

new!

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new!

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## PTC Product Focus

### What's New in Manufacturing for Wildfire 3.0

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## PTC Product Focus

### ModelCHECK

ModelCHECK is an add-on software that evaluates Pro/ENGINEER parts, assemblies, and drawings to ensure that they adhere to a company's modeling standards and best practices. If an exception to these conventions is detected, users are notified of the inconsistency, given tools to identify the problem within the solid model, and can often make a correction automatically from the familiar web-based ModelCHECK interface. ModelCHECK facilitates the work of design team engineers by letting users create superior models that are well suited for reuse in downstream applications.

### Facilitating Reuse of Models

As companies continue to embed Pro/ENGINEER into their design process, reusing the model becomes increasingly important. To facilitate reuse, models have to be created in accordance with common and accepted design philosophies and must contain all necessary information. However, users are often unaware of the design standards, or the company has difficulty enforcing them. ModelCHECK helps designers use correct modeling practices by letting them constantly monitor the Pro/ENGINEER model as design features are added, much as they would use a spell checker for a word processing application. In this manner, variations from accepted practices can be detected and corrected early in the design process, before they affect downstream users of the model and incur additional costs.

## Detecting Existing Designs

As the volume of models being created and stored in databases continues to grow, the opportunity to reuse existing designs increases. The problem is that with an increased number of models stored, it becomes progressively more difficult to identify similar designs. Often previously designed and released models are re-created from scratch simply because the user had no ability to determine if the model already existed somewhere in the database.

ModelCHECK introduces powerful new patent pending Shape Indexing™ technology that enables rapid detection of existing designs. While a user is building a model, ModelCHECK is constantly scanning the model's geometry to determine if a model with similar shape has been previously created. As soon as a similar model is detected, ModelCHECK informs the user of this opportunity and displays to them the degree of similarity between the two models and from where the existing model can be retrieved.

## Problem Resolution, Education, and Online Advice

The first step in guaranteeing the quality of the finished solid model is making sure users are aware of information missing in their model or other problems. ModelCHECK offers tools beyond simple notification to not only identify the feature in question but also actually make corrections to the model. In addition, users can easily access online help pages specific to the problem identified. This type of immediate feedback will advance user knowledge of Pro/ENGINEER modeling practices and help avoid the same types of mistakes in the future.

## Automated Tracking of Model Quality

As ModelCHECK is run on Pro/ENGINEER models, a database is created to track the types of problems found and their frequency. Tools provided with ModelCHECK sort and graph this data for trend analysis. The result is an engineering management organization that better understands the training needs and challenges of their Pro/ENGINEER users.

## Flexible Customization

ModelCHECK can be customized to perform any combination of checks that fall into the following categories.

Conformance to company modeling standards and start part guidelines

- Parameters are present and contain acceptable values.
- Layers exist, contain the correct entities, and are displayed properly.
- Notes on drawings are appropriate and correctly spelled.
- Suitable materials and units have been assigned to the model.

Utilization of accepted modeling techniques

- Parent-child relationships have not been created unnecessarily.
- The model contains no suppressed or incomplete features.
- Unused models and views have been deleted from drawings, not just erased.

- Assemblies contain no suppressed, frozen, or missing components.

#### Fulfillment of manufacturing requirements

- The model contains no tiny edges or geometry checks.
- Standard bend tables are being referenced in sheetmetal models
- Drawing dimensions have not been overwritten.
- Interference checks have been run recently on the model.

Configuration files allow ModelCHECK to be fine-tuned to a company's individual needs. Organizations can control the combination of checks that ModelCHECK performs as well as the severity assigned to the problems that are identified in the model. In addition, models can be sorted on the basis of key characteristics, and configurations can be created for different types of models and tailored to evaluate each model.

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## Tips of the Week

### Design for Manufacturing in Pro/ENGINEER Wildfire 3.0: Creating and Applying Manufacturing Annotation Features

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## Tips of the Week

### Configuring Windchill and ModelCHECK as a Gatekeeper

ModelCHECK promotes the use of company standards and best practices to improve the effectiveness of downstream design reuse. The ModelCHECK Gatekeeper is used to help filter out data that is being check-in into the vault that does not meet company standards or best practices.

You can configure a unique ModelCHECK Gatekeeper filter to define the requirements for a successful check-in into the vault.

During the check-in process, ModelCHECK Gatekeeper completes the check-in for data that meets the established requirements, or limits the check-in if any of the components do not pass the check. If the check-in fails, Windchill reports back the data's particular errors and warnings.

This tip will educate you on how to configure Windchill and ModelCHECK to enforce these best practices. This technique assumes that you have ModelCHECK installed, configured and running properly.

First we will review the settings and requirements for ModelCHECK. There are a two configuration files that we should review for ModelCHECK to check property settings. The first is the config\_mc.mc file located in the ModelCHECK\config directory. Check to see if the following options are set.

MC\_ENABLE            YNA                    Y

This option enables ModelCHECK so that it can be executed

MODE\_RUN            YN                        Y            Y            N            N

This option sets the mode in which ModelCHECK can be run in. The options are Interactively, Batch, Regenerate and Save modes.

ADD\_DATE\_PARM      YN                        Y            Y            Y            Y

This option adds a date parameter to the model when ModelCHECK was last run. Required.

```
ADD_ERR_PARM      YN                Y      Y      Y      Y
```

This option adds an error parameter to the model when ModelCHECK is run to track the number of errors. Required

```
ADD_CONFIG_PARM  YN                Y      Y      Y      Y
```

This option adds a config parameter to the model when ModelCHECK was last run. Required.

```
ADD_MODE_PARM    YN                Y      Y      Y      Y
```

This option adds a mode parameter to the model when ModelCHECK was last run. Required.

The second is the setconf.mcc file located in the ModelCHECK\config directory. This file specifies the configuration of ModelCHECK checks to run. The only entry that I have in my configuration is:

```
Medium=(check/demo_checks.mch)(start/demo_start.mcs)(constant/inch.mcn)
```

This entry is important because it is used in the Windchill configuration files.

There are a two configuration files that we need to update on the Windchill server to enable the ModelCHECK validation to run. The first is the cadxcommon.properties file located in the <WC\_HOME>\codebase\com\ptc\windchill\cadx\propfiles directory. To enable the ModelCHECK validation upon checkin, set the following value to true in this file.

```
ModelCheckValidation=true
```

The second file is cadxhtmlui.ini located in the <WC\_HOME>\codebase\com\ptc\windchill\cadx\cfg\default directory. There is a section in this file for ModelCHECK validation options. Here is what I have in my file.

```
[modelcheck]
;Parameters used for ModelCheck validation to be done prior to checkin of
EPMDocument
NumErrors=0
NumHours=24
MCConfig=Medium,check/demo_checks.mch,start/demo_start.mcs,constant/inch.mcn
```

NumErrors specifies that the maximum number of errors the user can have.

NumHours specifies the number of hours since the last ModelCheck run (integer).

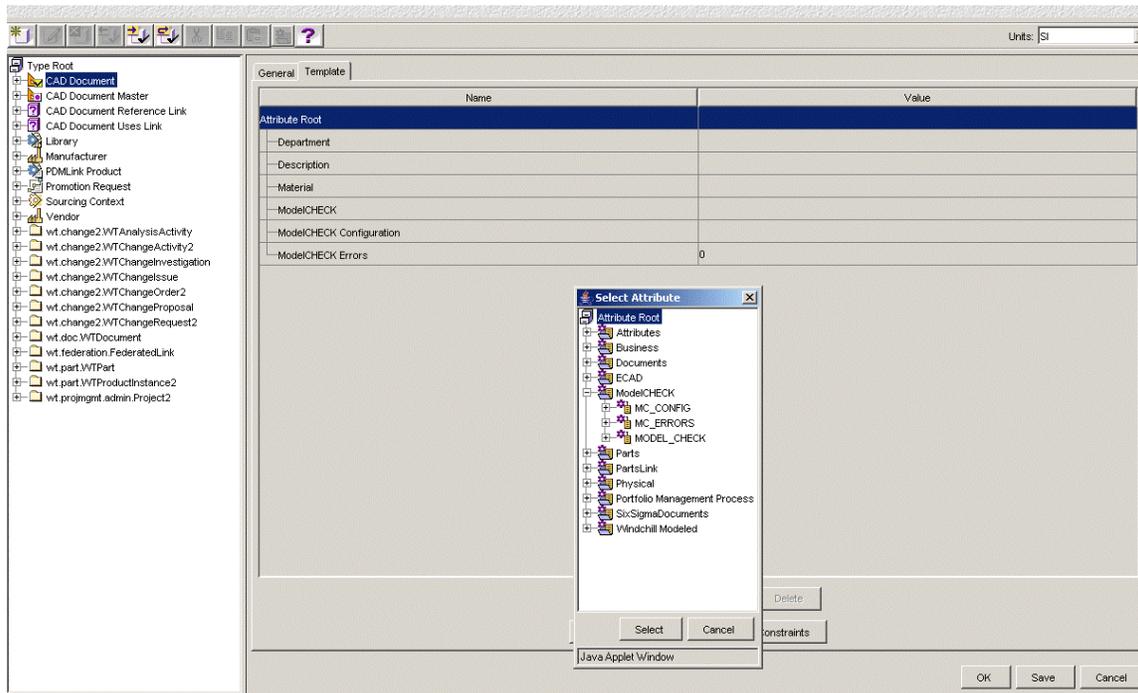
MCConfig specifies the type of configuration used followed by actual set of ModelCHECK Configuration files to be used for validation. Set this value to the value you set in the setconf.mcc file using the format in the cadxhtmlui.ini.

After these two files are edited, you must restart the Windchill Method Server for the new entries to take effect.

The Windchill PDMLink administrator will need to create IBA's with following names and types in the Attribute Administrator:

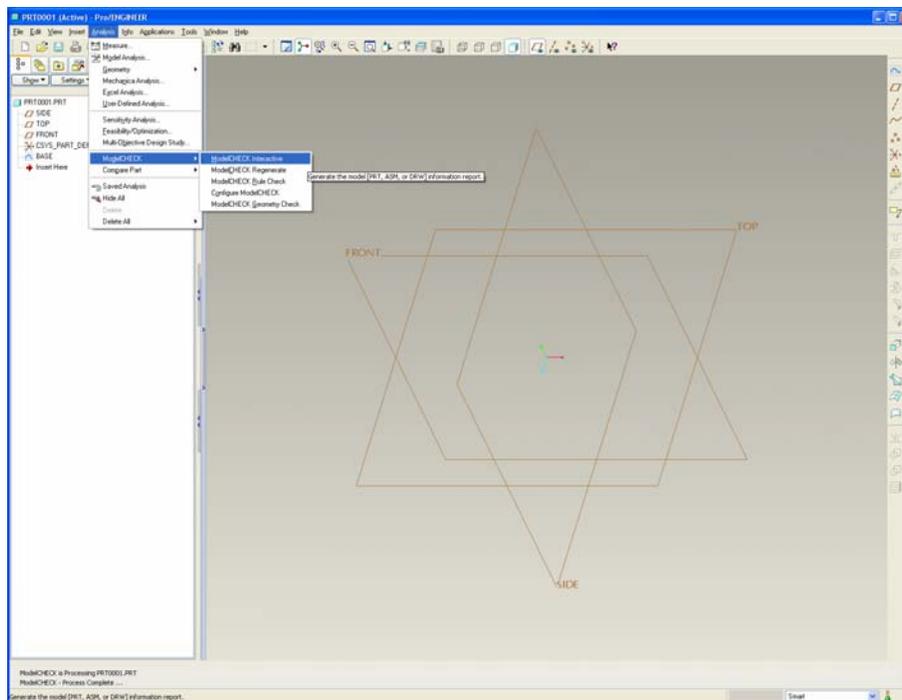
```
MC_ERRORS - Integer
MODEL_CHECK - String
MC_CONFIG - String
```

In Windchill 8.0, after the IBA's are created, use the Type Manager and update the CAD Document or the Workgroup Manger CAD Document and add these attributes to the template.

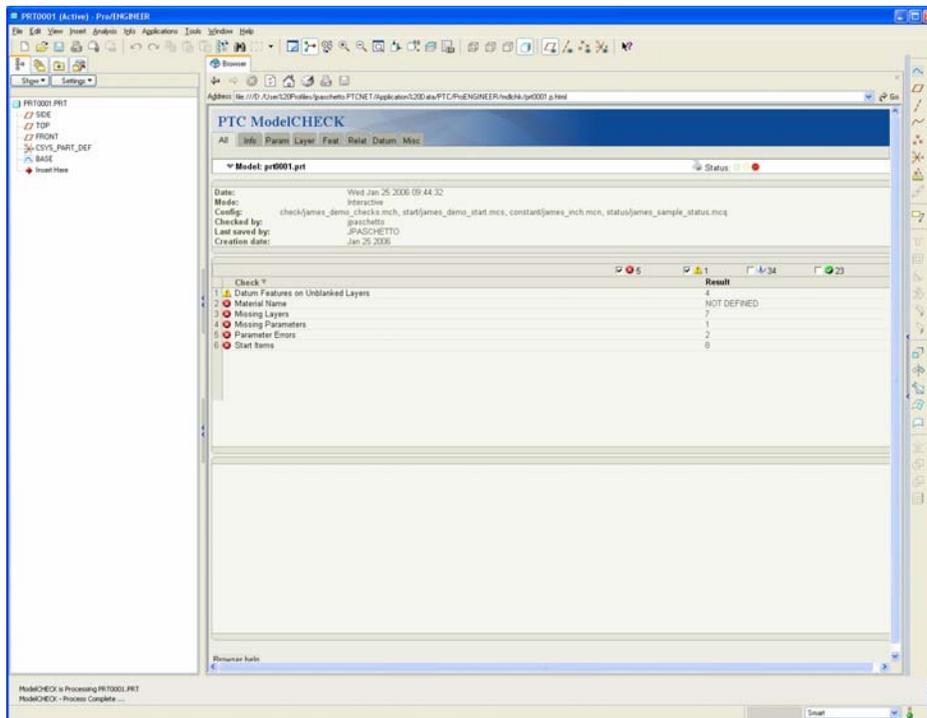


The configuration for Windchill and ModelCHECK are now complete.

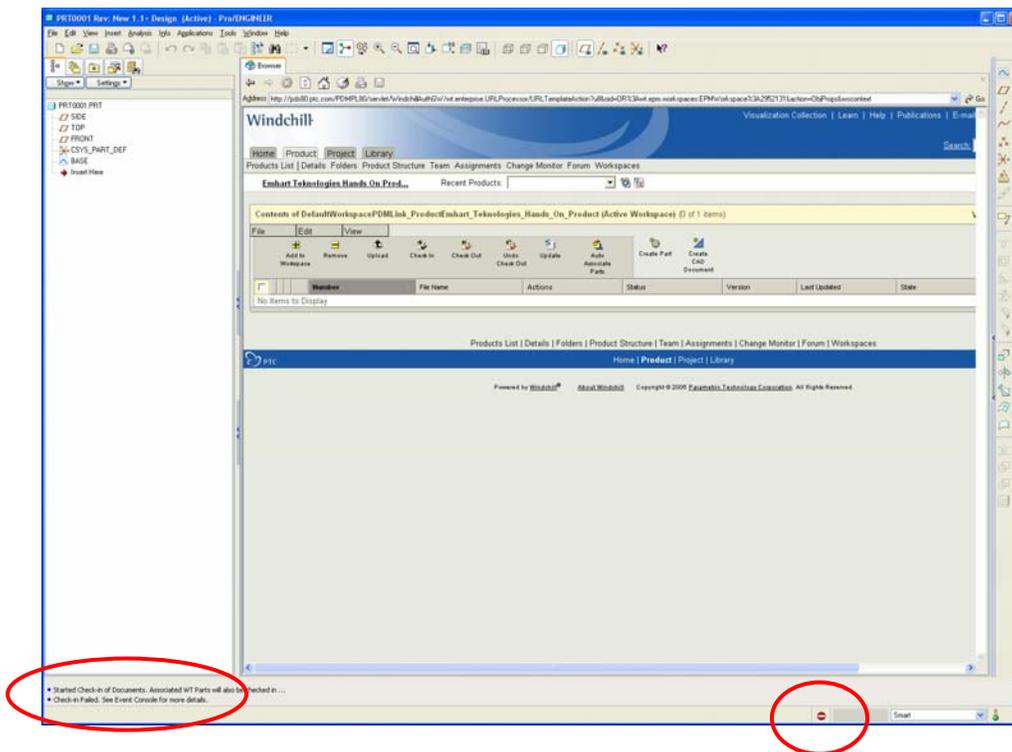
Now let's see the result of this configuration. I will try to check in a sample part that has not passed the ModelCHECK validation. Based on the ModelCHECK configuration file options that I have setup, the user will have to interactively run ModelCHECK.



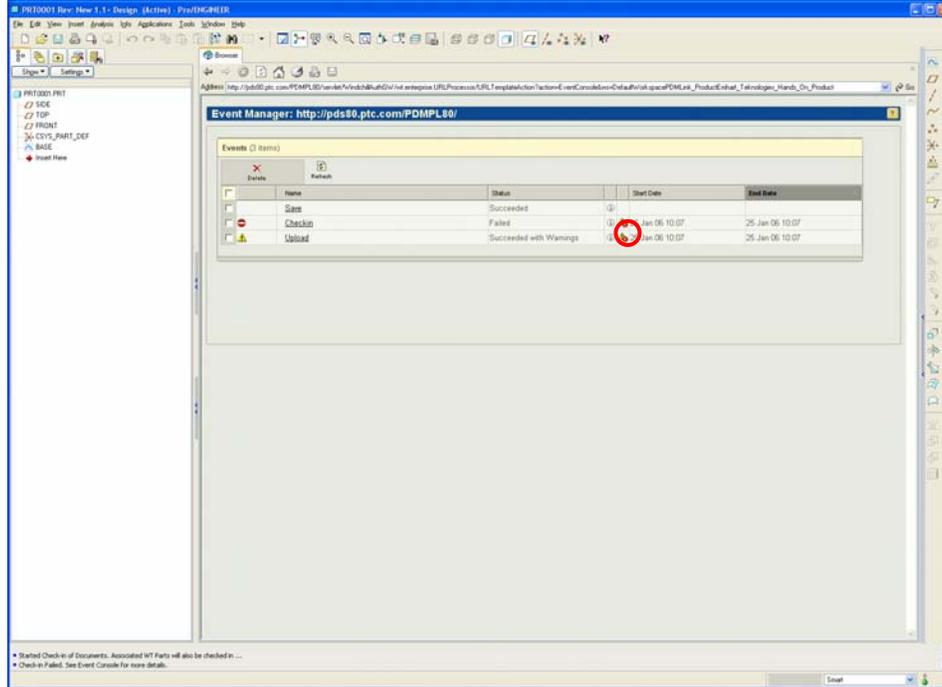
This model has 5 errors yet I will still try to check in the file to PDMLink.



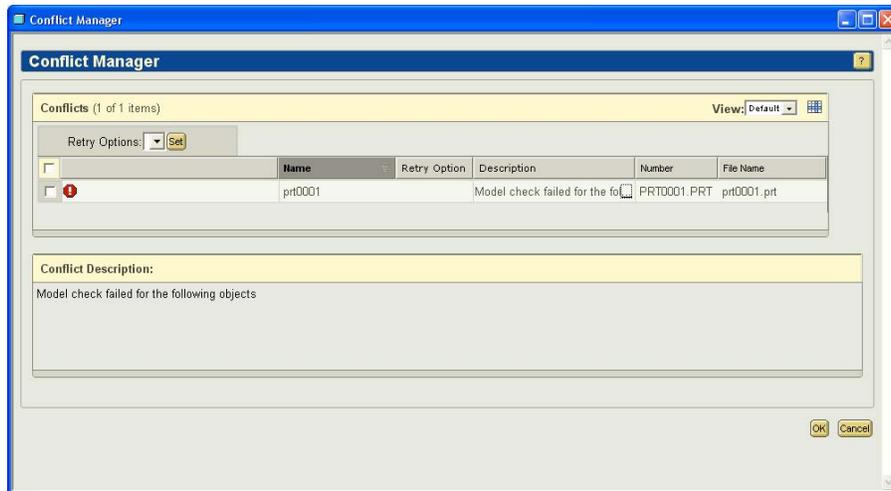
The check in failed for this part. That is indicated in the message window in the lower left hand corner of Pro/ENGINEER. To see why the part failed you can select the red circle to identify the reason.



The Event Manager indicates the status of events. By selecting the 'View Conflicts' icon next to the failed checkin event, a report will list the reason for the failure.



The conflict manager indicates the part failed check in because ModelCHECK failed. In this case, there were too many errors (5). We set a maximum value of 0 in the configuration file.



If you want to disable the ModelCHECK validation feature, then all you need to do is update the cadxcommon.properties file located in the <WC\_HOME>\codebase\com\ptc\windchill\cadx\propfiles directory and set the validation entry to false.

ModelCheckValidation=false

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## 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 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!](#)

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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.

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, 2006                      Your local Pro/Engineer User Groups  
<http://www.ptcuser.org/rugs/>

June 4 - 7, 2006                      Dallas, Texas  
PTC/USER International Conference  
<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.

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