared with Figure 11 and Figure 12.

The "Replace working copies" option instructs the vault server to download the latest version of the file in the vault and overwrite the version on the local hard drive to match the vaulted version.
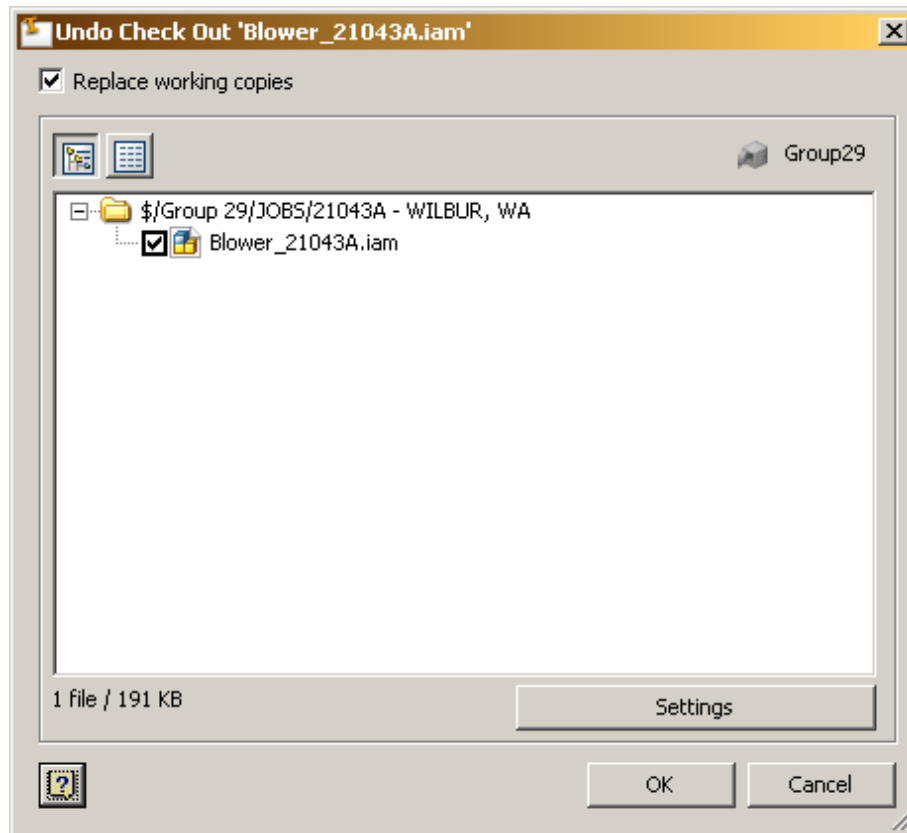
Figure 13 - The Undo Check Out Dialog

4.8 Options for the Vault Add-In for Inventor

The Vault Options command on the Vault ribbon provides settings to suppress any or all of the dialogs described above. The settings allow the user to tell the vault server to handle every file the same for each operation (Check In, Check Out on File Open, etc.). While this does reduce the amount of user instructions to the vault server, suppressing any of the dialogs is not recommended. The dialogs serve as signposts that alert the user how the vault server is handling the files; they also give the user options to instruct the server how to handle the files in the correct way for each situation. One exception to this is given in section 4.10.

Suppressing the dialogs and having the server handle every file in the same way can have unintended consequences, including (but not limited to) loss of data.

4.9 The Vault Browser

The Inventor model browser is an area of the screen that shows model information about the open Inventor file. For example, in an assembly file, the model browser displays a list of all of the assembly components, patterns, assembly-level features, model representations, etc (see Figure 14).

For each type of Inventor file, the model browser can be toggled to show the Vault browser. As shown in Figure 14, this is done by clicking the Model button on the browser and selecting Vault from the list.
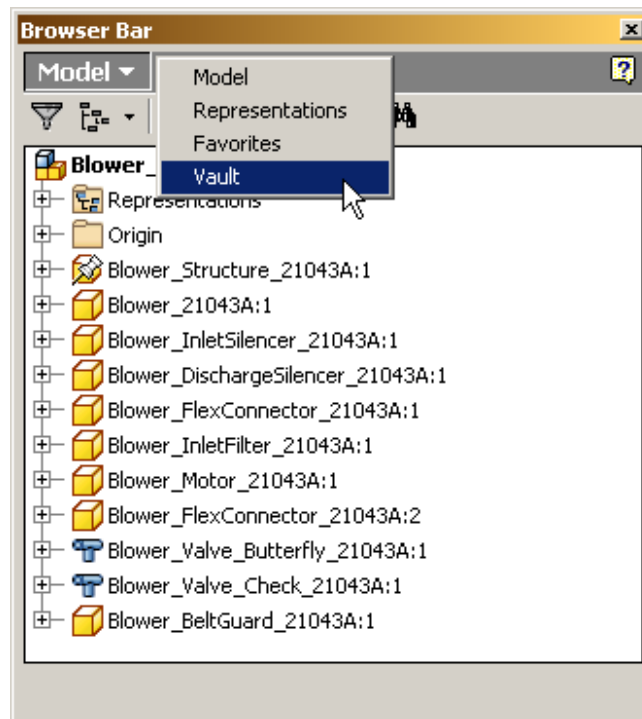

Figure 14 - Changing the Inventor Model Browser to the Vault Browser

The Vault browser (shown in Figure 15) displays the vault status of the current file and its children (if any). The status of each file is indicated by the symbol next to it at the far left of the browser. These symbols match the symbols in the vault client application (shown and described in section 3.7) with two exceptions:

?   The question mark indicates a file that exists on the local drive but is not found in the vault. Check this file in to add it to the vault.

Filename.ipt*   A filename in red text with an asterisk indicates a file that has been modified but has not yet been saved.
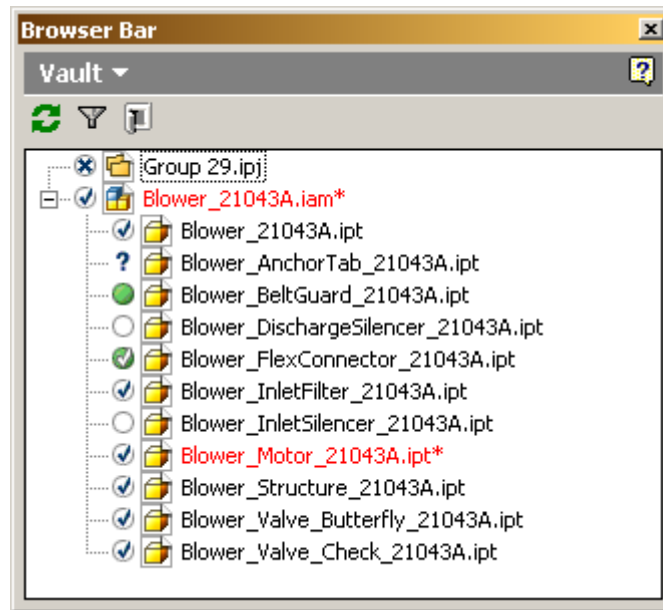
Figure 15 - The Inventor Vault Browser

If a file is modified through the vault client application, its status in the Inventor Vault browser does not automatically update to reflect the modification. In this case it is necessary to click the "Refresh Vault status" ⟳ button. This button only updates the status of the files listed in the browser—it makes no changes to the files themselves.

> **NOTE**: The "Refresh Vault status" button does NOT have the same effect as the Refresh from Vault command on the Vault ribbon (see section 4.2).

Right-clicking on a file in the Vault browser opens a context menu consisting of the vault file commands found on the Vault ribbon. This is a convenient way of managing files during the design process.

4.10 An Exception to Prompt and Dialog Suppression

As mentioned in section 4.8, it is NOT recommended that users suppress any of the Check In, Check Out, etc. dialogs. However, there is one message that appears that prompts user input that is redundant or unnecessary and may be safely suppressed to unburden vault interactions.

When opening a file that may be checked out from the vault, the vault server prompts the user with the message shown in Figure 16.
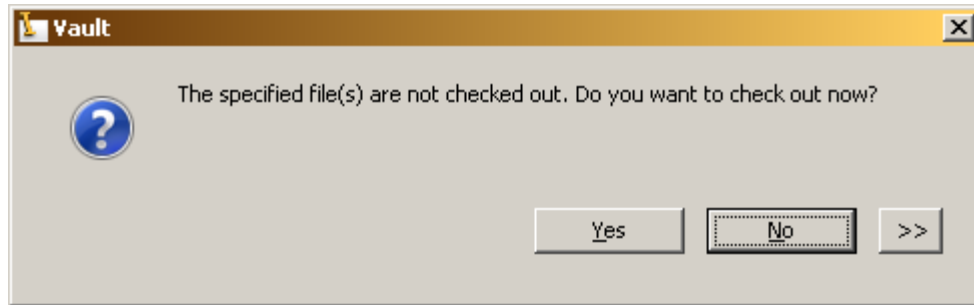
Figure 16 - Redundant File Check-Out Prompt

This message serves the same purpose as the Check Out dialog but with lesser functionality. If "Yes" is selected, the Check Out dialog is displayed anyway, so this message can be safely suppressed.

To suppress this prompt, click the Vault Options command on the Vault ribbon. In the Options dialog, click the Prompts button and change the "Open from Vault: The specified file(s) are not…" response to "Yes" and the frequency to "Never Prompt". Even though the response to this question will default to "Yes", the Check Out dialog will open allowing the user to cancel the check-out if desired.

This same setting can be applied in the vault client application. In the vault client, go to Tools > Options > Prompts button. Use the same setting as above. This setting will suppress the redundant message when opening Inventor files from the vault client application.

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5 Advanced Vault Operations

5.1 Vault Copy Design

Copy Design is a function within the vault client application that allows a user to create an exact copy of an existing design from top to bottom. The user selects a part, assembly, or drawing file and Copy Design will make an exact copy of that file and any children and drawings of children. The vault server preserves interfile relationships with the Copy Design function, a vital feature that will be explained below.

> **⚠ WARNING!** Copy Design creates new files and new file relationships. If used improperly, it can link new files to existing files and make a mess of the vault file organization. Only experienced vault users should use the Copy Design function. **Follow all Copy Design procedures exactly** and double-check very thoroughly before executing the Copy Design process. **Copy Design cannot be undone.**

Understanding the Copy Design Dialog

The Copy Design process is initiated by right-clicking on a file in the vault client application and then selecting Copy Design. This opens the Copy Design dialog as shown in Figure 17.
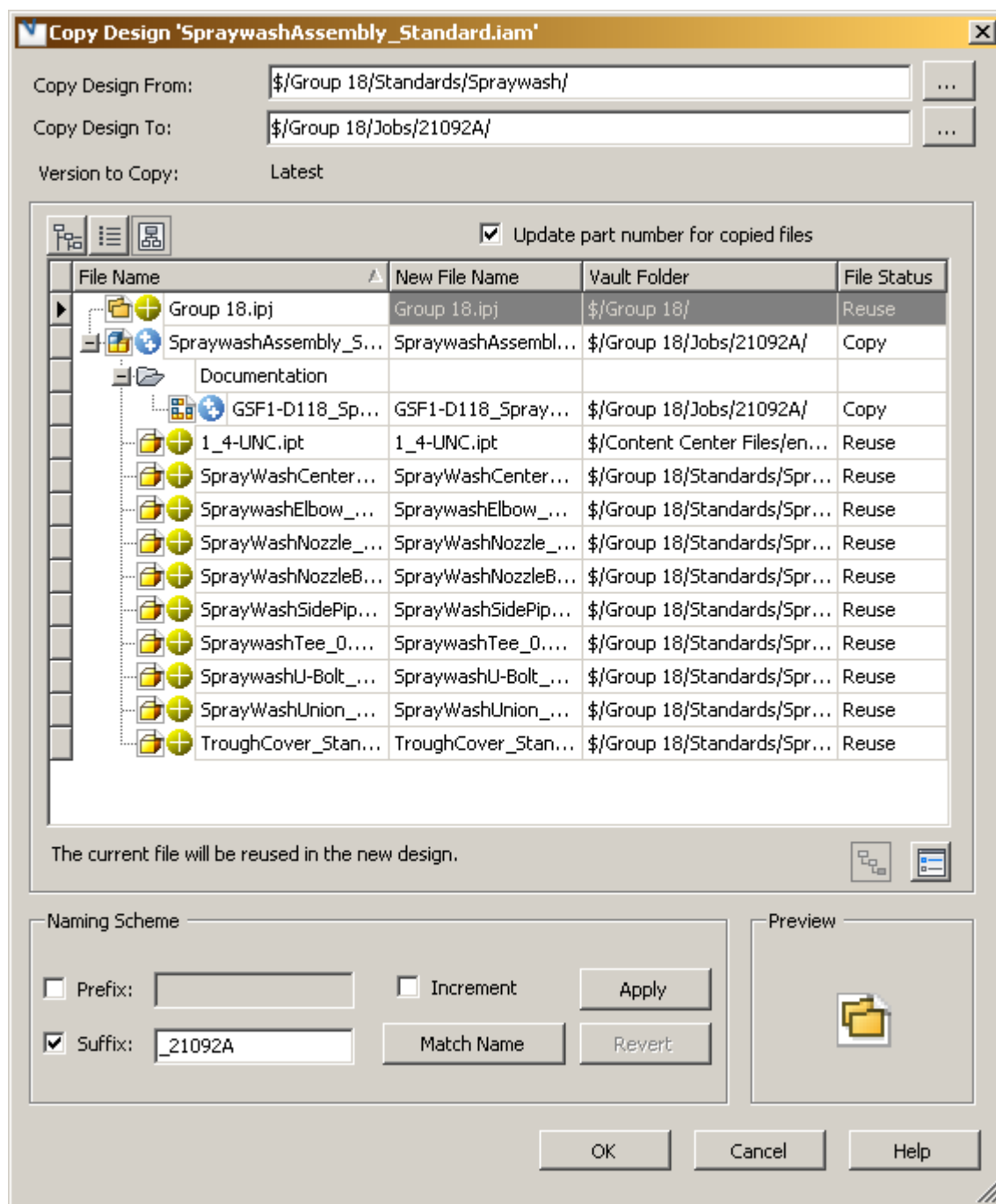
Figure 17 - The Copy Design Dialog

The main section of the dialog lists each file that will participate in the Copy Design process. This list can be organized in one of three ways by selecting the view type icons above and to the left of the file list.

View Type	Description
Tree View	Shows files grouped by the folder in which they are located.
List View	Shows files in a flat file list.
Design View	Shows files organized by parent-child relationship.

To the left of each file is a circular symbol that indicates which operation will be performed on each file. Clicking on the symbol will toggle it through the operation types available for that file. Also, right-clicking on the filename of any file in the File Name column shows a context menu with options to change the operation type for that file. The available operations and their symbols are as follows:

Symbol	Description
Reuse	Uses original file in the new design and maintains interfile links that include this original file. Project, Library, and Content Center files should always be reused.
Copy	Creates a new file independent of the original design and changes all interfile references to link to the new file.
Exclude	Excludes original file from the Copy Design. A file may only be excluded if it has no parents in the current design being copied.
Replace	Allows the user to select another file to replace the original file. All references to the original file will be changed to link to the new file.

The **File Name column** gives the original name of each file.

The **New File Name column** is where the new name of copied files is specified. The new name can be input manually in each cell or any of the tools in the Naming Scheme section of the dialog can be used (these tools are described on page 5-6). Also, right-clicking on any filename in the New File Name column shows a context menu with Find and Replace functions. This replace function (not to be confused with the File Replace operation described above) is useful for replacing part of a filename on many files at once.

The New File Name column displays the original filename for files that are either reused or excluded from the Copy Design. For files subject to the Replace operation, the name of the replacement file is specified here by either typing the filename manually or clicking the ellipsis (…) and browsing for the replacement file.

The **Vault Folder column** displays the destination folder into which a copied file will be placed. The folder can be changed by manually typing the path or by clicking the ellipsis (…) and browsing for the folder. Also, right-clicking any of the folders in the list (not the Vault Folder column header) shows a context menu with Find and Replace functions. This replace function (not to be confused with the File Replace operation described above) is useful for replacing part of a folder path for many files at once.

The Vault Folder column displays the original file location for files that are reused. For files subject to the Replace operation, the folder containing the replacement file is displayed here. For excluded files, the information in this column is irrelevant.

The **File Status column** indicates which operation will be performed on each file. It displays the same information as the circular symbol, but in text form.

In the **Copy Design From field** the user specifies a vault folder. The folder path may be entered manually or browsed to by clicking the ellipsis (…). This folder identifies the portion of the design folder structure that will be replaced by the folder specified in the "Copy Design To" field.

In the **Copy Design To field** the user specifies a vault folder into which the design will be copied. The folder path may be entered manually or browsed to by clicking the ellipsis (…). This folder is not necessarily the folder where every copied file will end up because the Copy Design process is programmed to maintain the design's folder structure. It attempts to copy that structure to the new destination folder specified in the "Copy Design To" field

How the "Copy Design From" and "Copy Design To" fields interact might be unclear at first. To illustrate how this works, we begin with an assembly called DesignA.iam. Each component of this assembly is located in a different folder. The "Copy Design From" folder is specified as $/Designs/Job A and the "Copy Design To" folder is specified as $/Designs/Job B. The Copy Design dialog for this example is shown in Figure 18.
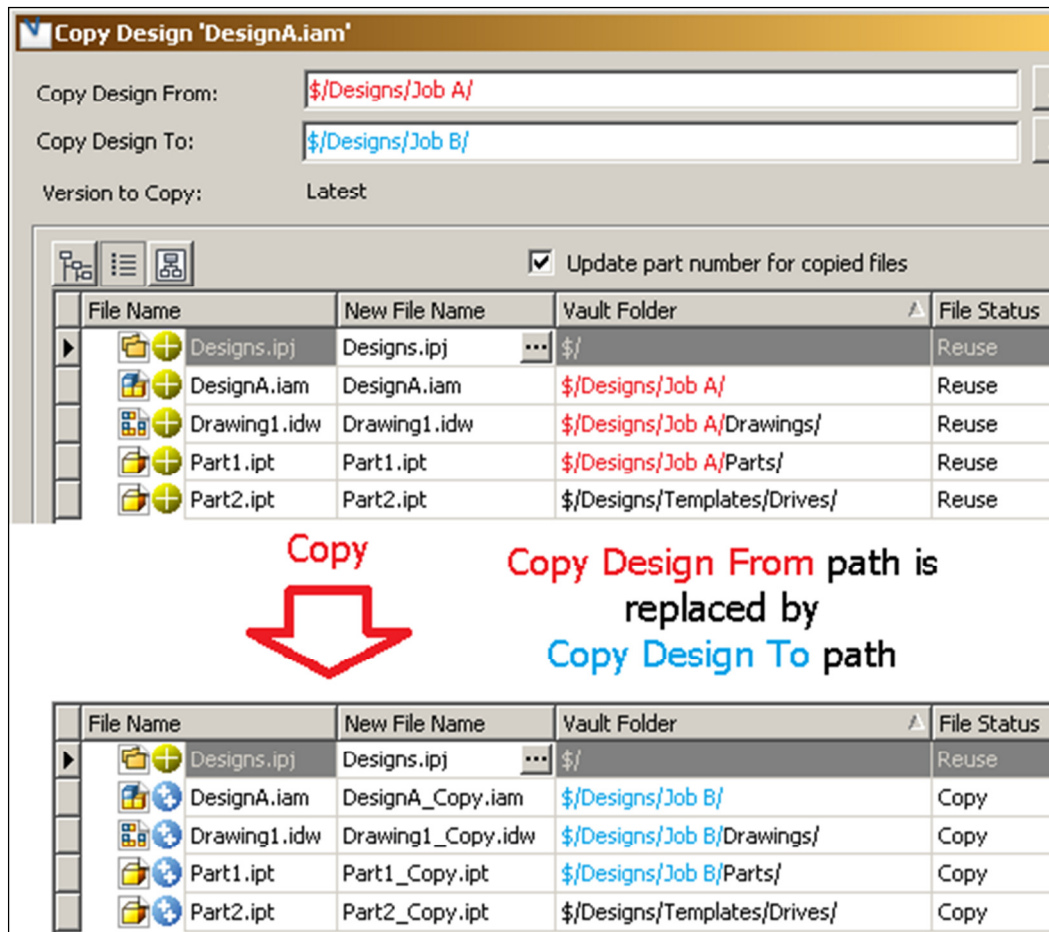
Figure 18 – An Example of Copy Design Folder Behavior

Notice the Vault Folder column for each file. The upper half of the figure shows the folder structure of the original design. The lower half shows the folder structure of the copied design. The "Copy Design From" path (highlighted in red text) is the portion of each file's original path that will be replaced by the "Copy Design To" path (highlighted in blue text).

Notice that the two folders (/Drawings and /Parts) originally under $/Designs/Job A will be copied to $/Designs/Job B. Every other folder remained the same—that is, the file located in those other folders will be copied to its original folder ($/Designs/Templates/Drives).

Alternatively, if the "Copy Design From" folder is specified as $/Designs, then the Copy Design dialog will look like Figure 19. Notice that each folder that was originally under $/Designs will be copied to $/Designs/Job B.
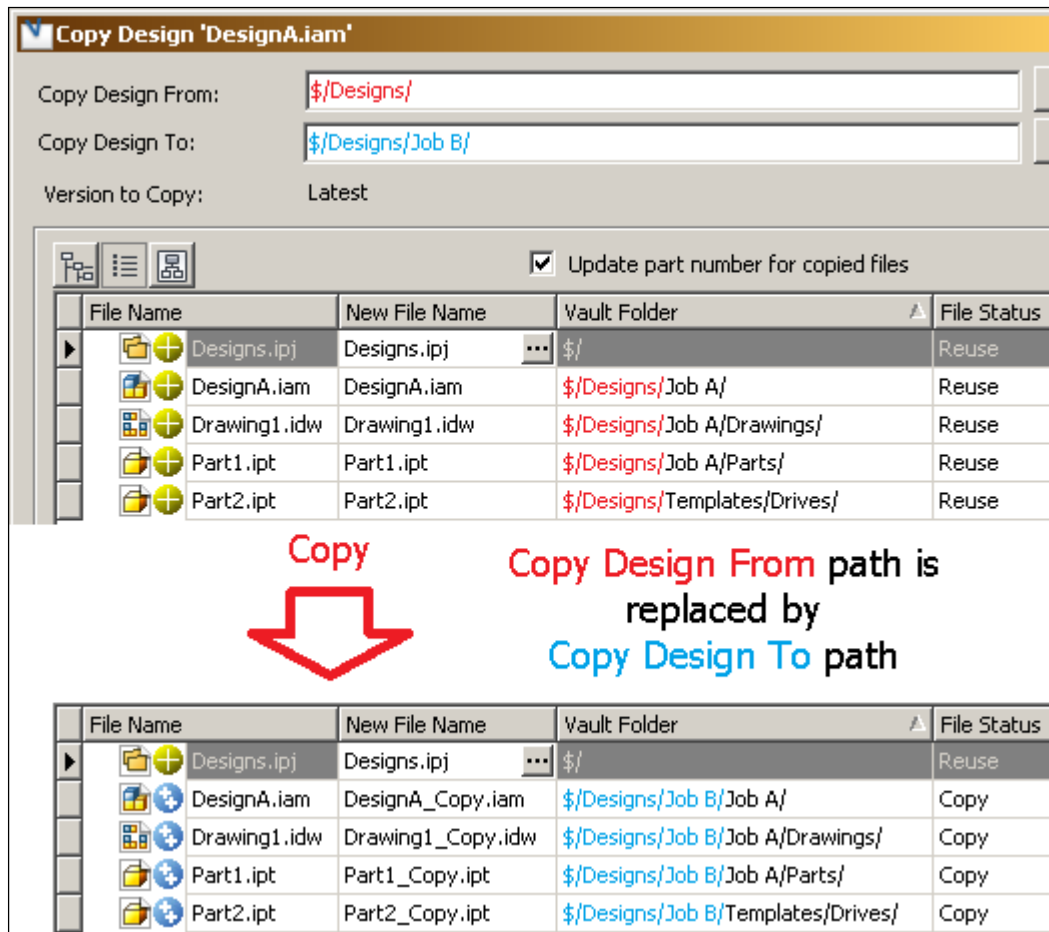
Figure 19 – An Alternate Example of Copy Design Folder Behavior

The Copy Design function attempts to maintain the design's folder structure by copying that structure to the new destination folder specified in the "Copy Design To" field. It is clear that this is exactly what happens in Figure 19. However, as Figure 18 shows, if the "Copy Design From" folder is specified slightly differently, some of the folder structure is copied while the rest is not.

The **Naming Scheme** section of the Copy Design dialog (see Figure 17 on page 5-2) offers several tools to help manage the new filename for copied files.

- To add a **prefix or suffix** to every copied file, check the box and fill in the text you wish to append to the filenames. Click Apply to view the changes in the New File Name column.

- The **Increment** option sequentially updates any filename that ends in an integer. Click Apply to populate the New File Name column with the changes.

- The **Match Name** option changes the filenames of each presentation and drawing file to match the filenames of their direct child.

- Clicking **Revert** will return the filenames to the original naming scheme.

Step-By-Step Copy Design

Before copying a design, be sure that every file that will participate in the Copy Design process is checked in to the vault.

To perform a Copy Design, follow each step listed below in the order given.

1. Locate destination folder in the vault (create one if needed).

2. Select the base file of the design to be copied. Select a file that references all of the elements of the design that you wish to copy. A good rule of thumb is to pick the highest file in the parent-child hierarchy that encompasses all of the desired design elements, such as a drawing of the complete design or an assembly.

   When you have selected the appropriate file, right click it and select "Copy Design". This will open the Copy Design Dialog (see Figure 17 on page 5-2).

3. Specify the "Copy Design From" folder.

4. Specify the "Copy Design To" folder.

5. Select an appropriate file display view. Use a view that makes the most sense or is most comfortable.

6. Check the Vault Folder column for any unusual folder paths. If any anomalous paths show up, there may be some stray files linked to the design. This is a good way to ensure that you are copying only the files you want. (If this happens, simply exclude the files from the copy if possible. If excluding the files is not allowed, then some more in-depth design cleanup might be required. This should be performed by an experienced vault user familiar with the design.) Ideally, the design should be repaired before continuing with the copy; however, if you decide to proceed, be aware that extraneous files will be copied that should be deleted afterward.

7. Apply the desired file operation (copy, reuse, exclude, or replace) for EACH file.

   > **TIP**: Holding down the Control key while clicking the circular symbol next to a file will also change the file operation for each of that file's children.

   To change the file operation for every file in the list at once, CTRL+click the circle next to the base file. You may have to CTRL+click the circle a couple of times to get every file operation to change. Also, depending on the number of files in the list, several seconds may pass before the file operation symbols update.

Unfortunately, since Vault 2010, using the CTRL+click trick to apply the Copy operation to every file in the list also applies it to Content Center and Library files. It is best practice to reuse Content Center and Library files. So, you will have to manually change the file operation back to Reuse for each file of these types (these files are quickly identified by their folder path in the Vault Folder column).

Double check the list of files to ensure that every desired file is in the list and that each of the files has the desired operation specified.

Be especially thorough with the Replace operation. A botched file replacement can be particularly tedious to correct.

8. Ensure that the destination folder is correct in the Vault Folder column for EACH copied file.

   A mistake in the Copy Design process can create extraneous folders or copy files to unintended folders. This will not ordinarily impair the function of your copied design (except in the case of an incorrect file replacement), but it adds clutter to the vault organization and is extra work to correct after the fact. It is much better to get it right from the start.

9. Ensure that all of the copied files are given a unique filename. This is necessary for efficient vault file management and is enforced by the vault administrators. The easiest and quickest way to accomplish this is to add a common prefix or suffix to all copied files. Choose something that will ensure that the copied files will not share a filename with any other files in the vault, such as a job number, proposal number, or other specific project or model designation.

10. Look over the Copy Design dialog thoroughly one more time to be sure that all steps have been followed correctly. Make certain that all necessary information has been accurately provided. Doing this will guarantee that your new design will be created just as you intended and will help prevent problems that are time-consuming to resolve.

11. Once you have determined that all information is correct, click OK to execute the Copy Design.

5.2   Rolling a Design Back to an Older Version

The vault server keeps old versions of every file stored in the database. Not only is this useful for tracking the revision history of a file, but it provides a way to rewind a design to a previous state.

The following steps detail how to roll back to a previous version of a design.

1. In the vault client application, right click on the top file in the design hierarchy and select Get / Checkout. In the Get / Check Out dialog, be sure that all children and related documents (e.g. drawings) are included for checkout. Click the Settings button and configure the settings to include these files if they are not already in the list. Click OK to check out the files.

2. Right click on the same file and select Get / Checkout. Select the version to which you wish to rewind. Again, make sure that all children and related documents are included in the list of files in the Get / Check Out dialog. Use the Settings to include the files if necessary. Click OK.

   Since the files are checked out to you, a warning prompt appears that says "File '<Filename>' is checked out to you. Are you sure you want to replace it with an earlier version?" This is to warn you that the local copy of the latest version of the files will be overwritten as the server downloads the previous version to the local drive. In this situation, this is what we want. The warning will appear for each file being overwritten, so click "Yes to All" to save some clicks.

   Once the previous version has been downloaded to your local drive, you will see the vault file status icons change to red circles with check marks for each file that was rolled back. You may have to refresh the view to see the current file status.

3. In Inventor, use the Open command to browse to the top file of your rolled-back design. In this case, the version on the local drive is the rolled-back version, while the version in the vault is still the latest version; so, make sure that you are browsing on your LOCAL DRIVE and <u>NOT</u> THE VAULT. Open the file.

4. Check in the file through Inventor. Make sure that the file's children are included in the list of files in the Check In dialog. Use the Settings to include the children if necessary.

   Include a comment to be checked in with these files. Simply type the comment in the comment field located in the lower portion of the Check In dialog. Type something like "Design rolled back to version 2" or something similar to indicate to which version the design was rolled back. Since the file's previous history is not modified, users can track the evolution of the design.

Click OK. This will upload the rolled-back version of the design to the vault. The vault server will increment the version number of the files stored in the vault, and the rolled-back version will become the latest version of the files in the vault.

If it becomes necessary to "undo" the rollback (e.g. you decide that the design was correct BEFORE you rolled it back), simply repeat the process to restore the correct version (which would now be the version immediately previous to the latest).

The vault does not delete any versions when you roll back a design. The process outlined above simply copies the old version, brings the copy to the front of the line and increments it as the latest version.

End of document.