

innovations

from The University of Vermont

TITLE: SYSTEM AND METHOD FOR ANALYZING THE RESPONSE OF A MECHANICAL SYSTEM

INVENTOR: Jeffrey Frolik

DESCRIPTION: It is often desirable to analyze the response, or output, of a mechanical system to any one or more of a variety of inputs. Testing of a mechanical system is performed for a variety of reasons, including, determination of system performance, maintenance requirements, data collection for calibration of the system, or for simulation purposes. The invention is a system and method for analyzing the response of a mechanical system to a variety of one or more inputs. The use of several accelerometers have been operatively coupled in a way that collects the data required to perform these tasks and integrating this data into signal processing software. An added feature is that a wireless transmission of data can be configured for in situ monitoring.

ADVANTAGES: The advantage of this system is that the system response can be characterized/monitored in situ. For example, the performance of a shock absorber can be obtained using naturally occurring loads both by the environment and the rest of the mechanical system. This performance can be monitored over time to indicate when the shock should be replaced. Alternative approaches would replace shocks at scheduled intervals and not when necessarily needed.

PATENT STATUS: U.S. patent application

LICENSING STATUS: Worldwide rights available

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