DriveTest

NoiseLab

Quality by Sound Evaluation

DriveTest GmbH develops and produces test-systems for the world-wide use in the automotive and railway industry. As one of the pioneering companies in the field of pinch force measurement **DriveTest** offers a broad range of different systems for a variety of applications. Every system supports the control of applicable standards. The service comprises the consultation, maintenance and calibration of the measuring devices. Major customers in the automotive industry include Webasto, Daimler Chrysler, BMW and Volkswagen.

DriveTest NoiseLab is a collection of software tools for in-production acquisition and evaluation of vibrations and sounds. Basic concepts emphasize ease of use and seamless integration into production line testing.

Noise Acquisition

Noise Acquisition is a software library for easy integration of vibration and sound acquisition into a test course. The library is available for National Instruments LabVIEW and consists of a small number of well documented ready-to-use modules. The library is preeminently suited for use with National Instruments TestStand. It is intended to use National Instruments devices and IEPE vibration sensors as acquisition hardware. When it comes to hardware selection **DriveTest** is ready to oblige.

It is an option to record a pulse signal synchronously which serves as a position reference. Acquired data is processed (amplitude and frequency spectrum) and stored to a database and/or file. Raw data saving is possible. Unique identifications and context data allow to find specific results. Self-defined filters can be applied to raw data. The output integrates seamlessly into the existing data storage structure. This way customer made add-ons to spotlight certain details are easily possible without forsaking the build in benefits of DriveTest NoiseLab.

Noise Evaluation

Previously acquired vibration and sound recordings can be identified as good or bad part with Noise Evaluation software library within the fraction of

Noise Lab at a glance

- **Ready for integration:** LabVIEW Acquisition Library for use in test sequences, hardware by National Instruments

- **Structured:** Data is stored in files and /or a database. This facilitates locating specific recordings efficiently and easy forwarding of data

- **Modular:** Independent LabVIEW libraries for acquisition and evaluation

- **User friendly:** Easy to use software for data browsing and evaluation. Reduces complex themes to under-standable concepts for occasional users

- **Extensible:** NoiseLab is an open system. Direct data access and custom exten-sions are possible

a second. Only very few library calls are necessary. Besides good or bad status, evaluation details are available. Noise Evaluation Library is a LabVIEW software and easily integrated with National Instruments TestStand for the purpose of automated test courses. It is possible to evaluate amplitude RMS and spectrum. Amplitude evaluation is either referenced in time or position. Evaluating vibration and sound is independent of recording. This allows subsequent assessing of existing data
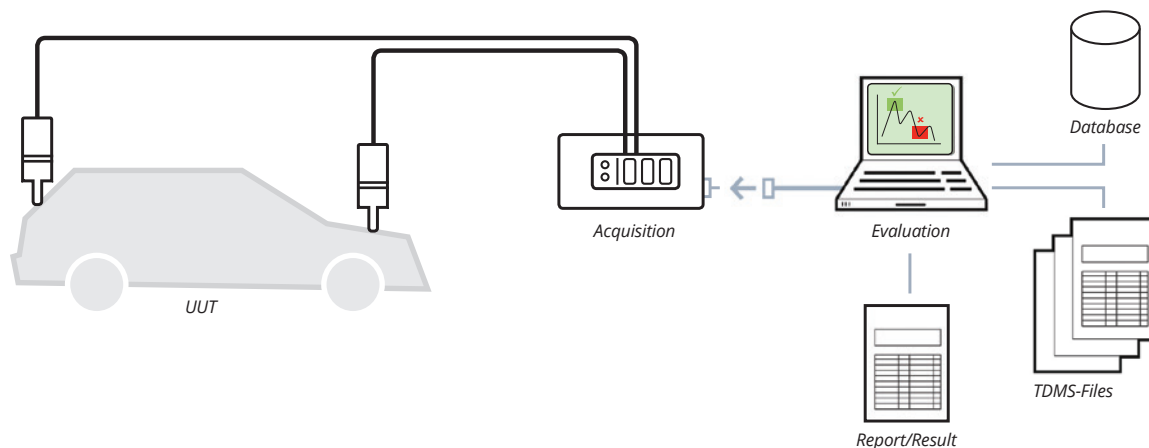
and facilitates the development of test courses without acquisition hardware.

Noise Studio

Noise Studio is a Windows application that has been designed for easy sighting and evaluating vibration and sound recordings either individually or in great numbers. Evaluation rules can be created and managed with a graphical editor. It is possible to calculate the number of good and

bad parts of previously recorded data with any evaluation rule. This way the impact of evaluation rules on the reject rate can be estimated before deploying it to production.

Noise Studio works with files and data from a database. This feature enables working with large amounts of data and efficiently finding specific results on the one hand while file based data exchange an import of individual recordings is possible on the other hand.

UUT

Acquisition

Evaluation

Database

TDMS-Files

Report/Result

Scope of delivery

All-in-One Solution
- Turn-key Test System (including measurement hardware and PC)
- Test sequences based on National Instruments TestStand
- Web-based result analysis and test configuration
- Vibration and sound test solution including Noise Studio

Plug-in Solution
- Vibration and sound test libraries for National Instruments LabVIEW/TestStand
- Noise Lab software for data sighting and evaluation