



PTC Product Focus: A) [Design Animations: What Are They and How Do I Use Them?](#)

B) [Using User Defined Workflows in the Promotion Process](#)

Tips of the Month: A) [Collaborating with 3D PDF Files](#)

B) [Selecting Promotion Task Participants From User Defined Roles](#)

Announcements: [Most Recent Announcements](#)

Upcoming Events & Training Schedule: [Events & Training Schedule](#)

PTC Product Focus



Design Animations: What Are They and How Do I Use Them?

With Pro/ENGINEER Design Animation Option (DAO), a user can create an animation of a Pro/ENGINEER assembly using interactive dragging, drivers, and body definitions. An animation consists of one or more key frame sequences. A key frame (or snapshot) is created by recording the relative positions of all of the model components. A key frame sequence is a series of key frames. If the assembly has been connected using Mechanism Design, the joints and drivers created in the assembly process are also valid in Design Animation. The following information will help you begin to explore this functionality.

To Define an Animation

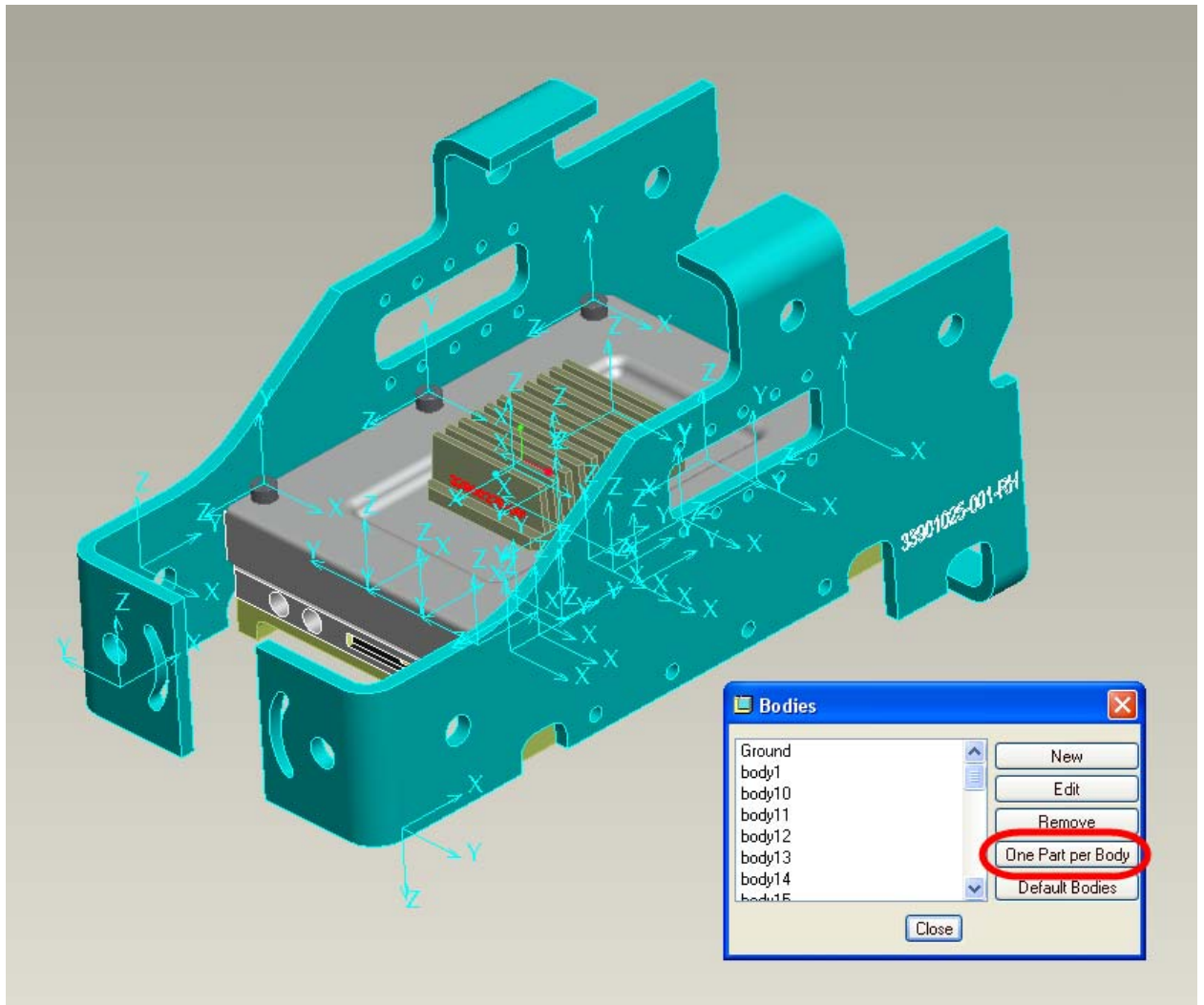
You can create an animation to do many different things. Depending on your objective, you may use different steps to create your animation.

Following are the typical steps you might take to create an animation:



1. Open an assembly in Pro/ENGINEER.
2. Click **Applications > Animation**. The Design Animation toolbar and timeline appear. An **Animation** menu is added to the Pro/ENGINEER menu bar.
3. Click **Animation > Animation** or  to create a new animation. The **Animation** dialog box opens with a default name for your animation. Click **Rename** and enter a meaningful name for your animation.
4. Click **Animation > Body Definition** or  to check your body definitions:
 - When working with a Pro/ENGINEER assembly, select **One Part per Body** and then edit the body to put the parts into the appropriate moving groups. Since **One Part per**

Body empties the ground body of parts, make sure to edit the ground body and reassign ground parts to it.

- When working with a Mechanism Design assembly, make sure that the bodies are properly defined.



5. Next, define animation components:

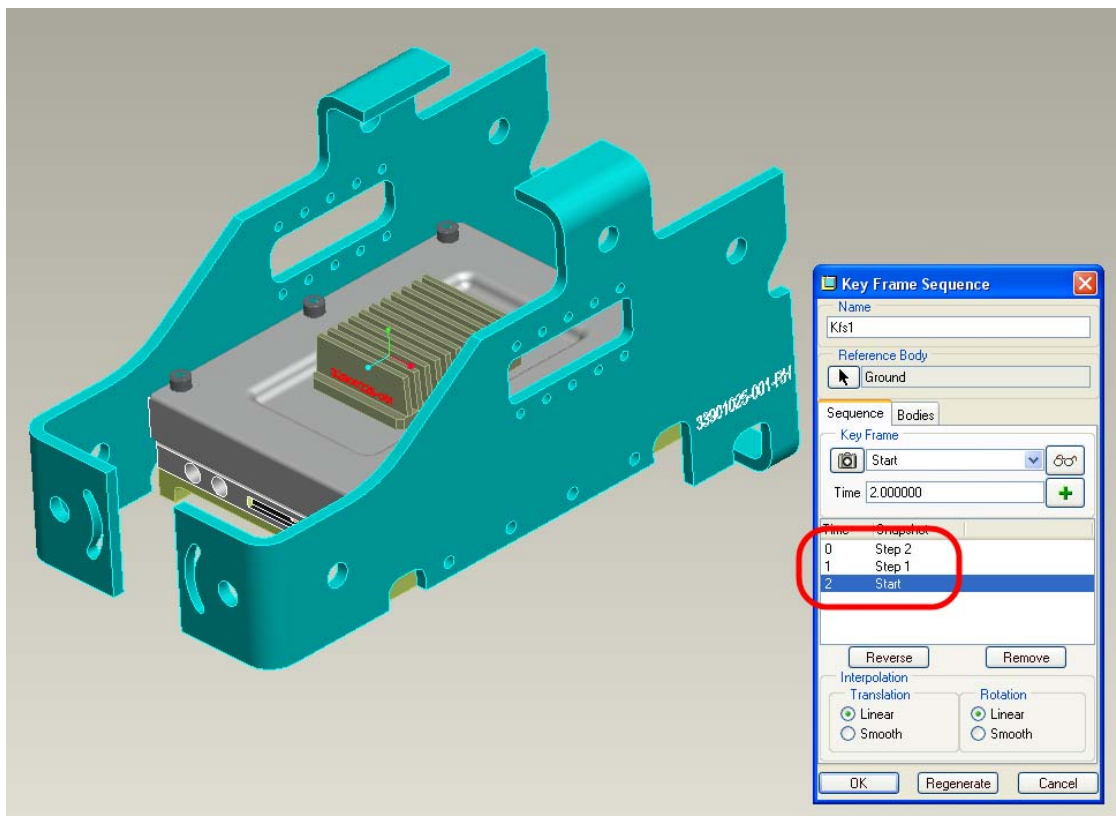
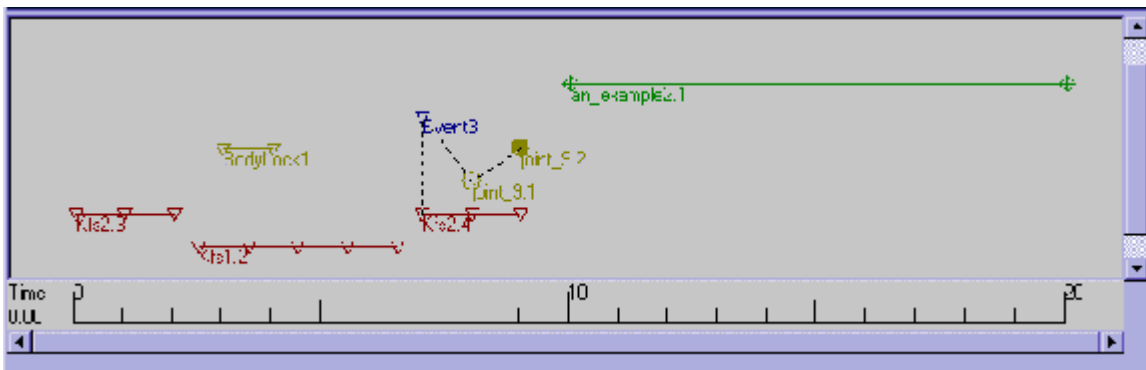
- Click  or **Animation > Key Frame Sequence** to create key frame sequences to specify general movement. Click  to move bodies to specific positions and take snapshots. Design Animation will interpolate between these key frames to produce a smooth animation.


About the Animation Timeline


Use the timeline window to view and manipulate the animation events. Once an event is defined, it must be on the timeline in order to be included in the animation. Use the commands on the **Animation** menu to create or edit events or right-click any of the timeline events and select a command from the shortcut menu.

- The default length and duration of a new animation timeline is 10 seconds.
- To zoom into an area, select **View > Timescale Zoom in** and draw a box around the area.
- To change the duration of an animation, double-click on the time scale and change the animation time domain.


The following figure shows a timeline with three key frame sequences, a body lock, an event, a connection status change, and a subanimation.

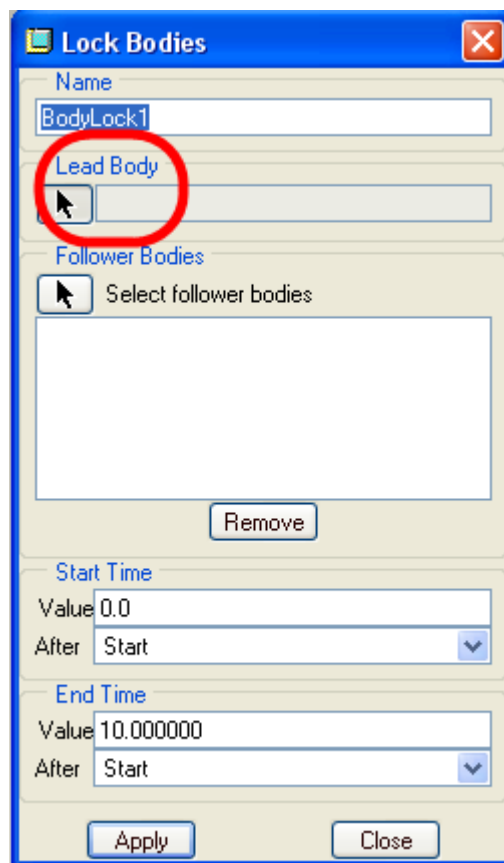




- Click  or **Animation > Servo Motor** to define servo motors and create specific movement between bodies connected by motion axes or between geometric entities.





6. Add the servo motors and key frame sequences to the timeline if they are not already present. Any components included on the timeline form the basis of your animation. Edit the timeline length and increments, the length of the servo motor or key frame sequence, and the relative timing of all components in the timeline by right-clicking and choosing the appropriate command from the shortcut menu or by clicking  to edit a selected component.

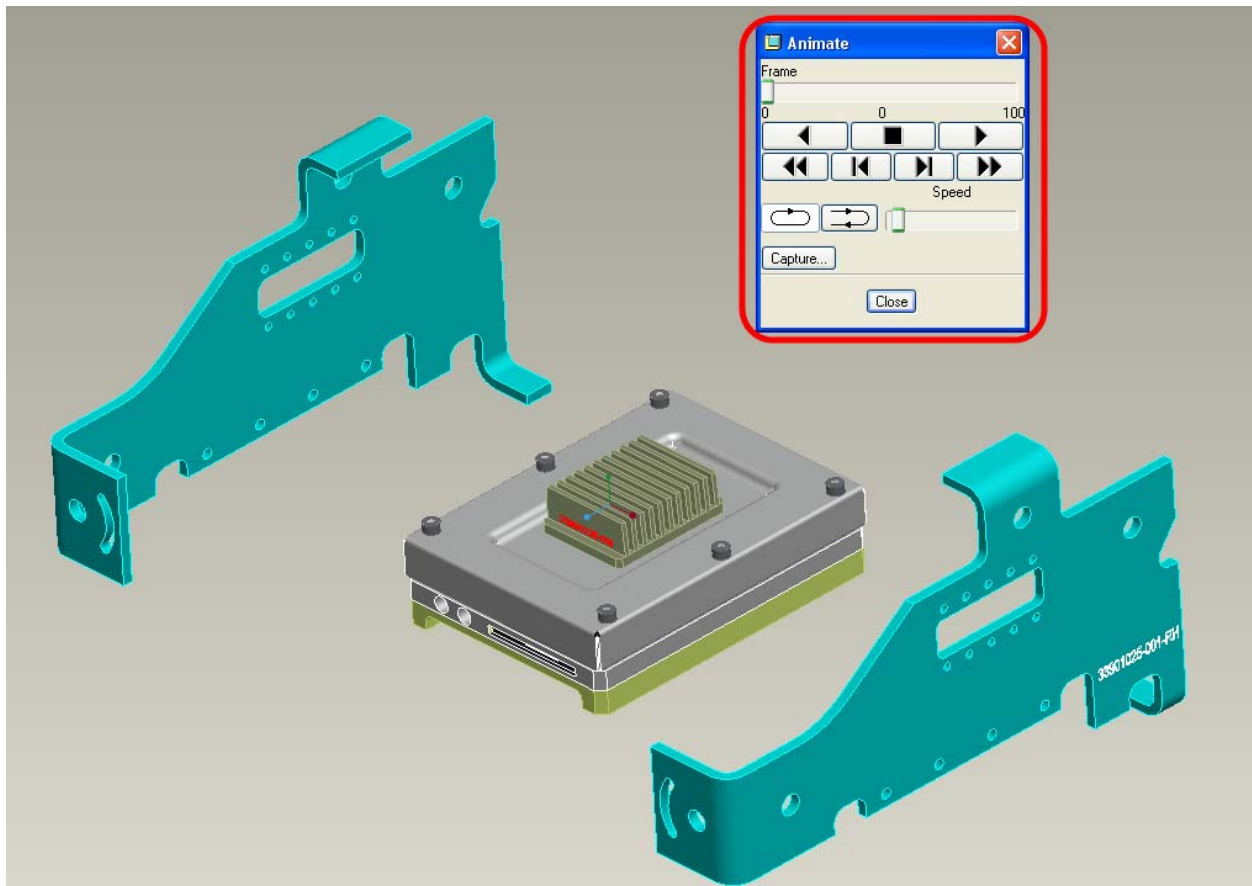
7. If body locking, events, or connection status have not been included in the timeline, you can add them now:

- Click  or **Animation > Lock Bodies** to fix a group of bodies relative to each other for a specified part of the animation.

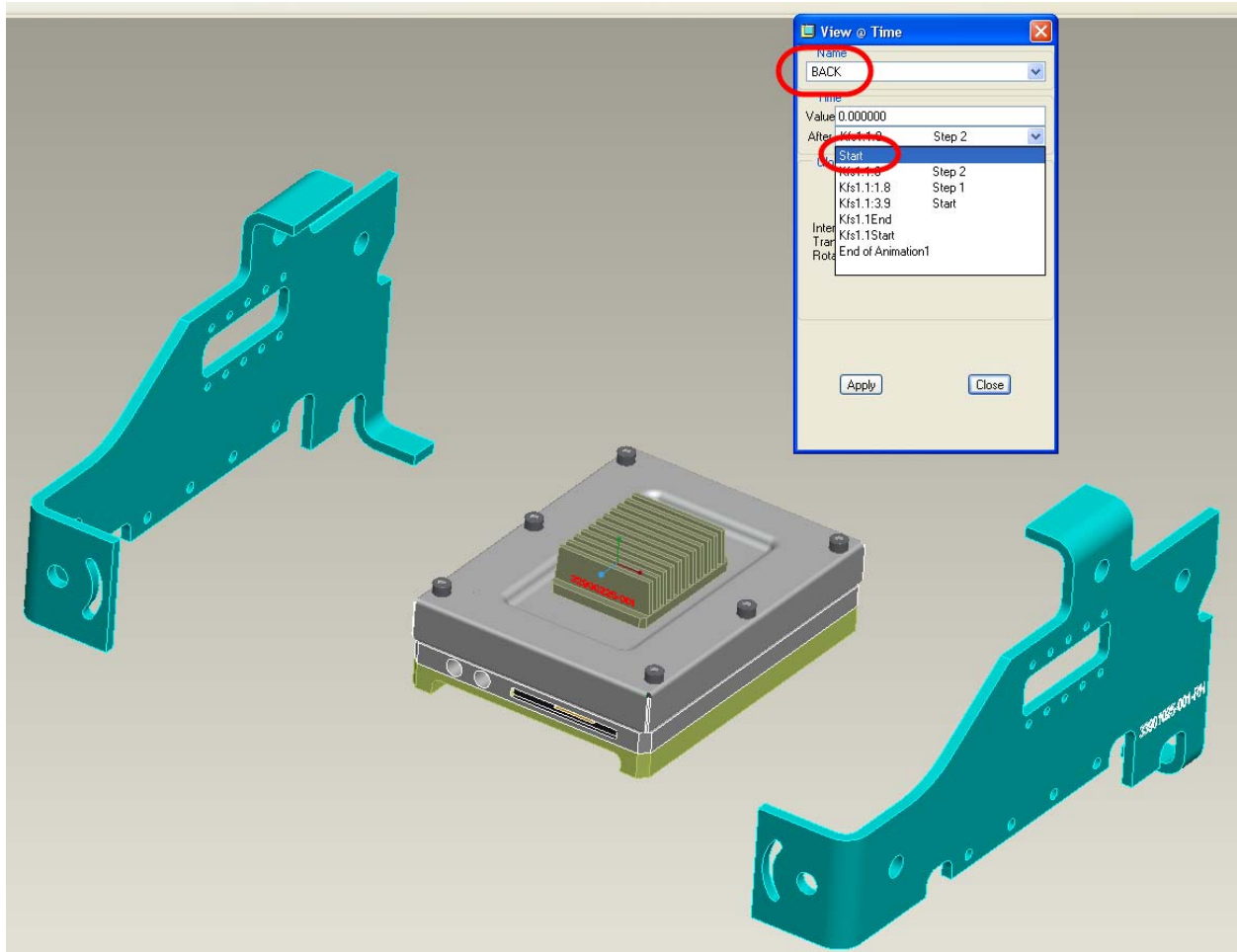




- Change the connection status to help assemble or disassemble your model. If you are working with key frame sequences, click  to change the connection status in the **Drag** dialog box while dragging bodies to position them, and then take snapshots.
- To edit servo motors, right-click a selected servo motor, then choose **Edit Definition** from the shortcut menu, or click  or **Animation > Connection Status**.

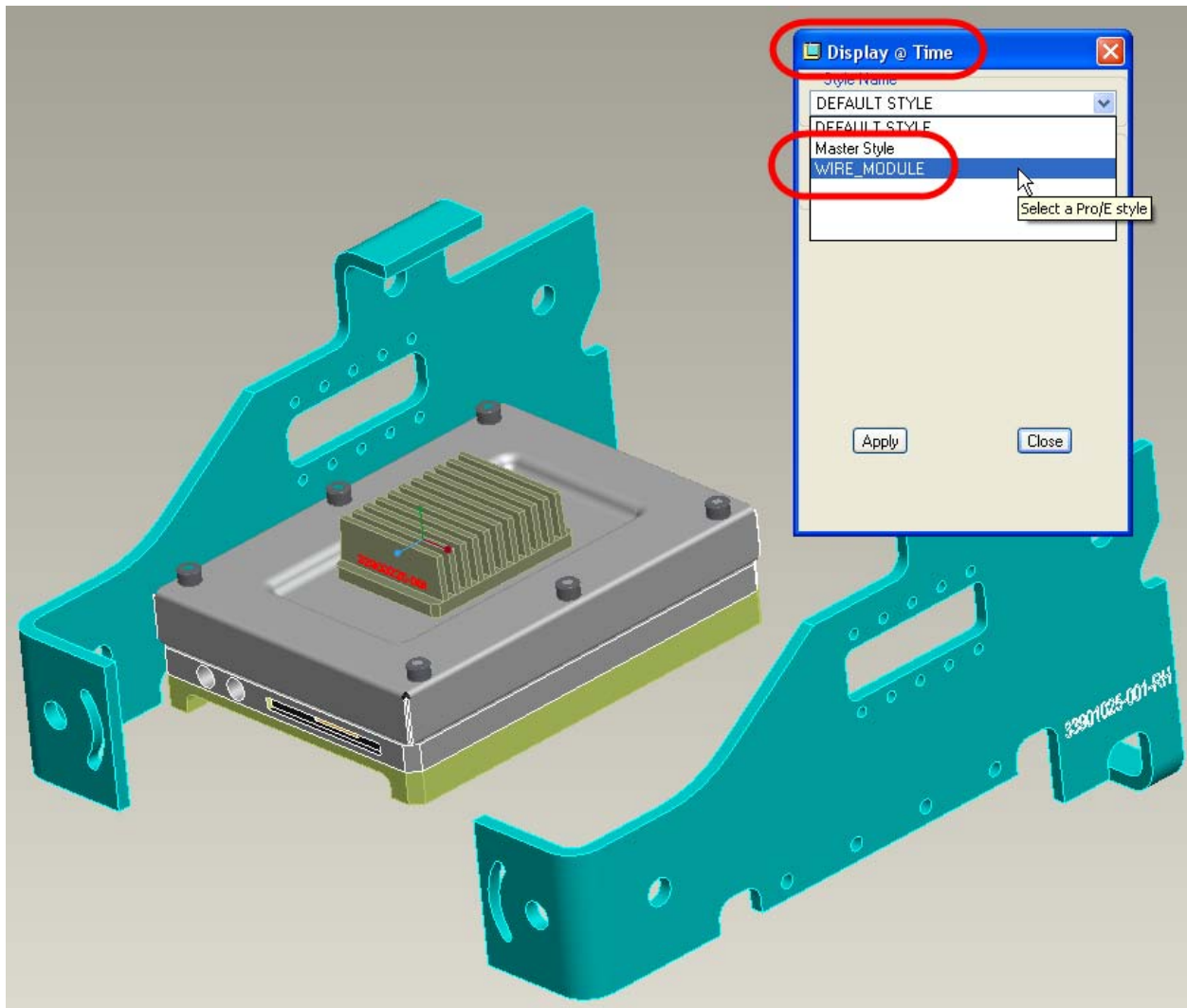
- Click  **Animation** > **Event** to define a specific sequence of events.
8. Once everything has been defined, click  or **Animation** > **Start**. The **Run** dialog box opens. The model moves as specified by the animation components in the timeline, and the timeline shows the progress of the animation.
 9. If the animation does not run as expected:
 - Make sure that your mechanism is not overconstrained. For example, check that a servo motor and a key frame sequence do not require conflicting positions.
 - Try increasing the number of time steps by clicking **Tools** >  **Time Domain**.
 10. Click  or **Animation** > **Playback** to run the animation again and change the speed or direction, or to check for interference and other results.




11. Click  or **Animation** > **View @ Time** to define views along the animation to display model orientations and magnifications.



12. Click **Tools** >  **Animation Interpolation** to choose an interpolation method for your views.
13. Click  or **Animation** > **Display @ Time** to specify component displays along the animation for your assembly components.



14. Click  or **Animation > Playback** to rerun the animation and view results.
15. Click **File > Save** to export the animation as a .fra file and save it with the model's .asm file, or click **CAPTURE** on the **Playbacks** dialog box to save your results as an.mpeg, .avi,.jpeg, .tiff, .bmp, or .pba file.

Summary:

Use Design Animation to coordinate the components of an animation sequence and play back an animation.

Click **Application > Animation** to invoke the Design Animation option. A timeline window appears below the graphics window, and a toolbar appears below the Pro/ENGINEER toolbar. You can run, create, and manage your animation using the menu commands, the toolbar buttons, or the timeline window.

You can use Design Animation to do the following:

- Visualize your assembly's operation. If you have the concept, but have not defined the mechanics, you can drag bodies to different positions and take snapshots to create an animation.
- Create an assembly or disassembly sequence animation of your model.
- Create a maintenance sequence, a short animation of steps to take to instruct a user in how to repair or build a product.

For an introduction and overview of the Design Animation module, and for typical steps to take to create an animation, see the [Design Animation Concepts Guide](#) online document.

Many models created in Mechanism Design will transfer to Design Animation.

[Back To Top](#)

PTC Product Focus

Using User Defined Workflows in the Promotion Process

[Click Here To View](#)

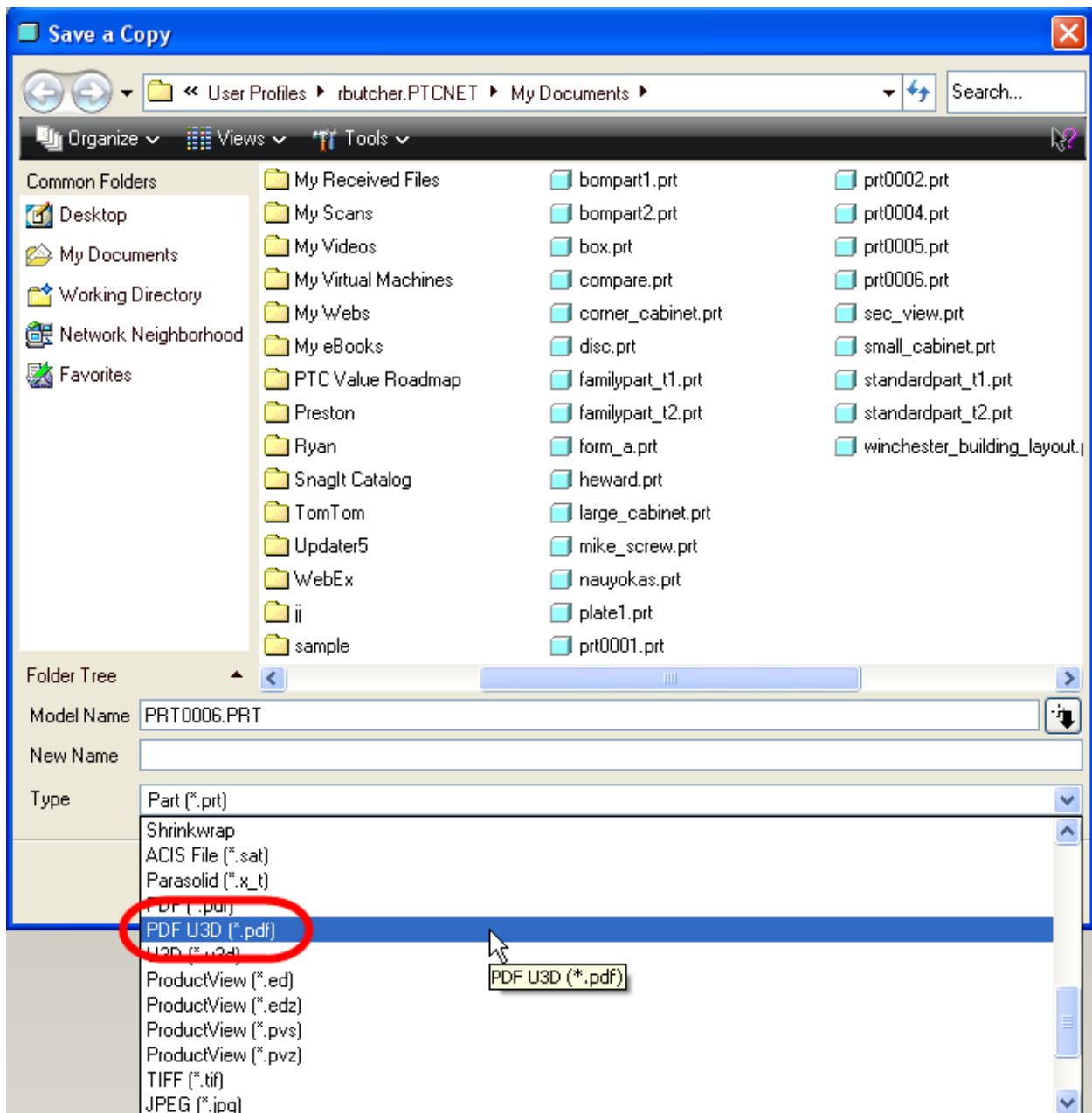
[Back To Top](#)

Tips of the Month

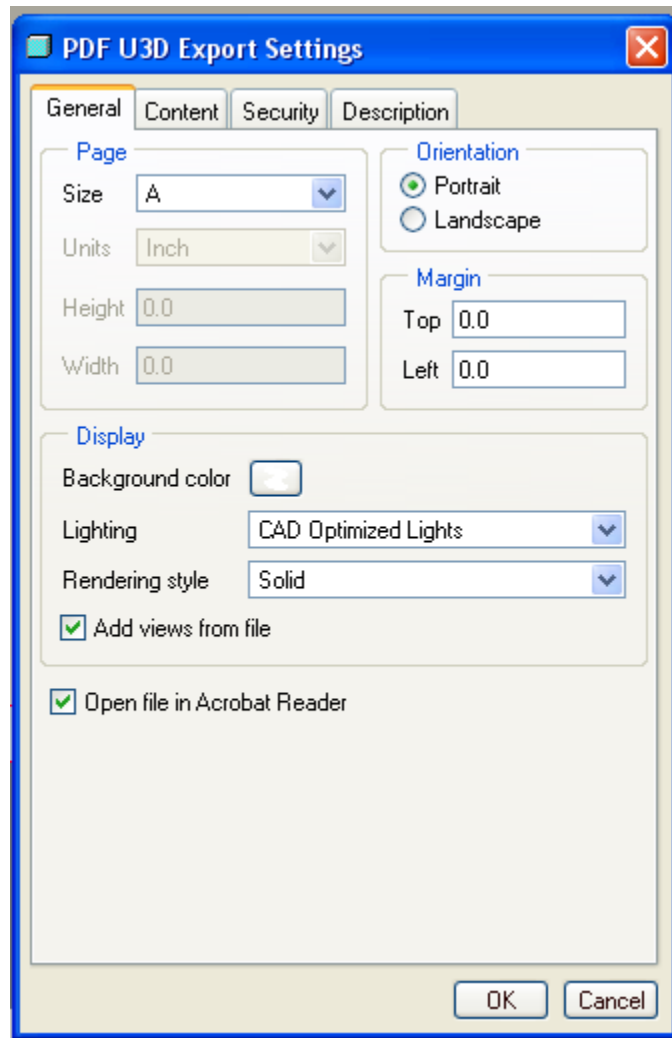
Collaborating with 3D PDF Files

To Export a Model as a U3D Graphic in a PDF File

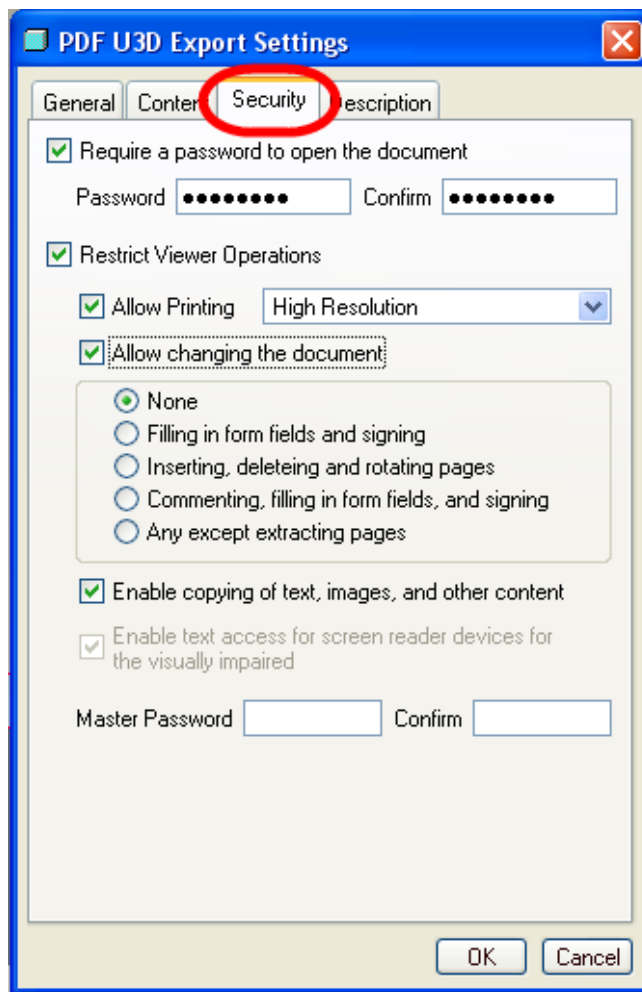
1. In a model, click **File > Save a Copy**. The **Save a Copy** dialog box opens.
2. Select **PDF U3D (*.pdf)** in the **Type** box. The Pro/ENGINEER drawing name without the extension appears in the **New Name** box.



3. Accept the default name or type a different one.
4. Click **OK**. The **PDF Export Settings** dialog box opens.



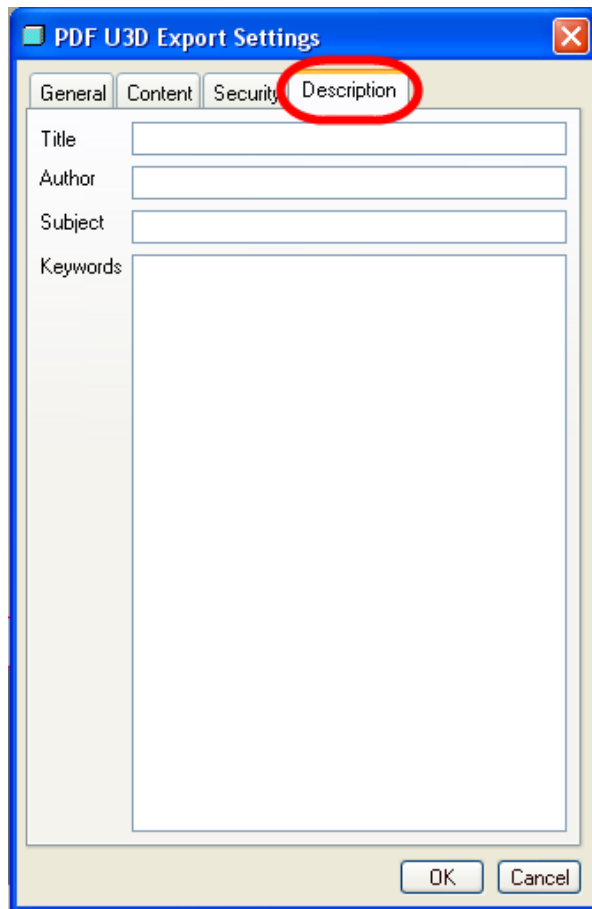
5. Click the **General** tab to set the following options:
 - **Page**—Sets page size to a standard or variable height and width.
Note: The Pro/ENGINEER model graphic is sized to fit on the selected page size within the user-defined margins.
 - **Orientation**—Sets the file orientation to **Landscape** or **Portrait**.
 - **Margin**—Specifies top and left margins.
 - **Display**—Controls background color, lighting, and render style.
6. Click the **Security** tab to set the following options:



- Click **Require a password to open the document** to restrict access to the file.
- Type a password and confirm it.
- Click **Restrict Viewer Operations** to limit changes a person viewing the document can make.
- Select **High Resolution** or **Low Resolution** printing.
- Click **Allow Changing the document** and Select one of the following security levels:

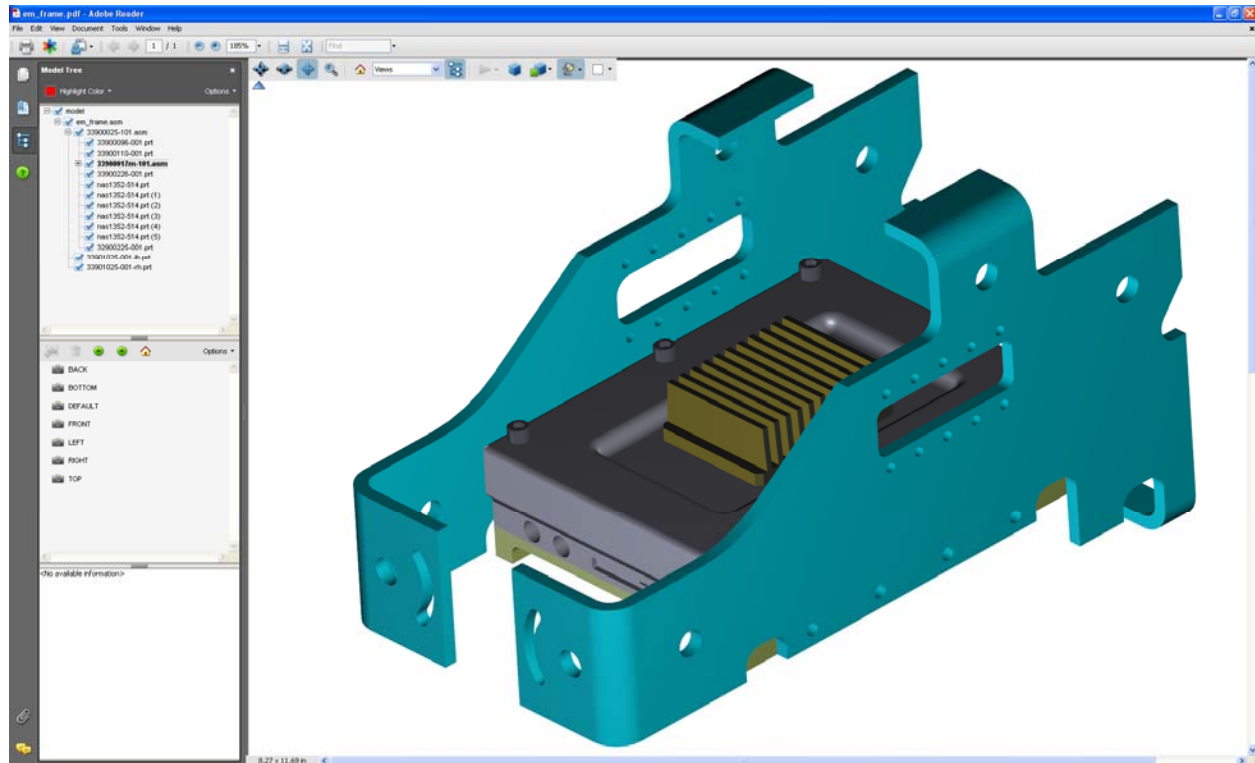
Security Level	Possible Actions
None	View the document (default)
Filling in form fields and signing	Fill in form fields, create templates, and add a digital signature
Inserting, deleting and rotating pages	Insert, delete, and rotate pages, create bookmarks and thumbnails
Commenting, filling in form fields, and signing	Add or edit comments, fill in form fields, create template pages, add a digital signature
Any except extracting pages	All except extract document content

- Type a password in the **Master Password** box and confirm it.
7. On the **Description** tab, type document information in the **Title**, **Author**, **Subject**, and **Keywords** boxes.



8. Click **OK**. The model is exported.

9. The PDF file can now be opened in Acrobat Reader as shown below.



10. Now you can use Acrobat Reader to collaborate in the data. You can spin, rotate, pan, and zoom to manipulate the orientation of the model. You can investigate the structure of the assembly, and use the predefined orientations from ProEngineer to position the model for viewing.

11. Try out the many other capabilities that are part of this 3D PDF.

[Back To Top](#)

Tips of the Month

Selecting Promotion Task Participants From User Defined Roles

[Click Here To View](#)

[Back To Top](#)

Announcements

Educational Resource Library

Learn things you always wanted to do - but didn't know you could.

This one stop educational resource library will help you learn more about PTC Solutions and provide you with technical materials developed by the product experts to help you become more productive.

Get tutorials, how-to videos and expert advice for:

- Pro/ENGINEER
 - Conceptual and Industrial Design
 - Detailed Design
 - Simulation/Analysis
 - Production
 - Design Collaboration
- Windchill PDMLink
- Windchill ProjectLink
- Pro/INTRALINK
- PTC Online Tools

Check out the [Educational Resource Library](#) today.

PTC Tips & Techniques Newsletter Archives

Miss an issue! Can't find that awesome technique you read about? Fear not, you can click on the link below and go through our Customer PTC E-Newsletter archives.

[Click Here To Access](#)

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

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!](#)

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.

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

<http://profilesmagazine.com/>

[Back To Top](#)

Upcoming Events & Training Class Schedules

Upcoming, 2009 Your local Pro/Engineer User Groups
<http://www.ptcuser.org/rugs/>

June 7 – 10, 2009 Orlando, FL USA
PTC/USER World Event
<http://www.ptcuser.org/>

Events

Our seminars and conferences seek to provide you with relevant information regarding product development trends in your industry as well as innovative software learning experiences. Think of them as a constructive day off where you can share experiences and swap ideas with your peers.

If you can't manage to get away, we'll bring it to you. Check back often for regularly scheduled live webcast events.

[You're Invited to Attend...](#)

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>

Live Instructor-Lead Virtual PTC Training Courses

Virtual Classrooms provide interactive learning with a trained PTC instructor in convenient and manageable sessions that last approximately 4 hours over a series of days. It's easy to join a class right from your desk using a phone or voice-over IP technology.

Sessions are performed just like a traditional ILT (including interactive exercises where you and the instructor can work on lab exercises together) and feature some of our most popular ILT courses. These sessions cover the exact same material as the traditional ILT in-center courses. Also look for some of our most frequently requested mini-topics delivered in the same format that are only an hour - two hours in duration.

If you have any questions about these sessions or would like to see getting other courses, not on this list, on the schedule please feel free to contact me for more details. They are a great way to bring training to you without you having to worry about location or being out from work for long stretches.

You can register for these sessions just as you would for any normal ILT class either by:

1. calling order admin at <http://www.ptc.com/services/edserv/training/registra.htm> or
2. you can go to PTC University directly at <http://www.ptc.com/learning> and submit a registration request directly. All you have to do is search the catalog by typing in “virtual” in the search field and you will see a listing.

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.

[Back To Top](#)