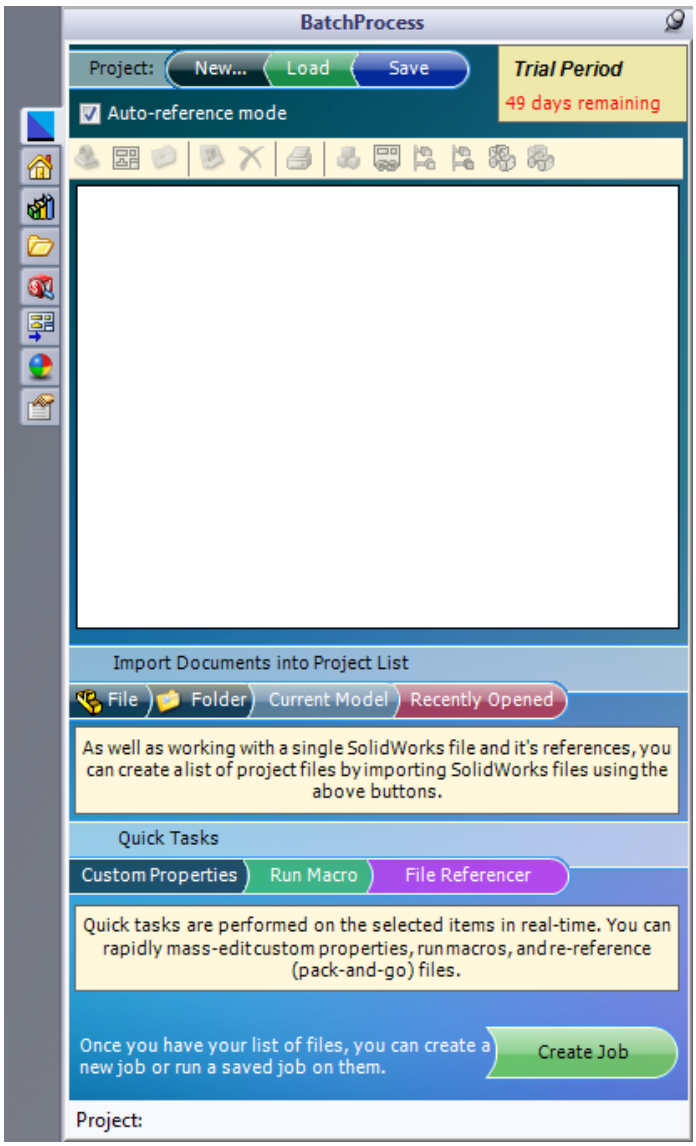
TUTORIAL

Written by Luke Malpass

Sunday, 04 April 2010 20:20



How do I use BatchProcess

Begin by downloading the required version (either 32bit or 64bit) of BatchProcess and install it on your system. Make sure the version matches the version of SolidWorks you are using, not your operating system. So if you are running 32bit SolidWorks on a 64bit machine, install the 32bit.

If you haven't already, the installer will tell you that you need the .Net FrameWork 3.5 and SQL Compact 3.5 installed beforehand. Both are free and available here so download and install them as required:

.Net FrameWork 4.0

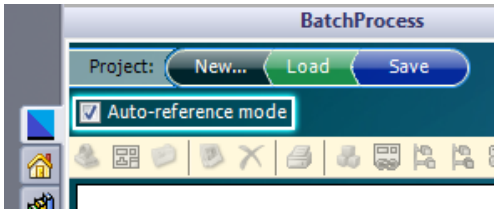
SQL CE 3.5

Now that you have everything installed open up SolidWorks and we can begin. If BatchProcess doesn't load up in the Taskpane to the right, check that it is loaded in the Tools->Add-ins menu.

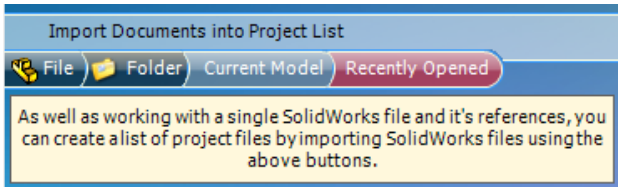
The Project Screen

The first screen you will be presented with (once you have entered your customer ID or clicked "Start Free Trial" is the Project Screen. This screen is where you can load in the files you want to work with.

By default the "Auto-reference mode" is checked. In this mode BP will automatically update the project file list with the currently active model open in SolidWorks, and also list all of it's references. So for an assembly that would mean the BP list would be automatically ready to work with the active assembly and all of its children.



If this is not the type of structure you would like to work with, you can simply use the Import Document buttons below the list to add files based on location, folder, the currently active model, and recently opened files.

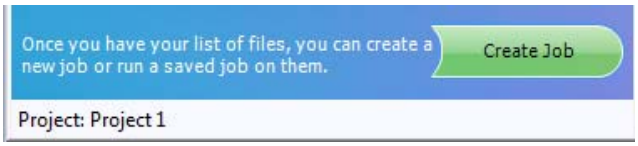


As well as being able to add files directly to this list, can can also delete them, and add specific references, as well as perform other general tasks. To do so lets take a look at the project toolbar above the list:

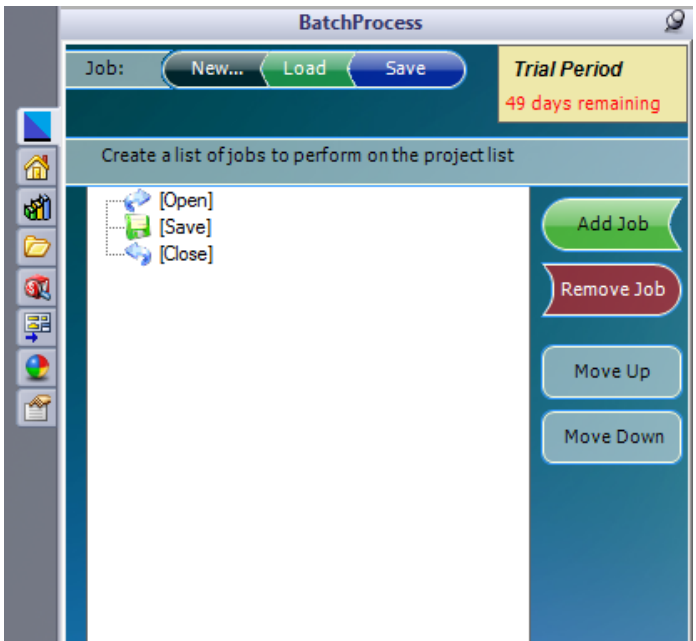
Going from left to right, the buttons are as follows:

1. Open selected file – Opens the selected model.
2. Open drawing – Opens the drawing associated with the selected part or assembly if one exists.
3. Open containing folder – Opens the folder where the selected file is located.
4. Preview image – Hover over this button to see a preview picture of the selected file if one exists.
5. Delete file – Removes the selected file from the project list.
6. Print file – Prints the selected file using the default printer.
7. Add file references – Adds the selected models references to the project list (like auto-reference mode).
8. Add drawing files – Adds the associated drawing file of the selected file to the list if one exists.
9. Unsuppress all features – Unsuppresses all features inside the selected assembly.
10. Suppress all features - Suppresses all features inside the selected assembly.
11. Show all features – Shows all features inside the selected assembly.
12. Hide all features - Hides all features inside the selected assembly.

The fastest way to understand these buttons is to have a play with them. Don't worry you can't break anything by playing around with them so go crazy! Once you have finished creating your list of files to work with, you can optionally save them to be loaded later on from the Save button at the top, or load a previously saved list. The currently active project name will be displayed at the bottom if it has been saved.



The Job Screen



Once you have finished getting your list of files ready, it is time to create and select a list of jobs that you actually want to perform. These can be anything your imagination can think of. Printing files and drawings, saving out files to 30+ different formats, setting/deleting custom properties, running custom macros, downloading macros and jobs from the BatchProcess website automatically, updating/editing drawing templates and much more.

To get to the job screen click the Create Job button.

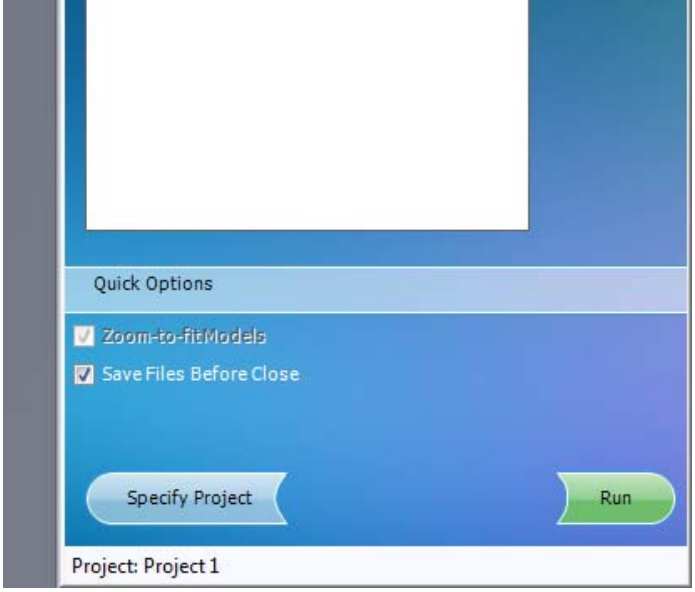
You will initially be presented with a blank list containing the mandatory jobs. Open, Save (Optional) and Closing of the files.

If you do not wish for the files to be saved after processing (perhaps you are temporarily changing the drawing templates to a 3rd party template and saving them out as PDFs, but do not wish to preserve the changes) then you can uncheck the "Save Files Before Close" checkbox.

Click Add Job to open up the Job Manager. This manager is where you can

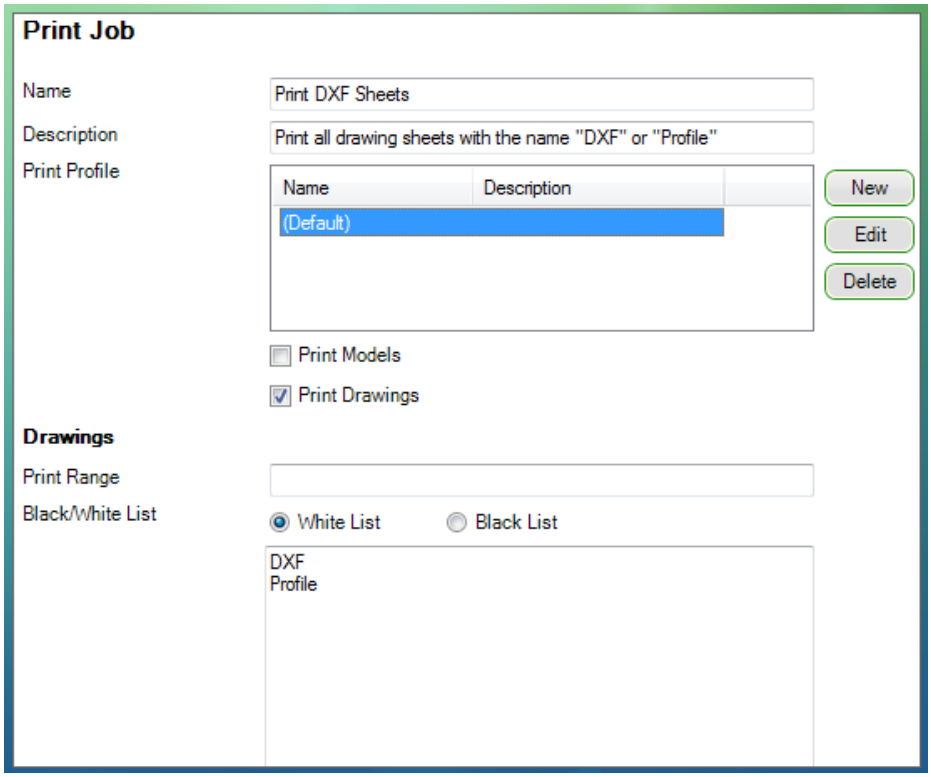
create, modify, delete and download job items for use in BP.

At first from a fresh install you may have little or no jobs created. You can take a look at the Download section to get started quickly for common tasks and download pre-created jobs directly from the BP website. Alternately you can create your own specific jobs.



The Print Jobs

To create a job select the type of job you wish to create from the list at the left hand side, and click New Job. This will open up the Print Job control where you can specify a print job.



We are going to create a print job that will print drawings only, and more specifically only print sheets that have the name of “DXF” or “Profile”.

Give the job a name you would remember it by. In this example we call it “Print DXF Sheets”.

Enter a description that further describes the specific function of the job.

For now leave the printer profile as default and select (Default). We will create a custom printer profile next.

Now because we want to print only drawings, we make sure the “Print Models” is unchecked, and the “Print Drawings” is checked.

Finally, change the Black/White list to Whitelist mode and enter the names of the sheets you want to print, seperated by a new line. In this example enter DXF and Profile.

That’s it for this job, click Save to finish the job.

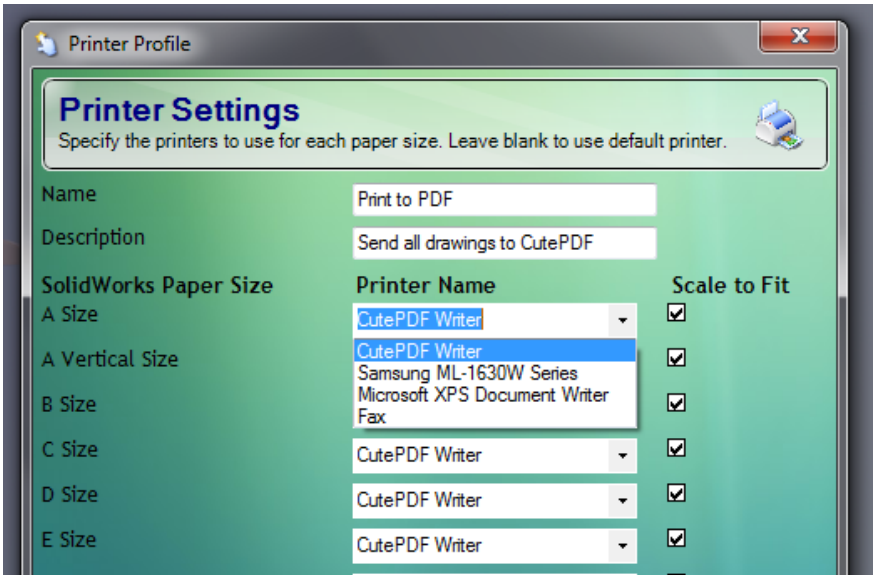
Print Profiles

Say we made a mistake on the last job and wish to edit it, simply click it from the list and select Edit. This will take you back to where you were.

Edit the previous print job. We are going to create a custom print profile that will print our DXF profile sheets to PDF instead of a printer using the trick of printing to the CutePDF printer.

To the right of the Printer Profile list, click the New button. This will open up the Printer Settings dialog where you can create new profile.

In this list you can specify what printer will be used based on the size of the drawing sheet to be printed. For this job we want all sizes of sheet to go to our CutePDF Writer printer.



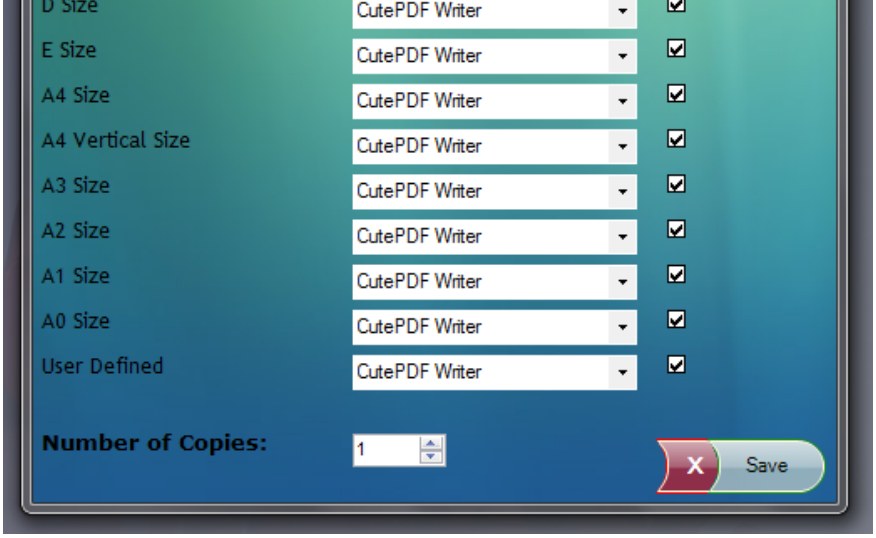
Enter a name for the profile, we called this one “Print to PDF”.

Enter a description to match.

Now for every size of paper, select the printer name from the drop-down list of installed printers.

Click Save once done to close the dialog. Now notice in the list as well as the (Default) printer we have our newly created profile. Select it and click Save to update our “Print DXF Sheets” job.

We are all done for this job and it is now ready to use for this project and any future project. We do not need to re-create this job once it is created as it is stored on the machine.



Custom Property Job

As well as printing, we may want to mass-alter a set of custom properties. Using Custom Property Jobs we can manipulate any number of custom and configuration specific properties easily.

Select the Custom Properties item from the list in the Job Manager and then click the New Job button to start a new job.

We are going to create a new job that will update 2 custom properties in all files, if they already exist in that file. Those fields are the Customer field and the CreatedBy field.

As before, enter a name for this job. We gave it the name “Update CreatedBy and Customer” and set a description.

A custom property rule only has one more thing to do, and that is to select the list of Custom Property Rules to use. As we have not created any yet let’s do that. Click the ellipsis (...) button to open up the Custom Property Rules dialog.

Click the New Rule button, and enter the group name “General” (this can be anything you like, it is just a convenience to allow you to easily organize your rules. Enter the name “Set Customer” as this is going to be the rule to set the Customer custom property field.

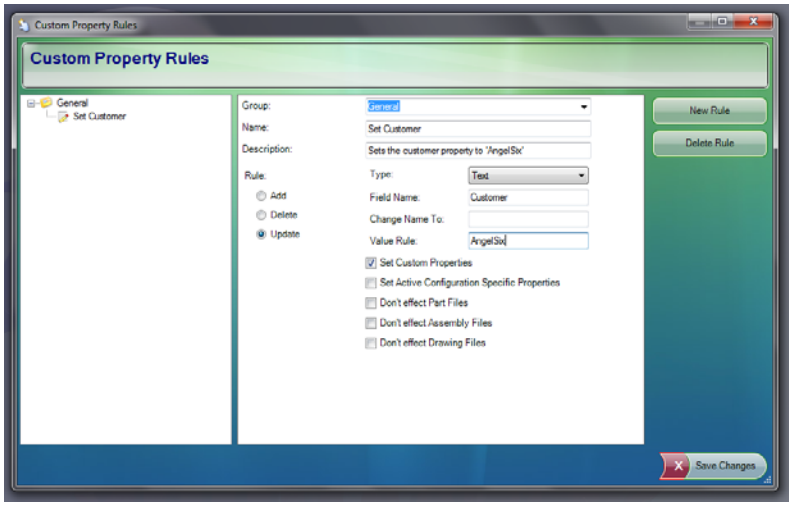
Enter a description to match.

Because we want this rule to only update the custom property field if it already exists and not created it if it doesn’t already, we select the Update rule.
The Field Name is the name of the custom property. Enter Customer as the name.

The Value Rule is the value we want to change the custom property too. This will be the name of the company. We entered “AngelSix” but feel free to change it as you see fit.

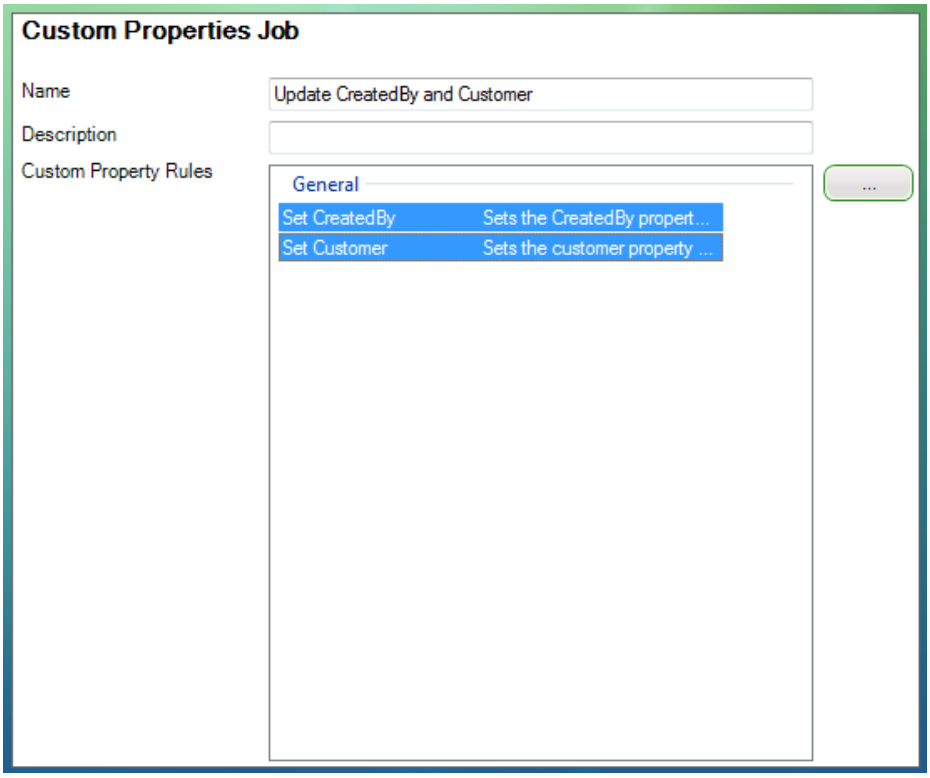
Finally take a look at the checkboxes below. These allow you to specify whether the rule is for custom properties, configuration specific properties (or both), and whether it should only be run on specific types of files.

Your rule should now look like this:



Click New Rule to create another rule. This time we are going to create one that alters the CreatedBy field. Enter all of the same information as the previous rule, only this time change the name to “Set CreatedBy” and the Field Name and Value to “CreatedBy” and a value you would like respectively.

Click Save Changes to finish. Now back in our job Ctrl+Click the two rules we just created to specify that we want this job to run those two rules. Click Save to finish this job.



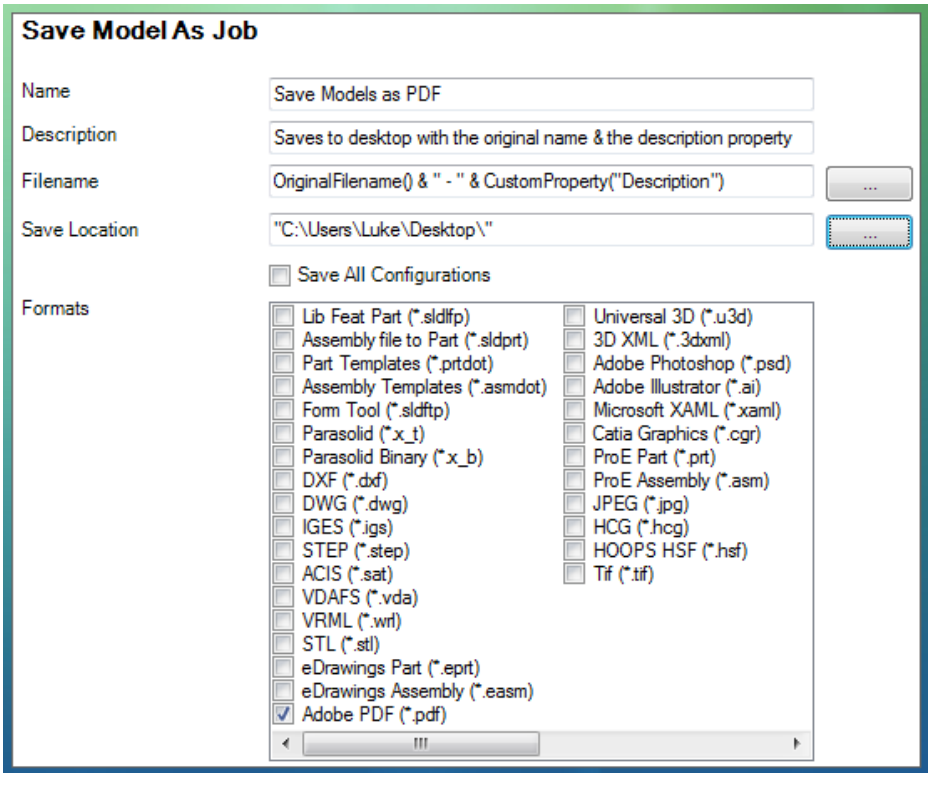
Save As Job

One of the most popular jobs for any company is that of the “Save Model As” and “Save Drawing As” jobs. These jobs allow you to automatically mass-save 100s of files in one go to many different formats including the most popular formats of DXF, DWG, PDF, JPEG, eDrawings and more.

Save Model As

We will start by created a Save Model As PDF rule. Select the Save Model As item from the list at the left in the Job Manager, and click New Rule.

Enter a name and description just like we have done previously.



The Filename and Save Location are both special “Rule” fields, and are not just static values (although they can be). This “Rule” field allows us to specify dynamic values for the filename of the output file, and the Location. This very powerful tool allows us to do some great things, such as specify the filename to have a custom property as part of the name, or create a sub-folder from a custom property or the original filename etc...

We want our filename to be the original filename, plus have the value of the custom property field Description of whatever part it is saving.

To do this click the ellipsis (...) button next to the filename rule. This will open up the Rules Builder.

Start by clicking the “Model Filename” button to insert the special function to retrieve the filename of the original file being saved. For example if you were saving “Part1.sldprt” this value would be “Part1”.

Now we want to append something else to the name, so we do that by adding an & character between the pieces of information. Let’s add a space and a dash and a space after the original filename by typing in the rule box after the function name like so:

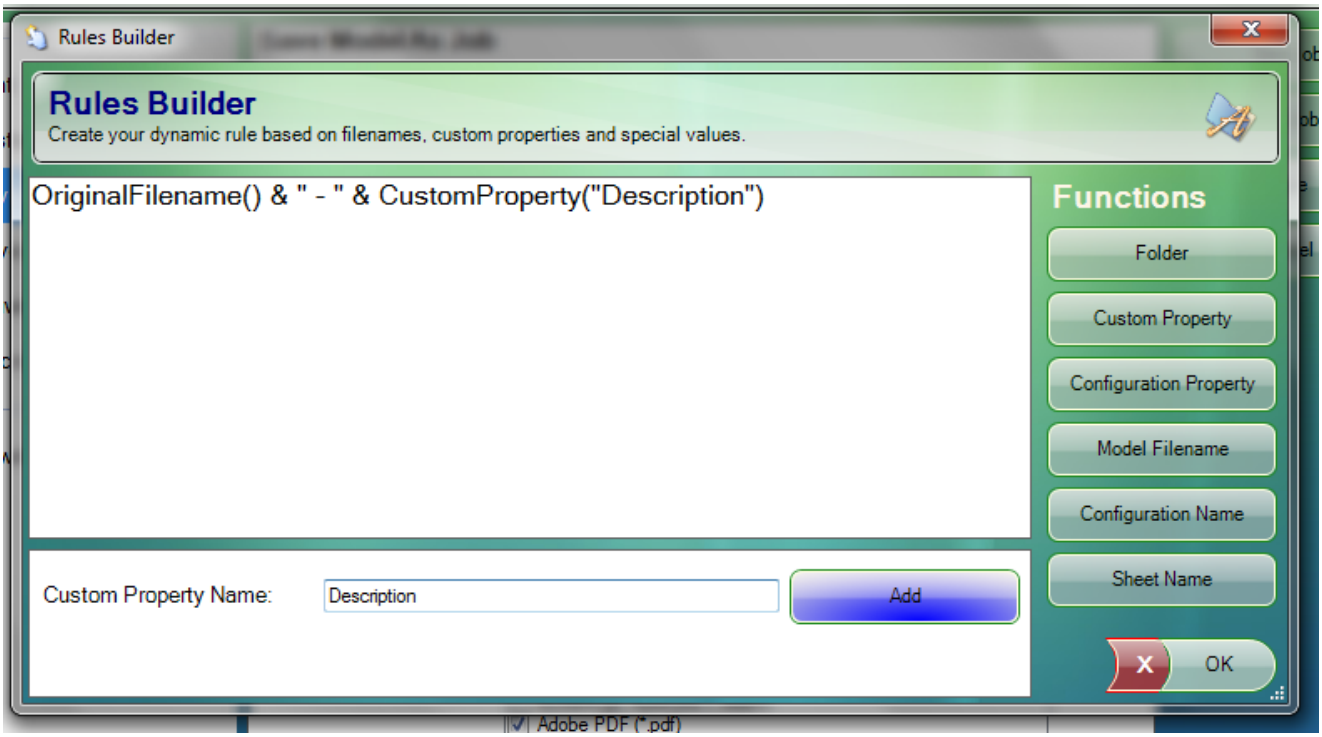
OriginalFilename() & " - "

This would currently give us the filename “Part1 – “.

Finally, let’s add the value of the custom property Description to our filename by first adding another & to the rule, and then clicking the Custom Property button

and entering Description as the custom property name.

That is it for our rule it should now look like this:



Let's say our part is called Part1.sldprt, and its custom property Description is set to "Angle bracket", and we run this rule, we would end up with a filename of "Part1 – Angle bracket".

Click OK to save the rule.

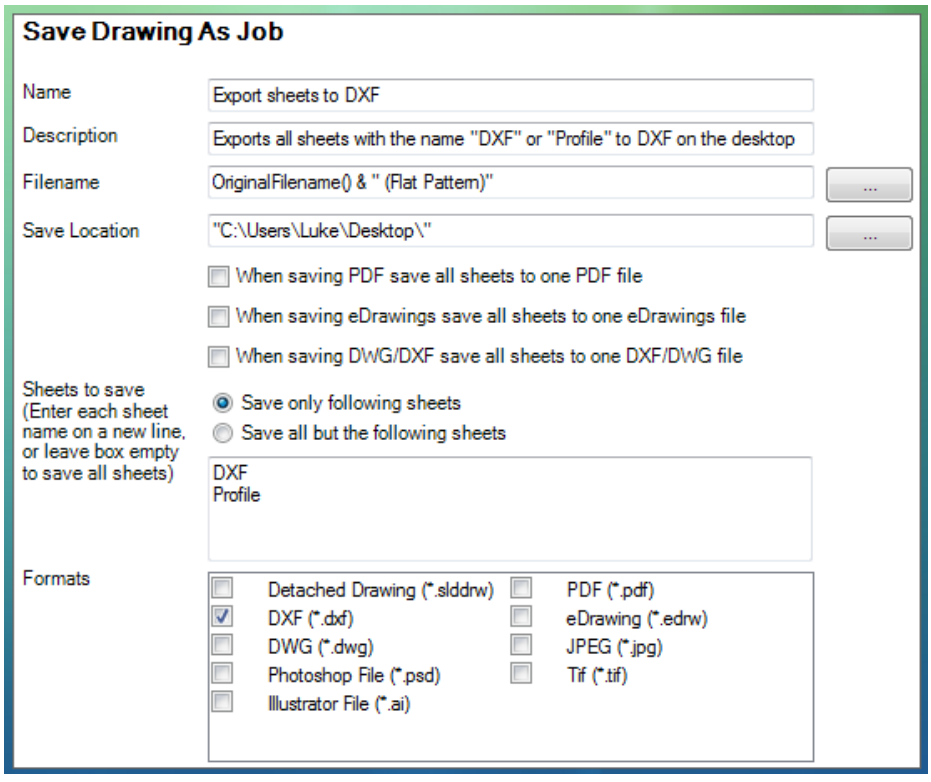
Next up is the Save Location rule. This time we want all files to be saved to our desktop. In the Rules Builder click the Folder button and browse to your desktop then click OK. Finish the rule by clicking OK.

The final part of this rule is to select the Adobe PDF format from the list of formats. You can select multiple formats if you like to save as multiple formats. Click Save to finish the rule.

Save Drawing As

We are going to do a similar thing for drawings, but this time we are going to flat pattern drawing sheets to DXF format.

Select Save Drawing As from the list and click New Job to begin another new job. Enter the name and description as before. We called this job "Export sheets to DXF".



The filename for this job will be slightly different than the model one. Open up the Rules Builder like before and start by clicking the Model Filename button to start with the original filename. Now we want to add static text after the original name. Static text is just normal text that isn't specific to details or properties of a part, and is the same for all files. This is the same as just typing an explicit filename.

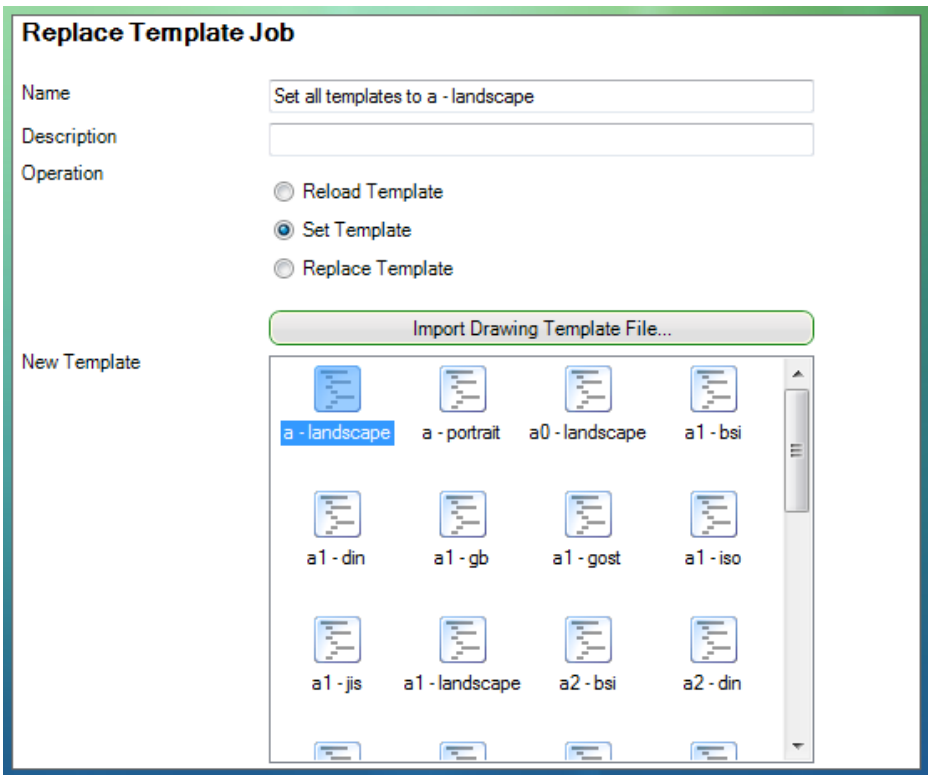
We want to add " (Flat Pattern)" to the end of the filenames. Add the & character, and then add the text (Flat Pattern) inside quotes. By putting the text inside quotes it tells the Rules Builder that this text is just plain text, not a special rule or function. Click OK to finish the rule.

For the Save Location do the same as the previous job and select the desktop.

For the "Sheets to save" option, select the "Save only following sheets". This option is similar to the White list mode of the Print Job in that it only saves drawing sheets when the sheet name is in the list. Inside the list enter the names DXF and Profile separated by a new line.

Select DXF as the format and click Save to save the job. This job will now save out all sheets in the drawings that have a sheet name of “DXF” or “Profile” to our desktop as DXFs with the original name plus (Flat Pattern) at the end.

Drawing Template Jobs



Another useful job to perform is to replace or update drawing templates of drawings. This is typical if a company is updating their standard templates or wishes to temporarily change the template to a third party template and then export as PDF.

As normal, select the Drawing Template item from the list in the Job Manager and then click New Job to start a new job.

We are going to create a simple job that will change all drawing templates to the “a – landscape” template.

Enter a name of “Set all templates to a – landscape”. Because this is the first time we have created a Replace Template job there will be no drawing template files in our list to select from, so start by clicking the Import Drawing Template File... button to import multiple drawing template files (.slddrt). Typically you start by adding all of the standard SolidWorks templates that are located in “C:\ProgramData\SolidWorks \SolidWorks 2010\lang\english\sheetformat”. Then you can add your custom templates to the list also.

Once you have added your templates they will all appear in the template lists.

Because we do not want to replace specific templates with other specific templates, and instead just want to change all to one format, select the Set Template option.

Now from the New Template list select the “a – landscape” template and click Save.

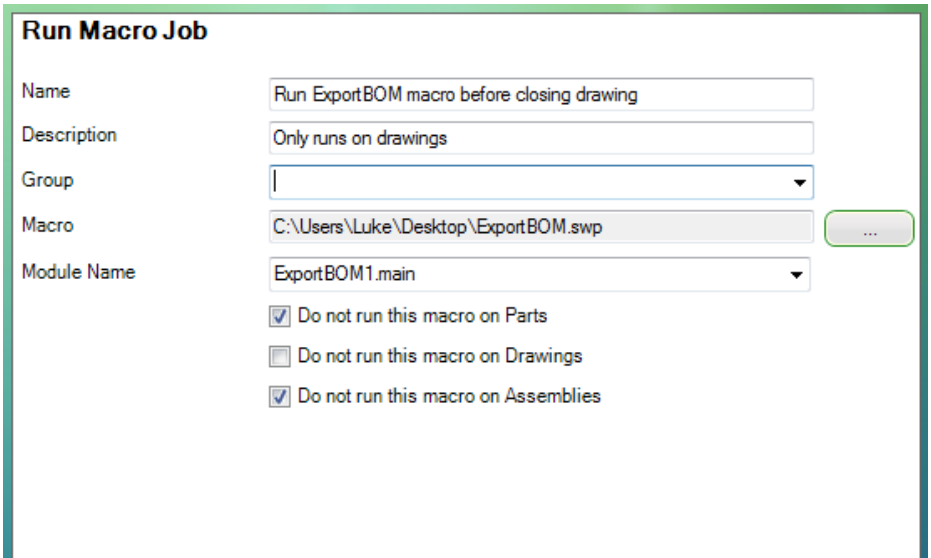
That’s all there is the this job.

Another option is Reload Template. You may at first wonder what is the point in reloading a template as that is changing nothing. However, if you set a drawing to a template, and then later edit the original template file it is linked to, it will not actually update in the drawing even if you rebuild it. So to actually update the template it needs reloading. This option does exactly that.

The last option is to replace templates. In this mode you can select multiple “Old Templates”, and when BP finds a drawing with that “Old Template” in, it will replace it with the selected “New Template”.

Run Macro Jobs

If your task goes beyond the standard functions and you wish to do something more specific or custom to your application, you have the option to run a SolidWorks macro at any point during the job.



Create a new job in the normal way.

We are going to run the ExportBOM macro (available on AngelSix) to export our drawing BOM tables to Excel.
Name the macro something appropriate. You can leave the Group blank, again like custom properties it is just there to aid in organisation.

Click the ellipsis (...) button by the Macro and select the ExportBOM macro from your machine.

Using the drop-down menu select the main function from the list as that is the one we want to call.

Check the “Do not run this macro on Parts” and

the same for assemblies, as this macro is only meant to be run on drawings.

Click Save to finish.

You can run any macro to do any job you like, so if you ever find yourself wanting to do a specific task, but on a mass of files instead of one, just plug it into a Macro Job and run it through BP in seconds.

Downloading Jobs

If you do not find the job you are after or just fancy a look at what is available, go to the Download tab from the Job Manager to see a list of all currently available jobs that are live and available for immediate download from the BP website. This list of jobs is always updated so check it out regularly.

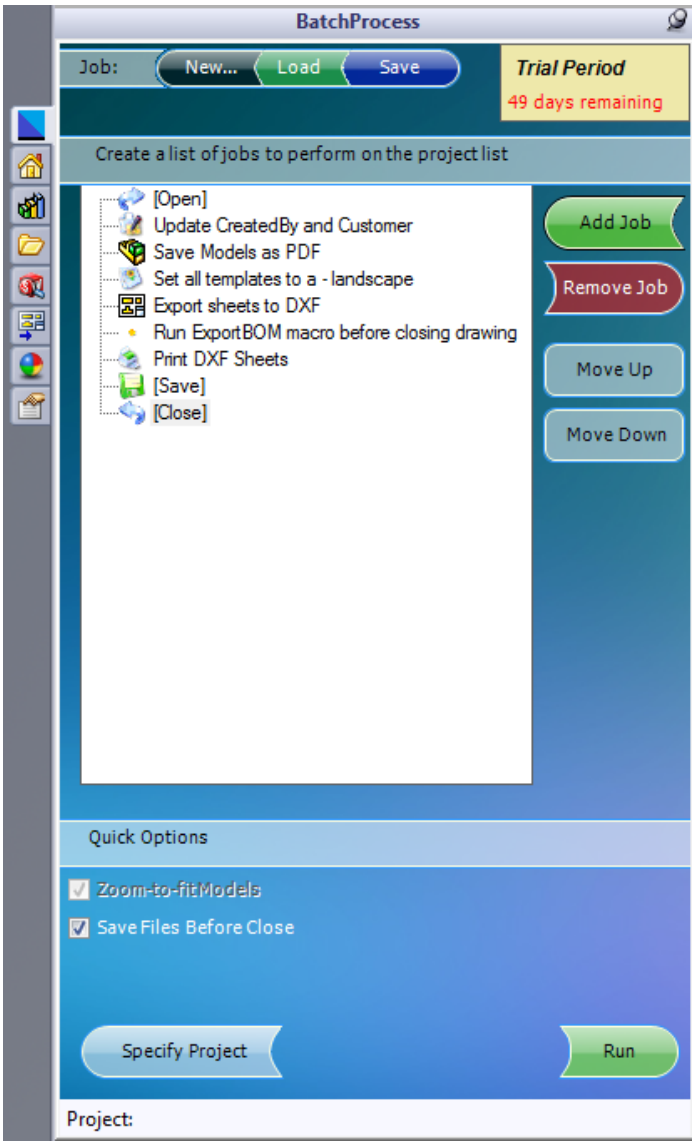
Selecting your Jobs

Now that you have created a load of jobs it is time to actually select which ones you want to use at the moment.

If you are still in the Job Manager, just go to one of the jobs you have created, click it and then click the Select Job button to add it to the current Job List.

This will add the item to the list and show you at what point in the process it will run. Click Add Job to do the same and add another. If you select the job from the list you can click the Move Up and Move Down buttons to re-order them in any position you like.

Once you have your list of jobs and they are all ordered correctly you probably don't want to have to recreate the list and order them again so at this point it may be a good idea to click the Save button at the top to save the Job List. This is independent of the Project List you saved earlier, so you have the flexibility to create lists of parts and list of jobs and combine them as you see fit.

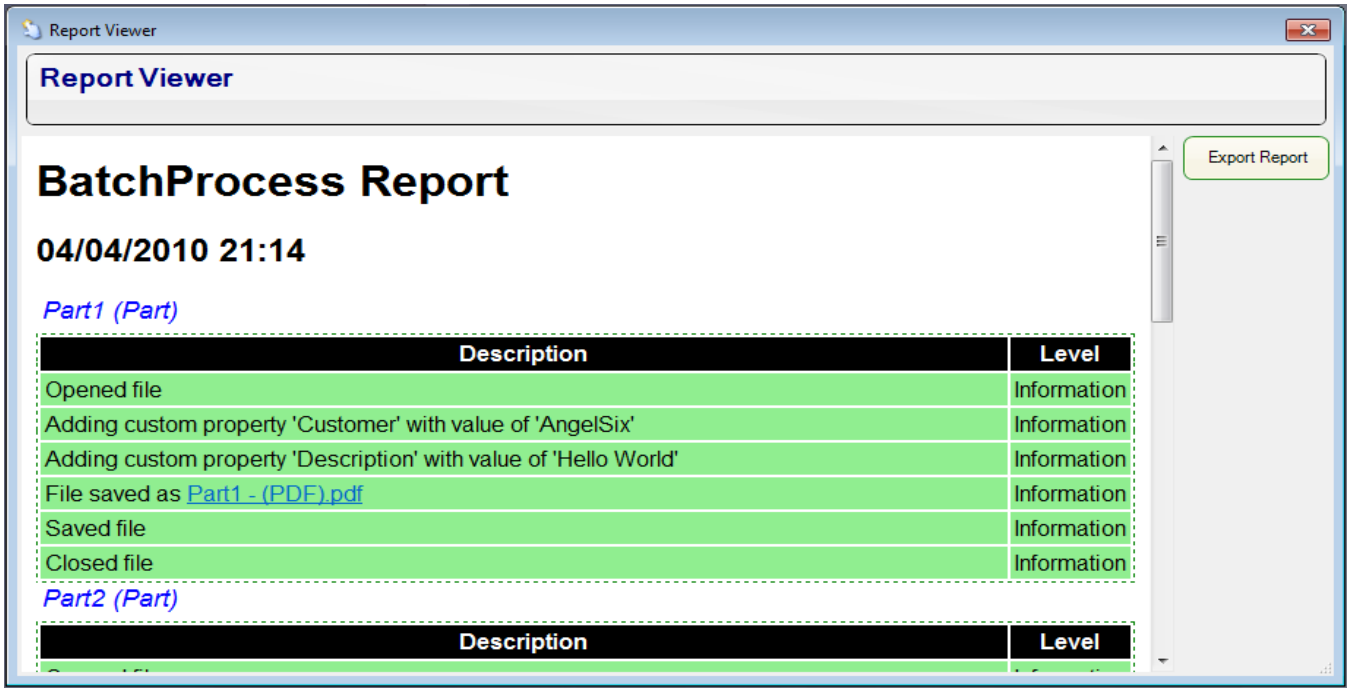


Running your Project

All that is left to do now is run your project to perform the actions. Click the Run button and sit back and watch as BP takes away all the hassle of performing the operations manually.

At the end you will be presented with a nice report you can save, print and edit as you see fit. Take note to see any yellow or red rows indicating warnings and errors.

Hopefully you now have a good understanding of how to use BP. Feel free to contact us if you have any further questions or suggestions on improvements/functionality. We value customer feedback over all else, and we hope you enjoy using our product!



Last Updated on Friday, 14 May 2010 15:24

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Solution Partner