

PRESS RELEASE

## **Optimus 10.18 firmly extends offering of optimization algorithms and software interfaces**

Leuven (Belgium), August 17 - 2016 – Noesis Solutions, the developer of Optimus and id8, announces the release of Optimus 10.18. The new Optimus release extends its methods library by introducing the innovative FINNOPT algorithm and an easy connection to the Dakota optimization algorithms. Optimus 10.18 also reaches out to a growing engineering community through multiple new and more powerful software interfaces, including SOLIDWORKS and Software Cradle CFD tools. Both the new algorithms and interfaces underline the power of Optimus' openness—firmly positioning Optimus as the industry's preferred platform for Objectives Driven Draft-to-Craft Engineering.

### **FINNOPT interactive multi-objective optimization**

Thanks to Noesis Solutions' exclusive partnership with FINNOPT, Optimus users gain access to the world's first commercial interactive multi-objective optimization algorithms. Developed by FINNOPT optimization specialists, the algorithms enable decision makers to interactively deal with a large number of conflicting objectives. They simply enter preferences using intuitive software screens, and receive only those design configurations that are preferable or desirable. They can modify objective specifications any time during the process, and direct optimization in specific target directions. The FINNOPT plugin to Optimus comes with different visualizations that graphically illustrate the complex trade-offs across the high-count objectives. This allows users to truly understand and knowledgeably evaluate the suggested trade-offs in order to make well-informed engineering decisions.

### **Dakota algorithms linked to Optimus methods library**

Noesis Solutions further extends its already comprehensive library of algorithms with dozens of powerful algorithms by providing a straightforward connection with the Dakota toolkit (from Sandia National Laboratories). This enables Optimus users to gain access to all of Dakota's powerful gradient and non-gradient based optimization methods directly from their familiar working environment. Likewise, the Dakota plugin to Optimus is suitable for uncertainty quantification with sampling, reliability, and stochastic expansion methods. Connectors to the most widely used Dakota algorithms are provided and they can be selected like any Optimus built-in algorithms, with Dakota running next to Optimus. Any other algorithms from the Dakota toolkit can be easily added afterwards using straightforward templates.

### **Extending connectivity with leading 3D CAD/CAE solutions**

By adding the SOLIDWORKS interface, Optimus completed its seamless connectivity with leading global 3D CAD/CAE solutions including CATIA V5, PTC Creo and Siemens NX. The interface makes it possible to run design space exploration and design optimization, involving parametric SOLIDWORKS 3D CAD modeling as well as structural and dynamic simulation.

Further extensions and performance improvements to existing interfaces add support for PTC Creo 3.0, Siemens NX and ANSYS Workbench.

## Interfacing with Software Cradle, CETOL and JMAG

The latest Optimus release features interfaces with SC/Tetra, scSTREAM and HeatDesigner from Software Cradle. These interfaces offer CFD engineers user-friendly yet powerful means to explore the design space and optimize thermal-fluid product performance.

Optimus 10.18 further enhanced the CETOL 6 $\sigma$  interface by offering enhanced filtering capabilities. The filters greatly simplify the selection of design parameters and result measurements from CETOL 6 $\sigma$  models.

In addition, the new Optimus 10.18 release provides parallelization capabilities for the existing JMAG interface. This enables faster and better targeted electromechanical design optimization.

## About Noesis Solutions

Noesis Solutions is an engineering innovation partner to manufacturers in engineering-intensive industries. Specialized in solutions that enable **Objectives Driven Draft-to-Craft Engineering** processes, its software products and services help customers adopt a targeted development strategy that resolves their toughest multi-disciplinary engineering challenges.

This **Engineer by Objectives** strategy entails an automated approach that streamlines engineering processes to efficiently manage the growing complexity of today's engineering challenges. In addition, interactive design space visualization allows engineering teams to make informed decisions faster – empowering them to form & transform ideas into products that outsmart competition.

Noesis Solutions operates through a network of subsidiaries and representatives in key locations around the world. For more information, please visit [www.noesisolutions.com](http://www.noesisolutions.com).

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