Pro/ENGINEER® Cabling Design
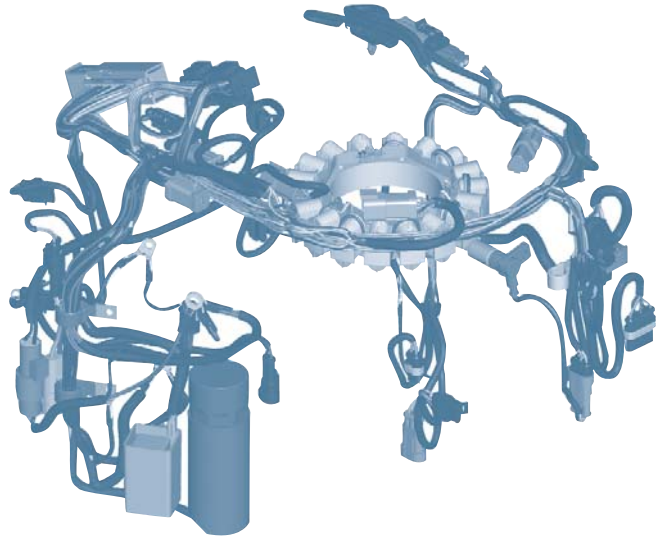## Determine the Optimal Route in Just Minutes

The process for designing electrical harnesses can be very complex–and problematic. Typically, engineers must create a physical prototype, then manually determine a route for the cabling, which is usually the first route that works, and not necessarily the optimal one. Even worse, when any engineering change is made to the design, it means starting over by recreating the physical prototype and rerouting the cabling, wasting valuable time. Additionally, the companies that create the prototypes often don't document the cabling routes, making it difficult to service these products. To solve these issues, a company will often send a service engineer to the field, which can be very costly.

Engineers at Bombardier Recreational Products used Pro/ENGINEER Cabling Design to design this wire harness. Pro/ENGINEER Cabling Design makes it easy to move components and connectors without manually re-routing wires and cables.

Pro/ENGINEER Cabling Design eliminates these issues by giving you the power to extract logical information from 2D schematics, while automating your 3D cable routing.

Now, not only can you determine a working route quickly, but you can easily find the optimum route that won't interfere with the design.

Plus, since it's a Pro/ENGINEER model, it has the advantage of full associativity; any change made to the model is automatically reflected in the cabling routes! Imagine, no more creating physical prototype after physical prototype, which will save you significant time and money.

Key Benefits

- Improve time-to-market and reduce costs through virtual prototyping and automated routing of cables

- Achieve concurrent engineering via associativity; routed cables automatically update as the product design evolves

- Quickly determine the best cabling route possible rather than wasting significant time with a trial-and-error approach

- Increase the quality of your designs by providing the best cable design possible

- Generate documentation automatically, for easier product maintenance and minimized servicing costs

- Facilitate collaboration between manufacturers and designers by making all documentation available to all teams

Features and Specifications

Electronically Document the Entire Design Process

- Capture and document schematic information and manufacturing instructions

- Implement a versatile solution for 2D and 3D designers, improving communication from schematic to product

- Automatically flatten 3D harnesses for manufacturing

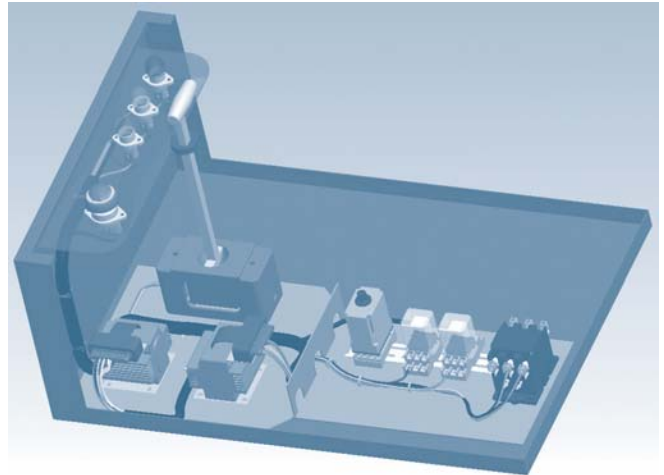## Automate the Creation of Fully Defined 3D Harnesses

- Automate harness routing by referencing 2D logical information

- Digitally define complete 3D harnesses with connectors and components

- Implement engineering changes to the assembly, confident knowing that Pro/ENGINEER associativity will automatically update the cabling routing

- Calculate mass properties and perform clearance evaluations

Automate the Flattening of 3D Harnesses for Manufacturing

- Quickly flatten 3D harnesses to create accurate 2D harness documentation with intelligent dimension, BOMs, and pinouts

- Create fully associative, customizable lists and tables containing all information necessary to create the harness

- Detail the flat harness drawing with parametric notes, dimensions, symbols, and tables

Enable More Effective Enterprise Communication

- Produce fully associative detail drawings for 3D and flattened harnesses

- Create complete documentation, including intelligent dimensions, BOMs, and pinouts

- Share schematics, documentation, and harnesses with the entire product development team using PTC's ProductView® visualization tool

With Pro/ENGINEER Cabling Design, you can automatically route cables within your model, ensuring a fully defined digital model.

The Pro/ENGINEER Advantage

With the built-in associativity of Pro/ENGINEER, you can rest assured that no matter where you make a change in your design, those changes will be propagated automatically throughout all downstream deliverables. With Pro/ENGINEER Cabling Design, you'll be able to perform all cabling functions quickly and easily because Pro/ENGINEER already understands your model. Associativity means you don't have to worry about working with an outdated model or recreating it for a cabling prototype. Pro/ENGINEER applications are seamlessly integrated, so you can focus on designing your product–not wasting time and energy recreating the model for use in different applications. The seamless integration of Pro/ENGINEER and its modules eliminates the errors that can occur when you are recreating the model in different, unassociative applications.

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