

PRESS RELEASE Optimus Revision 10

Optimus Rev 10 puts design engineers in the driver's seat for faster, better-targeted design optimization

Leuven (Belgium), March 29 - 2011 – Noesis Solutions releases Optimus Rev 10, offering superior process integration and bundling more modules and features in its Base configuration. Translating designers' ideas and goals into an Optimus optimization process flow has never been more intuitive and straightforward. Optimus' enhanced software environment informs engineering specialists about the ongoing optimization, and guides them in steering the process based on their extensive experience. It's all about getting better feedback faster, also by applying the full strength of Optimus' enhanced methods and leading-edge algorithms for multi-objective optimization. No matter how complex the product or how far the ambitions reach, Optimus identifies the optimum design in record time.

More value for money and interaction with the user

With Optimus' reshuffled Base / Standard / Premium versions, a lot of optional modules are now available as part of the default Rev 10 software configuration. This increases the return on investment for new customers and also rewards loyal users; two advantages that result from pushing optimization technology towards commodity use.

Optimus is renowned for capturing and automating the most complex simulation process workflows without any programming skills. Perfect examples in this regard are user customizable actions and interfaces (UCAs and UCIs), which can simply be plugged in any workflow. Numerous improvements in Optimus Rev 10 build in even more flexibility in design optimization definition and execution. Using Reject Rules, users can simply bypass expensive calculations when it's known they will fail. And by choosing the start population of Genetic Optimization algorithms, fewer design optimization iteration steps are needed altogether, saving simulation time and expenditure. The default No Stop condition makes sure that Optimus completes design optimization in full and collects a complete set of result data under any external circumstances.

Picking the optimization method that's most suitable

Talking about methods. Rev 10 incorporates a second-order Adaptive Region Method (ARM) algorithm extension. Optimus applies a smart set of panning and zooming techniques to hunt the location of the optimal point. Based on successive approximation of the quadratic response surface, Optimus accurately captures non-linearities using fewer iteration steps.

Noesis Solutions also made available the first in a series of plug-in methods in partnership with eArtius, combining the best of gradient-based techniques and genetic algorithms. Using this multi-objective optimization plug-in, Optimus only requires 2 to 5 model evaluations to identify each Pareto optimal design. This speeds up the process considerably, irrespective of simulation model complexity.

Driving more CAE packages and mastering graphic reporting

The introduction of partner technology plug-ins fits in Noesis Solutions' strategy to maximize the openness of the Optimus design optimization and process integration software platform. Rev 10 of Optimus presents an impressive series of new UCIs that drive rapid design software packages such as CoCreate, SpaceClaim and SFE

Concept as well as simulation software solutions including MoldFlow and Abaqus 6.10.

Optimus Rev 10 supports critical decision making by introducing new plot types, populated by means of multi-disciplinary data mining performed in real time. Some plots serve the identification of trust regions between disciplines in the solution spaces, others are helpful with filtering combinations of designs to limit the solution corridor. Another purpose is generating new design of experiment samples on the basis of data mining results.

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