

platform independent access to NVH test data, another shortcut in the development cycle

“LMS Test.Lab provides a fast, integrated, and expandable architecture, that covers all NVH applications we need in our body, engine, powertrain, and vehicle integration departments. Its flexibility to accommodate PSA PEUGEOT CITROËN testing processes, and its communication capabilities through data standards such as ASAM ODS, provide a perfect fit with our vehicle development strategy.”

Jean-Philippe Soulat
Project Manager Testing Systems
for Vehicle Integration

i Summary

Challenge: Easily sharing data between departments, and even with suppliers, is one of the keys to shortening the development cycle.

Solution: LMS integrated the ASAM ODS standards into its entire product line, from LMS Test.Lab for NVH testing and analysis to LMS Virtual.Lab, its integrated platform for functional performance simulation.

Key Benefits: Enable consistent data exchange between departments and companies, even if they are active in different engineering disciplines

ii Situation

To permit universal, platform independent access to NVH test data, LMS actively participated in the development and the promotion of the ODS standard for NVH. Using common ASAM ODS terms to describe the NVH test objects will enable consistent data exchange between departments and companies, even if they are active in different engineering disciplines. For example, an engine sound power curve as function of rpm measured in the Acoustics department can now be documented with an engine performance curve measured during the calibration of the engine in another division of the company.

iii Challenges

“LMS acknowledges the industry need to share test data among different departments such as program management, conceptual design, component development, and system integration. Easily sharing data between

departments, and even with suppliers is one of the keys to shortening the development cycle. As such, LMS played a key role in defining and promoting the ASAM ODS standard for NVH”, commented Filip Pintelon Corporate Vice-President and General Manager Test Division at LMS. LMS integrated the ASAM ODS standard into its entire product line, from LMS Test.Lab for NVH testing and analysis to LMS Virtual.Lab, its integrated platform for functional performance simulation.

iv Success strategy

Compressed development cycles and decentralized engineering activities put increased pressure on standardization that facilitates the storage and exchange of noise and vibration engineering data. The early participation of LMS in the ASAM standardization consortium led to the gradual adoption of the open ASAM ODS standard in the LMS Test.Lab product offering. This enables organizations to put in place a true vendor-independent data management system, which can be accessed out-of-the-box by different commercial software packages. Today, LMS Test.Lab supports standardized ways to efficiently handle large bulks of noise and vibration data, and to flexibly manage measurement data by adding context-specific information.

v Challenges during the project

In the late eighties, a number of German automotive manufacturers collectively responded to the typical software and data incompatibility barriers by establishing ASAM, the Association for Standardization of Automation and Measuring systems.

platform independent access to NVH test data, another shortcut in the development cycle

Throughout its year long involvement, LMS always focused on ASAM ODS (Open Data Services), a data management standard that allows engineering data to be effectively shared between multiple applications of different vendors. Technically spoken, the standard defines the client-server interface, the physical storage of the data and guidelines as to how data needs to be structured or what descriptive meta information to be specified. Since noise and vibration related data typically requires additional descriptive attributes to uniquely characterize the data, ASAM defined a dedicated ASAM ODS NVH data model standard with a more extended set of attributes. As part of the ongoing ASAM ODS implementation.

vi Business benefits

LMS Test.Lab's standardized way of storing noise and vibration data enables companies to secure their technical legacy data and to retain their independency with regard to external software vendors. The data storage strategy of LMS Test.Lab is also in line with the industry trend to stay with native application file formats while acquiring and analyzing test data, and use open data formats during subsequent post-processing stages. LMS Tec.Manager extends the LMS Test.Lab offering by providing web-based data organization and interpretation capabilities. The LMS Tec.Manager solution in ASAM ODS enabled and provides powerful, flexible web access to all test data available.

