

MAST Virtual Test Lab Speeds Development and Saves Cost through ADAMS Model Integration

Benefits

- » Simulates MAST dynamics before physical testing
- » Offers identical operator interfaces and reporting capabilities for virtual and physical “tests”
- » Provides a validation path for ADAMS models directly replicating your physical testing process
- » Allows rapid evaluation of design alternatives and boundary conditions using validated models

MTS MAST™ Virtual Test Lab technology lets you evaluate a broad range of ADAMS®-based automotive components and subsystems models. It uses an ADAMS model of the test system to apply the vibration forces in exactly the same manner as in a physical test.

Typical automotive components tested on the virtual MAST and standard MAST systems include radiators, instrument panels, engine mounts, fuel tanks, seats and similar components and assemblies.

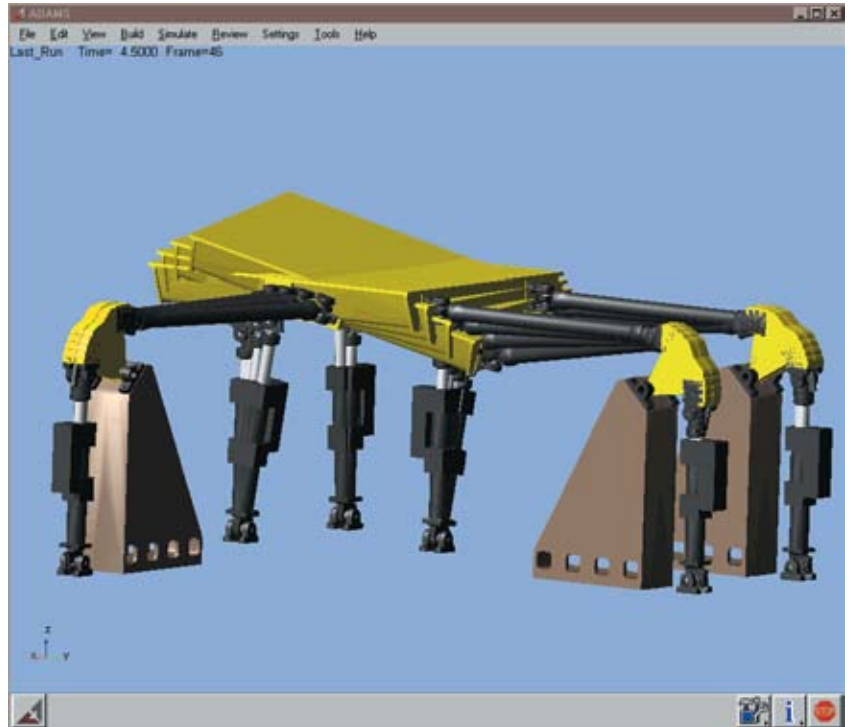
The MTS MAST virtual test lab, like the actual system, provides up to six degrees of freedom of motion and up to three auxiliary control channels. These additional channels can be used to control torque input fixtures. Controlled motions include:

vertical, lateral, longitudinal, pitch, roll and yaw. These inputs reproduce the inertial vibration environment typical of automotive bodies, subsystems and components.

ADAMS dynamic models are easily integrated into the MTS MAST virtual test lab. This allows you to simulate MAST dynamics prior to actual physical testing. The virtual tests are run using the same interface that you will use during the physical test. Training and system operational issues can also be accomplished prior to completion of physical prototypes so your operators can begin testing as soon as a specimen is available. The MAST virtual test lab ensures that the data collected is already in the same format, speeding the correlation and analysis of physical test results.

Frequently, development schedules do not always allow engineers to evaluate all test specimen design alternatives or boundary conditions. In these cases, you can use the MAST virtual test lab to validate your ADAMS model and then use the model to evaluate more “what-if” design alternatives or boundary conditions. In addition, the MAST virtual test lab will allow testing of those conditions not easily measured in service.

The MTS MAST virtual test lab provides the wide operating range typical of actual MAST systems. RPC® (Remote Parameter Control™) Software can control the MAST system to reproduce time history road load data for optimized simulation. Versatile function generation allows for sine, sine sweep and random function commands to the test rig, equivalent to those used in actual physical squeak and rattle, NVH and modal tests.



For More Information

To learn how the MTS MAST virtual test lab can improve your testing program, contact your local MTS field sales engineer, visit www.mts.com or e-mail info@mts.com.



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