

November 18th, 2016

JSOL Corporation

**MathWorks and JMAG's joint cooperation
to advance Model-Based Design using FEA Models.**

JSOL Corporation (Representative: Mitsutaka Nakamura, President and CEO, hereafter "JSOL") is collaborating with MathWorks (headquarters in Natick, Massachusetts, USA) to help control engineers export FEA-based motor models into Simulink, enhancing the use of Model-Based Design for developing Electric Vehicles (EV)/Hybrid Electric Vehicles (HEV) and other motor drives.

High-output motors require sophisticated control algorithms to ensure EV/HEV are both responsive and electrically efficient. Model-Based Design helps control engineers use simulation to design and validate the powertrain control systems to ensure optimal motor speed and torque output. The powertrain development process can ensure greater product quality and reliability when engineers share high-fidelity motor model data to concurrently optimize the motor design and motor control system. MathWorks, makers of MATLAB and Simulink, and JSOL, developer of JMAG, are working together to extend Model-Based Design to include high fidelity motor models.

MATLAB and Simulink are recognized software for analyzing and simulating automotive control systems. JMAG is an accomplished FEA environment for designing EV/HEV drive motors. By collaborating to improve how engineers move high-fidelity motor data from JMAG into Simulink, MathWorks and JSOL are helping the automotive industry develop better performing, more efficient, and more reliable electric vehicles. Model-Based Design continues to grow in value to the automotive industry. Further details regarding this partnership will be announced during the JMAG Users Conference, to be held on December 7th and 8th, 2016.

Customer Quotes ;

IAV welcomes the collaboration between JMAG and MathWorks to realize high-fidelity model based design:

Simulation technology that integrates motor design and control systems is indispensable to develop a next-generation motor drive system. This technology is indispensable for obtaining an accurate understanding of the behavior of an entire drive system. This collaboration promises to further advance control simulations utilizing high-fidelity FEM motor models.

Bernd Cebulski, Team Manager
HV-Traction Systems & Batteries, IAV GmbH

Partner Quotes ;

We are excited to work with JSOL to port high fidelity motor models from JMAG into Simulink, helping engineers gain greater confidence in their system design. Our cooperation is evolving Model-Based Design for motor control in the automotive and other industries that need to improve the efficiency and performance of motor driven systems.

Tony Lennon, Application Manager,
Motor and Power Control, Technical Marketing, MathWorks

***About JMAG :**

<http://www.jmag-international.com>

JMAG is simulation software for electromechanical design and development which has been continually developed with the support of those in many industries and universities since 1983.

It accurately grasps complex physical phenomena inside of equipment and performs high-speed analysis. It has been used as a product development and design tool for motors, transformers, actuators, sensors, and other electronics and power electronics.

***About MathWorks**

<http://www.mathworks.com/>

MathWorks is the leading developer of mathematical computing software. MATLAB, the language of technical computing, is a programming environment for algorithm development, data analysis, visualization, and numeric computation. Simulink is a graphical environment for simulation and Model-Based Design for multidomain dynamic and embedded systems. Engineers and scientists worldwide rely on these product families to accelerate the pace of discovery, innovation, and development in automotive, aerospace, electronics, financial services, biotech-pharmaceutical, and other industries. MATLAB and Simulink are also fundamental teaching and research tools in the world's universities and learning institutions. Founded in 1984, MathWorks employs more than 3500 people in 15 countries, with headquarters in Natick, Massachusetts, USA. For additional information, visit mathworks.com.

MATLAB and Simulink are registered trademarks of The MathWorks, Inc. See mathworks.com/trademarks for a list of additional trademarks. Other product or brand names may be trademarks or registered trademarks of their respective holders.

About JSOL Corporation

<http://www.jsol.co.jp/>

Address: Harumi Center Bldg. 2-5-24,Harumi,Chuo-ku,Tokyo 104-0053, Japan

Representative: Mitsutaka Nakamura, President and CEO

Shareholder: NTT DATA Corporation, The Japan Research Institute, Limited

Established: July, 2006

Business Profile:

JSOL Corporation is a ICT service coordinator offering consistent line of services from ICT consulting to system framework creation and management, providing customers from various industries such as production and distribution, service, and finance, a means to maximize their IT investments.

In January of 2009, following a business and capital alliance with NTT DATA, the company name was changed to JSOL. It has evolved as a member of the NTT DATA Group and Sumitomo Mitsui Financial Group to allow an even wider range of needs to be met.

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