MSC.Software Introduces Adams Gear Advanced Technology Solution to Accurately Analyze Transmissions

Engineers use a single dynamic simulation tool for the complete design process of transmissions

SANTA ANA, CA--(Marketwire – December 23rd, 2010) - MSC.Software Corporation, the leader in multidiscipline simulation solutions that accelerate product innovation, today announced the release of Adams Gear Advanced Technology. The new toolkit is a plug-in to the world leading multibody dynamics program MD Adams from MSC.Software. The customized gear simulation environment enables engineers to use a single and scalable dynamic simulation tool for:

- Complete design process of transmission systems
- High fidelity systems simulation including detailed gears and bearings and optimization

High performance transmissions can be found in every technical industry segment such as machinery, automotive, aerospace, medical products, wind turbines, and consumer products. All transmissions have to fulfill the same requirements. They must be lightweight, quiet, vibration free, durable under harsh operating conditions – and all developed in shorter time frames.

Traditional transmission design procedures often rely only on static design studies. It is widely known that these design procedures alone are not meeting the demands of modern virtual prototyping. Decoupling system dynamics from transmission dynamics carries potential design risks, which will most likely lead to higher development costs and longer development times. Therefore, accurate prediction of system dynamics is a common prerequisite for robust system engineering and reliable component dimensioning.

Adams Gear Advanced Technology is a fully transient dynamic solution based on MD Adams. The combination of MD Adams and transmission specific methodologies built into its environment allows design teams to rely on both design approaches: statics as well dynamics. The same model used for static analysis throughout the design process can be used to perform dynamic studies of the component transmission and/or full system modelling. Dynamic effects like gear rattle can be observed.

The designer can then design the best performing transmission system overall layout and simultaneously receive and consider the relevant information about displacements, deflections and stresses in gears and bearings. This is possible since the high performance model consists of flexible
and interacting components. Because of the scalability of Adams Gear Advanced Technology, the user can easily simplify arbitrary components to speed up the calculation and to evaluate control systems.

The Adams Gear Advanced Technology solution is available now, and supports:

- Straight, helical, internal and external gears
- High resolution gear contact algorithm that computes the distributed contact in function of the tooth shape (straight or helical), the applied micro corrections, the wheel distance and the misalignments within the highly flexible and interacting system components.
- Numerous output data in accordance to established standards and animations assist the engineer in evaluating the transmission design.

Please contact us at www.mscsoftware.com for more information.

About MSC.Software

MSC.Software is the worldwide leader of multidiscipline simulation solutions that help companies improve quality, save time and reduce costs associated with designing and testing manufactured products. MSC.Software works with thousands of companies worldwide to develop better products faster with simulation technology, software, and services. MSC.Software is a global company with offices in 20 countries. For additional information about MSC.Software’s products and services, please visit www.mscsoftware.com.

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