Customizing the Inventor Content Center

Barrett Kamille – IMAGINiT Technologies

MA201-1L The Autodesk Inventor Content Center ships with over 700,000 parts. This session will show CAD managers and every-day users alike how to streamline their libraries to include only the parts they use. You'll learn how this process accelerates not only a design team's part-selection process, but also significantly increases the performance of the Content Center itself. In addition, attendees will learn how to publish their own custom parts to the Content Center and to modify and add default properties to standard library components such as internal part numbers and descriptions used in bills of materials and parts lists.

About the Speaker:

Barrett Kamille has over 12 years of experience in the Autodesk community focusing primarily on mechanical CAD and PDM products. He was part of the Autodesk Inventor product team for five years and was a consultant for Inventor, Vault and Productstream. Barrett brings a wealth of experience in the realm of CAD data management as well as database-driven applications. Barrett is currently a Senior Applications Engineer with IMAGINIiT; one of Autodesk's largest business partners.

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Overview

The Autodesk Inventor Content Center gives you the ability to access 700,000 unique, standard parts for use in your Inventor assemblies. This session will show you how to streamline your parts libraries to limit the availability as-per your company standard. You'll learn how this process accelerates not only a design team's part-selection process, but also significantly increases the performance of the Content Center itself. In addition, you will learn how to publish your own custom parts to the Content Center and to modify and add default properties to standard library components such as your own part numbers and descriptions for use in bills of materials and parts lists.

After this lab you will be able to:

- Create your own custom Content Center Library
- Populate your library with standard components
- Customize those standard components with company specific properties. (Ex. Company Part Numbers, Alternate Descriptions etc.)
- Add your own company specific parts to your custom library
- Perform backup and recovery of your custom libraries

Prerequisites

This class assumes a good working knowledge of Inventor, its environments and general functionality. Specifically you should be familiar with the user interface components and how to use Content Center to navigate and place parts within an assembly. The class will be conducted using Autodesk Inventor 2008 (similar methods apply in Autodesk Inventor 11).

For More Information

For more information on this or any other topic please visit:

http://www.autodesk.com/mfgcommunity

http://discussion.autodesk.com

http://support.autodesk.com

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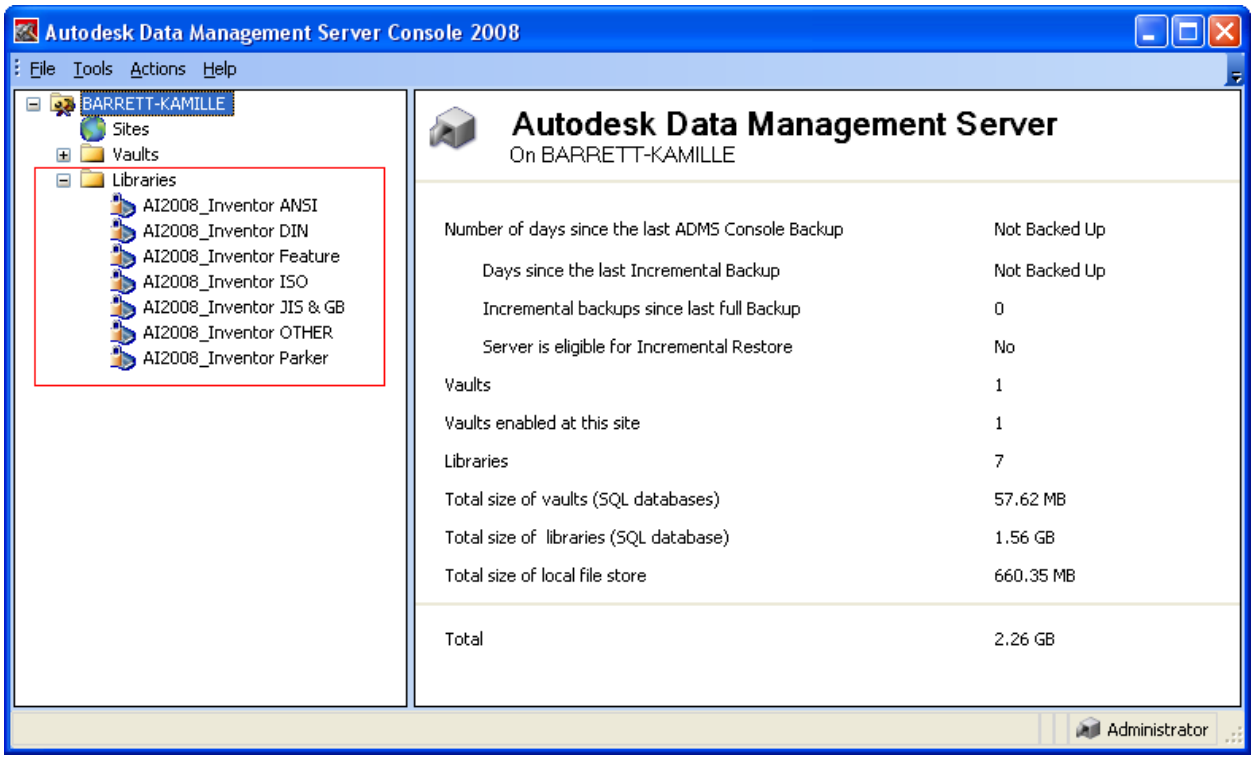
Setup

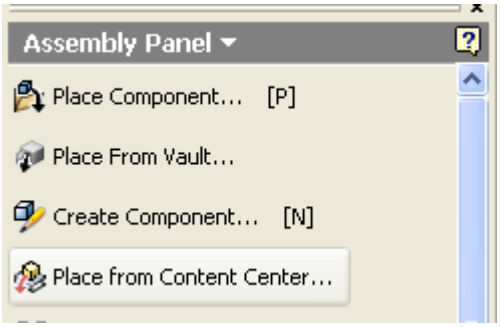
To prepare for this exercise ensure that you have both Autodesk Inventor 2008 an ADMS Console 2008 installed on your system:

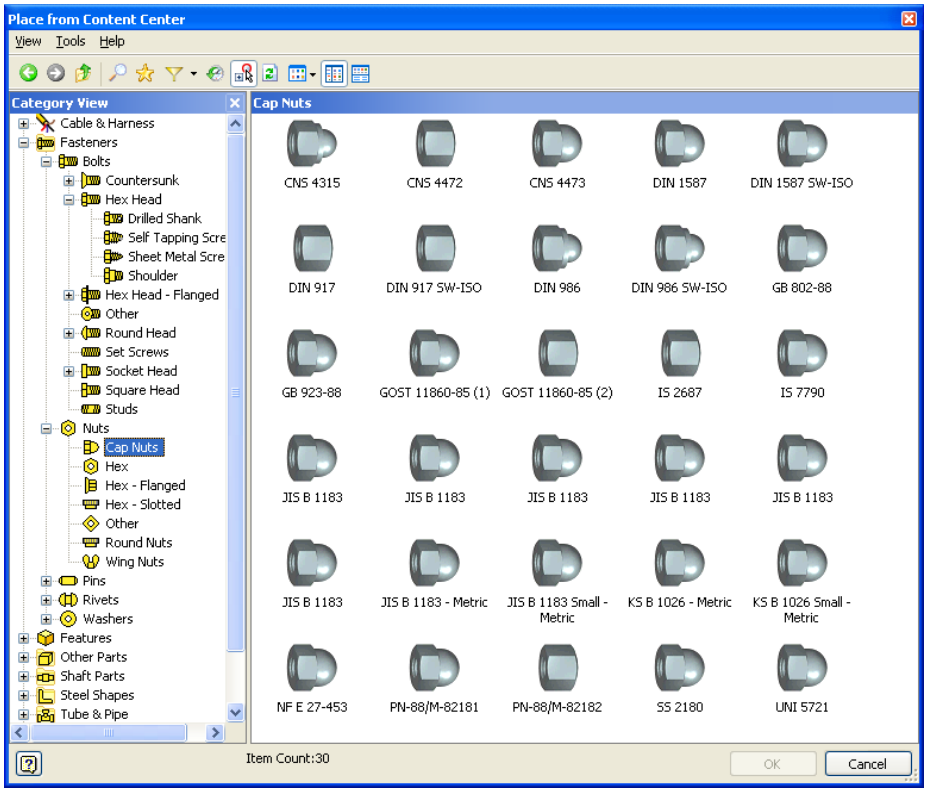
1) Launch ADMS Console 2008 and ensure that you have Autodesk Inventor 2008 Content Center libraries installed:



NOTE: If you already have a library called “AI2008_MyLibrary”, delete it by right-clicking on it and choosing delete.

2) Launch Inventor 2008 and make sure that you can connect to the Place from Content Center dialog:



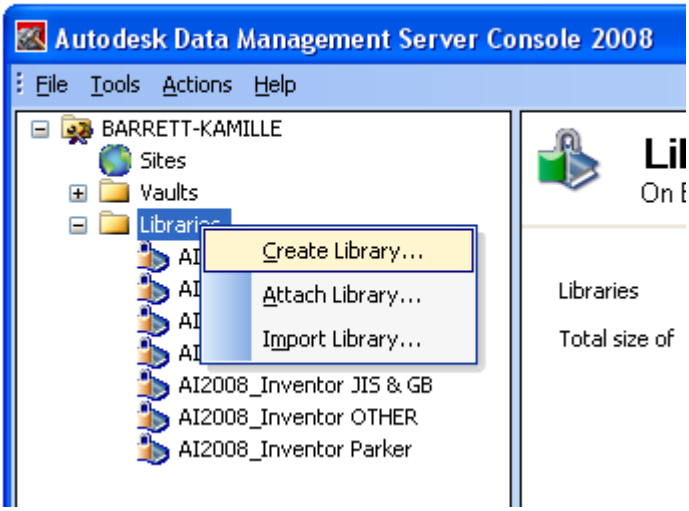


You are now ready to begin customizing your content center.

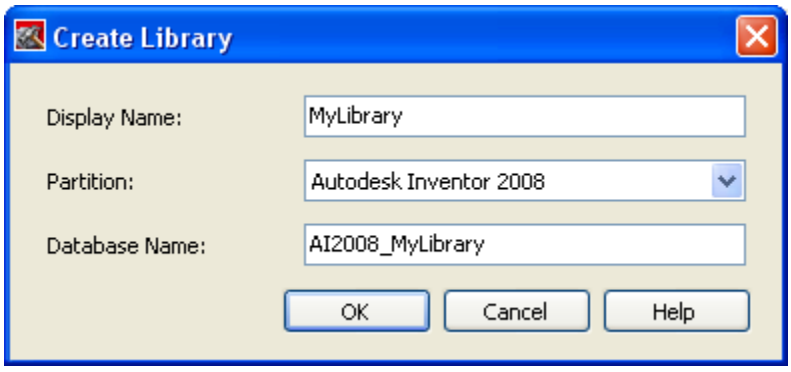
Creating a Custom Library

The first step is to create your own custom library which will allow you to copy parts from the existing read-only Content Center libraries and will also allow you to modify the properties of these parts such as the description and part number.

1) Start by opening ADMS Console 2008 – right click on Libraries and select Create Library…:



2) In the Display Name box type in “MyLibrary”. Keep the selection for Autodesk Inventor 2008 in the Partition section and use the default of AI2008_MyLibrary as the database name:

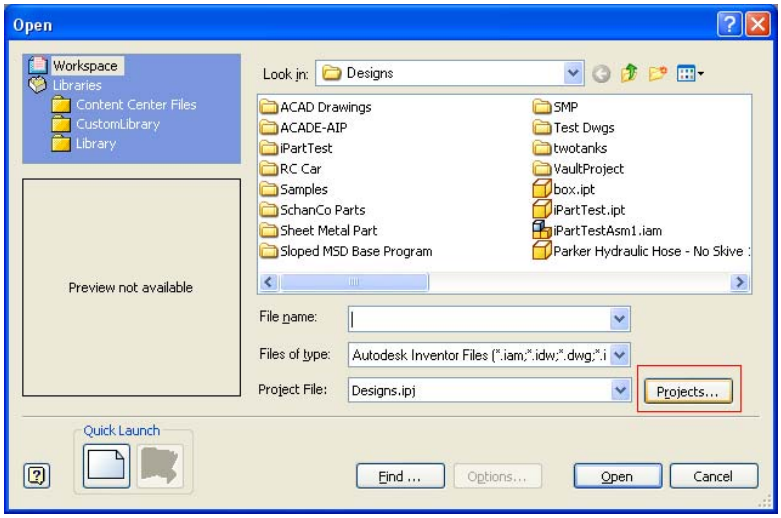


Click OK when finished. You will be notified that the library was successfully created. Note that the library has a different icon than the others indicating that it is read/write enabled.

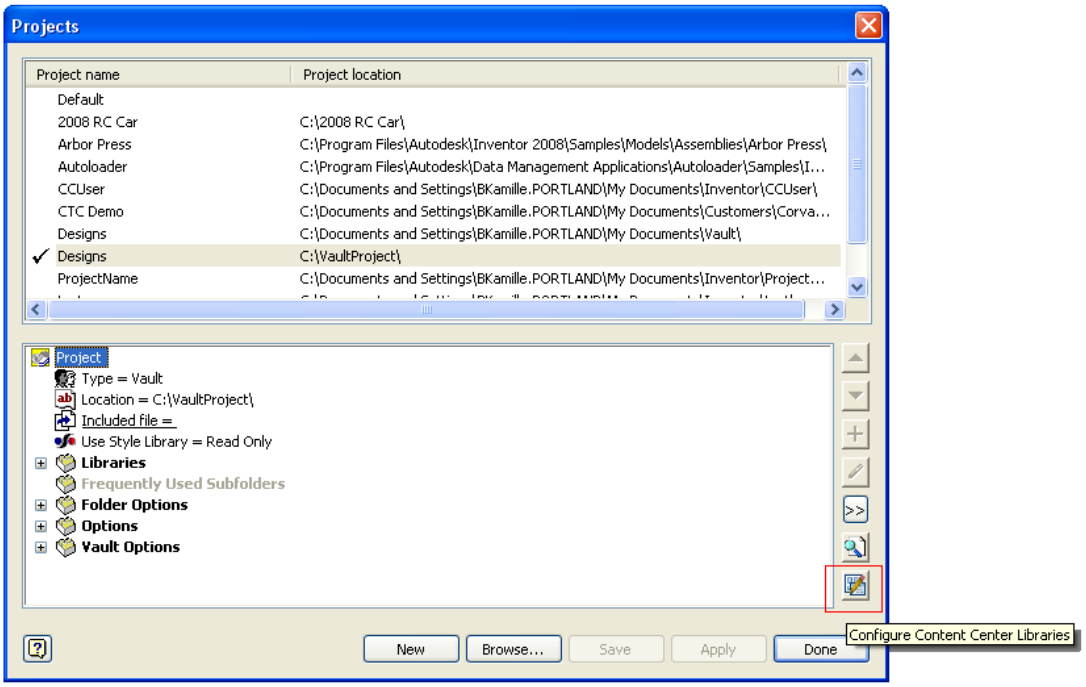
Adding the Custom Library to the current project

Now that you have a custom library you need to activate it within the current Inventor project.

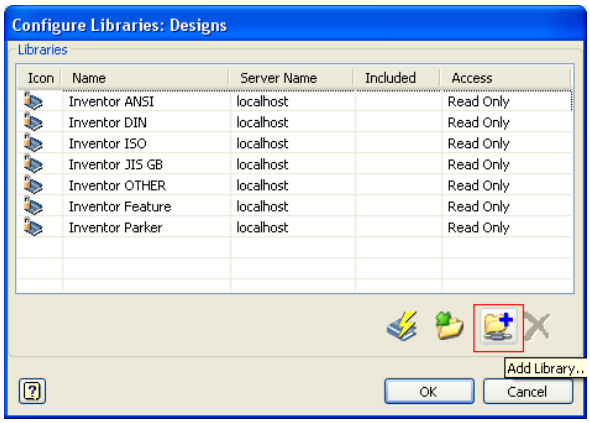
1) Open Inventor 2008 and select the Projects… button:



2) Select the Configure Content Center Libraries button in the lower-right side of the Projects dialog:



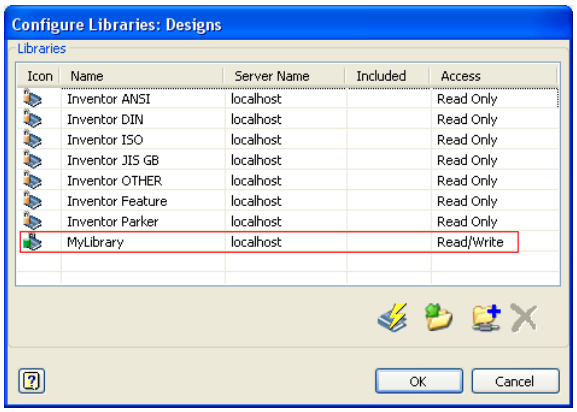
3) Click on the Add Library… button:



4) Choose MyLibrary from the pulldown:

Click OK to close this dialog.

5) Your Configure Libraries dialog should now contain your custom library:

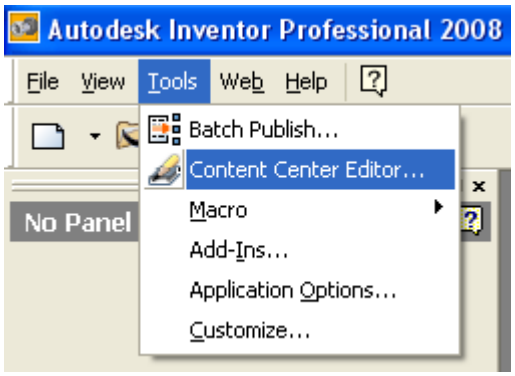


Click OK to continue.

Modifying the Custom Library

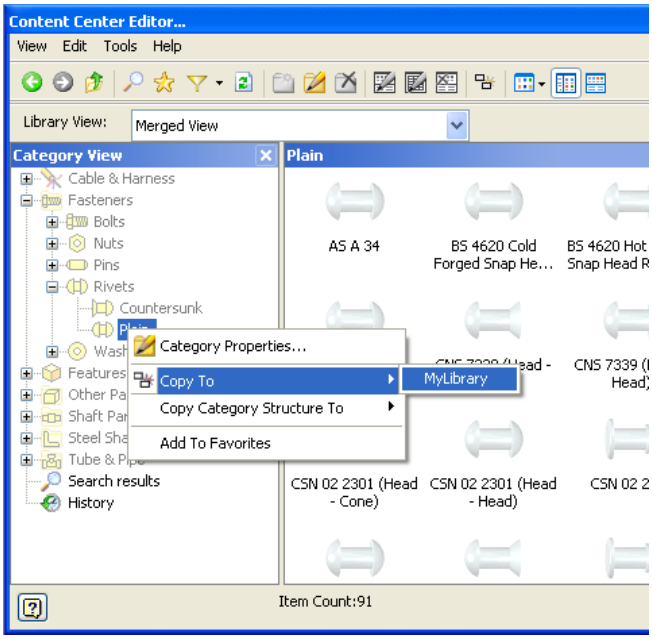
Now you have created a custom library and have added it to the current Inventor project. From this point you can modify your custom library to include your company's standard parts and apply your own descriptions and part numbers too them.

1) Open Inventor 2008 and launch the Content Center Editor:



(You may have to wait while the content center data is loaded from SQL Server)

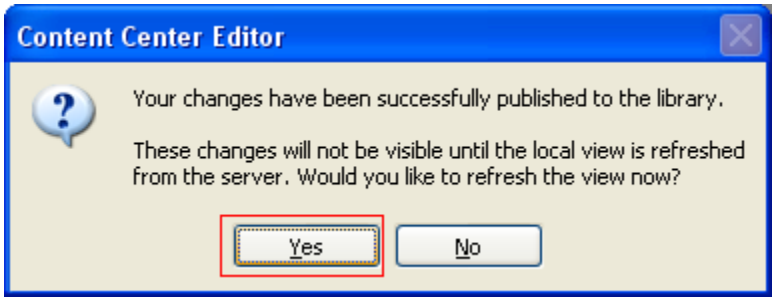
2) From the list of items on the left, right click on Fasteners->Rivets->Plain->Copy To->My Library:



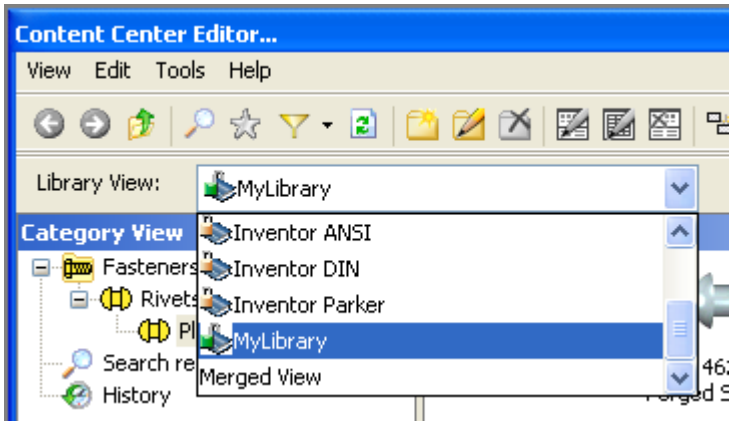
(You will get a warning that this will take a few minutes to copy – allow it to copy)

BREAK (while copying)

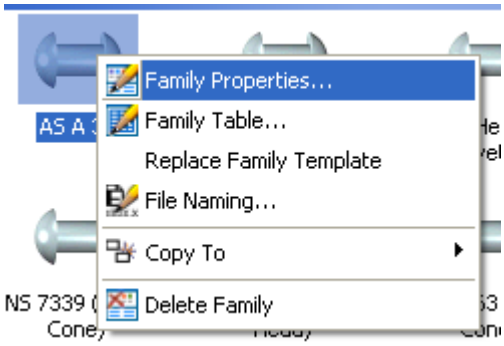
3) When notified that that you need to refresh the local view choose Yes:



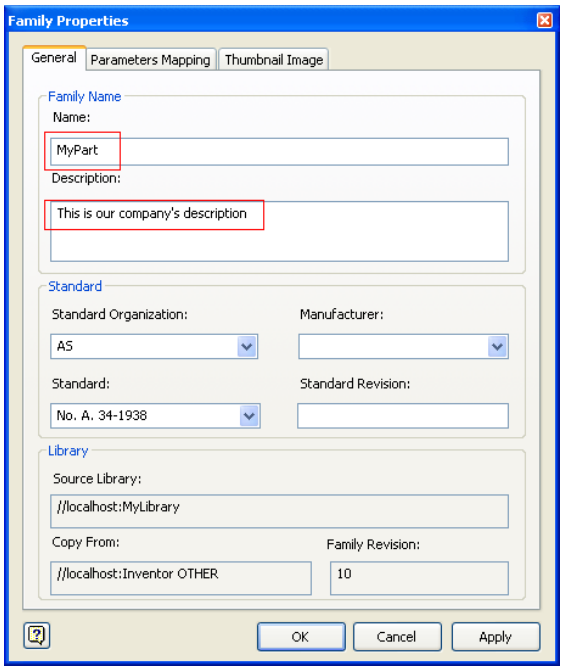
4) In the Content Center Editor dialog change your view to MyLibrary:



5) Now you can begin editing the parts you have copied. You can modify the properties:

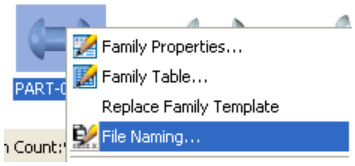


6) Change the Name to and the Description of the part:

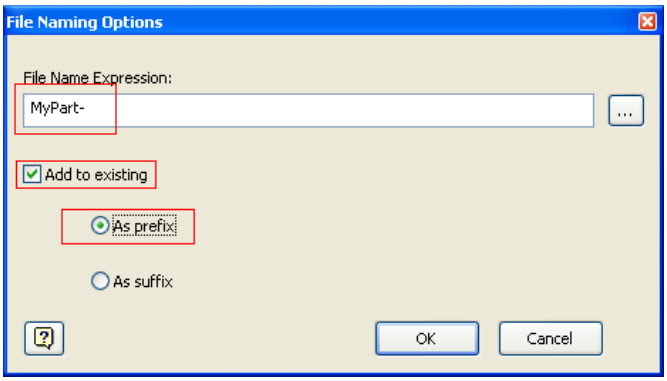


Choose OK to close the dialog – you will be asked to refresh your local view again.

7) Change the File Naming scheme for the part you are editing (right click):

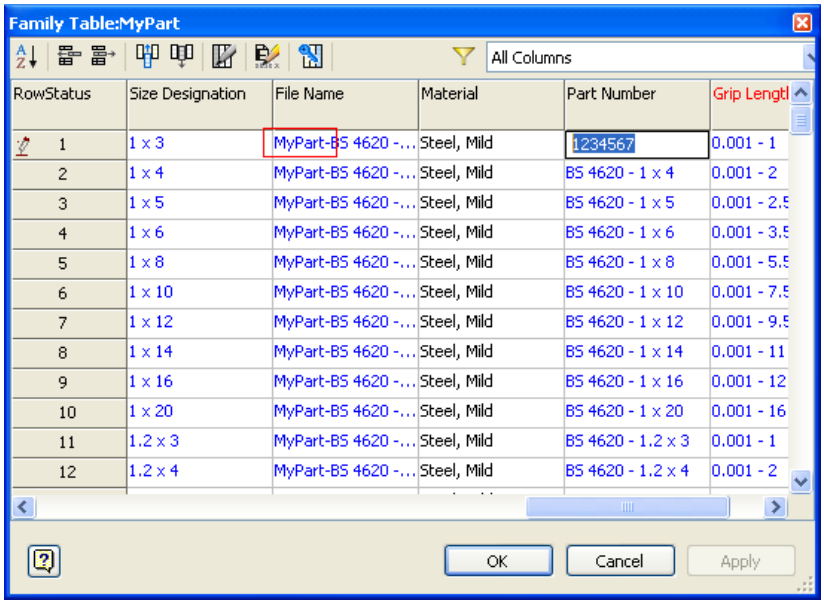


8) :Add MyPart- as a prefix for new parts:

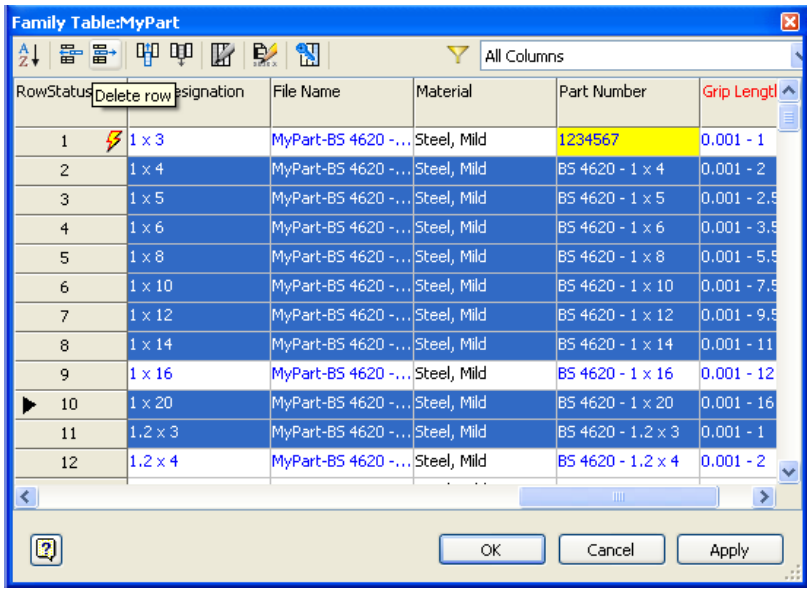


Choose OK to continue.

9) Modify the Family Table for the part so that you can edit its part number. Notice that the filenames are already pre-pended with the MyPart- prefix. If you wanted you could modify part file names directly from here. Modify the part number for the first row:

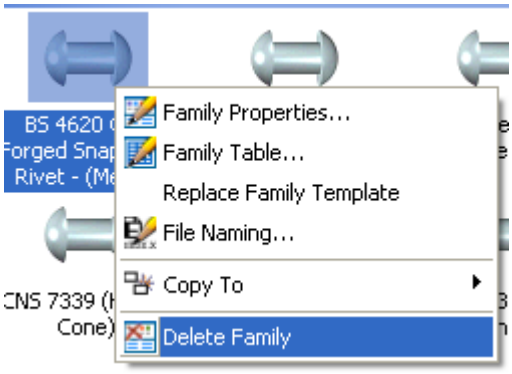


10) Delete a few rows of parts by clicking on the row number and holding the Ctrl or Shift keys and click Delete Row:



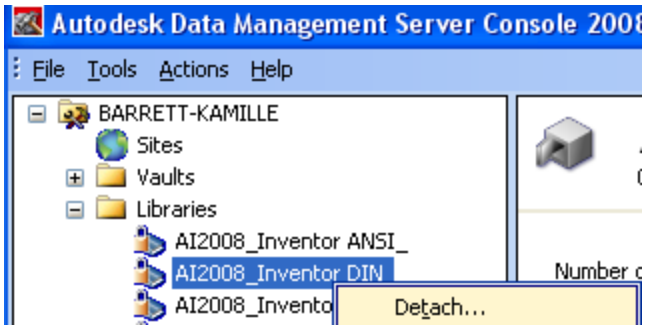
Click OK when finished.

11) Select a few of the other part families and right-click on one and choose Delete Family:

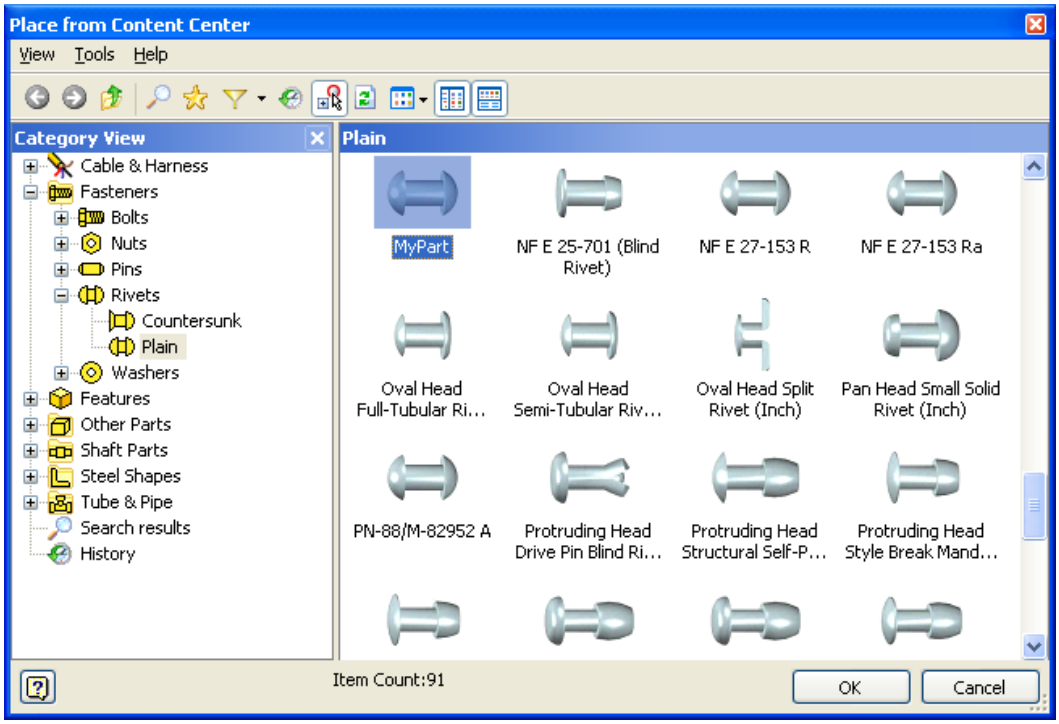


You will be prompted to delete selected families, choose Yes.

12) Once you have copied over and cleaned up your custom library using the standard content as a base, you can detach the standard content libraries from your system. Go to ADMS Console and expand the Libraries folder, right-click on a library and choose Detach. You can also delete the library but this is not recommended as you may need items from the library at a later time. Detaching it simply removes its link to the system without deleting the library file:

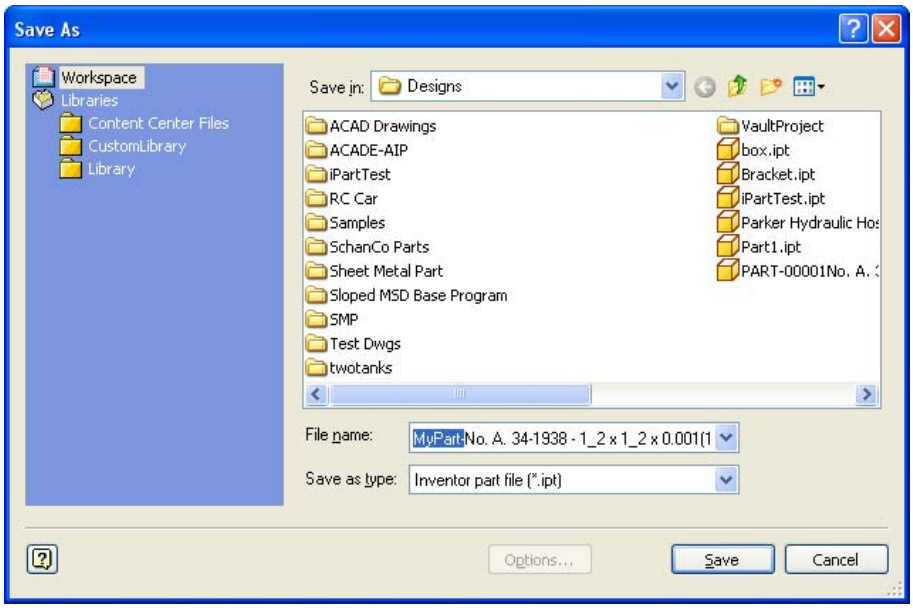


13) Now you will add the modified part to an assembly. Start a new assembly, choose Place from Content Center and navigate to your custom part family:



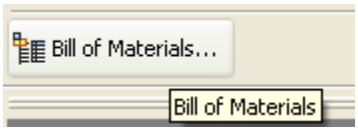
Choose the default sizes and pick OK to continue.

14) Note the prefix for the new part name:

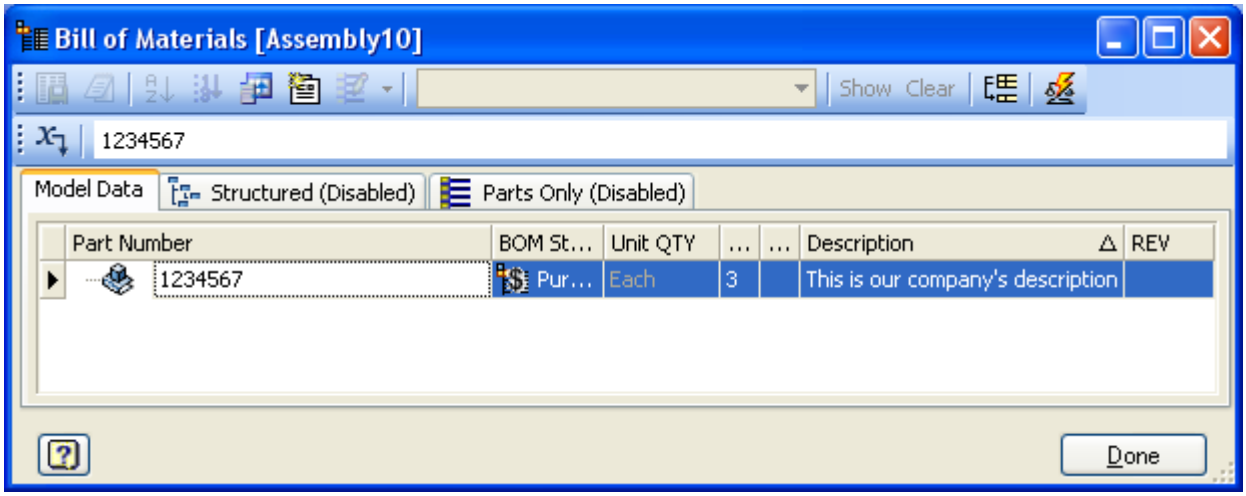


Click Save to continue.

15) Add a few instances of the part to the new assembly and open its Bill of Materials:



16) Examine the new part number and description modified previously:

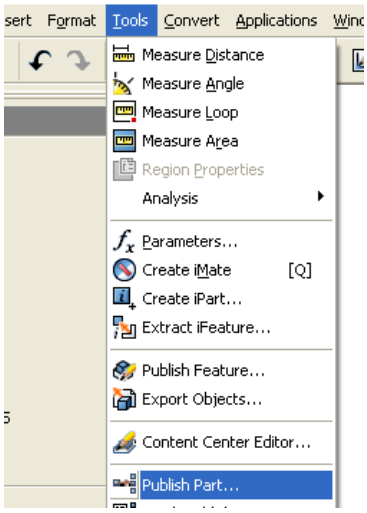


Summary: You have created and customized a library using content center data. You have also removed unneeded part instances and families and have detached the no-longer needed Standard Content Center libraries. You now have complete control over which parts are used in an assembly as well as the part numbering and file naming conventions used.

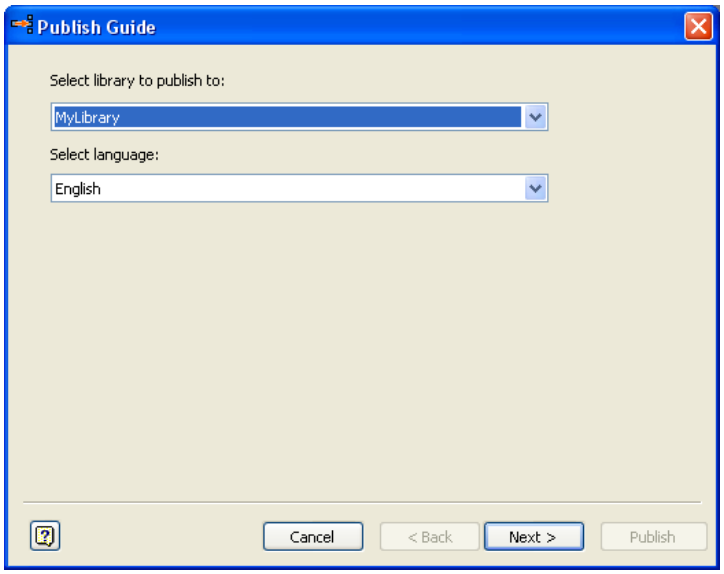
Adding custom parts to a Custom Library

Now that you have created and copied data from a standard content library, you will see how you can add your own company's parts to this library.

1) Start by creating a part that will be used to simulate your company's standard parts (or open Bracket.ipt). Once finished go to Tools->Publish Part:

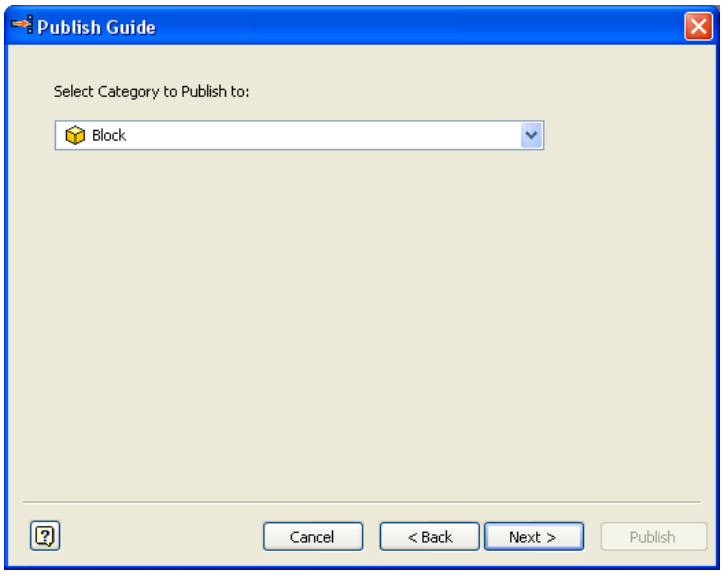


2) In the Publish Guide dialog make sure that MyLibrary is selected and then click Next:



Choose Next to Continue.

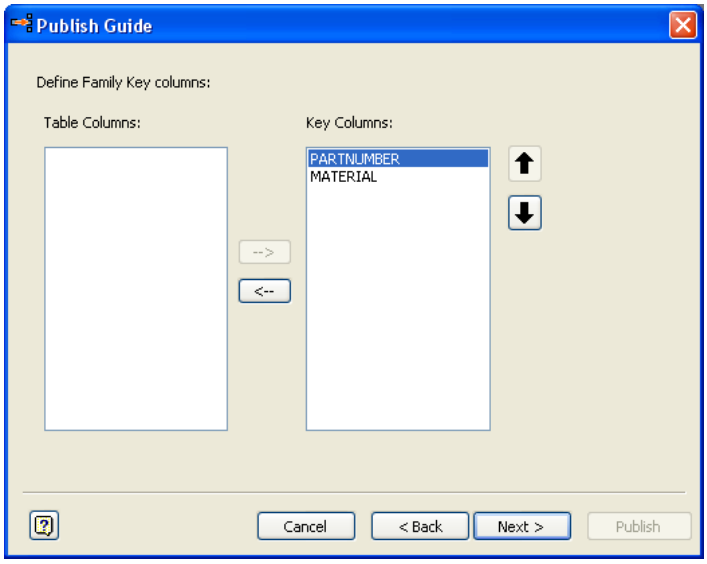
3) In the Select Category to publish to pulldown, choose whatever is most appropriate for your shape. If you are not sure which to use Choose Features->English->Block:



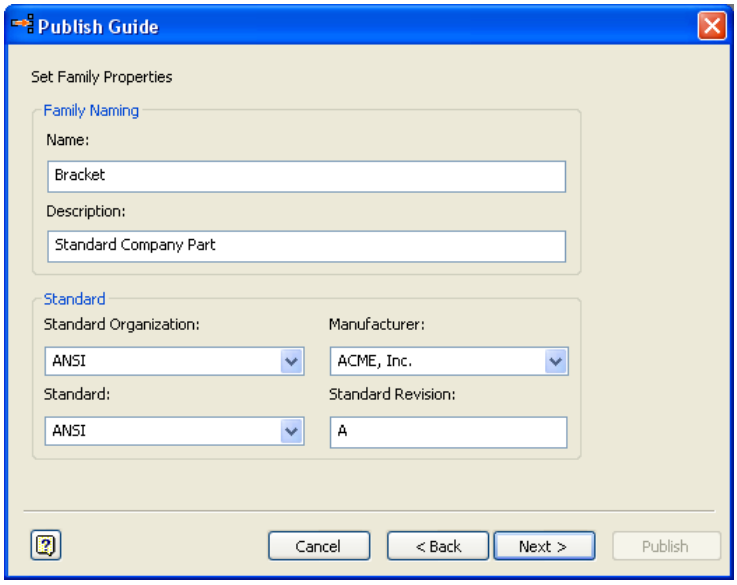
Choose Next to continue.

4) Unless you have chosen something other than Block, you can simply choose Next on the Map Family Columns to Category Parameters dialog.

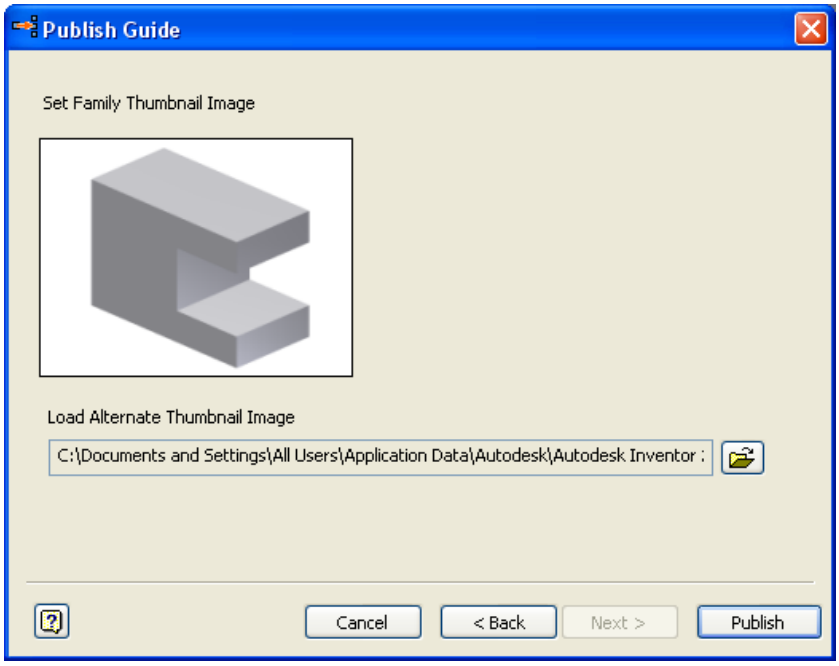
5) For Define Family Key Columns, you are going to want to have both the Material and Part Number fields referenced in your family table. Choose the items so that they appear in this order (you may need to use the arrow up and down keys on the right side of the dialog):



6) You will now be prompted to add standard information for the new part:

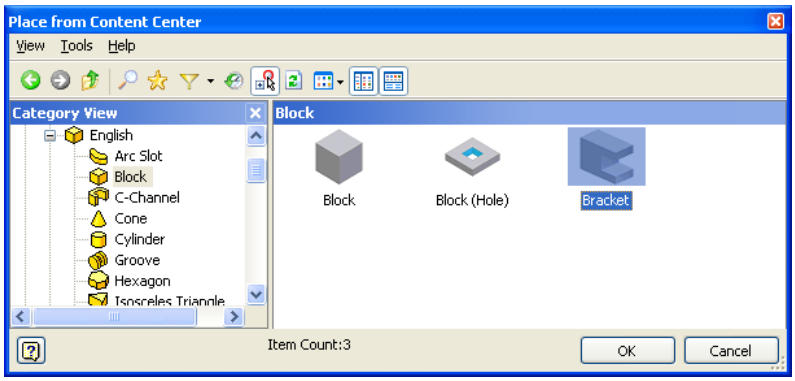


7) Select a thumbnail image for the new part – the default is to use Inventor's thumbnail:

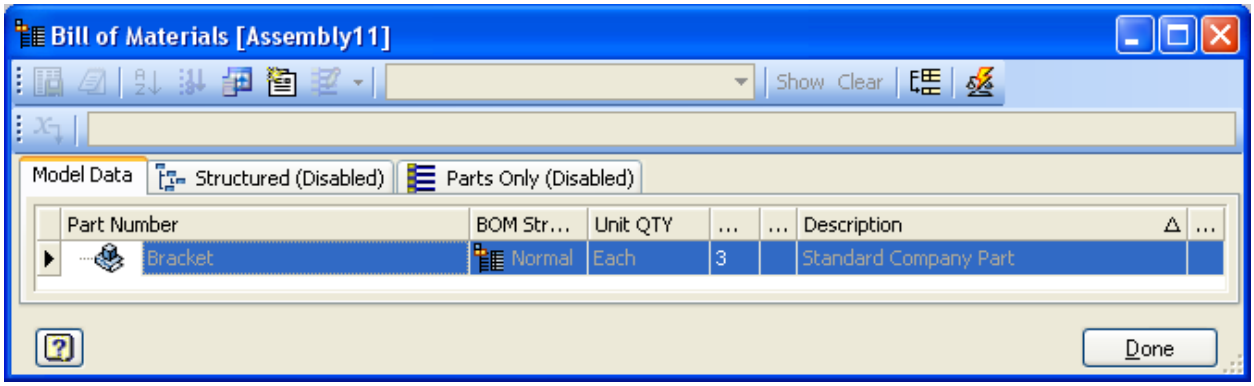


Click Publish to place the part in the content library.

8) Open a new assembly and navigate to the newly published part inside of the Content Center dialog:



9) Place it into an assembly and check its bill of materials:



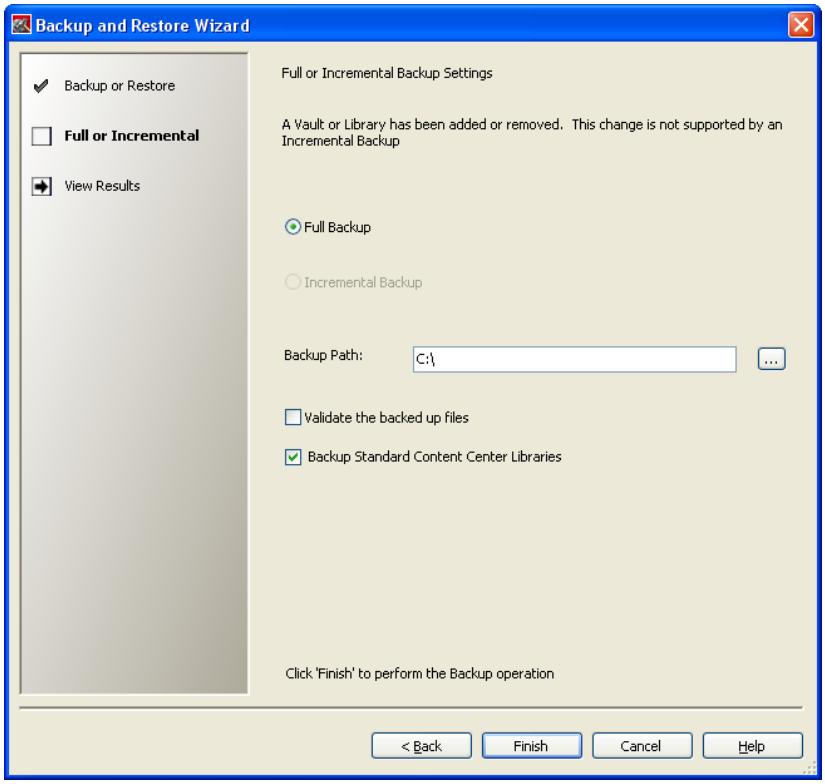
Summary: you have now created a new library part and published it to your custom library which is now accessible using the Place From Content Center dialog. You can modify the properties of this new part using the methods described earlier.

Backing up and Restoring Custom Libraries

As a rule of thumb it is always a good idea to back up your custom libraries, especially once you have imported all of your parts and have made necessary changes.

1) Open ADMS Console and log in as Administrator (no password). Go to Tools->Backup and Restore. Make sure Backup is selected and pick Next>.

2) Make sure that Full Backup is selected and that Backup Standard Content is also selected. In the Backup Path field type in C:\ and select Finish:



3) The backup will take a few minutes to complete.

BREAK (while backup completes)

4) When the backup is complete, go to your C:\ Drive. You should notice a new backup set with today's date and time as part of the folder name. Navigate inside this folder to see that your custom library (C:\VaultBackupXXXX\databases\AI2008_MyLibrary_dbak) exists. Once you have backed up the Standard Content Center Libraries you do not need to do so again as they do not change (read-only).

Summary: You have successfully backed up your content center and custom libraries. Restoring them is a reverse of the same process you just completed. If you have time, try restoring and using the libraries you just backed up.

Quiz Yourself

1) What must be done first before you can create your own library of parts?
    a. Create a new Inventor Project file
    b. Create a new custom library using ADMS Console
    c. Create a new folder for the library parts
    d. Change the read only setting on a standard Content Center library
2) How can you duplicate data from a standard Content Center library to a custom library?
    a. Edit the excel file that controls content center
    b. Changing the read only setting on standard Content Center libraries
    c. Use the Copy To command to copy standard content to a read/write library
    d. There is no way to copy data from the standard content libraries
3) How do you add your own parts to a custom library?
    a. The Content Center Editor
    b. The Publish… tool in Inventor
    c. Edit the Excel spreadsheet to add the new part information
    d. ADMS Console
4) Where are Content Center libraries modified (Part Numbers, etc.)?
    a. ADMS Console
    b. On a shared network drive
    c. On a dedicated content center server
    d. Content Center Editor
5) Where are Content Center libraries managed by the system?
    a. ADMS Console
    b. On a shared network drive
    c. On a dedicated content center server
    d. Content Center Editor

Answers: 1b, 2c, 3b, 4d, 5a