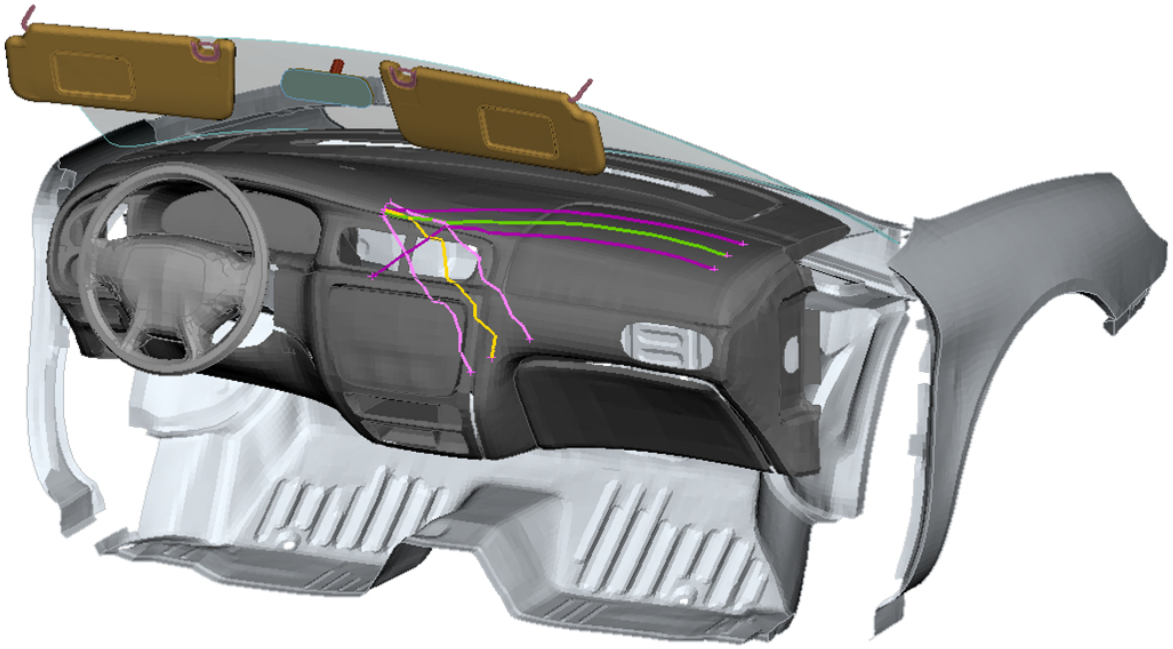
BETA
SIMULATION SOLUTIONS

physics on screen

August 5, 2020

BETA CAE Systems announces the release of the v20.1.3 of its software suite



About this release

BETA CAE Systems announces the v20.1.3 release for ANSA/EPILYSIS/META and KOMVOS.

Apart from fixes in the detected issues, this version also hosts noteworthy enhancements and implementations.

Follows a selection of the most important items:

Contents

Enhancements and known issues resolved in ANSA

Enhancements in ANSA

CAD to ANSA Translators

The new library of CoreTechnologie (CT 2020 SP1 HF) is now available, supporting the formats of NX1899 (UGOpen) and Inventor 2020, in addition to the already existing ones.

Modular Run Management

The Assembly and specifically the Assembly Sets from now on directly reference the Loadcase as connectivity, instead of a list of the contained Subsystems/Library Items.

In the area of Loadcases/Assembly, unloading modules (Subsystem or Library Item) with defined A_POINTs/LC_POINTs is no longer an issue for the proper and automatic re-attachment of all affected entities when the container is loaded back.

Moreover, Loadcases and/or Simulation Runs can contain all the Loadcase Assistant related entities in the definition file during "Save in DM", backed up by dedicated ANSA.defaults settings.

Batch Meshing

Focusing on CFD mesh, the quality of anisotropic mixed/quad type mesh has been significantly enhanced.

NVH Console

Significant performance improvements when working with a model in NVH Console (opening lists from within NVH Console, opening Loadcase Manager). The larger the number of the existing entities (Tables, Loads, Coordinate Systems, etc), the bigger the performance improvement that is achieved.

Known issues resolved in ANSA

Modular Run Management

Loadcases/Assembly: Reloading a module (Subsystem or Library Item) attached to Connectors, Boundary Conditions, or other entities via its A_POINTs/LC_POINTs, could erroneously mark the Model Container of those affected entities as modified.

Intermodular Assembly: Domain Finders with status "ok" would retain their status when Subsystems were reloaded in the model, although the new Subsystem content could potentially affect their search result. From now on during Build, the search result of Domain Finders will be verified, even when their status is "ok". In case discrepancies are detected, the Domain Finders will be re-applied and will mark their Model Container as modified.

Model Browser: Setting a Model Browser container as Working MB Container would only unload the previous working container. Model Browser containers not previously marked as working, would not be unloaded. Moreover, marking a Model Browser container as Working MB Container would erroneously unload common, between the previous and the current working container, entities.

Subsystems: From now on, any id adaptation applied to a loaded base module (Subsystem or Library Item) will be removed automatically on "Save in DM" of the base module as an ANSA or solver keyword file. In this way, the file of the base module will contain ids in the source, un-adapted range.

Volume Mesh

The Hexa Interior algorithm of unstructured mesh would possibly not succeed, reporting Kernel Error 41.

Unexpected termination could occur when the Conv2Poly function was used on Light Volume representation elements.

NASTRAN

NASTRAN Header would not be correctly read, in case it contained an empty Set.

Furthermore, unexpected termination would occur while reading a NASTRAN file containing two Sets with the same id, one of which was a part of a Superelement.

NVH Console

ANSA would not exit properly, if NVH-Console was running.

Calculation of System Modes based on FAST SOL103 (by using the modal basis of each component) with EPILYSIS most of the times resulted in errors.

Cross Section

Unexpected termination would occur, when Geometry Similarity was enabled in the Settings and Cross Section's Multicut function was used.

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

Enhancements and known issues resolved in META

Enhancements in META

Project Files & METADB

When loading a .metadb file via drag and drop while a geometry file is already read in META, a menu pops up to handle the .metadb file.

Known issues resolved in META

Graphics

Unexpected termination could occur upon reading a new model, if the Render functionality was enabled in multiple windows.

Read Results – ASCII

The reading of results from column ASCII files was distorted in versions 20.0.4 and 20.1.2.

METADB

Unexpected termination could occur while reading results from more than one lossy .metadb file.

Decks

META could terminate unexpectedly while reading some layer results of Theseus –FE, as well as while reading part hierarchy of a specific model through HyperMesh comments.

Differences in HDF format written by NASTRAN v2020 compared to v2020 ALPHA caused an unexpected termination when trying to read the file.

NVH Calculators

In v20.1.1 and v20.1.2, the FRF Assembly Tool Check reported errors when TPA fractions with connections forces / transfer functions / point mobility results were requested and FRFs did not exist for each path related to a loading DOF to itself (necessary for point mobility results). This stopped the calculation of TPA fractions also in cases point mobility was not of importance and only connections forces / transfer functions were needed, e.g the calculation of TPA fractions after using the toolbar TPA from Forces and FRFs. Now a warning is displayed instead and the calculation proceeds.

Moreover, focusing on Modal Parameter Estimation, since v20.0.0 curves were not created when the option to plot curves was selected, without the option to output to .unv file at the end of the analysis. The problem appeared only when applying the function from GUI, whereas it was applied correctly when using the respective command.

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 20.1.3 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" or "Version <16.0.0".

Support for Mac OS has been discontinued.

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 "sign in" 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 for software distribution details.

What to download

All files required for the installation of this version reside in the folders named **"BETA_CAE_Systems_v20.1.3"** and are dated as of **August 5, 2020.** 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, download from the respective folders, the .sh file for Linux or the .msi file for Windows.

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 "Previous_Versions" or in a folder named after the product and version number.