PSA Peugeot Citroën Selects MSC Nastran as its Choice for Car Body Nonlinear FEA

SANTA ANA, CA--(Marketwire – November 3rd, 2011) – MSC Software Corporation, the leader in multidiscipline simulation solutions that accelerate product innovation, today announced that PSA Peugeot Citroën, the leading French manufacturer of cars and motorcycles sold under the Peugeot and Citroën brand names, has extended its simulation environment to take advantage of MSC Nastran for Nonlinear analysis at various development sites.

PSA Peugeot Citroën is a long term user of MSC Nastran software for linear simulations of the car body structure. The French company expects the newly available nonlinear analysis capabilities in MSC Nastran to improve and accelerate the simulation process and to reduce time and development costs.

Imagine what happens if somebody hangs on an open car door as if it were a high bar. Will it still close smoothly after being exposed to this exceptional load? These are the kinds of problems that PSA engineers solve with the help of MSC Nastran Nonlinear. The principal reasons why the French carmakers' analysis department decided to implement the new tool were its powerful capabilities for nonlinear simulations with contact situations, and its perfect integration with the rest of the MSC product family. This seamless integration allows the reuse of existing finite element models, reduces the number of steps necessary for pre-processing, and speeds up the learning process. MSC Software's simulation experts helped PSA to implement the software and to train the users, offering optimized training courses for specific PSA use cases.

MSC Nastran's Nonlinear replaces another nonlinear solver used previously at PSA, which was not closely integrated in the existing simulation environment. "To do nonlinear simulations we had to convert the existing models and pre-process them again with a different tool which was not only time consuming, but also made it difficult

to trace the different model versions," explains Sylvain Calmels, responsible for technical support at the analysis department in Sochaux, France. "MCS's integrated solution for linear and nonlinear calculations facilitates reuse of models which saves a lot of time in pre-processing and enables us to standardize the data exchange formats for body models when collaborating with other departments or external suppliers."

At present, some 40 computer-aided engineering (CAE) specialists at PSA use MSC Nastran to simulate complex nonlinear problems involving contact like exceptional loads or structural rigidity of the car body. The engineers are based at the headquarters near Paris and the development site in Sochaux, close to the Swiss border. In the near future the MSC Nastran Nonlinear installation will be extended to development sites in Brazil and China, as Sylvain Calmels points out. MCS's subscription model allows users at different sites to share the existing licenses.

Since the installation of MSC Nastran's Solution 400 Nonlinear capability, MSC Software and PSA Peugeot Citroën collaborate to optimize the use of the solution. This collaboration allows MSC to continuously improve the performance of the solution, and provides best practices and enhances users' knowledge.

"Automotive manufacturers all around the world are under constant pressure to reduce costs and development times. Therefore, they need powerful and closely integrated solutions for linear and nonlinear simulations to assure the feasibility of their cars early in the design process, and to reduce the costs for physical prototyping while achieving shorter cycle times," explains Kais Bouchiba, Senior Vice President EMEA at MSC Software. "PSA's decision to expand its long term partnership with MSC and to implement MSC Nastran Nonlinear shows that our solution is best suited for this very demanding industry."

To register for the upcoming MSC Nastran 2012 "What's New" webinar, please visit http://www.mscsoftware.com/webinar/Nastran2012.

About MSC Software

MSC Software is one of the ten original software companies and the leader in multidiscipline simulation. As a trusted partner, MSC Software helps companies improve quality, save time and reduce costs associated with design and test of manufactured products. Academic institutions, researchers, and students employ MSC technology to expand individual knowledge as well as expand the horizon of simulation. MSC Software employs over 1,000 professionals in 20 countries. For additional information about MSC Software's products and services, please visit: www.mscsoftware.com.

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