Specification

Supported MRI data format

Image format	NIfTI - 1 (file extension : .nii)
Type	Structural MRI (T1-weighted)
Slice thickness (Spacing)	Coronal ≤ 1.0 mm
	Sagittal ≤ 1.0 mm
	Axial ≤ 1.6 mm
Field Strength (Tesla)	1.5 T
	3.0 T

Validated devices and protocols of MRI

Company	Model	Protocol
GE	Signa HDxt 1.5T	SPGR
Philips	Intera 1.5T	MPRAGE
	Intera 3T	TFE
	Ingenia 3T	
Siemens	Skyra 3T	MPRAGE
	Verio 3T	

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Personalized tES Treatment
tDCS/tACS Simulation Software tES LAB

This version includes simulating electric field strength with stroke-affected region segmentation feature.

# Neurophet tES LAB is a complete, powerful tES simulation software

that allows you to simulate and analyze tES-induced electric fields in a personalized brain model using MRI.

## Fully Automated Brain MRI Segmentation Including Stroke-affected Region

Deep learning-based Neurophet's technique segments skin, skull, CSF, white matter, grey matter, and even stroke-affected region using MRI.

Personalized Brain Modeling
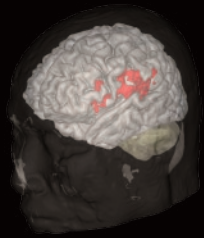
An automated modeling algorithm generates a 3D brain model based on segmented tissue layers considering an individual's anatomical structures.

Fully Compatible with tES Parameters
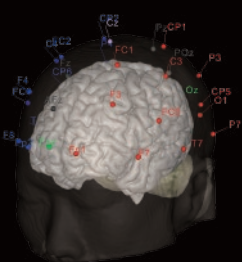
- Customizable electrodes configuration (shape, size, number, and position of electrode)
- Electrode positioning system (10-20/10/5 EEG positioning system)
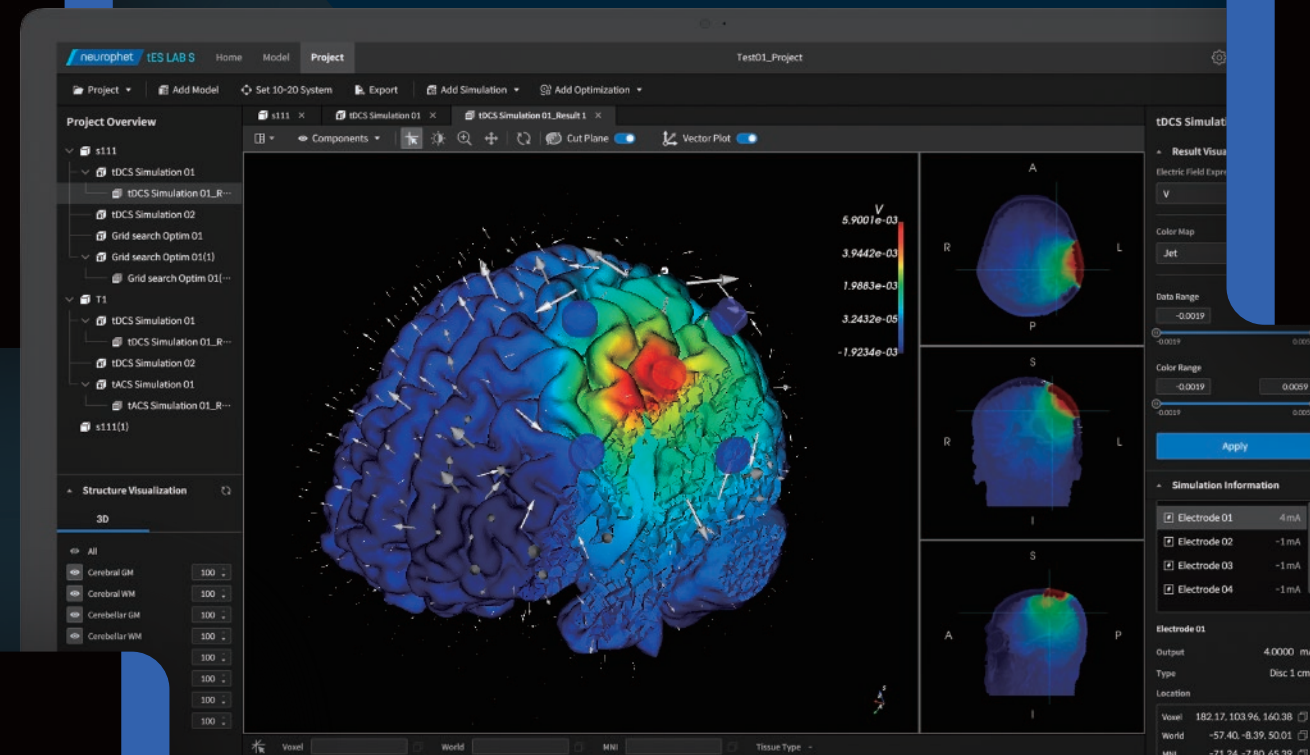
A Powerful tES Simulation Framework

The high-speed simulation feature calculates tDCS/tACS-induced electric field in the brain for advanced analysis and treatment planning.

- Easy, intuitive graphic user interface (GUI)
- The state-of-the-art visualization and analysis features (3D surface/cut-plane and ROI-based analysis)
- Electric field optimization features (single/multi-channel tES optimization)
- Visual guidance for accurate electrode positioning

Additional Convenient Features

- Data export: segmentation label, 3D model, stimulation results
- Batch-processing for group data analysis

Neurophet also provides TMS LAB

for Personalized Transcranial Magnetic Stimulation Simulation and Planning

- Simulation & analysis for TMS-induced electric fields
- Optimization of a coil's position & orientation
- Interoperability with TMS Navigation*

*an upcoming function

neurophet tES LAB