

FOR IMMEDIATE RELEASE

## **Hong Kong Highways Chooses FEMtools and ARTeMIS for the Stonecutters Bridge Structural Health Monitoring System**

**Leuven, Belgium – May 13, 2008** – Dynamic Design Solutions announces that the Government of the Hong Kong Special Administrative Region (HK-SAR) has selected its FEMtools™ Framework as the platform software to develop a custom monitoring system for the prestigious Hong Kong Stonecutters bridge (<http://www.stonecuttersbridge.net>). This is one of the longest cable-stayed bridges in the world, currently under construction and scheduled for completion in 2009. The custom monitoring system will be part of the bridge's Wind and Structural Health Monitoring System (WASHMS) that monitors the response of the bridge to wind loading, temperature loading, highway loading and seismic loading.

The order also includes several licenses of FEMtools™ Model Updating, which will be used for real-time correlation of the bridge mode shapes with reference modes shapes obtained from a validated and updated finite element model. This technique is increasingly used to identify and assess structural damage in structures as a result of ageing, natural hazards, accidents or changing operating conditions.

The bridge mode shapes will be obtained with ARTeMIS™ Extractor software, supplied by Structural Vibration Solutions A/S. This software is used by civil engineers for ambient vibration analysis of large structures like bridges and buildings.

Dynamic Design Solutions' general manager Eddy Dascotte said, "This new bridge monitoring project gives us the opportunity to showcase state-of-the-art structural health monitoring technology that uses operational modal testing and finite element model updating applied on a large scale civil engineering structure. Our solution turned out to include the right mix of features to satisfy the requirements for this project."

"We are pleased to partner with Dynamic Design Solutions to provide a structural health monitoring solution that integrates modal testing and simulation," said Palle Andersen, managing director of Structural Vibration Solutions. "The level of automation that can be obtained with operational modal analysis is a key factor to its success in real-time monitoring applications."

### **About Dynamic Design Solutions NV**

Dynamic Design Solutions ("DDS") is an independent and privately owned developer of CAE software tools for validating simulation models, optimizing engineering designs and integrating and automating simulation processes. Dynamic Design Solutions has its headquarters in Leuven, Belgium.

The flagship product of the company is FEMtools™, a multi-functional, cross-platform and solver-independent family of CAE software programs providing analysis and scripting solutions for many different applications in the areas of finite element pre- and postprocessing, structural dynamics simulation, pretest analysis, test-analysis correlation, model updating, uncertainty analysis, design improvement, CAE process integration and simulation data management. FEMtools™ seamlessly integrates with standard finite element analysis programs. The underlying framework architecture with powerful scripting and API function libraries provides unlimited extension and customization. This makes the software an ideal tool for research and development of process-based applications like damage identification.

### **About Structural Vibration Solutions A/S**

Structural Vibration Solutions A/S is a spin-off company from Aalborg University, Denmark. It is an independent and privately owned company specialized in software solutions based on the Operational Modal Analysis technology. The core product is the patented ARTeMIS™ Extractor, which is considered the state of the art product within the field of Operational Modal Analysis and used as reference for many researchers in this field. It includes several algorithms and can as such return cross validated results. If the response of a structure can be measured, ARTeMIS™ Extractor can find the modes of the structure, no matter if is large civil engineering structures subjected to wind, waves and traffic, or mechanical structures such as rotating machinery.

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