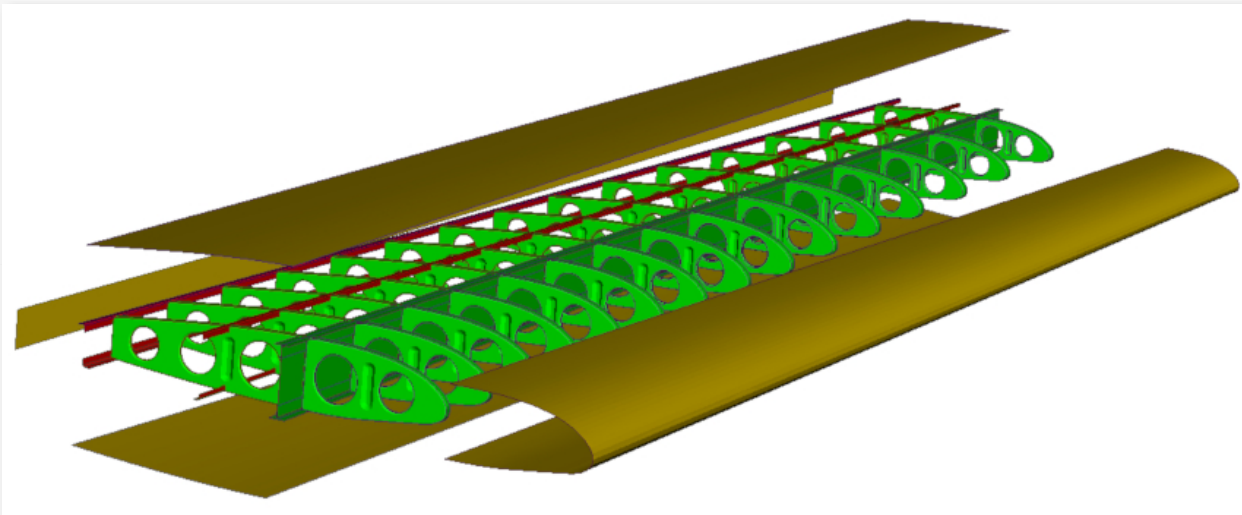June 19, 2019

BETA CAE Systems announces the release of the v19.1.3 of its software suite

About this release

BETA CAE Systems announces the third bug-fix release of ANSA/EPILYSIS/META v19.1.x series.

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

Please, note the addition of 'CFD_2 layout', a new layout that appears on ANSA Launcher window. It is an alternative mode, suitable for handling large CFD model geometries, which neutralizes the highlight effect in functions such as Points > Insert, Faces > Cut, Curves > New, in order to maintain high operational performance.

Follows a selection of the most important items:

Contents

Enhancements and known issues resolved in ANSA

Enhancements in ANSA

Data Management

New script functions to switch between ANSA keyword and DM type are now available:
dm.GetObjectTypeFromAnsaKeyword()
dm.GetAnsaKeywordFromObjectType()

ANSA keyword is the generic keyword of an entity type as shown in the database browser e.g. ANSA_SUBSYSTEM,

ANSA_SIMULATION_MODEL while the DM type is the exact type of the entity, as described in the data model through the dm_structure.xml.

Connections & Assembly

A new option, Connnectivity[Sort], is now added in the context menu of Spotweld, Gumdrop, Screw and Rivet connections. The Sort option re-arranges the connectivity fields according to the relative positions of the projections in space. For example, in case of a spotweld that connects 3 flanges, after the execution of the function, the middle flange should be referenced in the P2 field.

Shell Mesh

Upon execution of function ELEMENTs > Offset [Copy] with option "Add to PID", "specific" and ID=0, a new, copy-PID is now created for each existing PID.

Volume Mesh

Apart from significant improvements in the quality of the layers and mesh of Hextreme Snap, noteworthy performance improvements have been implemented in Cavity functionality: The Volume creation time has been decreased almost to half.

Moreover, Octree algorithms, Wrap [Variable Length] and Hextreme, are now able to capture identified features like fillets and 3D holes from the original geometry and imprint their boundaries on the resulting generated mesh as FE-Perimeters.

Optimization

Upon the DOE Setup via the Optimization Tool, selected values of the DOE table are now assigned to the Current Values of the respective Design Variables, through the context menu.

Known issues resolved in ANSA

GUI

The Cut Plane function, activated from Utilities menu, would not show layers on geometric faces with laminate property.

Model Browser

Upon execution of base. RemoveEmptyPartsGroups() script function, Empty Parts/ Groups would not be recursively deleted. As a result, there were cases where empty Parts/ Groups would still remain after the application of the function.

Data Management

Unexpected termination would occur under certain circumstances, when saving ANSA representation files of Subsystems in DM, under Model Browser > DM [Save in DM].

Connections & Assembly

Unexpected termination would occur, when Applying a Connector defined on Assembly Points and - at the same time - Loadcase Points were pointing to the corresponding Interface nodes of the Assembly Points.

Moreover, realization of mesh-dependent seamwelds would fail, if the connectivity was defined using ANSA groups.

FE Representations

Unexpected termination would occur for some 'flange-to-flange' mesh independent FE Rep. types, such as SHELL-CONTAC, RADIOSS WELD, PSE98, MPC-CBUSH-MPC, CBUSH-CBAR-CBUSH, if projections failed during realization.

TOPO

Upon execution of Points > New [Num.Input] functionality, import CSV would not work, if the file was located inside DM path.

DECKs

In Deck Info function, non-visible Rigid Body elements would erroneously be taken into account in mass calculation.

CFD DECKs

During Output, Polygon faces lying on internal boundaries between volumes would have erroneous orientation.

PERMAS

When reading and writing a MEDINA model for PERMAS solution, K1,K2 shear stiffness of BEAM property would be erroneous, leading to abnormal termination of the analysis.

Optimization

Upon FE Output from Optimization Tool, when selected solver was OPTISTRUCT, output of *.fem files would not be available.

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

Enhancements and known issues resolved in EPILYSIS

Enhancements in EPILYSIS

General

Compresed ANSA Database is now supported as input file, through command line execution.

Known issues resolved in EPILYSIS

General

Unexpected error termination would occur on Windows OS, in case the output and/or the scratch files directories were not specified and the current working directory had no write permissions.

Furthermore, a PLOAD2 on set with magnitude defined by expression was not regarded as varying, but as constant, when a solution was performed directly from ANSA.

Output

Wrong output filenames would be given, in case input file did not contain ".edb" suffix and output directory contained ".".

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

VR

Sketch commands created from within the To-Do list do not pass to the other collaborators anymore. On the contrary, each collaborator can keep his/her own notes without conflicts, while in collaboration.

DECKs

48-bit DIAdem results are now supported, as well as Element type 130 for MARC.

Managing Curve Data

Beam history variables are now supported from binout and elout file for LS-DYNA.

Known issues resolved in META

General

While switching among active models, performance would deteriorate if the "Model Action" menu was set to "Load to Active Model".

Graphics & Drawing

Color of Pid would unintentionally be replaced by color of Include or ANSA part, under certain focus or pick actions.

NASTRAN

Unexpected termination would occur when reading geometry from HDF5 file.

ANSYS

Centroid values for second order triangular elements could be incorrect, when reading results.

States & Animation

Unexpected termination could occur when creating Generated States.

Fringebar

Changing fringebar pallete on a window would erroneously affect the coloring of models in other windows.

Isofunctions > Export

Saving IsoFunctions in binary STL format in Windows would create corrupt files.

Project Files & METADB

METADB file could be wrongly saved, in case of reading Nastran Aux Force results.

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 19.1.3 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".

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

New documentation

Safety Loadcase Generator

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_v19.1.3"** and are dated as of **June 19, 2019.** 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 "old" or in a folder named after the product and version number.