



new!

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new!

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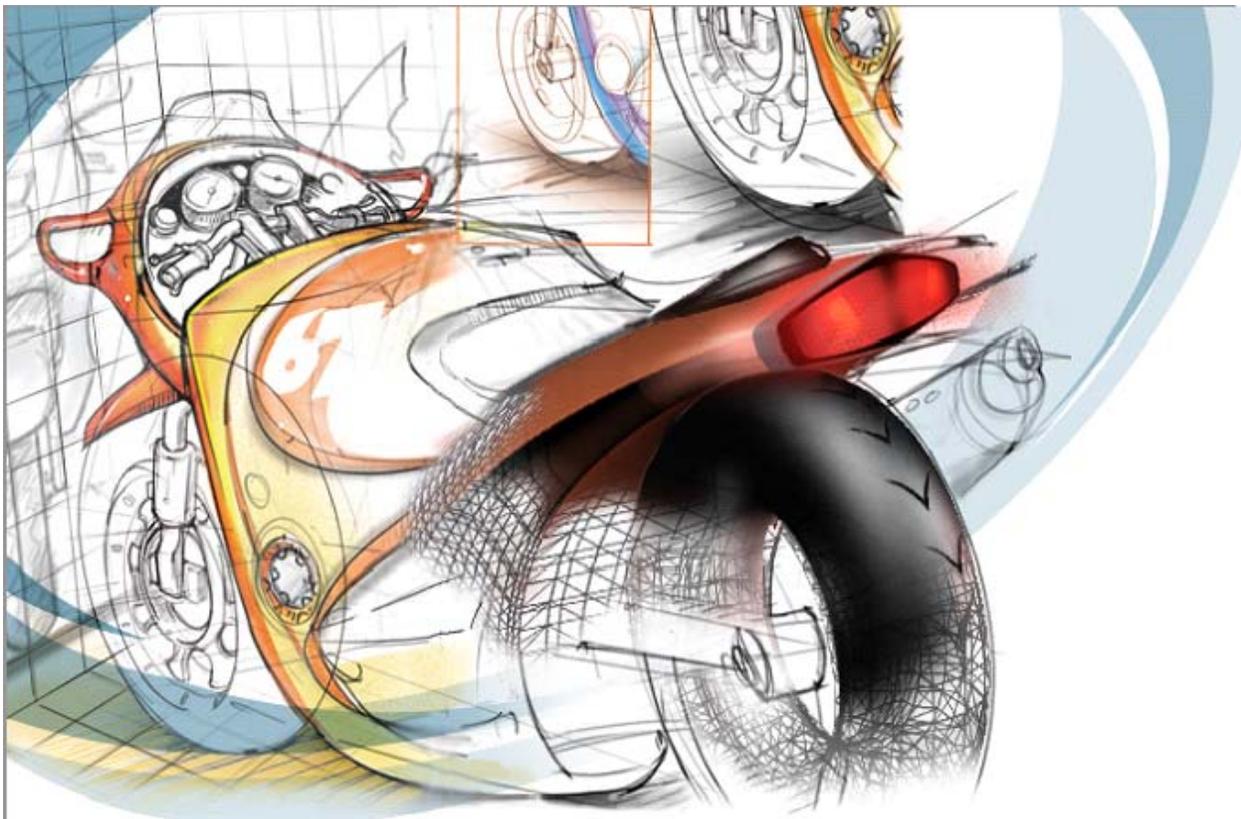
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## PTC Product Focus

### Introduction to Pro/Concept 2.0

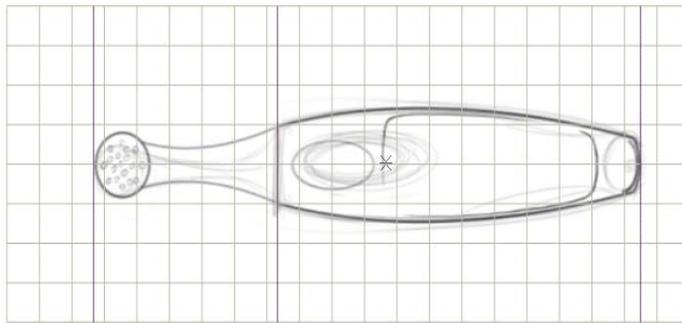


[Pro/Concept 2.0](#) is best described as the all-in-one digital solution for design driven innovation. This means that it drives a solution for all the required media and methods: sketch, layout, model, visualization, and the connection between all of them. Not only is this extraordinarily convenient, but it is more economical and integrates seamlessly with Pro/ENGINEER and ProductView for collaboration with others.

Pro/Concept enables designers to quickly explore concepts and develop them in a loose workflow environment. This enables more brainstorming and creativity with less time searching for tools. Pro/Concept has integrated many powerful selection options in its intuitive user interface along with the capability to undo and redo these powerful features. This all-in-on environment has many shortcuts for streamline workflow, so even the beginning user can begin to quickly utilize this software effectively. Most importantly, this conceptual software is best known for combining the 2D and 3D world in the easiest ways possible. Read on for the critical capabilities and characteristics of Pro/Concept.

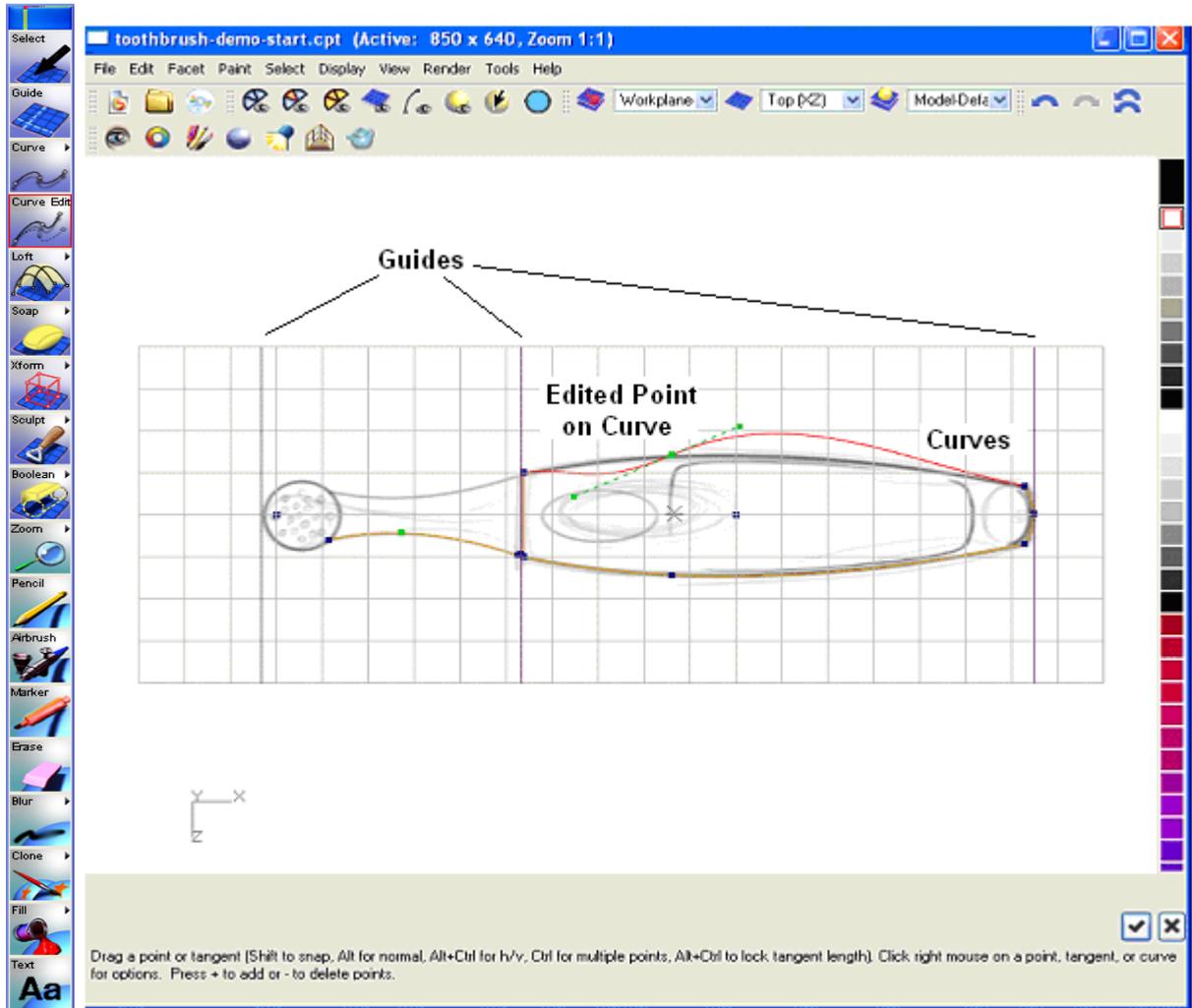
### **Creating Sketches:**

Sketching in Pro/Concept is allowed on 3D models, work planes, and 2D canvases. Using a sketching tablet makes you feel like you are really drawing on a surface with pressure sensitive pencils, markers and airbrushes. Just like in Pro/Engineer, Pro/Concept takes advantage of using layer effects to organize and explore multiple ideas like warping and color replacement as a couple of examples. Sketches do not have to be in your standard black and white. The ability to mix colors by a variety of methods is incorporated into the sketching and painting features.



## Curve layout:

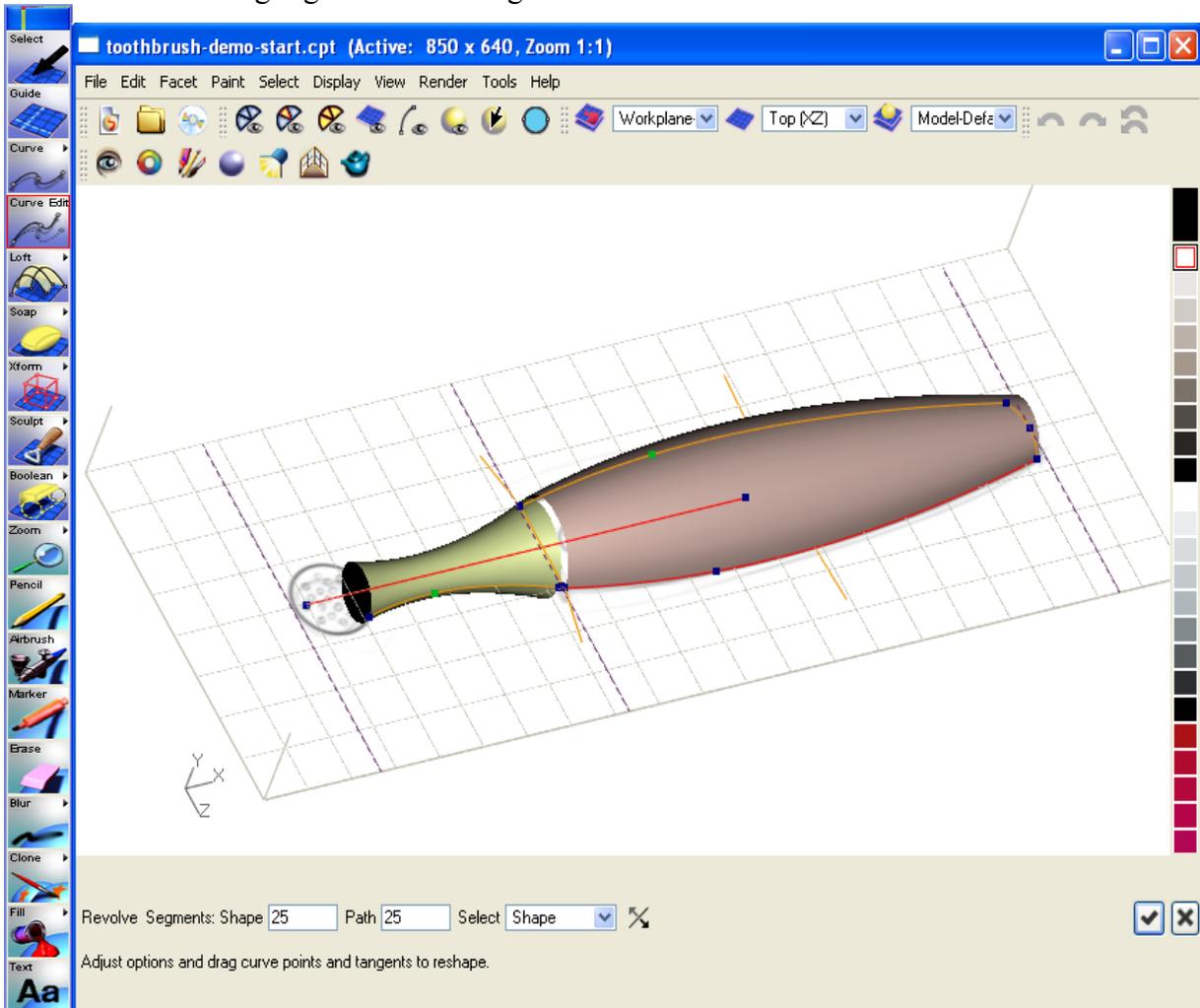
Curves are constructed with a series of points with the ability to define them with tangent lines and dragging and dropping. The construction curves can be built and aligned on work planes and interactive guidelines. These curves are extremely manipulative and can be transformed and warped with ease. Pro/Concept allows the most flexible and high quality curves in the market.



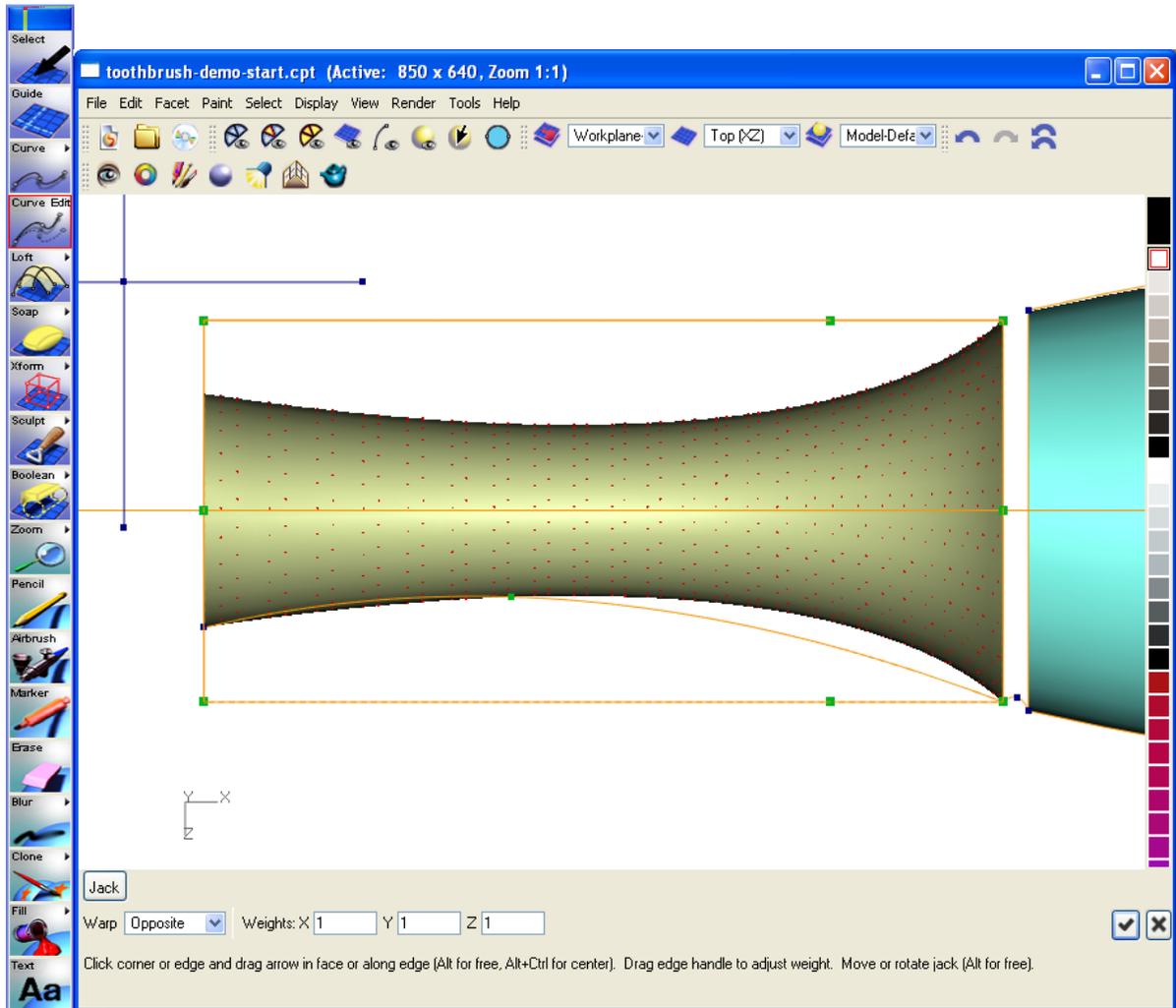
## Modeling and Editing:

Pro/Concept extends its ease of use even further into the modeling functions. The elaborate icons and simple dash board make searching for tools almost nonexistent. These features quickly alter your conceptual model and are easy to understand, even if you do not have a CAD background. Below are some examples of the most frequently used modeling and editing techniques.

**Revolving:** The intuitive dashboard instructs you to pick a center axis and curves to be revolved. Multiple revolved curves are a snap build. The graphic below shows the highlighted areas being revolved around the center curve.

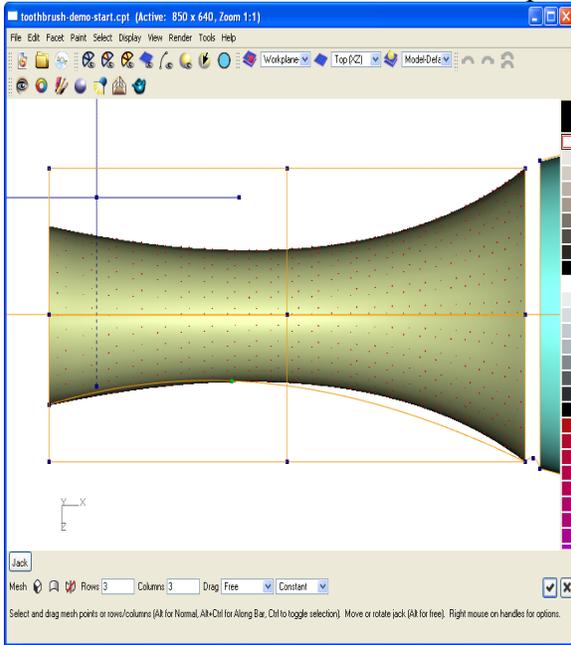


Warping: This zoomed in picture shows the front revolved feature being warped by having the material evened out on the right side. This is accomplished by dragging the green handle from the center and offsetting in the right direction. There is a list of different warping shapes to choose from in pull down located in the dashboard.

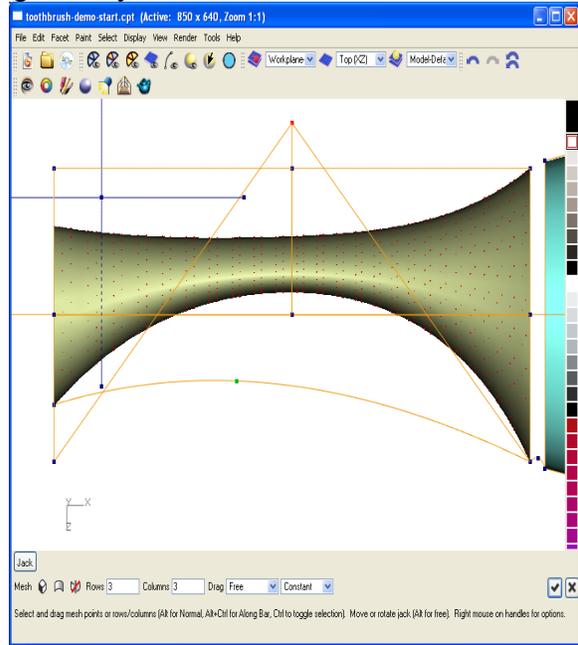


Mesh: The warp tool allows only a very general modification of geometry. The mesh tool encloses the selected shapes and allows you to push and pull the geometry by selecting on the green drag handles.

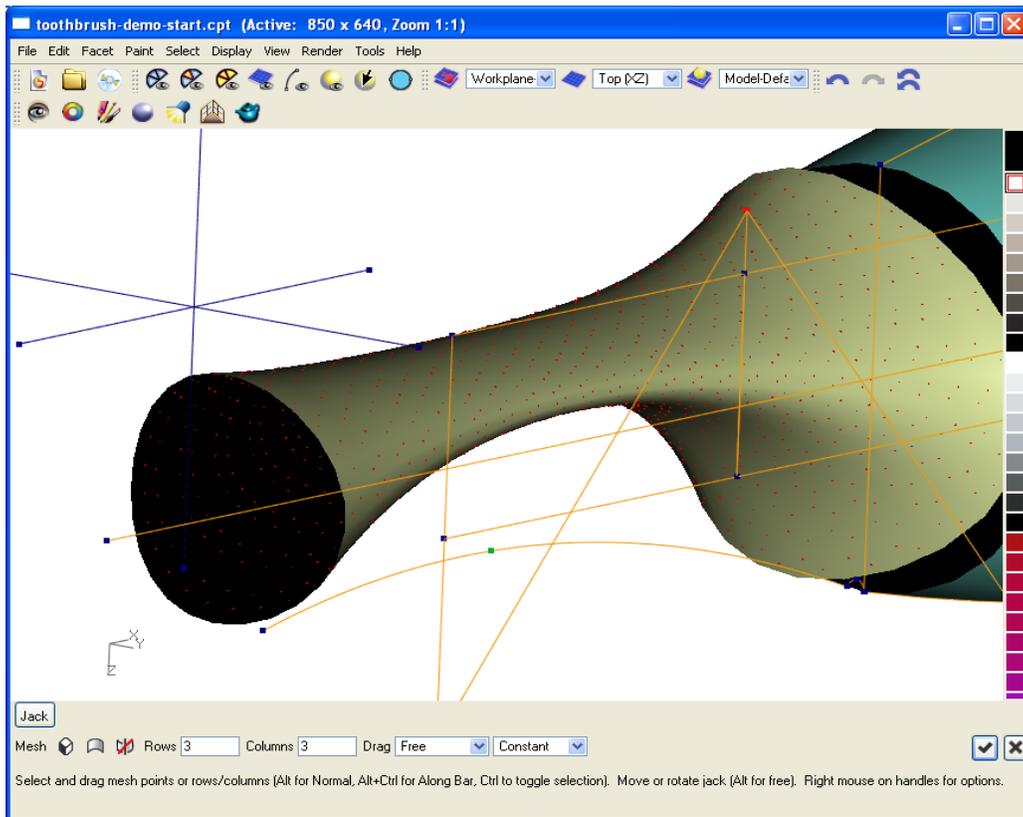
In graphic (1) the mesh box is drawn. Picture (2) displays the bottom center drag handle displaced above the box, with the geometry changed. The last picture (3) shows a 3D view of the manipulated geometry.



(1)

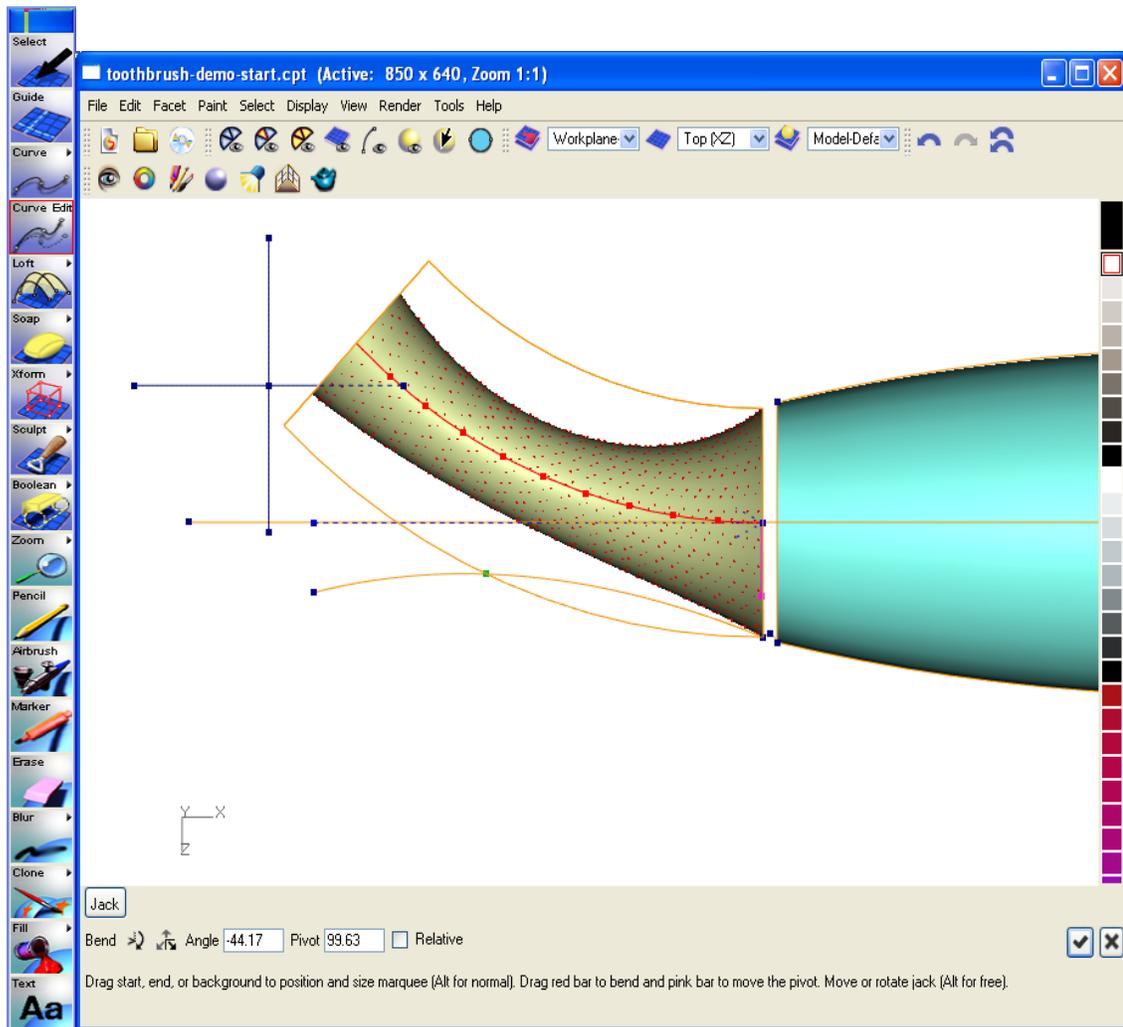


(2)

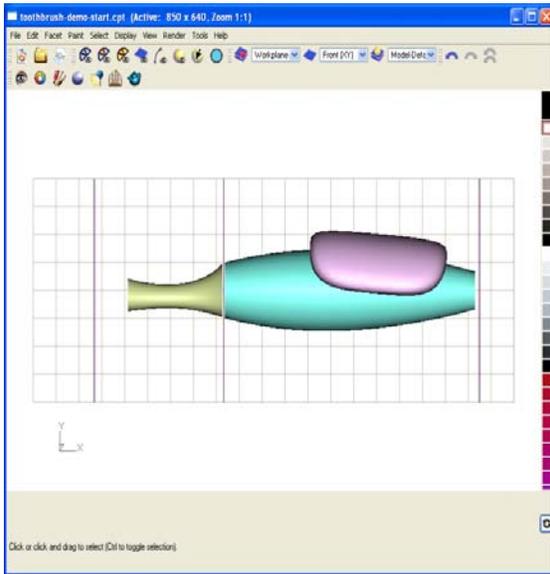


(3)

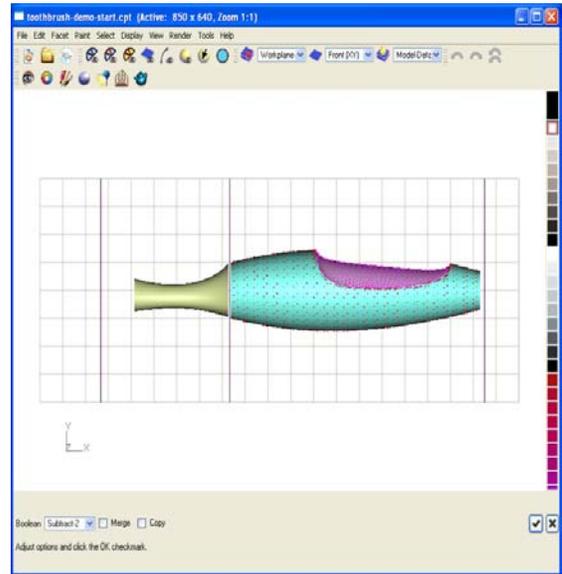
Bend: The bend tool stretches the selected geometry along an axis, which is parallel to one of the three axes of the marquee. You have control over the region in which the bend will take place as well as other options to control the bending located in the dashboard.



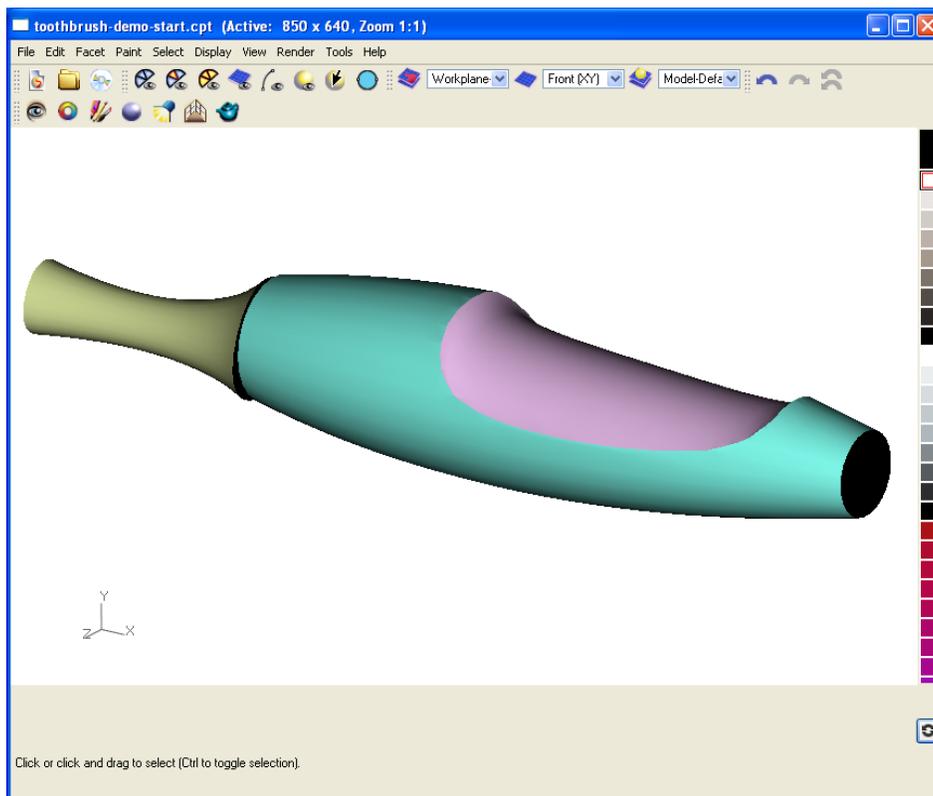
Boolean: The Boolean tool combines two sets of geometry resulting in the union, intersection, or difference (subtraction) between the two sets. The two sets of geometry are composed of facet objects. In the example below, the top object is subtracted from the main object below. In graphic (1) a soap object is brought in and arranged to a flat section and at an angle on top of the main body. Once it is arranged it is subtracted in graphic (2). Picture (3) shows a more 3D angle of the groove alteration in the main geometry.



(1)



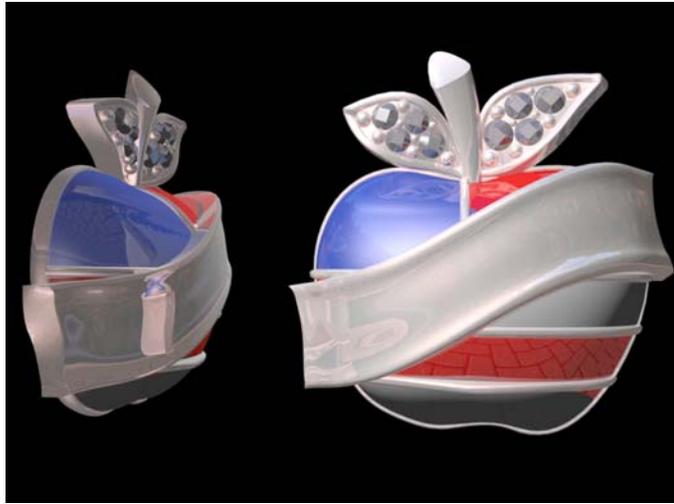
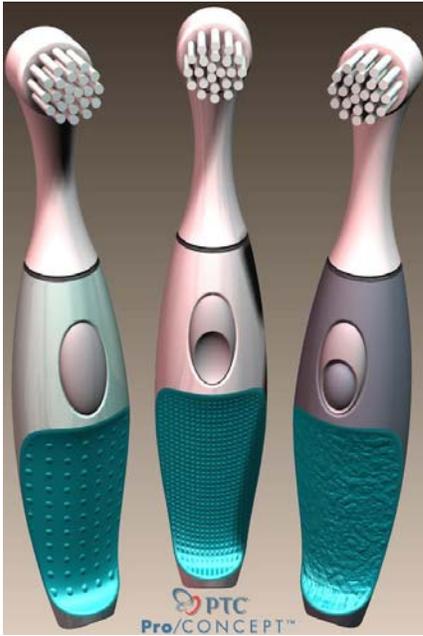
(2)



(3)

**Visualize 3D models in a rendered scene:**

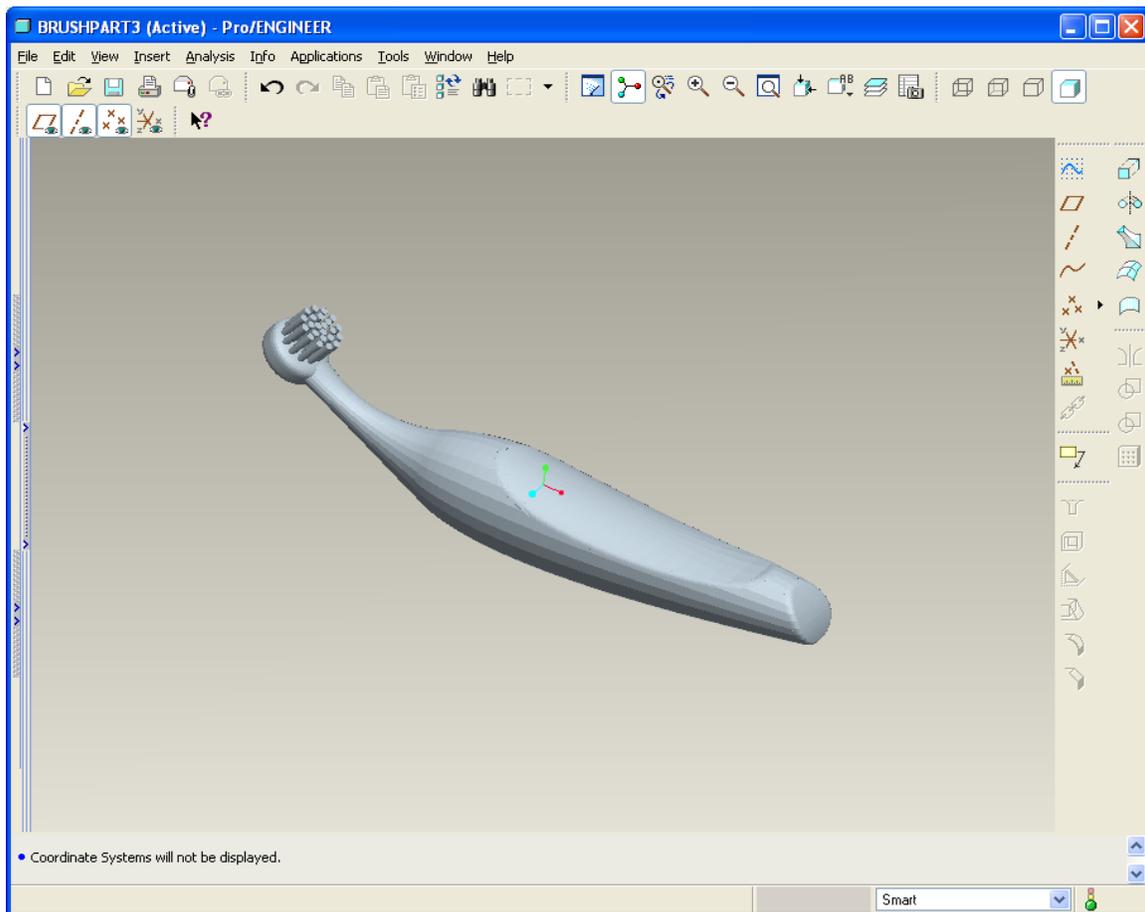
A huge advantage of possessing conceptual software is to actually see how a product would look in its natural environment. This is great for collaborating with other engineers involved in a product's lifecycle or even showing potential customers. PTC has always lived by the statement that "great products make great companies." Something like an aesthetically pleasing product can give a great advantage to that of the competition. With that in mind, it was imperative that Pro/Concept does a fantastic job of placing models in real-time rendering atmospheres. Some of the capabilities of rendering include: interactive setup of materials with libraries of predefined materials, room and lighting, accurate representation of reflections, environment effects, and more.



### Data exchange:

Pro/Concept allows users to export data directly into Pro/Engineer. PTC recognizes that companies may use more than one type of MCAD solution, so data from Pro/Concept can be exported into many other MCAD systems and vice versa.

When bringing in images into Pro/Concept the user has a wide range of possibilities. Formats such as TIFF, TGA, JPEG, BMP, GIF and many more are supported for imaging. Also, importing curves is extremely convenient because Pro/Concept utilizes IGES files, neutral files (Pro/E), .ed, .ol (ProductView), and even .ai (Adobe Illustrator). The formats for exporting geometry into Pro/E that are most commonly used are STL, IGES, .obj, and .ne. This example below was imported into Pro/Engineer using an object file.



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## PTC Product Focus

### Introducing Intercomm – The ECAD Collaboration Standard

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## Tips of the Week

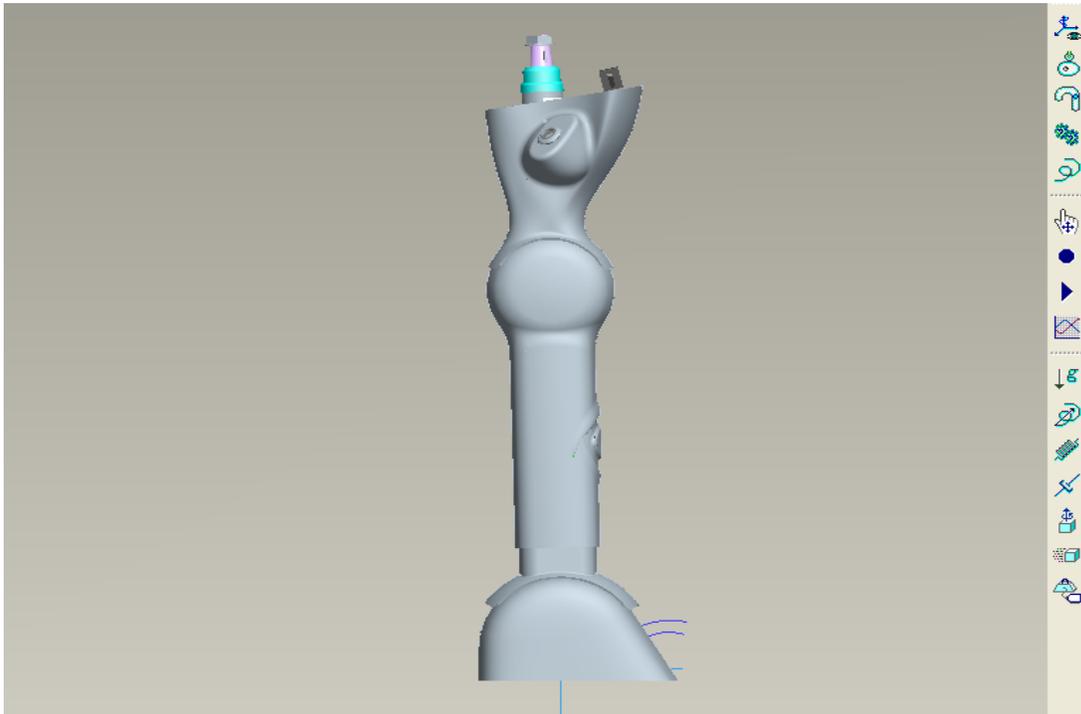
### Creating Snapshots of Dynamic Assemblies in Drawings

Pro/Engineer Wildfire allows the most casual user to quickly define snapshots of dynamic parts. This means that these snapshots can be used for different representations and situations of assemblies that are built for movement. This is especially useful for different view states of that particular assembly within drawings or Pro/E Wildfire.

For example, this steering column was assembled so that there is a slider and pin joint on the bottom. Also, there is a pin between the control portion and the column itself. It would be useful to display the assembly's full movement in a series of pictures.

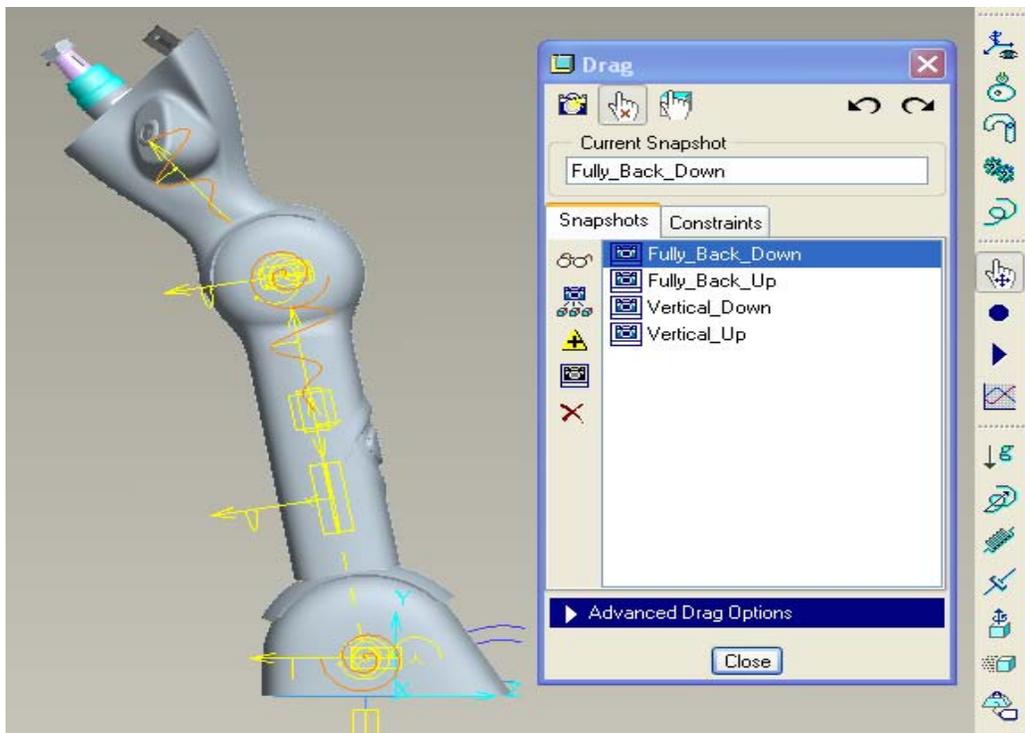


Pro/Engineer Wildfire allows the user to take advantage of the drag mechanism at the feature level. Also, the base package (Foundation Advantage) includes some of the mechanism applications, stored under the main applications pull down. Once the mechanism application is selected the assembly and tools should appear as follows:



The mechanism drag icon  on the right hand side can be used to maneuver the model where motion is allowed. Selecting the icon, a window appears giving two options of movement:

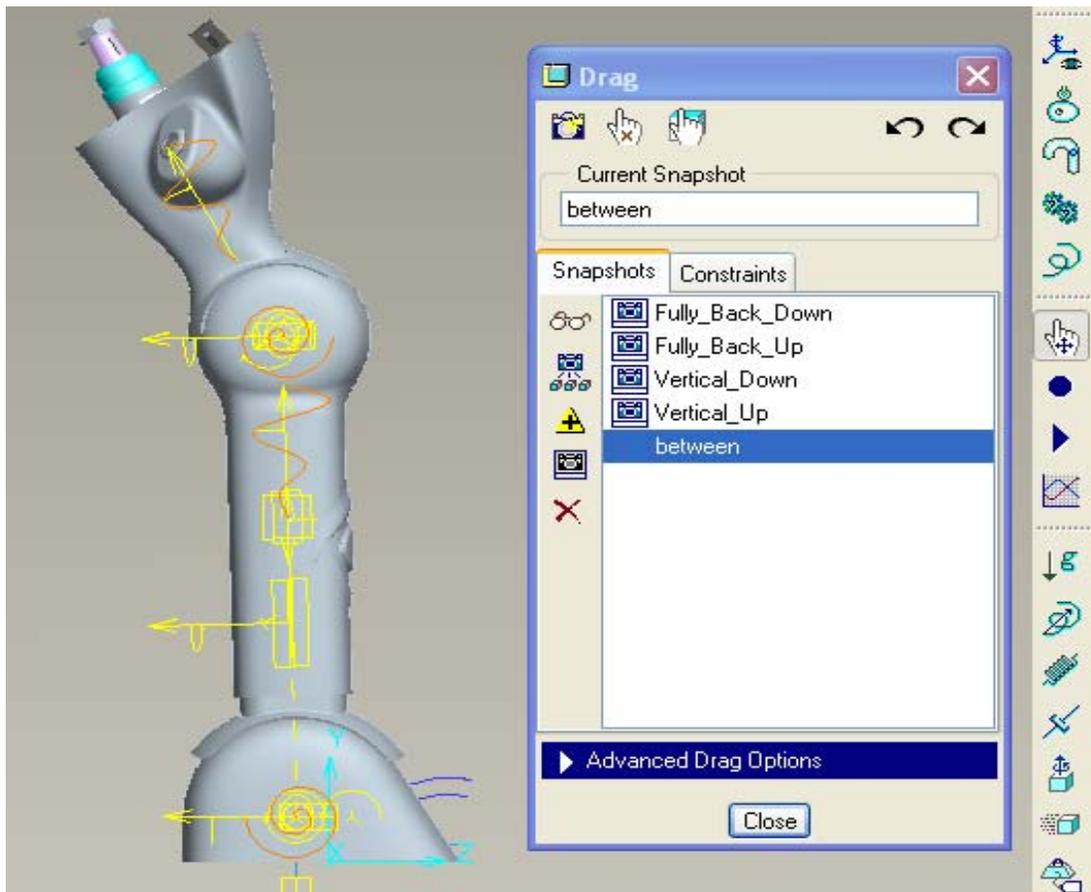
 = Point Drag     = Body Drag



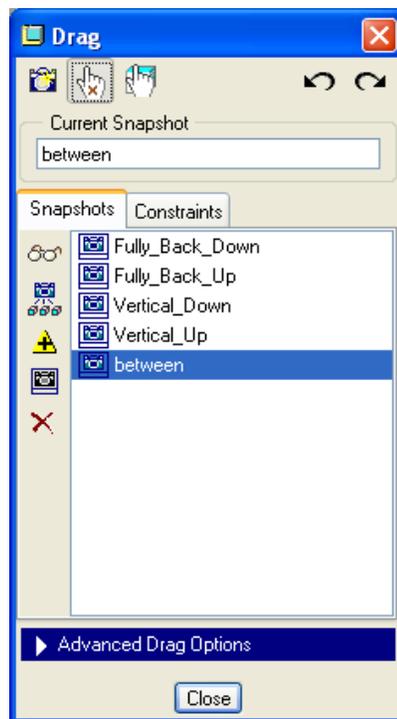
The graphic above displays the model in the fully\_back\_down snapshot that was previously saved. This was done by selecting on the descriptions and left mouse clicking over the glasses

icon on the left hand side. This will instantly move the model to that snapshot position. This procedure effectively eliminates users from saving redundant snapshots.

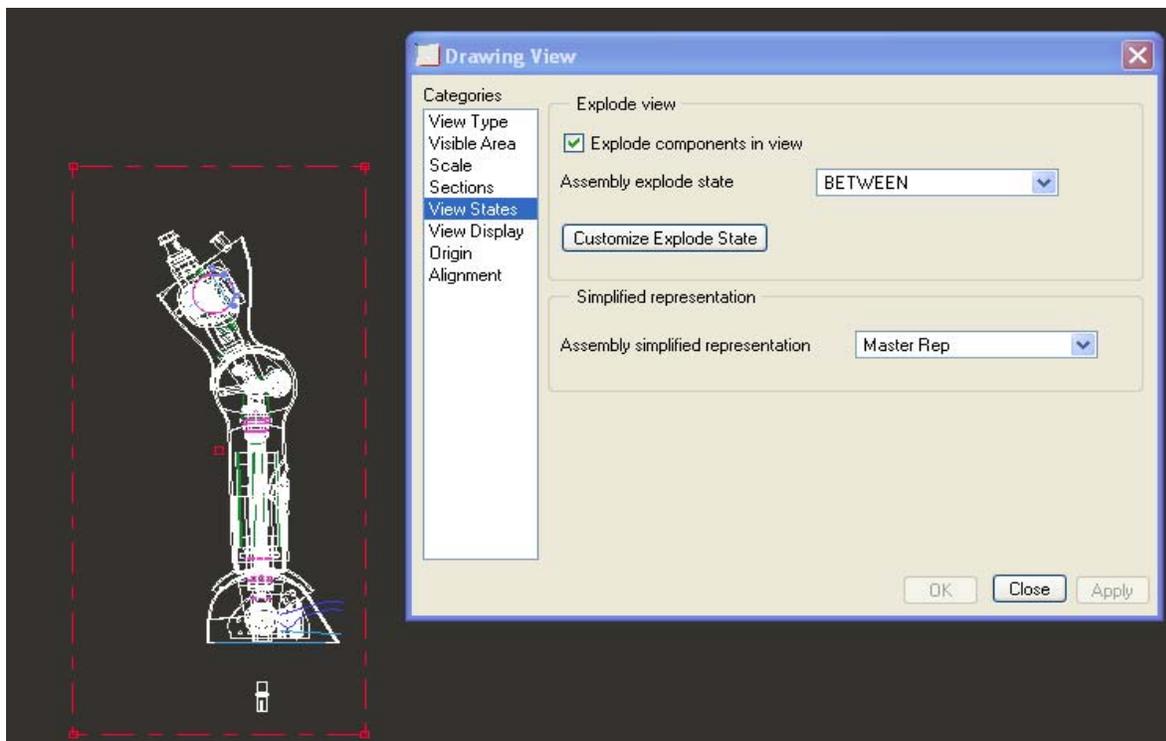
But I wish to show the position roughly between the vertical\_down and the fully\_back\_down snapshot in a drawing. This is done by moving the model with the point drag icon to my desired position and typing “between” underneath the current snapshot in the display window. Then by using save current position icon in the top left , my snapshot is saved.



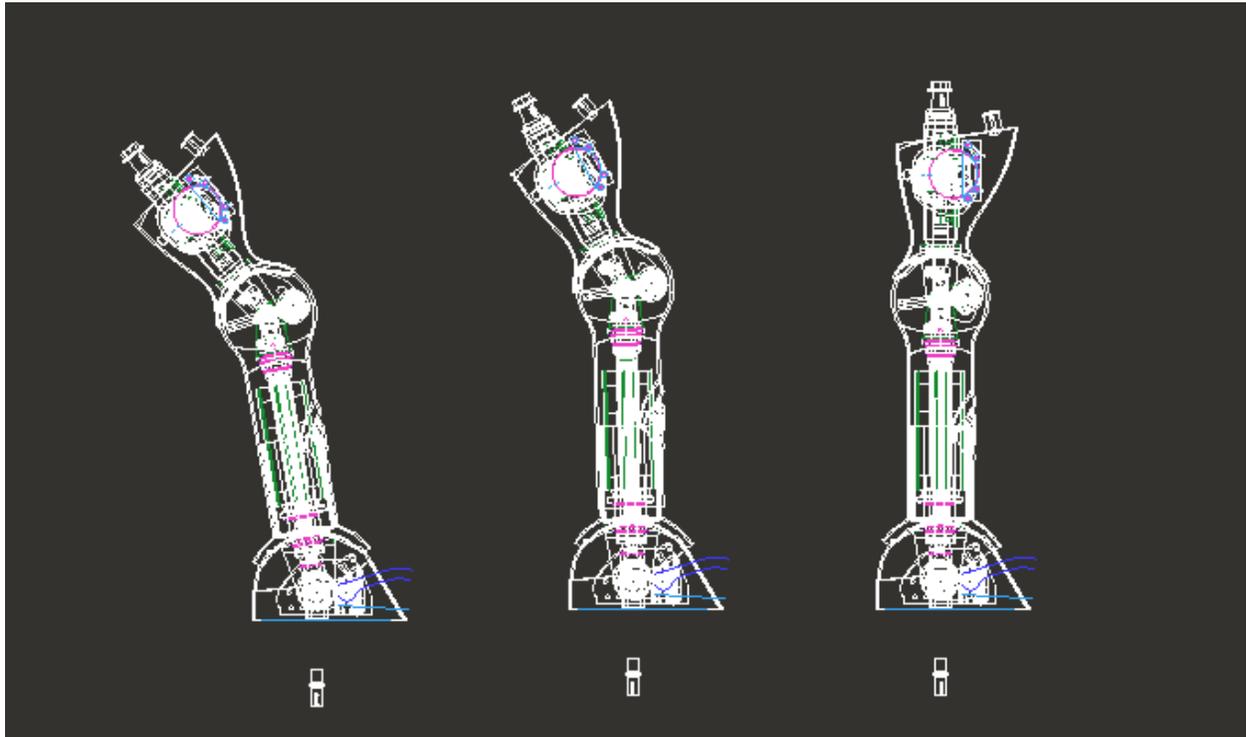
A procedure that can be neglected is the ability for the snapshot to be used in a drawing. This is done by keeping the snapshot highlighted and using this icon: . This will make the dialogue box appear as below:



Once these steps are accomplished, the drawings can be made. A new drawing is started with the steering column as its model. A general drawing view is inserted with the model view set to the left hand side. The snapshot can be located in the view states category. A pull down becomes active after checking the box labeled “Explode components in view.” In the pull down, BETWEEN can be found to orient the model as shown:



Two more drawings can be placed on both sides to show the series of movement of the steering column. These drawings are placed in the same procedure, except `fully_back_down` and `vertical_down` are chosen in the pull downs, respectively.



This is powerful functionality that is overlooked, yet simple to create. Some users don't know that this process exists, and it's important to be walked through the first time for future use.

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### **Tips of the Week**

#### **Intercomm – Legacy Gerber Control Through Comparison**

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## Announcements

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It's better than finding the Covenant of the Ark!

### PTC Tips & Techniques Webcasts: Work Smarter. Not Harder.

Click below to see regularly scheduled Tips & Techniques technical Webcasts that are designed to provide you with the most popular time-saving tricks that Pro/ENGINEER users of all skill levels will find useful. Get more out of your maintenance dollars!

[Tips & Techniques: Work Smarter Not Harder!](#)

### Hands-On Workshops

Experience and receive the next generation of CAD - Pro/ENGINEER Wildfire. During these workshops you can try it yourself to experience this breakthrough in simple, powerful, and connected in CAD software.

[http://www.ptc.com/appserver/it/icm/cda/template\\_lib/events/online.jsp?im\\_dbkey=17625&im\\_language=en](http://www.ptc.com/appserver/it/icm/cda/template_lib/events/online.jsp?im_dbkey=17625&im_language=en)

### Special Hardware offers for customers updating to Pro/ENGINEER Wildfire

[http://www.ptc.com/partners/hardware/current/wildfire\\_tlo.htm](http://www.ptc.com/partners/hardware/current/wildfire_tlo.htm)

<http://www.3dlabs.com/PTC/>

### PTC Sponsored Events

Click below to see PTC sponsored events:

<http://www.ptc.com/company/news/events/index.htm>

Thinking About Pro/ENGINEER Wildfire? Check this out.



<http://www.ptc.com/go/engineering/index.htm>

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### **E-PROFILES IS HERE!!**

We have been eagerly anticipating the debut of the new electronic version of Profiles Magazine and now it is here! This new web site will supplement the print edition of the magazine and will provide new useful features not feasible with paper media. e-Profiles will provide you with 24x7, worldwide access to key information previously available exclusively in the print version. "Tips & Tricks," a popular feature pioneered by Pro/USER, has also moved to the web and will be expanded as the site matures. Future plans include several foreign-language editions of Profiles for our many international readers. Currently, Profiles is printed in English and Japanese.

Please take a few minutes to check out this new web site. We don't think you will be disappointed.

<http://profilesmagazine.com/>

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## Upcoming Events & Training Class Schedules

Upcoming, 2004                      Your local Pro/Engineer User Groups  
<http://www.ptcuser.org/rugs/>

June 5 - 8, 2005                      Orlando, FL  
PTC/USER International Conference  
<http://www.ptcuser.org/>

Please visit the [PTC Education Services](#) website for the latest training information including course descriptions, schedules, locations, and pricing.

- Attend a course at any PTC Center and receive a **free** copy of Pro/ENGINEER Wildfire Student Edition!

<http://www.ptc.com/services/edserv/index.htm>

PTC

Note: This PTC E-Newsletter will continue to be used for the following:

- 1) Inform you on events related to PTC products (user groups, conferences, training schedules, etc.)
- 2) Educate you on solutions that are available at PTC
- 3) Tips & Techniques using PTC Products

Note: These messages are compiled in the local PTC office and will be distributed via e-mail.

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