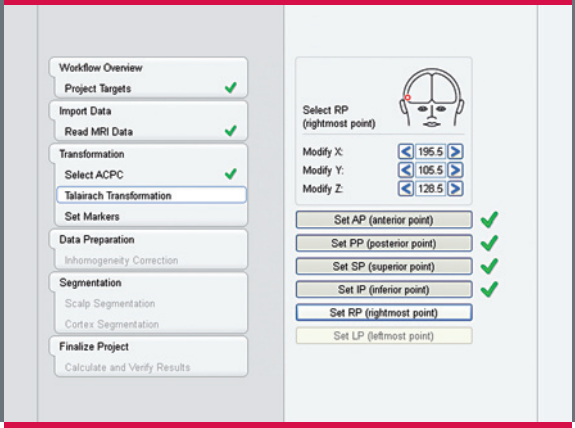
BESA®

BESA MRI

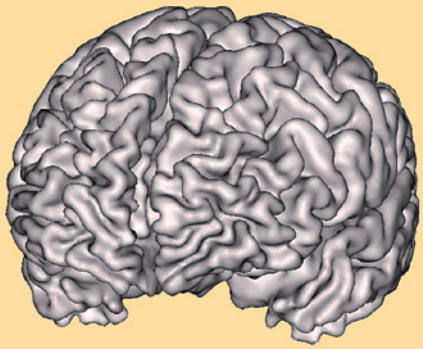
CE–certified clinical software to coregister EEG / MRI data and to create realistic FEM models for EEG source analysis

Easy, intuitive user interface



Workflow for segmentation, coregistration, FEM model generation

3D surface reconstruction



Reconstruction of high quality 3D surfaces

NEW

BESA MRI 2.0 – new features

- Readers for DICOM, Analyze, and Nifti files
- FEM model generation
- export of leadfield, surfaces and FEM meshes

Workflow

- Fully integrated workflows are guiding the user step by step
- Automatic finalization after setting up the MRI of single or multiple subjects
- Review each step of the complete workflow at any time

Data input and output

- Subject-based data mangement
- Data are stored in projects that can be saved and re-opened at any time

NEW - Easy import of MRI data in DICOM, Nifti and Analyze format

NEW - T1 and T2 data (optional)

NEW - FEM leadfield, meshes and surface are exportable

Registration

NEW - Automated registration of T1 / T2 data

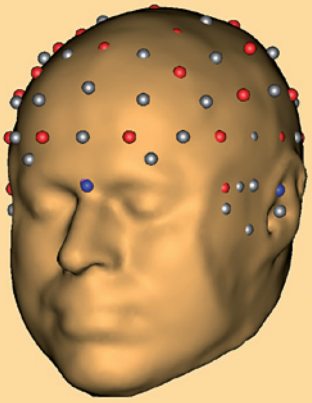
Coordinate space transformation

- Fast and easy work steps to set AC / PC and Talairach points
- Intuitive and fast selection of 3D positions and rotations by clicking and dragging in visualized MRI data

Inhomogeneity correction

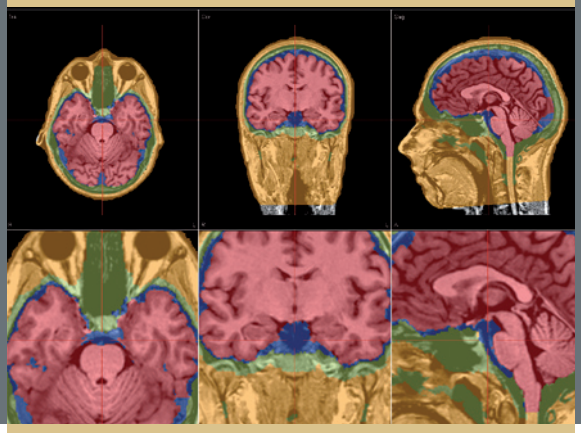
- An automated, robust inhomogeneity correction is computed as a precursor for highest quality segmentation of brain tissues

Electrode coregistration



Easy coregistration of standard or digitized electrodes with MRI data

FEM model



Automatic setup of 4-layer FEM model

Segmentation

- Automated segmentation procedures employing advanced algorithms
- Segmented scalp surface optimally suited for electrode coregistration and visualization of scalp potential maps
- Automated cortex segmentation, optimized for cortical current density reconstruction (CDR) methods in BESA® Research

NEW - Automated segmentation of scalp, skull, CSF and brain for FEM model generation

FEM model

NEW - Automatic setup of 4 shell model including CSF layer gaining critical precision over BEM models

- Geometry-adapted hexahedral meshes

Coregistration

- Coregistration of electrodes, MEG sensors, and fiducials with individual scalp surface
- Accurate coregistration of digitized electrodes with individual scalp surface

NEW - Automatic and manual surface point fit

- Morphing of 10-10 standard electrodes including inferior electrodes and coregistration with individual MRI
- Coregistered electrode coordinates are immediately available in BESA® Research
- Thus, source images / localization can be displayed in the individual MRI even with standard electrode placement
- Direct import of scalp and cortical surfaces into BESA® Research

NEW - FEM model directly available in the source analysis module of BESA® Research

BESA GmbH
Freihamer Str. 18
82166 Gräfelfing – Germany

Phone + 49.89.89 80 99 66
Email info@besa.de
Web www.besa.de

CE 0197

The CE marking certifies that this product fulfills the basic requirements of the Medical Devices Directive MDD 93/42/EEC. The number represents the identification number of the Notified Body which carried out testing and certification.