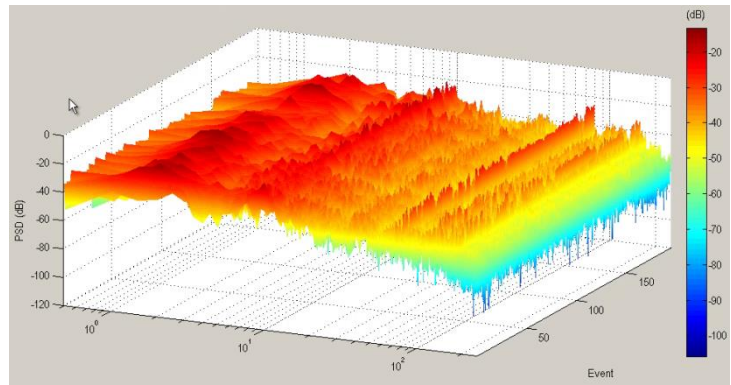


Field Data Analyser



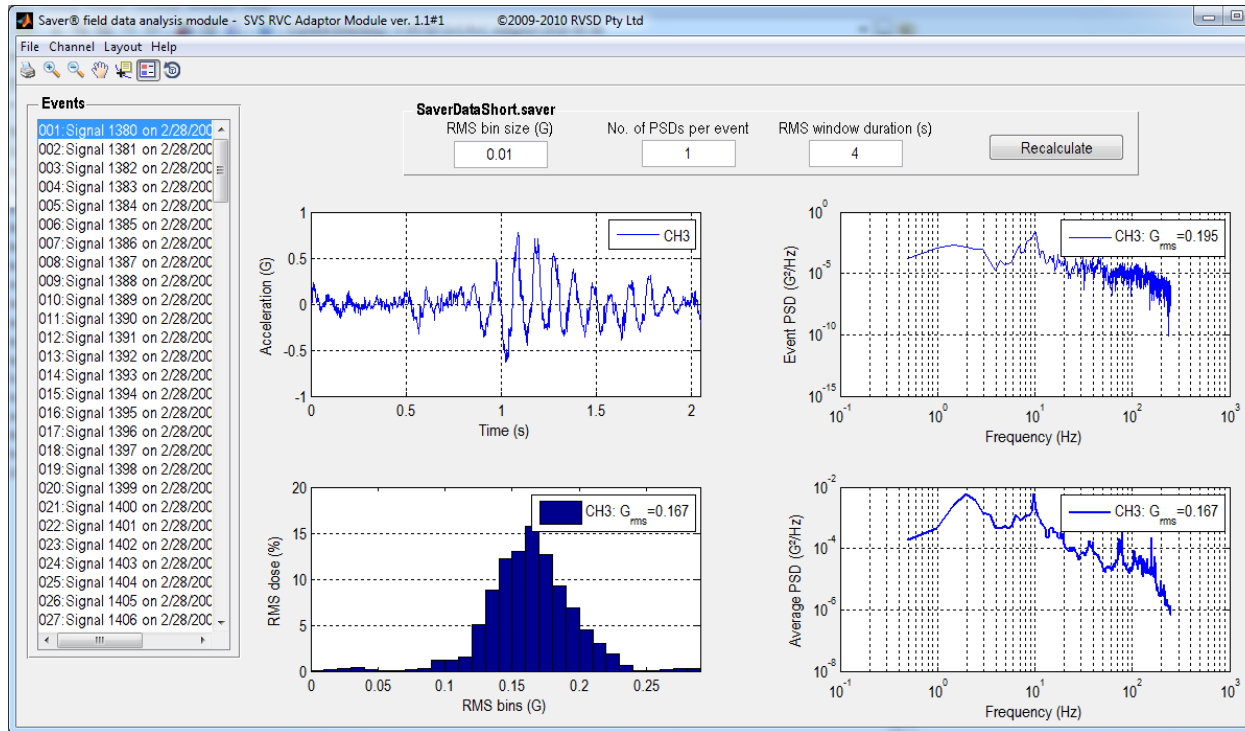
Real analysis of real vibrations

The field data analyser was designed specifically to facilitate the analysis of field vibration data. It allows the user to import, visualize and analyse field data recorded with numerous devices such as InnRecord® from SafeLoad Testing, Saver® from Lansmont, EDR® from IST, SlamStick®, MSR® and GCDC®. Facilities for importing data from other devices and other third party data acquisition systems can be developed on demand. The software module computes both the average PSD and the rms distribution functions necessary to synthesize nonstationary random vibrations as well as a variety of statistical parameters such as the moving RMS, crest factor and kurtosis.

The number of active channels within the file are automatically detected and there is provision to integrate and differentiate the data. Once uploaded, the average PSD(s) and overall rms distribution(s) for each channel are computed and the raw data (events) are stored in a propriety format. The following analysis parameters can be varied and the PSD(s) and rms distribution(s) re-computed:

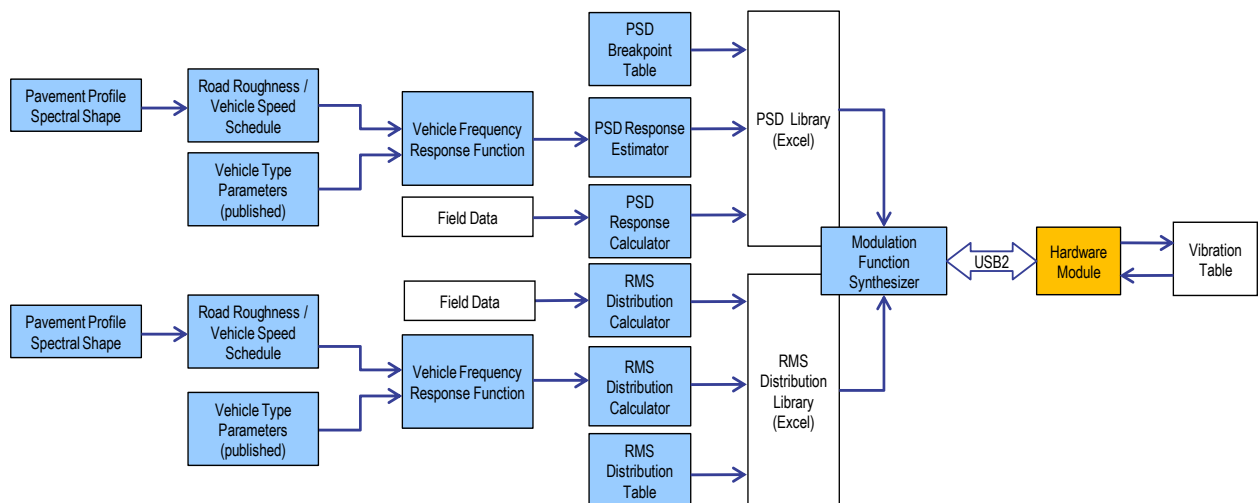
- RMS distribution bin size
- Number of PSDs per event (zero-padding automatically invoked if superior frequency resolution is required)
- RMS, crest factor and kurtosis window duration

As well being able to display the PSD of an individual event (record frame), the system can compute and display a 3-D map of the PSD for each event. A sample snapshot of the Field Data Analyser in action is given below showing the PSD(s) of the last event (top right), the average PSD(s) (bottom right) and the rms distribution(s) bottom left.



Data file merging

For more robust statistical estimates, measurements from repeat experiments can be merged before being analysed. Saved statistical and PSD data are accessible from and links seamlessly with Real Vibration's Vibration Shaker Controller to enable realistic simulation of field data. Below is a schematic showing how the Field Data Analysis Module forms part of the Real Vibration controller system.



A guided tour of the Field Data Analyser is available from the Real Vibrations web site at www.realvibrations.com.