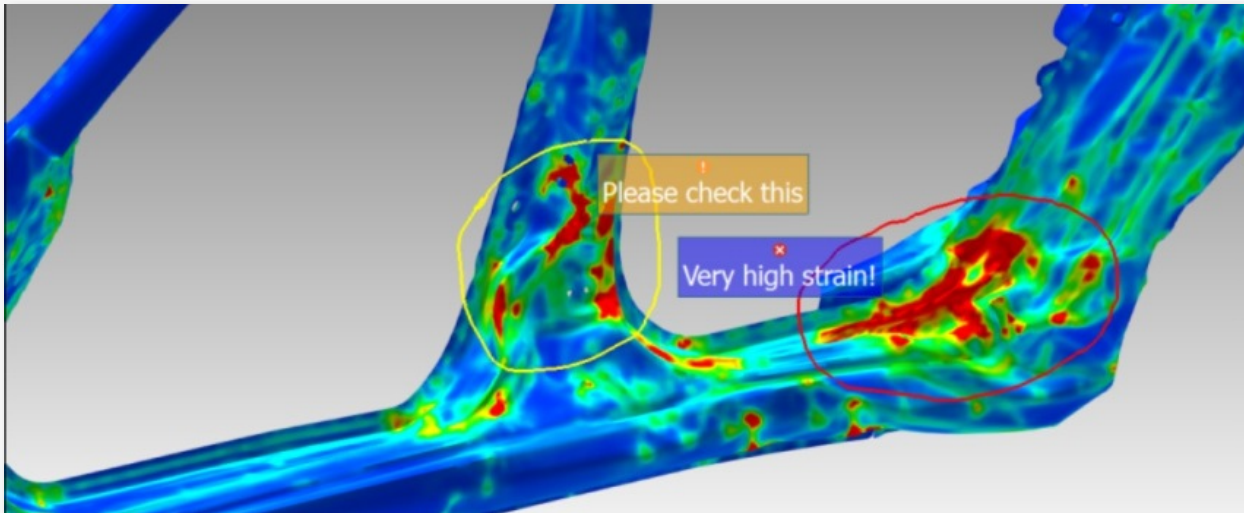


December 22, 2017

## BETA CAE Systems announces the release of the v18.1.0 of its software suite



### About this release

BETA CAE Systems announces the release of version 18.1.0 of its software suite with brand new tools and capabilities.

This first-point release of v18x brings the software to a next level of maturity and functionality richness. We put a lot of effort to incorporate as many of your requirements as possible and paid a lot of attention to the software quality and performance. We are proud to make this new release of our software suite available to you, so that you begin the new year with a bigger potential.

The most important enhancements implemented are listed below.

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### Enhancements in ANSA

ANSA extends its collaboration capabilities with the implementation of the Sketch tool. With this tool you can highlight areas of interest on the model and add notes in the form of annotations, for further check/review. The Web Interface capabilities are also expanded to full ANSA Interface broadcasting.

The new version, introduces a brand new methodology to facilitate the synthesis of modular assemblies. This new approach, powered by the marking capabilities of Assembly Points and Sets, the versatility of Bolts and Connectors, and the file management functionality of ANSA DM, brings a solution to many of the usual bottlenecks of model building process that are related to the interdependencies between the different subsystems. As a result, the maintenance of each subsystem becomes much easier, the assembly of the complete model is carried-out faster and the validation of the assembly after model changes comes at no cost for the analyst.

The support of distributions for Abaqus materials and multiple Step Managers in Abaqus deck bring loadcasing capabilities to a new

dimension.

Functionality initially introduced with v18.0.0 is further improved. The Light Volume Representation has been enhanced with the addition of clipping planes. Solid elements can be extruded with minimum user interaction. The seat de-penetration functionality comes with the support of non-linear characteristics of the cushion material, and the Laminate Tool has been enriched with the parametric definition of Laminates and Composites, on top of the Template Layers.

The introduction of the Octree entity allows you to create and preview the result of octree based algorithms, such as, Surface Wrapping, Hextreme, and Cavity meshing. This accelerates the overall generation process as it provides quick leak detection and cutting planes visualization tools, contour plots of mesh size distribution and more, extending the capabilities and performance in the CFD domain.

Polyhedral mesh conversion has now improved speed and memory consumption and can produce ANSA Volume result or Light Volume representation result. Fixing quality for volume meshes has been accelerated and is now available also for polyhedral and Light Volume representation meshes. Significant enhancements have been made in the CFD solvers as well, such as speed enhancements in Fluent Output and improved handling of TGRID meshes with hanging nodes in Fluent Input, Light Volume Representation support for Baffle, CyclicACMI and multi-region in OpenFOAM, Thermal Links Wizard and El Temp Menu, displaying temperatures directly on the model, in TAI Therm.

Implementations such as the material homogenization, the support of xMCF format and of new FEMSITE version, as well as updates in CGNS format (HDF5 I/O, Light Volume Representation I/O, Hybrid Output) are just representative cases of the vast developments that have taken place in v18.1.0.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

## Enhancements in EPILYSIS

Apart from the continuous enhancements in the overall performance and accuracy, Topology Optimization has also been enriched with new manufacturing constraints. Sizing optimization is now available including application on composites while mode analysis has also been added to the optimization solution (200).

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

## Enhancements in META

META also extends its collaboration capabilities with the implementation of the Sketch tool, for pointing out areas of interest on the model and adding notes in the form of annotations. The Web Interface capabilities are also expanded to full META Interface broadcasting.

The capabilities of Virtual Reality have been augmented. Full support of Oculus Rift /HTC Vive is provided, in compliance with a complete VR tablet GUI with animation, focus, and inspection planes features and capabilities. Furthermore, animation speed in High Quality rendering has been significantly accelerated.

The Modal Parameter Estimation is now supplementing the suite with NVH calculations available in META, enabling the assessment of modal parameters and eigenvectors from a provided set of transfer function results.

Through an attempt to couple RETOMO with the rest of the BETA products, META v18.1.0 can now import RETOMO volumes and proceed with rendering.

As for discipline enhancements, vortex tracking and CGNS are supported now in the CFD area. ATEFX for I/O in NVH field, JT 10 CAE export, Autoform, Moldex 3D and ADAMS view with flex bodies for Multibody dynamics are also implemented in this version, together with a new toolbar for Fatigue Safety factors calculation.

2D and 3D plots are embedded in vector format ensuring high quality images irrespectively of the image size, while units, curve linked calculations and updates, as well as undo functionality for curves is now supported for 2D plots.

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

## New Documentation

Best Practices

- Best Practices on Batch Mesh Manager with a new approach to improve the Batch Mesh result
- Features and their characteristics identification and handling through the Feature Manager
- Enhanced mesh improvement and treatment functionality of the new FE Perimeters entities
- Apply Design Actions on features through the Features Manager
- New techniques and tools for perfect middle surface mesh extraction

For more details about the new software features, enhancements and corrections please, refer to the Release Notes document.

## Compatibility and Supported Platforms

ANSA files saved by all the first and second point releases of a major version are compatible to each other. New major versions can read files saved by previous ones but not vice versa.

META Project files saved from version 18.1.0 are compatible and can be opened by META version 16.0.0 or later. To be readable by META versions earlier than v16.0.0, they have to be saved selecting the option "Version <16.0.0".

Support for 32-bit platform has been discontinued for all operating systems.

## Download

### Where to download from

Customers who are served directly by BETA CAE Systems, or its subsidiaries, may download the new software, examples and documentation from their account on our server. They can access their account through the "user login" link at our [web site](#).

Contact us if you miss your account details. The Downloads menu items give you access to the public downloads.

Customers who are served by a local business agent should contact the [local support channel](#) channel for software distribution details.

### What to download

All files required for the installation of this version reside in the folder named "**BETA\_CAE\_Systems\_v18.1.0**" and are dated as of **December 22, 2017**. These files should replace any pre-releases or other files downloaded prior to that date.

The distribution of this version of our pre- and post-processing suite is packaged in one, single, unified installation file, that invokes the respective installer and guides the procedure for the installation of the required components.

For the installation of the software on each platform type, the.sh installer file residing in the folder with respective platform name, for Linux and MacOS or the respective .msi installer file for Windows, 64bit, have to be downloaded.

In addition to the above, optionally, the META Viewer is available to be downloaded for each supported platform.

The tutorials and the example files reside in the folder named "TUTORIALS". This folder includes the complete package of the tutorials and example files, and a package with only the updated ones.

The Abaqus libraries required for the post-processing of Abaqus .odb files are included in the installation package and can be optionally unpacked.

Earlier software releases are also available in the sub-directory called "old" or in a folder named after the product and version number.