

PRESS RELEASE

Exa Streamlines and Accelerates the Simulation Model Preparation Process with the Release of PowerDELTA

BURLINGTON, MA, USA [June 25, 2009]—Exa® Corporation, a global innovator of fluids simulation (CAE/CFD) software for product engineering, announces the release of PowerDELTA™, the latest product in its suite of integrated tools that enhance the product development process. PowerDELTA dramatically streamlines and automates the simulation model creation process by enabling the numerous, often lengthy, meshing tasks to be performed in a single, easy-to-use, integrated application. Native CAD data of varying levels of complexity or completeness are rapidly and easily transformed using a sequence of parametric geometry and meshing features into high quality, simulation-ready meshes. With PowerDELTA, design changes are rapidly propagated through the simulation model to generate updated meshes—a huge, time saving, benefit.

“With the tough economic conditions leading organizations are seeking even more urgently to reduce cost and accelerate time-to-market by front-loading product performance analysis in the design process where critical and costly design decisions are made,” remarked Stephen Remondi, President and CEO at Exa. “An accurate and efficient analysis process becomes essential because many design iterations will need to be analyzed.”

A key activity within the analysis process is preparing models for simulation, and in most organizations it’s a significant barrier to an efficient process. Typically, mesh preparation time is very long – taking days or even weeks – and is complicated by the need to handle conceptual geometry and poor quality carry-over CAD data. Further adding to process inefficiency is the fact that many companies build multiple redundant simulation models for different types of analysis. Worse still, it is typical for a simulation model to be one-time, one-use only; due the extreme difficulty traditional tools have updating simulation models when designs change.

“PowerDELTA is a key component of Exa’s strategy to support the complete digital product engineering and analysis process in real-world conditions,” comments Dr. Paul Stewart, Exa’s Director of Product Management. “PowerDELTA solves the problem by applying the proven concepts of parametric feature modeling and history tree model management to the process of simulation model creation and update.” Stewart continues, “PowerDELTA imports CAD data from all major systems, handles varying levels of quality, provides an environment for collaboration and team design, and enables change on any level.”

About PowerDELTA

Exa's latest product offers numerous benefits to enhance the simulation model creation process:

- ◆ **Reduces mesh preparation time.** PowerDELTA is a single, integrated, product that starts with input CAD and produces simulation-ready surface meshes eliminating the multiple mesh preparation tools and variety of data formats typically required. Because PowerFLOW's unique approach to analysis does not need a separate mesh for the fluid, which is required with traditional fluids solvers, once the surface meshes are created with PowerDELTA, the model is ready for simulation.
- ◆ **Highly productive.** Designed for the professional user, PowerDELTA has easy-to-use graphical interfaces that guide the user through the feature creation process. Unique project, frame, and branch data organization capabilities enable large models to be quickly sorted and allow large mesh preparation tasks to be shared by multiple people. High speed, high quality, wrapping and decimation features allow high quality meshes to be created in significantly less time.
- ◆ **Enables rapid response to design changes.** Parametric feature history tree regeneration allows the user to simply change feature parameters and regenerate to propagate changes through the model.
- ◆ **Handles design data of varying quality and size.** PowerDELTA can directly import and heal most CAD formats, removing the reliance on, and wait for, the design department to export geometry in a neutral format. PowerDELTA directly reads and retains native CAD assembly structures eliminating the time-intensive task of recreating vehicle sub-system structures.
- ◆ **Eliminates redundant simulation model building.** Typical industry practice is to use different simulation tools for aerodynamic, aeroacoustic, and thermal analyses – each of which require a separate surface mesh and fluid mesh. Exa's unique approach and focus on validation of results mean that a single tool can be used for all types of fluids-driven analysis. A single PowerDELTA mesh can be used with PowerFLOW for aerodynamic, aeroacoustic, and thermal analyses.
- ◆ **Enables reuse, captures best practice, & reduces errors.** Saved frames and branches with pre-built feature sequences easily capture and allow reuse of best practices for different components of the model, e.g. engine vs. upper body. PowerDELTA's ability to read native CAD assembly structures eliminates the typical errors of missing parts from the simulation or using an incorrect configuration, thus avoiding inaccurate results and wasted simulation runs.



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About Exa Corporation

Exa Corporation develops, markets, and supports a suite of fluids simulation software solutions including PowerFLOW®, PowerDELTA™, PowerCLAY®, PowerWRAP®, PowerVIZ, PowerSPECTRUM®, PowerCOOL and PowerTHERM along with professional engineering consulting services. Exa's products and services enable engineers to create competitive designs, while shortening product design cycles, and speeding time-to-market. A partial customer list includes: AGCO, Audi, BMW, Chrysler, Ford, Hyundai, Kenworth, MAN, Nissan, Peterbilt, Renault, Scania, Toyota, Volkswagen, and Volvo Trucks.

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