SmartMove™

Two years ago ANT introduced Visor™, the most anticipated Neuronavigation system. As result of the clear benefits of Visor, ANT has become a worldwide leading provider of Neuronavigation systems for Transcranial Magnetic Stimulation (TMS). To strengthen its leading position ANT introduces another technological achievement in the TMS field: SmartMove, a Robotized TMS Coil Positioning system. With this proven innovation ANT is the first company that offers a complete solution for EEG/ERP recording & analysis including Navigated and Robotized TMS.

Robotized TMS Coil Positioning

SmartMove is a Robotized TMS Coil Positioning system which - in combination with the Neuronavigation system Visor – allows you to plan a stimulation session and define the stimulation sites and desired coil orientations. While executing the stimulation plan, the Robotized TMS arm places the coil tangentially at the predefined target positions and keeps the coil in place even if the head of the subject moves. SmartMove consists of a six-axis articulated arm and an optical tracking system. The devices are controlled by the navigation system for stimulation planning and execution.

SmartMove is currently applied in a number of European research labs, in studies ranging from cognitive research to precise mapping of motor cortex locations in animal studies.

Benefits

SmartMove allows you to do what you do best: research. It inspires and enables you to do your studies in the most efficient and effective way. The key benefits are:

- Work more accurate
- Better and faster treatment plan
- Treat more patients in a day
- Save time and money

Key features

SmartMove makes it easy for you to focus on your core activities. It overcomes well known major issues of image guided TMS, allowing:

- Automatic segmentation of the scalp
- Placement of the coil tangentially to the head
- Compensation of the movements of the subject's head
- Repetition of previous stimulation target positions
- High accuracy
- Definition of entire stimulation protocols
- Online mapping of evoked motor responses.

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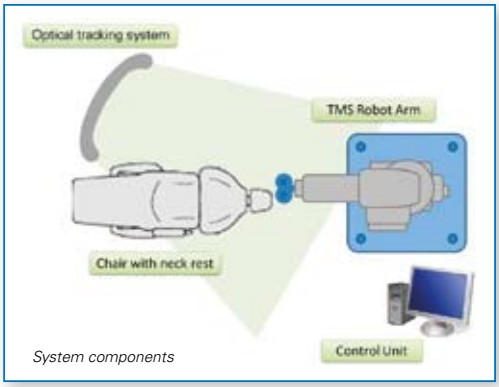
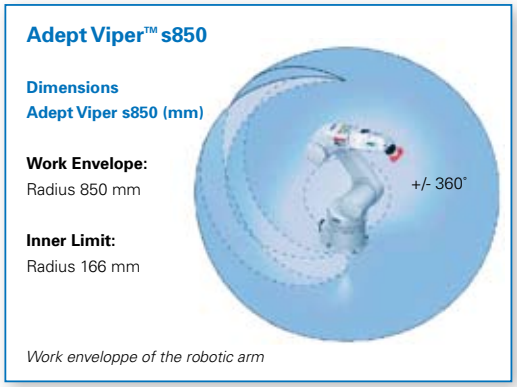
System Overview

The system consists of the following parts:

- Robot arm, type Adept Viper S850 with power supply unit and remote control
- NDI Spectra® optical tracking system
- Control Unit and the software for the robot arm, optical tracking system



System components



Work enveloppe of the robotic arm

How to perform a stimulation session*

- Plan the stimulation session by defining the target:
  1. Single points selected on the MRI or the virtual cranium
  2. Single points selected on the real cranium
  3. Automated target grid creation of desired dimensions and spacing, based on an initial site defined as above.
- Activate a target to allow the automatic placement of the coil at the desired location. The program calculates a safe trajectory from the current position to the target, displays it on the screen for user-approval and steers the coil exactly to the planned site for stimulation.

Compatibility with TMS stimulators

SmartMove can be used with any TMS system. The templates of the circular and figure-of-eight shaped coils are already included. No additional hardware like markers or calibration boards are necessary to track and register new coils. They can be used straight away!

More information

For more detailed information and specifications please visit our website www.ant-neuro.com, contact us directly by telephone or e-mail, or approach us during a conference.

*SmartMove is intended to be used for research applications only. This products is not sold as Medical Device as defined in EU directive 93/42/EEC. The product is not designed or intended to be used for diagnosis or treatment of disease.

Calculated trajectory when moving the coil from left to right motor cortex.

A full and complete Robotized TMS neuromodulation lab (SmartMove which consists a TMS system, Visor Neuronavigation system and the ASA-Lab EEG/ERP system including the Eevoke system -VEP and AEP stimulation).

SmartMove in full action during a presentation.

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