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PTC Product Focus

Design Animation Option (DAO)

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PTC Product Focus

Windchill DynamicDesignLink – Design-to-Order

Windchill DynamicDesignLink enables discrete manufacturers to address the increasing demand for design-to-order products by offering a visually interactive, Web-based, dynamic, and collaborative product customization solution.

It allows manufacturers to:

- Empower their customers and customer-facing organizations to interactively create custom products over the Web.
- Provide their design organization with a design portal that allows them to collaborate with cross-functional and cross-organizational teams and quickly deploy dynamic (configurable) product families. Furthermore, customers and customer-facing organizations can directly collaborate as they create their specific designs variations.
- Proactively control the product variety in designs by permitting high levels of customization while leveraging the economies and efficiencies of design reuse. Moreover, the solution registers the as-specified product structure for use in down stream processes.



Key features of Windchill DynamicDesignLink include self-service administration, collaboration, graphical product family modeling for capturing product and process rules, product family catalog publication, auto-generated specification wizard, automated notification and task routing, and generating of engineering deliverables. Deliverables can include a fully configured product definition including engineering documentation, 3D Pro/Engineer CAD parts and assemblies, drawings, bills-of-materials, etc. DynamicDesignLink can exchange data with other PTC solutions and supports interfaces with other systems.

Windchill DynamicDesignLink goes beyond just gathering customer input. It actually allows customers to create their own variations of a virtual prototype by defining and modifying the product to fit their needs. Customers simply log into their personal product portal via a web browser where an intelligent specification wizard guides them through a specification. They can save their specifications and revisit them for further modifications. Customers can preview the virtual prototype generated in real-time based on their specification and make modifications. Customers can also request other product-associated deliverables, such as the CAD models, bills of materials or quotes. All these deliverables are saved by the product portal for future review and use. Customers can even create multiple alternative product definitions and compare them before making a buy decision. Finally, customers can collaborate in real time with a manufacturer's product specialist if they need assistance in defining the product.

This product breaks new ground in addressing the needs of design-to-order businesses.

- Configuration rules and logic can be easily and efficiently defined and updated without programming using a graphical user interface (GUI) rather than complex programming languages. The system automatically generates the specification wizard from these rules.
- The solution works independent of whether or not the customer drives CAD models with it. However, when combined with Pro/ENGINEER in particular, the solution is unmatched.
- Individuals can compare and collaborate on alternative product designs.

- If the specified product requires new parts, the solution automatically creates them within parameters specified by the manufacturer and reuses existing parts when possible.

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Tips of the Week

Improving Animation Quality

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Tips of the Week

Preparing a Pro/ENGINEER Assembly for DynamicDesignLink

Before bringing an assembly into Windchill DynamicDesignLink (DDL), there are several checks that should be executed.

- Determine which Pro/ENGINEER parameters will be used in DDL and “designate” them. Pro/ENGINEER designated parameters are the only method for driving parametric designs with DDL. Parameters can be used in the following contexts:
 - **Driving dimensions**
Use a relation for tying a parameter to a dimension. E.g.
 $d0 = LENGTH$
where “d0” is the symbol name of the dimension and “LENGTH” is the parameter name.
 - **Input parameters of Pro/PROGRAM**
 - **Presence of features**
The logic, which controls the presence of an optional feature, should be kept in DDL wherever possible. DDL drives a Boolean (Yes/No) parameter in order to turn features on or off. Use Pro/PROGRAM for resuming or suppressing optional features depending on the value of the Boolean parameter tied to the feature. If the parameter is “true”, the feature must be resumed and suppressed otherwise.

Pro/ENGINEER parameters map to their corresponding Instance Based Attributes (IBAs) in DDL. Because not all parameters are important to be shared with DDL, only **designated** model parameters are transferred. Therefore, parameters, which are supposed to be driven by DDL, must be **model** parameters and **designated**.

If your Pro/ENGINEER assembly is built in such a way that changing a designated parameter changes the geometry of the Pro/ENGINEER model, the variant matching within DDL will be incorrect because those changes will be unknown to DDL. DDL requires that such features (Pro/PROGRAM driving geometry changes or adding or removing component unknown to DDL, parameter layouts driving component exclusion, assembly features, etc.) be eliminated before uploading the assembly.

- If the current assembly has simplified representations, do not use them for upload. Instead, use the master representation. DDL does not currently support simplified representations.
- Determine whether the assembly has any assembly User-Defined Features (UDFs). Try converting them as patterns or features of the assembly. DDL does not support assembly UDFs or assembly sets.
- Assembly cuts that are not visible in parts can be handled by DDL variant matching. However, DDL cannot distinguish between assembly cuts that are visible in parts from those which have altered the physical representation of the part. Make sure you check and remove these features from models to be configured in DDL.
- It is recommended that you rebuild the logic of Pro/PROGRAM into DDL. Remove and capture the Pro/PROGRAM logic using DDL. This process allows you to easily change the logic and capture the design intent in the DDL **Configuration Modeler**. If using Pro/PROGRAM, ensure that it does not alter the Assembly Bill-of-Material.

Follow the these guidelines when working with Pro/PROGRAM:

- Pro/PROGRAM should not create new components.
- The following should be considered when creating program driven design:
 - Only include logic in Pro/PROGRAM that requires geometrical data. All other logic can be handled in DDL.
- Do not use any program statements for switching components on or off. The existence of optional assembly components is handled by DDL.
- Pro/PROGRAM input parameters can be driven by DDL as long as they are designated model parameters.
- Use Pro/PROGRAM to resume and suppress features (assembly and part).
- Use Only Yes/No parameters in Pro/PROGRAM logic.
- Do not use the following statements. These should be put into the DDL configuration logic.
 - Pro/PROGRAM "Instantiate"
 - Pro/PROGRAM "input" statements
 - Pro/PROGRAM "execute" statements
 - Pro/PROGRAM "choose" statement
- If you have a super assembly (assembly that contains all options), unsuppress all the components.
- Test regeneration of the assembly by defining a range of values. Use a feasibility study or sensitivity analysis to verify that the regeneration works. You can also place all the designated parameters in a family table, add some range of values, and verify the models. This ensures that regeneration will not fail for the ranges specified in DDL.
- Make sure all relevant parts and assemblies (Interchange assemblies, family tables, layouts) are in the workspace before check-in. DDL supports component interchange through Interchange (Groups) Assemblies, Reference Layouts, Family Tables, and / or Super Assemblies.

For more detailed information on these topics, see the *Windchill DynamicDesignLink Model Guide*.

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Announcements

Special Hardware offers for customers updating to Pro/ENGINEER Wildfire

http://www.ptc.com/partners/hardware/current/wildfire_tlo.htm

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

Customer PTC E-Newsletter Survey

For the past 2 years I've been sending you our Customer PTC E-Newsletter such as this one.

In an attempt to deliver the highest quality and create the most value we would like to use this survey to further our "Learning" Relationship with you, our Customers. Even if you are a first time recipient of the newsletter, please feel free to share your comments on this one you're reading.

It will not take longer than a few minutes to fill out this quick survey as your input is invaluable and we greatly appreciate your input. Please click on the following link to begin:

[To Enter Survey, Please Click](#)

Please note it may be impossible to "Customize" the newsletter to meet every individual request however we will attempt to integrate as many ideas as possible.

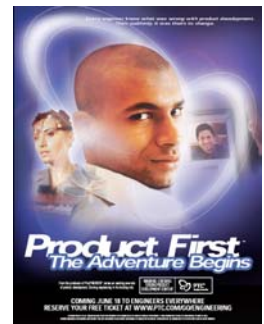
Thank-you very much for your time and feedback as we try to improve this value-added service.

PTC Sponsored Events

Click below to see PTC sponsored events:

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

Click on the poster to gain access to the Product First Virtual Event resource center!! See the software and pick up a screen-saver or two.



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, 2003 Your local Pro/Engineer User Groups
<http://www.prouser.org/rugs/>

Upcoming, 2003 Pro/USER International Conference
<http://www.prouser.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/E 2001 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 products 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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