

**BETA CAE Systems S.A.**  
announces the release of the new version v14.0.0  
of the **ANSA &  $\mu$ ETA** pre- & post-processing suite,  
with outstanding new features and tools

We are proud to release the new version v14.0.0 of our ANSA &  $\mu$ ETA pre- and post-processing suite, with outstanding new software features and tools, which enhance the user experience and increase the simulation processes performance. Driven by our customers' requests and inspired by the Industry's requirement for further simulation process improvement, we deliver a wide range of innovative new tools that bring CAE pre- and post-processing to a higher level. Notably, in this version, we introduce, among others, the synchronized release of the components of our suite. The installation of the software suite is now driven by a unified installer that provides an easy-to-use and automated step-by-step installation procedure.

**Notable New Features and Tools for Pre-processing**

**Notable New Features and Tools for Post-processing**

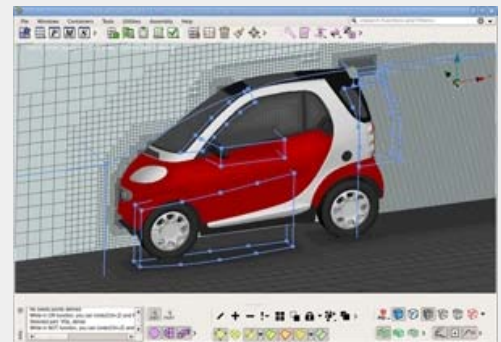
**Compatibility**

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**Documentation**

**Notable New Features and Tools for Pre-processing**

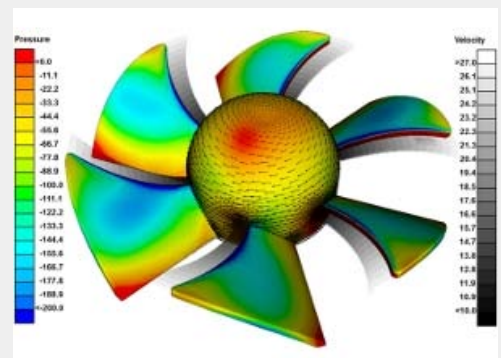
- A new Graphical User Interface improves the working efficiency through additional icons, a new layout, and colored grouped toolbars.
- The Selection tool has been enhanced and made available for all functions.
- CATIA, NX, Pro/ENGINEER and SolidWorks CAD files can now be directly opened in ANSA.
- A new interoperability with SpaceClaim allows direct geometry modifications, through an export-modify-retrieve loop.
- A new volume meshing algorithm allows now to generate trimmed hexahedral and polyhedral elements without the need for watertight volume definitions.
- A new tool has been introduced for rapid basic volume entities creation.
- Boolean operations with volume and faces are now available.
- The usage of size boxes has been extended to also control the element length for all shell mesh-improvement functions.
- A new dynamic interface for the Connection Manager simplifies and enriches the assembly operations.
- The Part Manager provides now easier model handling through a new configuration tool that organizes and handles a model into different configurations.
- The Comparison tool has been simplified and improved, through the usage of more filtering tools, smart navigation, advanced settings and the support of a new option to compare two models independently from the one currently open and regardless of their format.
- New SESTRA, THESEUS, pre-processing interface modules are now available.
- The Kinetics module now supports static equilibrium, contact, Initial Conditions, and Kinematic simulations.
- Additional keywords for all Solvers are now supported (i.e. LS-DYNA \*ALE, \*FSI and ABAQUS \*CO-SIMULATION).
- New Morphing Boxes are now available (i.e. Tetra, Pyramid) providing flexibility in adjusting boxes to more complex geometry. Additionally, 1-D morphing entities are now supported.
- A Library of predefined shapes (i.e. L, I, Z), allows for rapid creation of new Cross Sections.
- Python is fully supported by ANSA, as its main scripting language, while ANSA retains compatibility with the legacy BETA script language.



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**Notable New Features and Tools for Post-processing**

- A new Graphical User Interface improves the working efficiency through additional icons, a new layout, and colored grouped toolbars.
- Asynchronous reading of results now allows working on META while reading results. Additionally the loading process can be canceled.
- JT files can now be read and saved. CFD++ geometry and result files are now supported. Additionally, h3d files are also supported.
- New features on existing decks are added including:
  - Abaqus elements related to geomechanical analysis (C3D[4-20]P elements).
  - VDI2014 composite results for Nastran and Abaqus.
  - Nastran sensitivity results from .op2 and .pch files.
  - The direct support of .op2 files in 2D Plot.
  - Nastran DMIG elements and associated Strain energy results.
  - Support of different mesh per time step for OpenFoam.
- Vector results are now handled separately through a different label menu and a different fringebar.
- Visualization of material and fiber orientation has been added.
- New identification entity (Parametric Point) can perform queries in the inner area/space of elements. Additionally the definition of parametric points either on a line or on a circle through specific GUI is added.
- Medina and ANSYS results are now supported in Linear Combination tool.
- The MetaDB Translator is now available in the standard  $\mu$ ETA installation allowing for batch-saving results in .metadb files.
- Report Composer has been improved in the creation and the editing of tables. Hyperlinks work also when showing the presentation through  $\mu$ ETA. PDF report has been enhanced with searchable text and links.
- NVH ANSYS results are now supported in MAC, Modal response and FRF Assembly tool. Cavity modes can now be imported from a separate .op2 file in Modal response tool. Auto-grouping of curves output from Modal Response and FRF Assembly tools is now available. Moreover, ERP toolbar that calculates equivalent radiated power results has been added.



- Calculation of responses with respect to a user-defined local coordinate system is now available in Modal Response and FRF Assembly.
- Streamlines can now be animated as moving segments, particles, or arrows.
- Python is fully supported by  $\mu$ ETA, as its main scripting language, while ANSA retains compatibility with the legacy BETA script language.

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## Compatibility

ANSA files saved by version 14.0.0 can not be opened by previous versions.

The .metadb files saved by  $\mu$ ETA version 14.0.0 are compatible and can be opened by earlier versions of  $\mu$ ETA.

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## Download

### Where to download from

Customers who are served directly by BETA CAE Systems S.A. 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 <http://www.beta-cae.gr>

Contact us if you miss your account details. The [ Public ] link will give you access to the public downloads area.

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 folder named "**BETA\_CAE\_Systems\_v14.0.0**" and are dated as of **December 24<sup>th</sup>, 2012**. 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 evokes 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 following files have to be downloaded:

- the .sh installer file residing in the folder with respective platform name, for Linux and MacOS, 32bit or 64bit or the respective .msi installer file for Windows, 32bit or 64bit, and
- the tutorial example files that reside at the top level of the folder of this distribution.
- In addition to the above, optionally, the  $\mu$ ETA Viewer is available to be downloaded for each supported platform.

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

Previous software releases can be found in the sub-directory called "old" or in a folder named after the product and version number.

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## Documentation

Documentation is packed into the distribution package. After installation procedure, you will find html files that will guide you through the available PDF documents for ANSA &  $\mu$ ETA, including the Release Notes, the Users Guides, and tutorial instructions.

A new Users Guide, updated for ANSA and  $\mu$ ETA v14.0.0, are available.

Additional new tutorials for "Abaqus Co-Simulation" and "Model setup for multi-body analysis" in ANSA are available.

### Release Notes

Please refer to the Release Notes document for more details about the software corrections and the new features.

A detailed Release Notes documents are available in PDF in the download directory and also in the /docs sub-directory within the installation directory.

### Tutorial files' availability

The demo files necessary to cover the tutorials' documentation for both ANSA and  $\mu$ ETA are available to be downloaded from the top level of this version distribution in the [ Public ] area.

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