Release Notes

CDH/VAO Software
Version 4.2

May 2009

All the features described in these Release Notes are supported for Linux x86_64 and Windows XP 64bit platforms.

Matlab Version:

- CDH/VAO Version 4.2 requires Matlab Version 7.5.0.338 (R2007b)

Operating System:

- Development System:

Operating System:	CentOS release 4.4, Kernel: 2.6.9-42.EL for Linux
Graphics board:	Nvidia
glVersion:	NVIDIA 169.09

Installation:

For more detailed information, please refer to “installation.pdf”

- CDH/VAO Version 4.2 uses following environment variables to locate the software, license data and server:

HOME	user's home directory
HOST	hostname of computer running CDH/VAO
DISPLAY	variable for display
VAO_LICENSE	path of vao floating license file
VAO_HOME	installation path of vao program
VAO_SERVER	hostname of server running vao license daemon
VAO_NUTECH	(optional environment variable for using NuTech Optimizer), installation path of NuTech Optimizer program, a product of NuTech Solutions GmbH

- m-file vao_defaults.m:

  This file has been extended to include additional default definitions. Older versions of vao_defaults.m are **NOT COMPATIBLE** with Version 4.2

  Go to $VAO_HOME/mat, link 'vao_defaults.m' to 'vao_defaults.m-nastran' for users who use Nastran to calculate the modal data base of the original finite element model as well as the correction matrices for Submodel Shell- and Solid-Elements.

  File 'vao_defaults.m-permas' is for users who use Permas to generate VAO modal data base and the correction matrices for Submodel Shell- and Solid-Elements.

New Features in the VAO release Version 4.2:

- Improved UGVX Nastran Data Conversion Utility (see “ugvx.pdf” for details)

- Output from Nastran of reduced structural eigenvector data (see “reduced_nastran_output.pdf” for details)

- Panel Participation Improvements
- Complex Mode Indicator Function
- Scaling of Frequency Response Functions
- Direct output to “bof” format of Operational Shapes/Modes
- Universal Format output of Frequency Response Functions
- Simplified selection of Response Curves when saving to file
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- One-click for processing and loading UGVX data
- **UGVX: Simplified conversion of Nastran Output Data for Input to CDH/VAO**
- **Reduced Output for Structural Eigenvector Data**
- **Modifications to Frequency Response: Coupled/Uncoupled Operation: Scaling Factors, Result Output**
- **Operational Shape: Direct output of “.bof” files from CDH/VAO**
- **Modified menus for Panel Participation**
- **Structure Mode to Structure Participation**
- **Component Mode Indicator Function**
- **Additional Structural Sub-Model Types (v4.1)**

- Structure Mode to Structure Grid Participation Factors

  This feature is available in menu <VAO Main Menu>/<Full Model> /<Coupled Operation>/<Frequency Response>/<Structure Mode to Fluid Participation>.

- New visualisation mode in Viewer

  Vaoviewer has a new additional visualisation mode called skeleton structure, which draws only edges of elements.

- Modification and Improvement:

New control menu and 3D plot have been added to the feature "Panel Participation Factors".

The sub-menus of <Coupled Operation> have been re-organized. The frequency responses calculation of coupled operation will be done in menu <VAO Main Menu>/<Full Model>/<Coupled Operation>/ <Frequency Response>/<Physical Response> with new control input dialog. The input dialog for FRF of uncoupled operation has been extended with the option for FRF-output in Plots or ASCII data or both.

The feature "Optimisation Beta Method" has been removed and the feature "Optimisation Beta Multi-Load (ML) Method" is now available in menu <VAO Main Menu>/<Optimisation>/<Beta-Method>.

Furthermore, the method for saving/loading Submolde correction matrix, the scrollbar technique for displaying Submodel and Design parameters and the scrollbar technique for Force Generation have been improved.