

Pro/DESKTOP Tips

by Steve Schweitzer



Using the Object Browser

The object browser is the most important part of Pro/DESKTOP (see Figure 1). If you know how to use the object browser properly, you can completely control the 3D creation process.

Before exploring the object browser, let's review feature creation. Features are the individual 3D objects created by Pro/DESKTOP. Examples of features are Extrusions, Projections, Revolves, Sweeps, Holes, Rounds, etc. Features are created from sketches on different workplanes.

To create a feature (3D Object), start by selecting a workplane. You then create a sketch on that workplane, which is in turn used to create a feature. One sketch creates one feature. Many features combined make up a design and several designs put together form an assembly. The object browser is laid out to aid the user in this creation process.

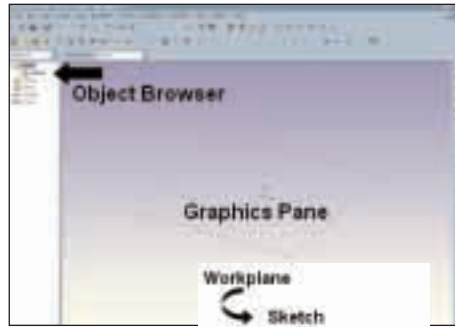


Fig. 1



Browsing Workplanes:

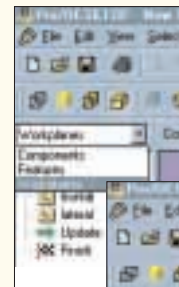
With workplanes selected in the object browser you can see all the workplanes on the current design. By clicking the plus signs you can see that sketches lie in each workplane. Double clicking a sketch makes it the active sketch.

To do anything to a sketch (changes, add constraints, etc.), it must be the active sketch. If you right click a sketch name, you get all the options for that sketch. The most useful is the filled sketch option. When the filled option is selected, the interior of the sketch fills with a color. If the sketch does not fill, then you do not have a closed sketch. (Generally, non-closed sketches will cause errors when you try to create a feature based on them).

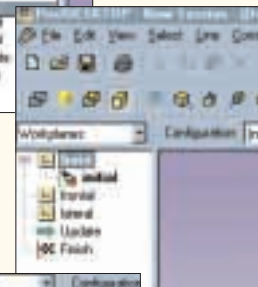
Browsing Features:

With features selected in the object browser, you can see all of the features in the current design. By clicking the plus signs, you can see the sketches that were used to create each feature. Again, double clicking the sketch name will activate it and right clicking it will show the options for that sketch. Most importantly this is where you can control and modify current features. Double clicking a feature will bring up that feature's property box (see Figure 2). In the feature property box, you can redefine extrusion lengths, tapers, etc. Right clicking a feature name will show all of the different things you can do to it. Also, this is where

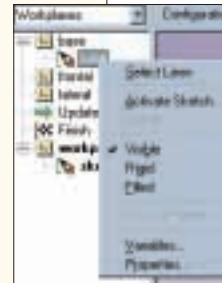
The object browser can look at three different sections:



1. Workplanes
All Sketches in that workplane



2. Features
All Extrusions, Projections, Revolves, Sweeps, etc...



3. Components
All designs added to an assembly with constraints



Fig. 2

you can DELETE a feature. Dragging and dropping the feature name can also change the order of creation of the features. Try making a box, project a hole thru the box, and then shell the box. Drag-n-Drop the shell feature in the object browser so it occurs before the project hole and watch how the object changes.

The Green Arrow and the Finish Flag:

Anytime you make a change in Pro/DESKTOP, you must hit the green light update button to get the changes to show in the graphics pane. The green arrow in the object browser is a representation of the update status of the design. If it is not at the bottom, then the design is not fully updated. The finish flag can be moved around and it represents where the design should stop when updating. You can

move the finish flag around and you will notice that everything below the flag is ignored when you hit the update button.

Browsing Components:

With components selected in the object browser, you can see all of the components

in the current assembly (see Figure 3). If you are not working in an assembly, this section will be empty. If you are in an assembly, you will see all of the components (designs) in the current

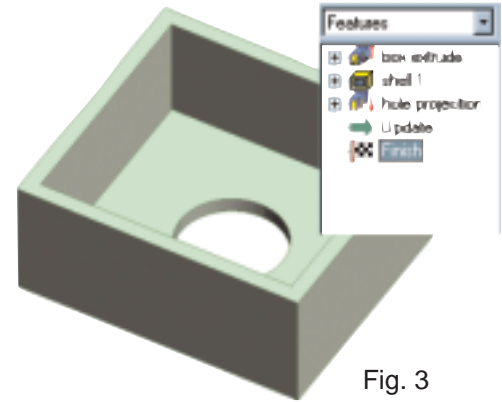


Fig. 3

assembly. Clicking the plus sign next to each component will show all of the assembly constraints (mate, align, etc.) applied to that component. Doubleclicking the component will show the component properties. Double clicking an assembly constraint will allow you to modify the constraint. Again, right clicking will bring up options one of which is DELETE.

Let me reiterate that the most important part of Pro/DESKTOP is the Object Browser. ALL new 3D modelers need to fully understand how to use this powerful tool. The first lesson I teach to new Pro/DESKTOP users is a lesson on feature creation. I use the object browser as a vehicle to explain the relationships between workplanes, sketches, and features. The secret to successful modeling is to understand and control the creation process, which hinges on workplanes, sketches, and features.

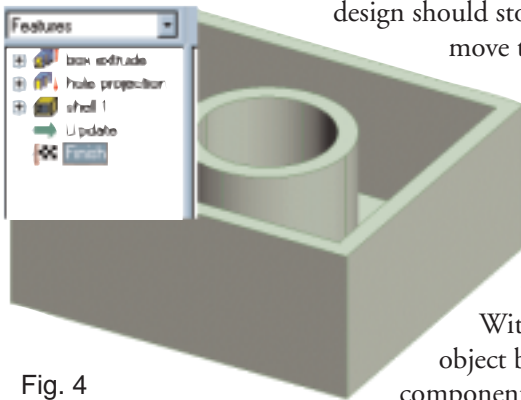


Fig. 4

Question of the Month:
How do I delete sketches?

Deleting sketches is not that easy inside Pro/DESKTOP. You cannot simply go to the object browser and select delete.

To delete a sketch do the following:

1. Make sure the sketch is completely empty. Activate the sketch and remove all lines and constraints from the sketch. Once this is complete you now have an "empty sketch."
2. Activate a sketch that is not one of the "empty sketches" you want to delete.
3. From the menu system chose WORKPLANE>Delete Empty Sketches (note: if a sketch is active it cannot be deleted even if it is empty).

Coming Next Month: Using Constraints

Send Questions to Steve by emailing him at prodesktopnet@yahoo.com
Visit his website Prodesktop.net for more information. <http://www.prodesktop.net>