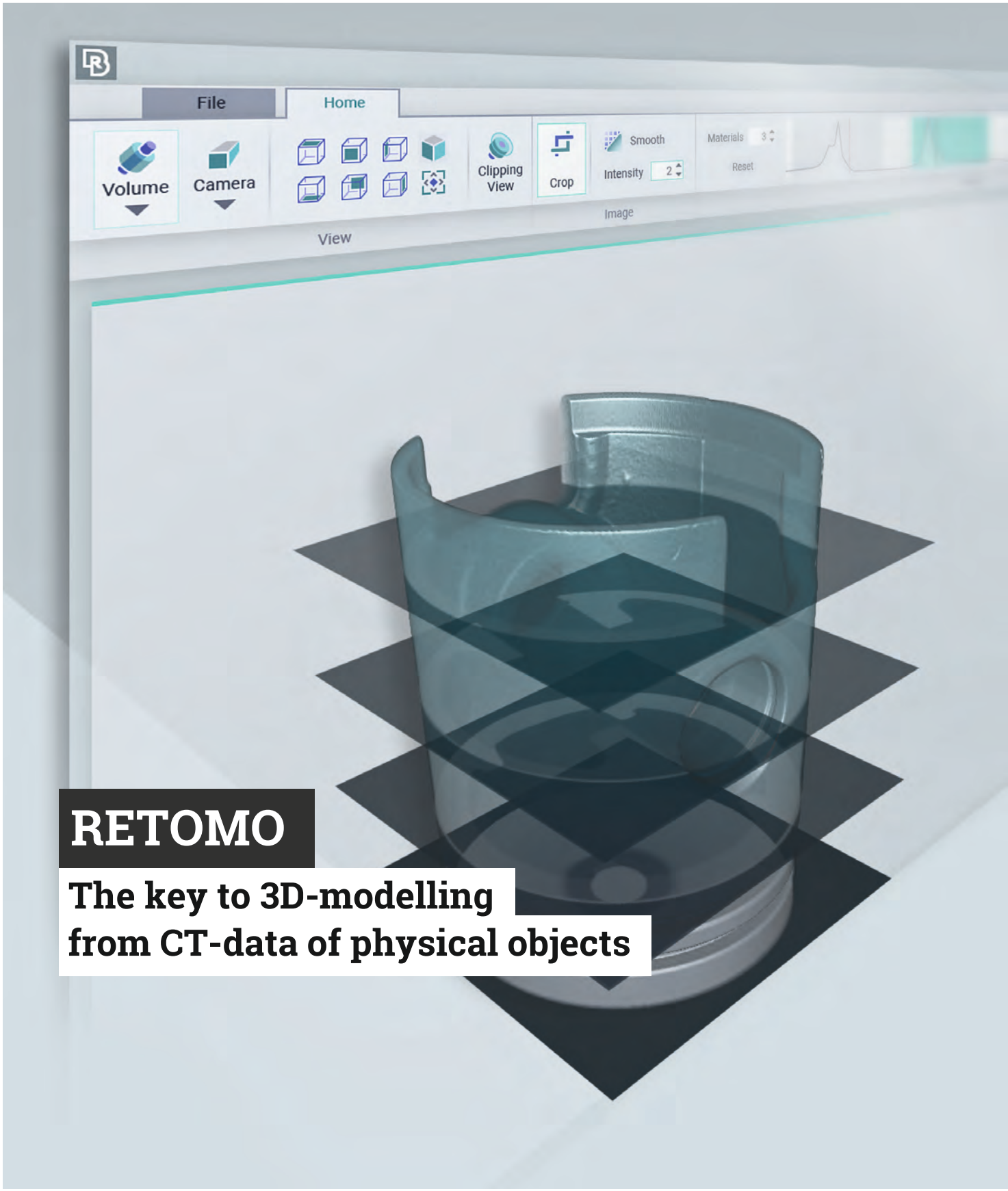
BETA
SIMULATION SOLUTIONS

physics on screen



RETOMO

The key to 3D-modelling from CT-data of physical objects

RETOMO

PIXEL TO OBJECT

“Physical objects and simulation data have never been so accurately close”

Addressing the need of contemporary industry to embed new approaches, such as the integration of Computed Tomography (CT) data into the CAE process, we bring forth RETOMO. This new software couples simulation and physical objects even for high-end complex, multi-material structures.

RETOMO enables the correlation of CT with CAE and CAD data, by applying high-end methods to read, process, reduce, reconstruct and visualize CT images and output them as tessellated models.

Benefits

- Overall process consistency, at all levels
- Process progress interaction and stepwise monitoring
- Highly precise techniques and inspection methods with the aid of the ANSA pre-processor
- Productivity increase, due to the automatic assignment of tasks, as soon as their input becomes available
- Repeatability of processes, even when using updated or different datasets and software tools
- Maximization of reuse, for both data and best practices
- Maximization of capability in delivering fast, results of high quality

From reality to virtuality

Grasp image data and turn them into tessellated models, ready to be driven to further analysis.

Turn the key to 3D-modeling from CT-data of physical objects

Embed Computed Tomography and process CT data in correlation with CAE and CAD data and apply high-end methods to read, process, reduce, reconstruct and visualize the CT for the analyst/engineer.

Minimal and Intuitive Interface

All tools and functions are grouped together on a ribbon, composing a minimal and user-friendly interface. The user has direct access to any of those, as well as direct interaction with the model during the analysis process.

Multi-material Volume rendering

Solid and transparent 3D Volume rendering allows the visualization of different materials with distinct colors, supporting instantaneous changes in number of materials or inter-material thresholds.

Multi-material Segmentation and Meshing

Multiple materials are handled simultaneously during the image segmentation and the user can generate separate meshes for all materials appearing in the scan, in a single pass.

Powerful Mesh processing tools

During mesh generation, the user can proceed with smoothing and simplification of the resulting mesh. This leads to models with smaller number of elements, making it easier to import and handle despite the huge amount of datasets.

Stream Meshing capabilities

Sophisticated algorithms allow the user to work efficiently on big databases, without sacrificing resulting quality.

Batch mode execution

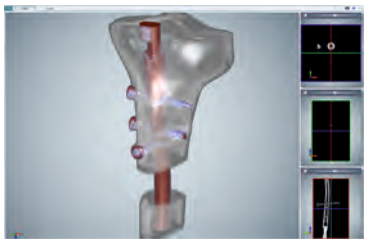
A session.xml file with all steps and processes can be automatically exported and can be revoked at a later stage from command line upon demand.

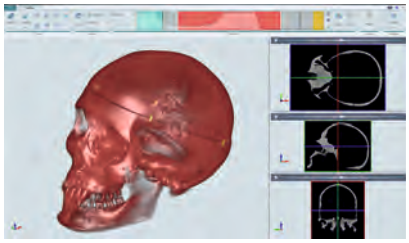
Multi-thread application

Making the most of RAM and available CPU cores, the user gains on time and effort, obtaining high-quality results.

Industry-oriented software

Unlike most CT applications, BETA CAE Systems software is primarily oriented towards the needs of industry, efficiently handling huge datasets and their resulting mesh representations.





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www.beta-cae.com