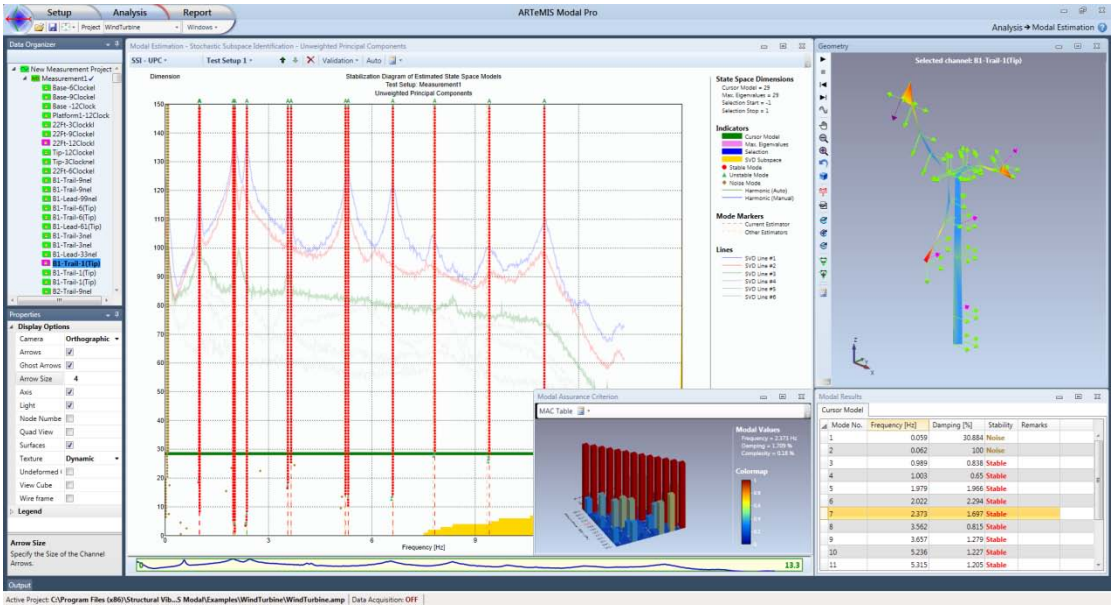
ARTeMIS

Leading Software for Operational Modal Analysis

领先的工作模态分析软件



ARTeMIS Modal

The Complete Software Solution for Operation Modal Analysis and Operating Deflection Shapes.
是一款完整的用于分析工作模态及相应模态阵型的分析软件。
ARTeMIS Modal helps our customers to determine and solve vibration issues in the vast number of cases where the excitation cannot be measured or controlled. The software is used by engineers all over the world for modal analysis of all kinds of structures.
AReMIS Modal 软件可以帮助客户识别并解决绝大多数激励信号无法测量及控制的振动方面的问题。全世界各行业的结构工程师都在使用该软件进行工作模态分析。

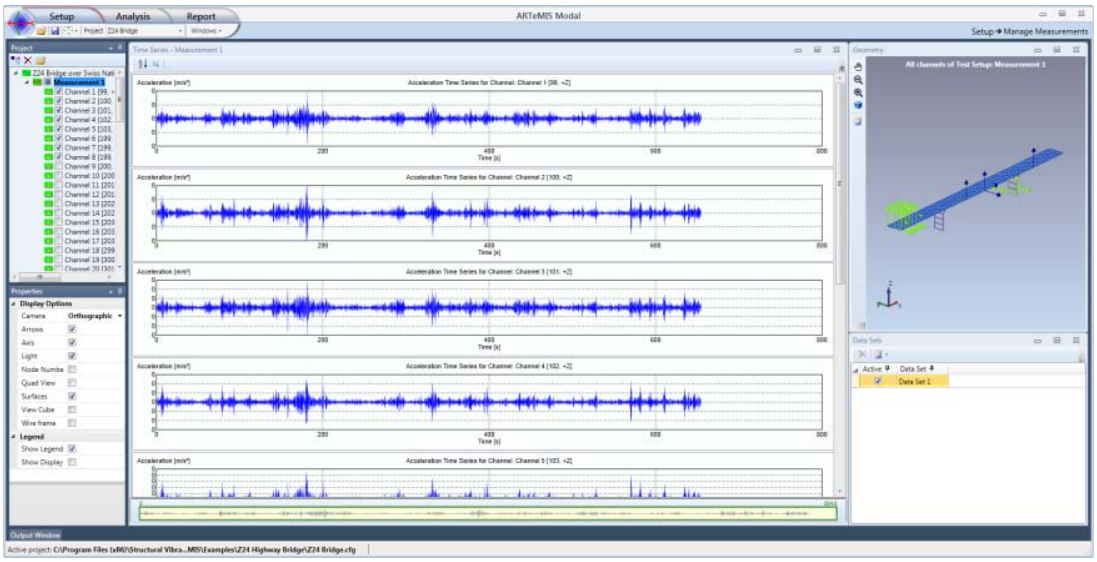
- Operating machinery or other mechanical structures with or without rotating components.
- 运行中的机械或其他结构（包含或不包含转动类零部件）
- Large civil engineering structures like bridges, dams and buildings subjected to ambient loads.
- 大型土木工程类结构，如受环境载荷的作用的桥梁、大坝及建筑。
- Structures with rotating components such as wind turbines, stream turbines, engines and gas compressors.
- 包含旋转零部件的结构，如风机涡轮、水轮机涡轮、发动机及空气压缩机。

- Maritime structures like ships and offshore structures.
- 海洋结构，如船舶及海洋离岸结构
- Automotive, trucks, trains and vehicles and sub parts systems.
- 汽车、卡车、铁路机车及其子系统零件
- Aerospace structures such as launch vehicles and aircrafts.
- 航空航天类结构，如发射平台及飞行器

The Setup Task

The Setup task consists of three sub tasks called Prepare Geometry, Manage Measurements and Assign DOF Information

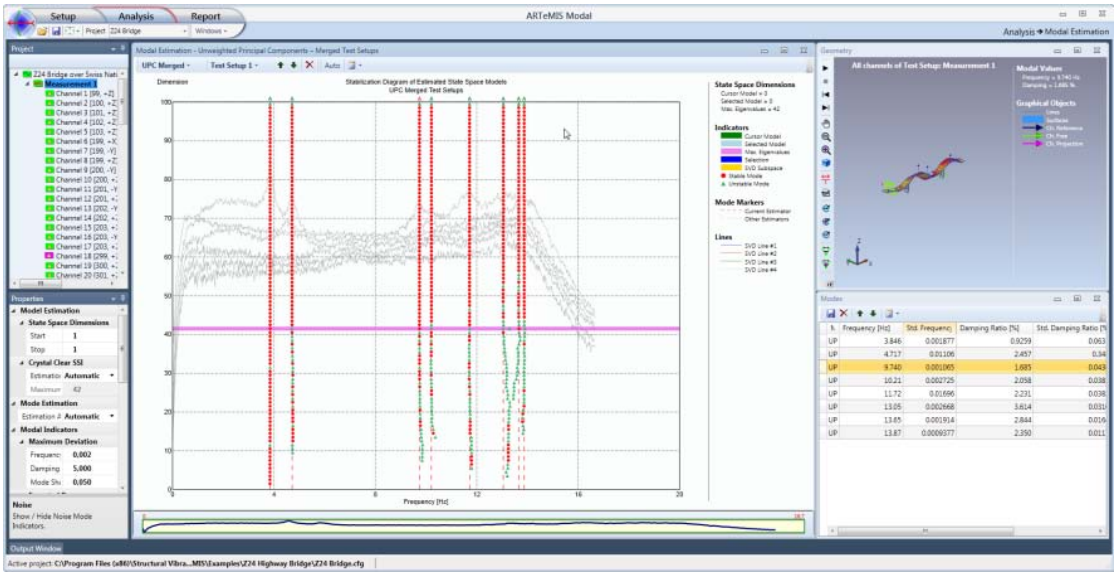
建模模块包含三个功能：几何模型准备、测量信号管理以及自由度信息指定。



The Analysis Task

The Analysis task consists of three sub tasks called Prepare Data, Modal Estimation and Validate. These tasks all relate to signal processing of the measurement and the modal analysis.

分析模块包含三个功能：准备数据、模态估计及模态确认。这三个功能均和测试信号处理及模态分析有关。



The Report Task

The Report task allows the user to generate report using either Microsoft Word or Microsoft PowerPoint. The user selects templates to use and the dumped images and tables are automatically inserted on the requested places in the document.

报告模块允许用户创建 WORD 或 PPT 形式的分析报告文档。用户可以自己选择报告的模板，并将图形或表格插入在指定的位置上。

ARTeMIS Modal	Modal PRO
SETUP	●
Geometry Generator	●
- Create geometry from scratch	●
- Import/modify existing geometry	●
Manage Measurements	●
- Import measurement files	●
- Merge measurement files	●
- Integrate/differentiate measurements	●
- View raw time histories	●
- Connect/disconnect channels and Test Setups	●
Assign DOF Information	●
- Link channels with geometry nodes and directions	●
- Link using drag-and-drop or by direct editing	●
- Automatic identification of reference channels	●
ANALYSIS	●
Prepare Data	●
- Configure all preprocessing of measurements	●
- View processed data of channels and Test Setup	●
- Option for automatic selection of projection channels	●
- Harmonic detection using fast and extended kurtosis analysis	●
Operating Deflection Shapes	●
- physical behavior at user-selectable frequencies	●
- Store specific ODS shapes	●
- Display unscaled and/or driving point scaled ODS shapes	●
Modal Estimation	●
- Estimation of natural frequencies	●
- Estimation of damping ratios	●
- Estimation and animation of mode shapes	●
- Frequency Domain Decomposition - FDD	●
- Enhanced Frequency Domain Decomposition - EFDD	●
- Curve-fit Frequency Domain Decomposition - CFDD	●
- Crystal Clear SSI Stochastic Subspace Identification - SSI - UPC	●
- Crystal Clear SSI® Stochastic Subspace Identification – SSI-PC	●
- Crystal Clear SSI® Stochastic Subspace Identification – SSI-CVA	●
- Crystal Clear SSI® Stochastic Subspace Identification Merged Test Setups	●
Validation	●
- Overlaid mode shapes animation	●
- Mode shapes difference animation	●
- Mode shapes side-by-side animation	●
- Mode shapes top-bottom animation	●
- Modal Assurance Criterion	●

- Comparison of Mode Complexity	●
- Comparison between estimated and imported modes	●
Report	●
- Easy selection of graphics and tables	●
- Store selected in "as is" colors or in B&W	●
- Seamless integration - Microsoft Office 2000, XP, 2003, 2007 and 2010 32bit/64bit	●
- Generate Word documents and Power Point presentations	●
- Predefined standard templates	●

Available Plugins	Modal PRO
- Data Acquisition	●
- Statistical Damage Detection	●