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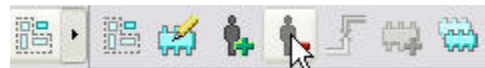
PTC Product Focus

What's New in RSD 9

PTC recently released the pre-production version of RSD 9 for customer evaluation. The production release of RSD 9 is scheduled to be released early in 2010. This new release of RSD has many new customer driven enhancements that improve the usability and data exchange capabilities of the product. Below are some details of the major new enhancements.

New Look and Feel

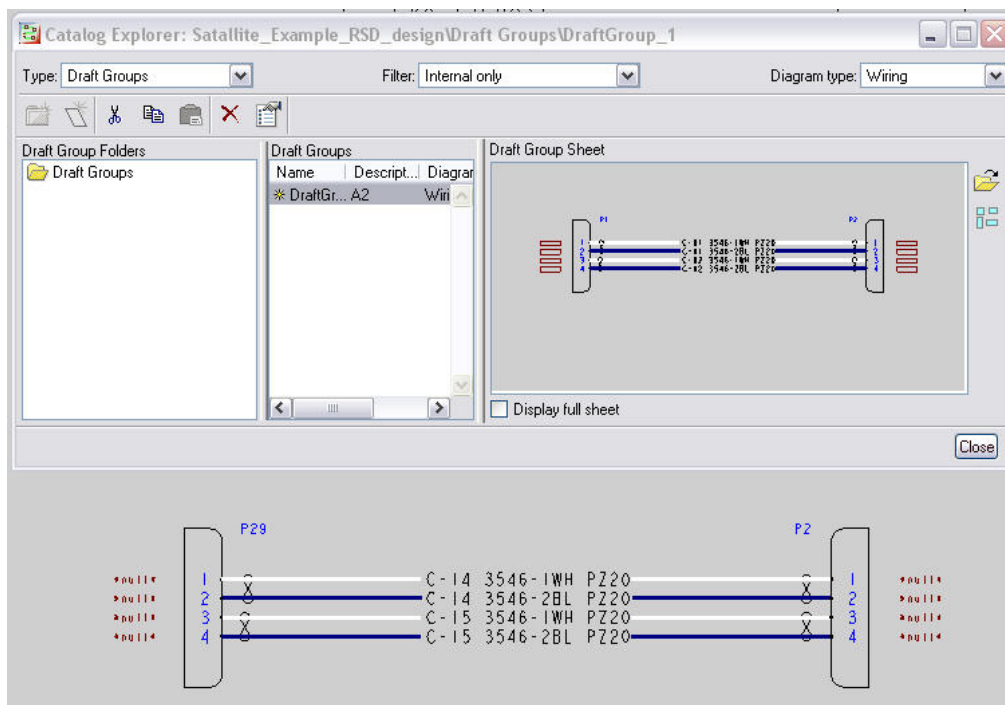
The RSD 9 user interface has been updated with new easy to read and see icons. These new icons should make RSD 9 a little easier to learn for new users and make commands easier to find for experienced users. Some sample icons are shown below:



Draft Groups

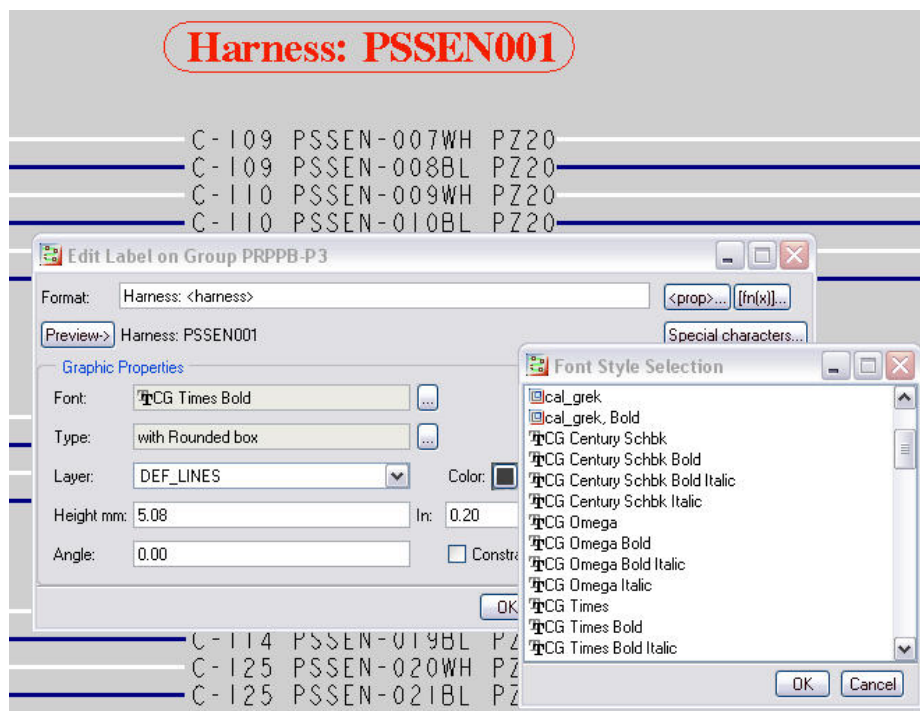
A new catalog type called "Draft Groups" has been added in RSD 9. This new catalog type will allow the user to create a collection of items (groups, blocks, fibers) and instance them together without relating the items in the group. In other words, once the "draft group" is instanced, the members of the draft group do not report up to a new group instance.

This new functionality has many different applications. One common application is for pre defined harnesses. Previously it was difficult to create a predefined harness group that contained connectors and predefined cables like twisted pairs. With the new draft group functionality this is now possible.



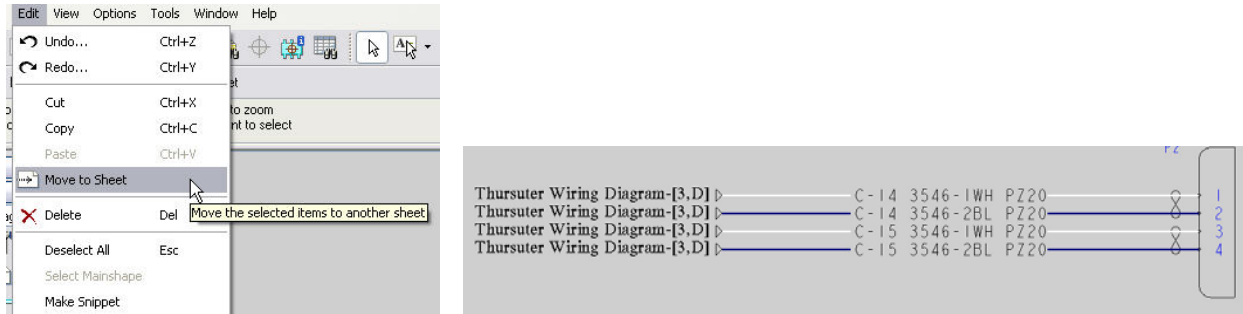
Support for True Type Fonts

RSD 9 now has support for true type fonts. This functionality allows users to easily improve the appearance of text on their diagrams. Any label or text can now access the true type fonts from the label properties dialog box.



New “Move to Sheet” Functionality

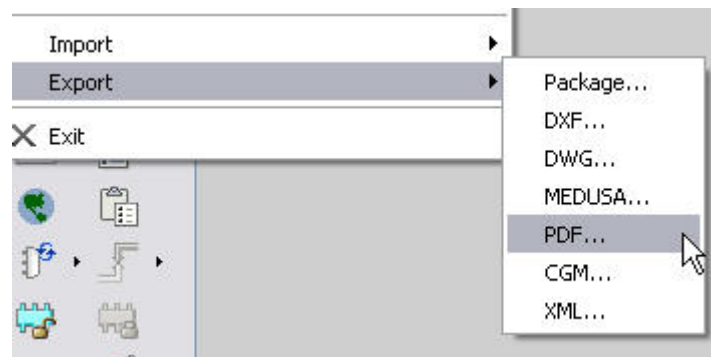
It is now possible to select an instanced connector with attached fibers and move the connector to another sheet. The attached fibers will automatically be broken, but remain attached. A cross sheet graphic will automatically be added to the end of the fibers and can designate the sheet and location of the broken fiber.



Improved Import/Export Functionality

RSD 9 has expanded and improved the import and export capabilities. New file formats include CGM and PDF. When exporting these new file formats the user can control the sheets that will be exported and a single file will be created. All labels will also automatically be updated prior to export.

DXF and DWG capabilities have been improved. These improvements include additional version support (12, 13, 14, 2000, 2004, or 2007), support for layers, and mapping of line styles. In addition, the user can easily select which sheets to export through a new dialog box.



Conclusion

Although the production version of RSD 9 is not out yet, the preproduction version can currently be downloaded from www.ptc.com. This preproduction version gives customers the ability to plan for upgrade and implementation of RSD 9 when the production version is released. Customers using RSD today are encouraged to download the new software and try it out for themselves! To find out more about Routed Systems Designer please visit our Website.

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PTC Product Focus

Ambassador Delegate for Windchill

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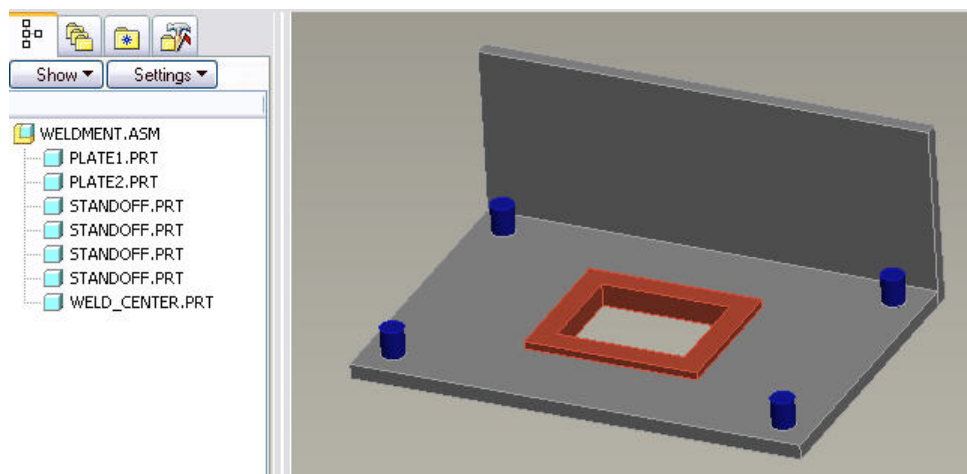
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Tips of the Month

Using Inheritance Models for “In Process” Manufacturing Models of Weldments

Creating Pro/ENGINEER models to support manufacturing documentation can be done in many ways. Each of these techniques has their own pros and cons. In the case of weldments, there may be many different manufacturing states of the model prior to the final welded and machined structure. The use of inheritance models can aid in the development of these models.

Consider the following weldment:



This weldment consists of two plates, a machined piece that gets welded to the bottom plate, and some cylindrical standoff parts that also get welded to the bottom plate. Note the model tree in the picture above as well. Notice that the model tree for this weldment is a flat structure.

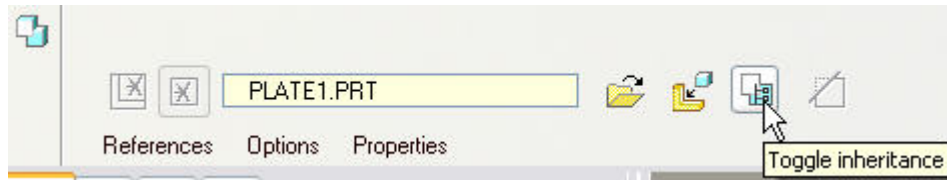
Next, assume that the manufacturing of this weldment needs to be performed in the following process. First, the two plates need to be welded together. Second, the machining for the center cut out and preps for the cylindrical standoffs need to be created. Finally, the additional parts will be welded to the plates. How can in process models be developed for this weldment? Should simplified reps or family tables be used? What if the manufacturing engineer responsible for designing and documenting this process does not have the rights to change the engineering models? Should the engineer be responsible for restructuring the assembly to try to match the manufacturing process?

It turns out that developing new “in process” models using inheritance features will answer most of these questions. Assume that the first “in process” model that needs to be developed is a model of the bottom plate with no machining, and with some additional features to describe the weld prep.

To create this model, start by creating a new part. Next, select **Insert, Shared Data, Merge/Inheritance**. This will bring up the dashboard to define the feature. Choose the open folder icon and select the original plate part as shown below.

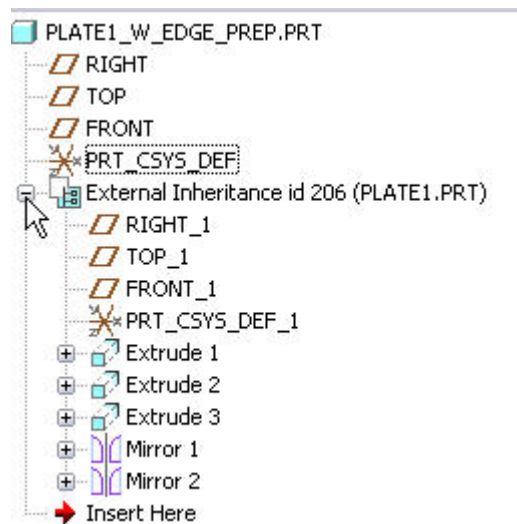


Browse and select the original plate part and assemble the model by default. Next, select the icon to toggle the feature to inheritance as shown below.

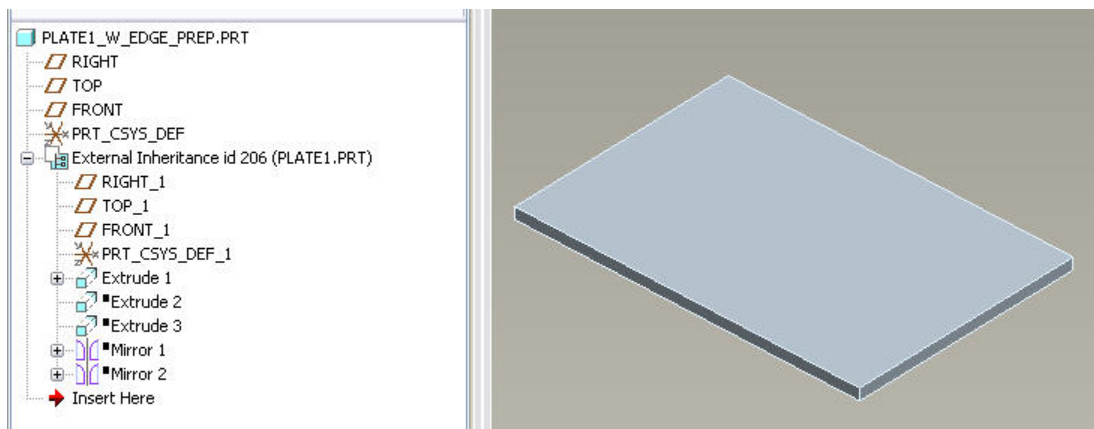


By toggling the feature to inheritance, all the features of the original model will be available in the new model. Hence, the user can suppress any features of the original model in the inherited model and not affect the original design model. For this example, the machining features need to be suppressed in order to represent the plate in the initial “process state”.

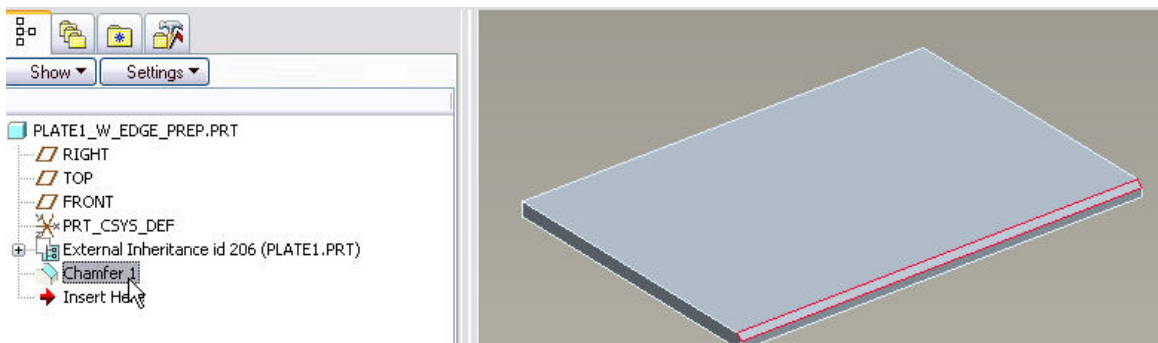
Complete the feature by selecting the green check mark on the dashboard. Notice that the geometry of the original plate is now in the new model. Select the plus icon next to the inheritance feature in the model tree to expose the original features as shown below.



With these features now exposed, the machining features can be selected and suppressed without affecting the original design model. Notice the picture below showing the model tree with the machining features suppressed and the resultant geometry.

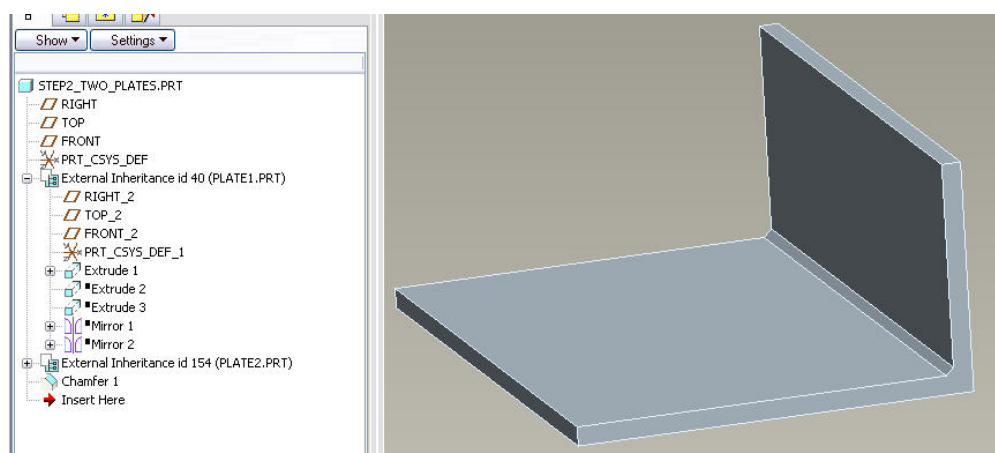


The final step to create this in process model would be to add the edge prep for the weld. This can be done using standard Pro/ENGINEER features without affecting the original design model. In the picture below a simple chamfer was added to show the edge prep.



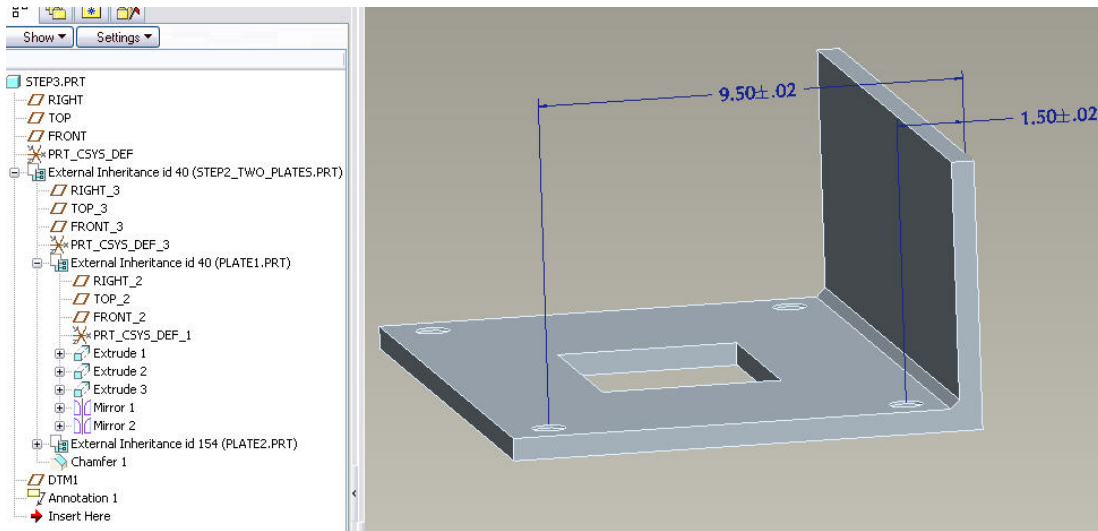
The in process model is now complete and still remains associative to the original design model.

These same steps can be repeated to represent more in process steps. Further, multiple inheritance features can be used to inherit geometry and feature information from multiple parts. Here's an example of a process model for the next manufacturing step for this weldment. Notice the model tree in the example below. The machining features in the first plate have been suppressed. Also, a chamfer has been added to represent the additional material added by the weld.

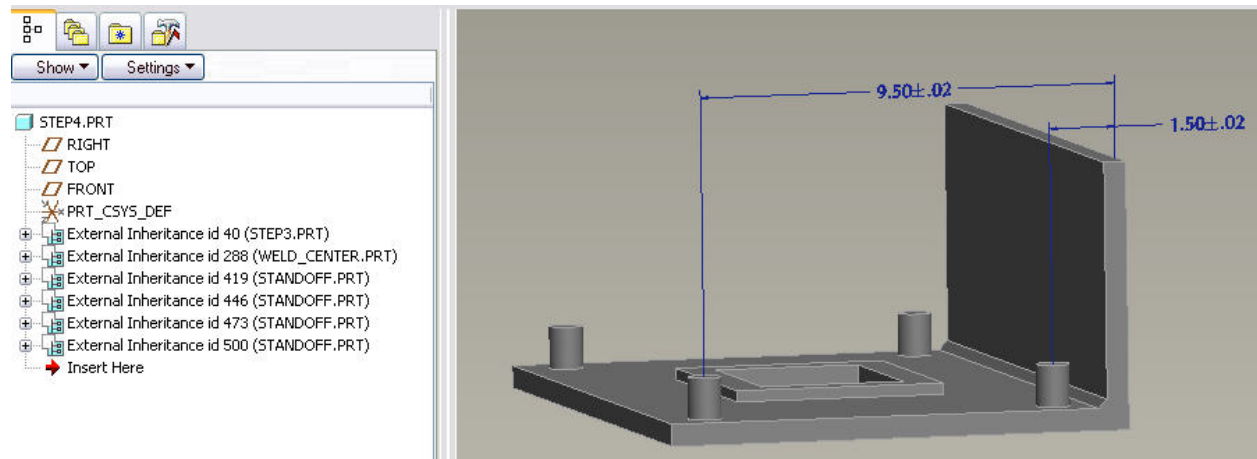


The one drawback with this process is that the parts will need to be reassembled during the creation of the merge/inheritance feature. Even with this drawback, there are many advantages to this process.

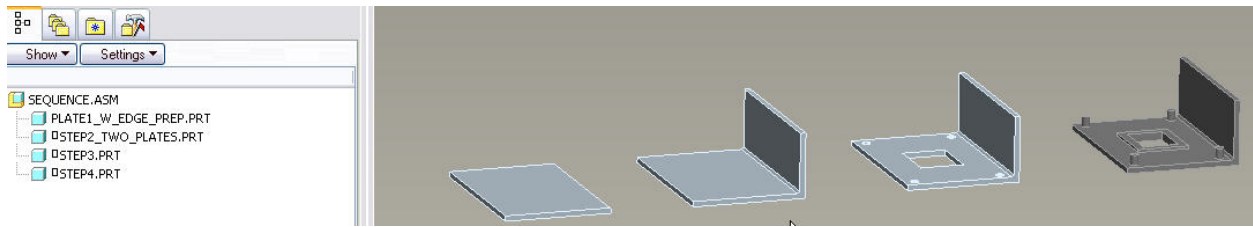
Below is an example of step 3. Notice that for this example, the inherited model from step 2 has been used to create the model for step 3. This nested inherited structure still allows the user to expand the features for the original plate and resume the machining features. Further, annotations can be added to this process model to show required dimensioning and tolerancing. Notice that the annotations position the machining preps off of the second plate. This is a different dimensioning scheme than what was used for the original engineering model.



The final step could be created in a similar fashion. Notice that the annotations carry over from the step 3 model.



Finally, the new parts could be combined together in an assembly to show the sequence.



This is just one of many techniques that can be used to decompose a structure and develop manufacturing in process models. It has the advantage of not using family tables or assembly features that can cause parts to regenerate upon retrieval. Further, it allows a manufacturing engineer to build up a separate manufacturing structure without requiring the engineer to restructure the design assembly to match the manufacturing decomposition.

This technique also works well in an environment utilizing MPM Link. MPM Link allows the transformation of an engineering BOM or EBOM to a manufacturing BOM or MBOM. Once that transformation has been developed, these new CAD models could be associated to downstream WT Parts that have been created with MPM Link.

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Tips of the Month

Virtualization: Streamline Development Testing and Deployment

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Announcements

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[Customer Care Zone](#)

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- <http://www.hp.com/go/ptcworkstation>

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

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

June 6 – 9, 2010 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.

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

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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.

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