

PRESS RELEASE

New Optimus release: a full-process PIDO platform that's faster and smarter than ever

Leuven (Belgium), June 4, 2015 – With the latest 10.16 release, Optimus once more confirms its position as the leading full-process PIDO platform introducing several new capabilities on different levels. New Adaptive DOE methods enable engineers to better focus on interesting design space regions, increasing control over design space discovery strategies and making better use of existing datasets. By supporting the Functional Mock-up Interface (FMI) standard, Optimus delivers computationally inexpensive yet highly accurate FMUs that facilitate model-based systems engineering. All new Optimus capabilities further increase the flexibility and efficiency of the overall simulation-based engineering process – reducing total cost of ownership (TCO) for our customers.

Active learning through Adaptive DOE

Development teams doing simulation-based engineering can boost their productivity using Optimus' Design of Experiments (DOE) methods early in the process – planning virtual experiments to deliver a maximum of relevant design insights at minimum simulation cost. With the new Optimus release, engineers can go one step further using Adaptive DOE techniques to actively exploit the design space knowledge being built up as the experiments run.

The automated active learning process adds extra virtual experiments whenever and wherever needed to better capture the (originally unknown) design space. This eliminates the risk to undersample the most relevant design space regions (overlooking critical information) or oversample less relevant regions (wasting simulation resources). Optimus offers the flexibility to stop this active learning process at any time, for instance when the required sampling accuracy is reached and/or when the allocated simulation budget is spent.

By providing the possibility to start from any user-defined population, Optimus Adaptive DOE allows engineers to expand existing DOE datasets and make better use of the original data. By adding any new DOE samples in batches, the user can also benefit from Optimus' strong parallelization capabilities to further speed up the process.

FMU/FMI facilitates export and exchange of surrogate models

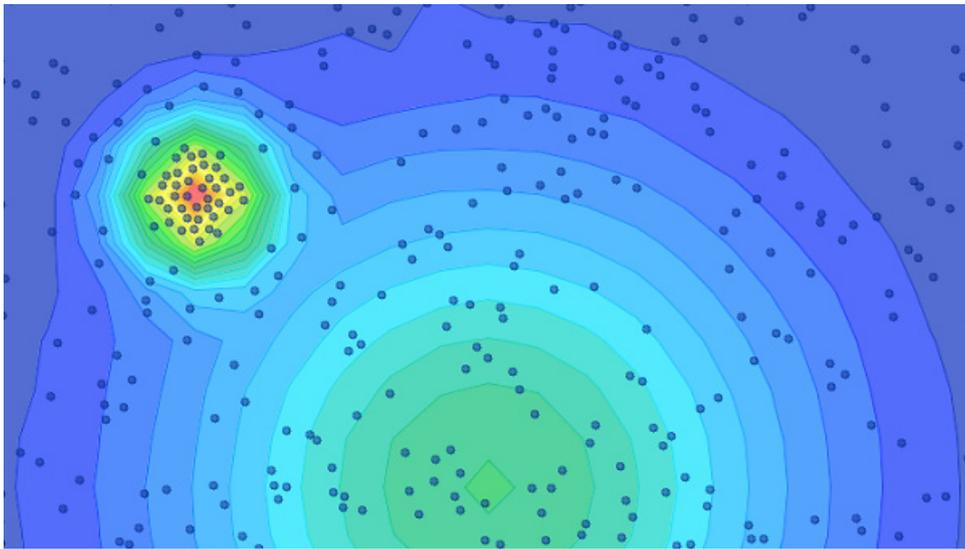
Optimus adds support of the Functional Mock-up Interface (FMI) standard. Using the open standard, Optimus is now able to export accurate yet simulation-inexpensive surrogate models as Functional Mock-up Units (FMU) – allowing straightforward interconnection with individual subsystem and control system models. As a result, a large number of mechanical, electronic and software components can be elegantly combined into a single design model. This approach is extremely useful for designing functions driven by electronic vehicle devices, such as dynamic stability controllers, emission controllers, etc. especially when different components originate from various suppliers or when the new design needs to be marketed in multiple variants.

In particular when the underlying physics simulations are computationally expensive, the surrogate models packaged as FMUs allow for extremely fast simulations. FMUs can be run as part of any Optimus simulation workflow through an FMI Master tool (e.g. Dymola, JModelica, FMU Checker, LMS Virtual.Lab AMESim, MapleSim, MATLAB/Simulink, AMESim, SimulationX, etc.). Internally Optimus can fully parameterize FMUs just like any 'regular' physics simulation model. This means manufacturers can flexibly and efficiently analyze FMU-based simulation models using Optimus' full design space discovery and multi-objective optimization capabilities.

About Noesis Solutions

Noesis Solutions is a simulation innovation partner to manufacturers in automotive, aerospace, and other engineering-intensive industries. Specialized in simulation process integration and numerical design optimization, its flagship software Optimus helps customers adopt an 'Engineer by Objective' development strategy to resolve their toughest multi-disciplinary engineering challenges. Optimus identifies the best design candidates by managing a parametric simulation campaign that orchestrates customers' software tools. Customers using this approach report design time savings averaging over 30%, while achieving 10% or more product performance improvements.

Noesis Solutions operates through a network of subsidiaries and representatives in key locations around the world. For more information, please visit www.noesisolutions.com.



New Adaptive DOE methods ensure a denser network of virtual experiments in those design space regions that are most interesting for development engineers.

Noesis Solutions Press Contact:
Kirsten Cabergs
Phone +32 16 31 70 40
kirsten.cabergs@noesisolutions.com

Noesis Solutions NV
Gaston Geenslaan 11, B4
3001 Leuven - Belgium
Phone +32 16 31 70 40 - Fax +32 16 31 70 48
www.noesisolutions.com