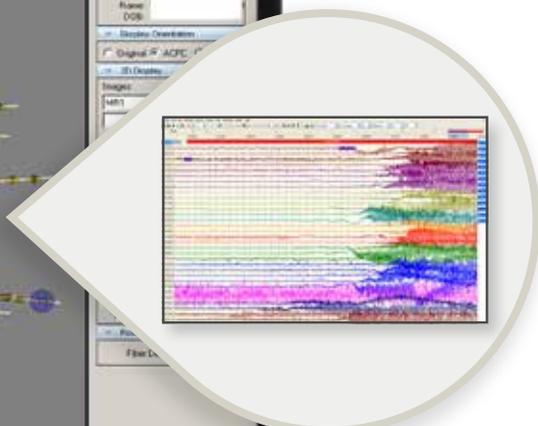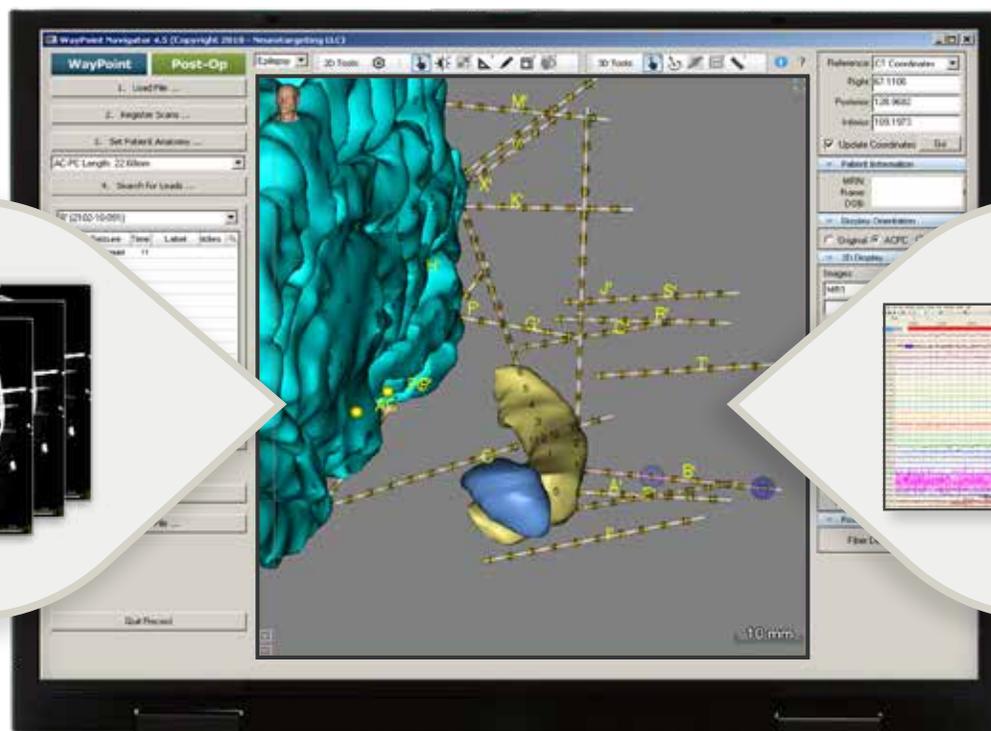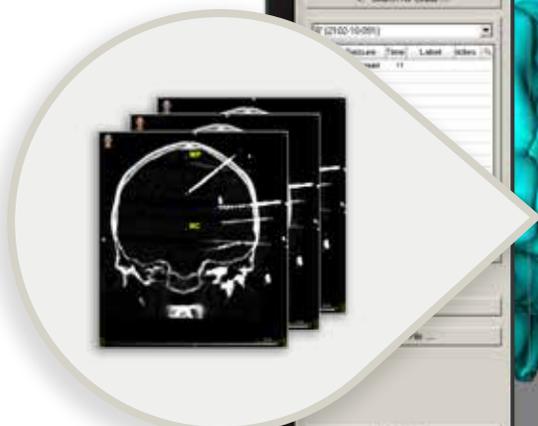# WayPoint Navigator

The Critical Link in Comprehensive Epilepsy Treatment

Diagnosis and treatment for refractory epilepsy involves many professionals working together to achieve the optimal patient outcome. WayPoint™ Navigator 4.5 allows epileptologists, neurosurgeons, and epilepsy monitoring unit staff to aggregate the wide variety of information collected as a patient progresses from diagnosis through treatment stages.
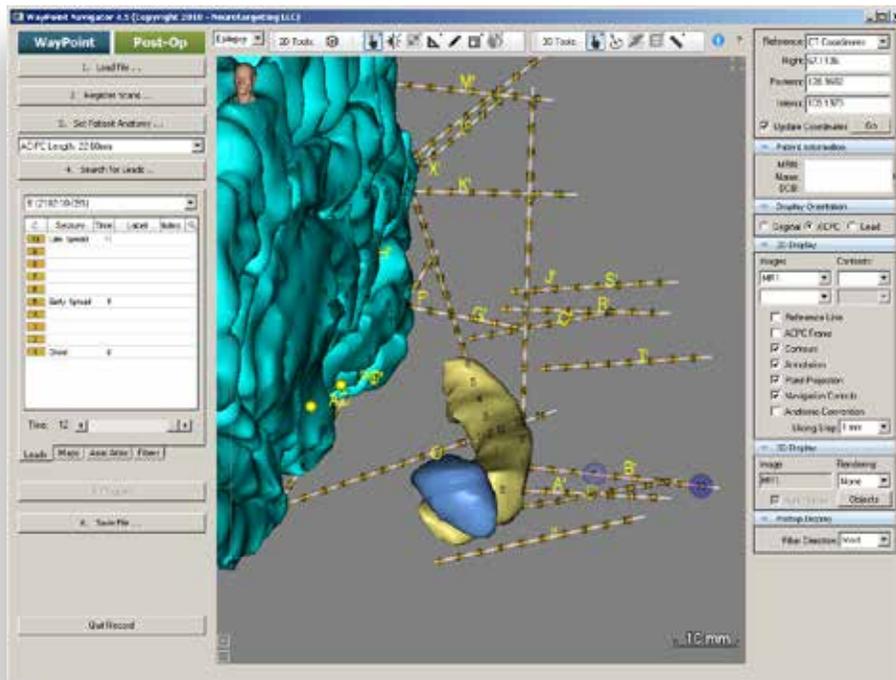

WayPoint Navigator is the only planning software which combines EMU foci localization results and post SEEG CT scans to create a complete 3D visualization of segmented lead, structures and seizure spread.

WayPoint Navigator is Built for Collaboration

FHC's WayPoint™ Navigator offers the epilepsy team a unique combination of powerful tools to streamline the complex visualization and analysis of SEEG monitoring results.

With one click, WayPoint Navigator's post-op tools can automatically segment the contacts on all SEEG leads in a post-op CT without the need to specify the lead model(s) or locations. The advanced segmentation algorithm accurately reports the actual position of every contact and can handle deflected or overlapping leads.

The spread of the seizure can be easily viewed in 3D space and time by classifying lead contacts based on the monitoring results. When combined with Navigator's powerful deformable atlas, the contact locations can be clearly associated with specific brain structures.
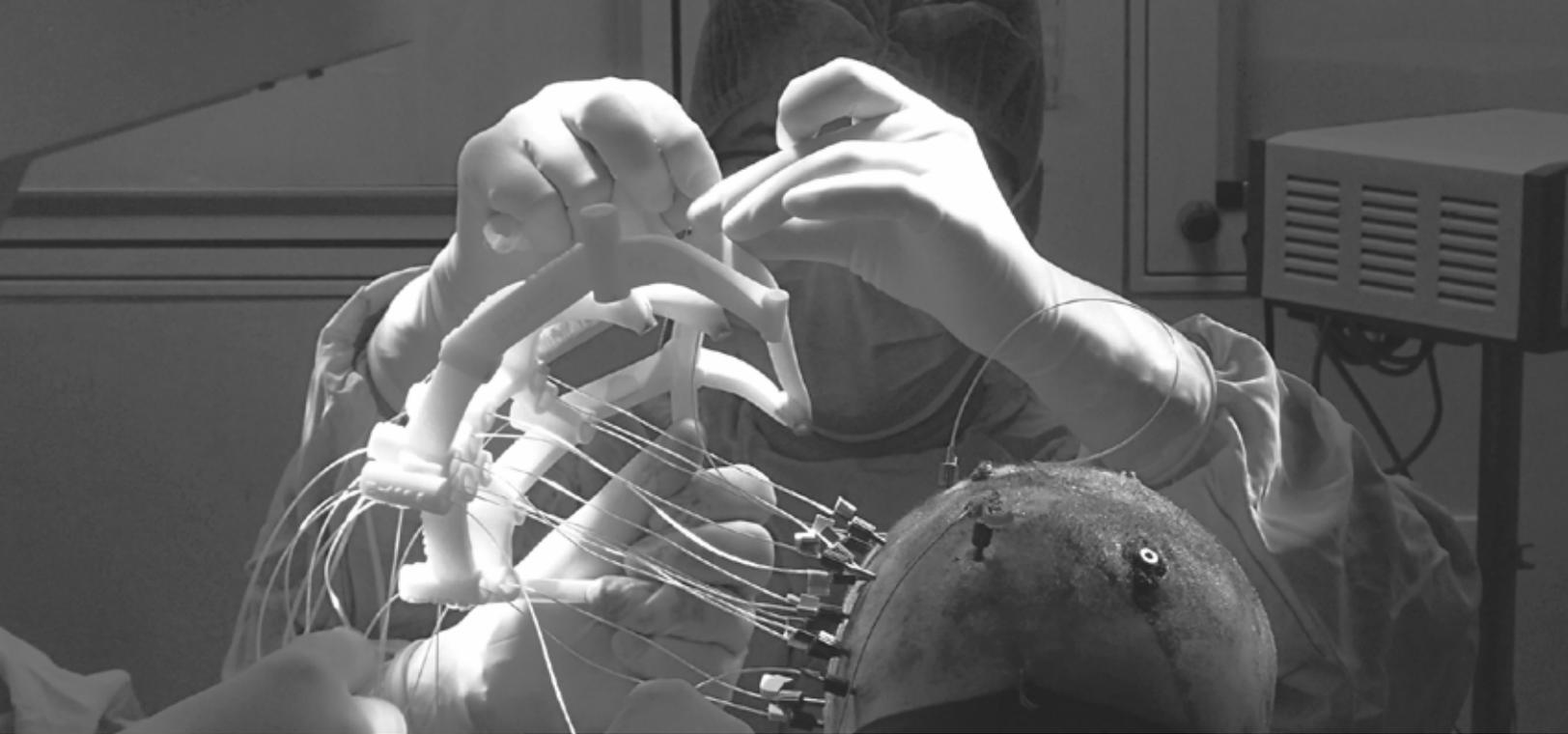

WayPoint Navigator's built-in deformable atlas enables Navigator data to continue to be useful after the case is complete. Navigator aggregates data from multiple files into the common "atlas space" to provide efficacy maps that can be utilized when planning the next case.

- Define 3D volumes to target for resection
- Create surgical plan for treatment while viewing monitoring result visualizations
- Export volumes to StealthStation™, BrainLab, and Stryker planning systems

Navigator has Powerful SEEG and Surgical Planning Tools for Epilepsy

In addition to unique and powerful SEEG monitoring analysis tools, WayPoint Navigator includes a robust suite of enhanced-for-epilepsy functions to be used in surgical planning of both the SEEG and treatment surgeries. These tools eliminate the need for time-consuming, manual trajectory-by-trajectory steps and allow visualization of placed leads and contacts.

Additional productivity gains can be realized when Navigator is used by the entire neurological and surgical team through all stages of the epilepsy surgical diagnosis and treatment.

All product names, trademarks and registered trademarks are property of their respective owners.
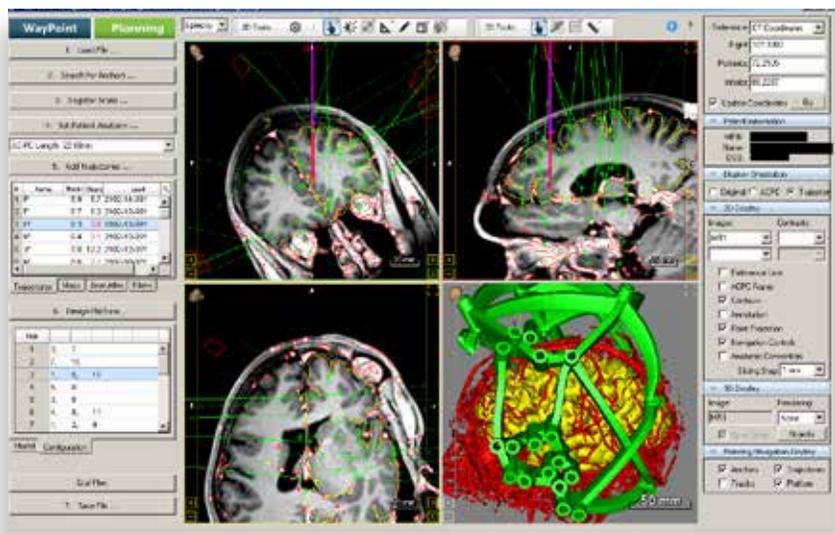
Navigator EMU Features for Epilepsy SEEG

- Automatic lead segmentation from CT for most vendors
- Automatic contact labeling when planned with Navigator
- 3D visualization of monitoring results
- Unique deformable atlas offers improved structure mapping and visualization
- Import external surface and mesh data

Navigator Planning Features for Epilepsy SEEG

- Target based trajectory templates
- Automatic lead selection for most vendors
- Lead/contact visualization
- Automatic bone thickness detection
- Display of trajectory angle to skull
- Lead intersection warnings

With FHC's STarFix™ Stereotactic Platforms, WayPoint Navigator also offers the best solution for surgical planning. Designed specifically for SEEG surgery, the patient-specific STarFix Multi-Oblique Platform provides simultaneous access to all trajectories eliminating the need for time-consuming traditional stereotactic frame registration and manipulation required during surgery.

Additional Navigator Features for Epilepsy

In addition to 3D visualization of the monitoring results at the actual contact locations, WayPoint Navigator allows brain cortical surface reconstructions and meshes in standard formats, including FreeSurfer, to be imported and displayed in the 3D visualizations. Navigator can also import white matter/gray matter classifications generated with the CranialCloud™.
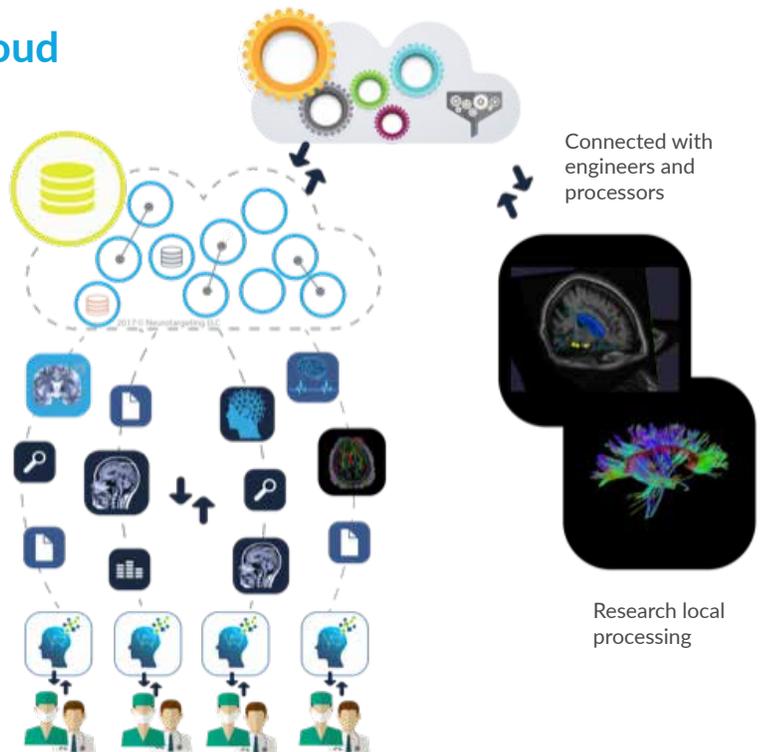
Navigator Integrates with CranialCloud

WayPoint Navigator is one of the few planning systems that can publish and access data to the CranialCloud. The CranialCloud, a separate service provided by Neurotargeting, LLC, allows Navigator's built-in aggregating functions to be used to share atlas-normalized, anonymized data between multiple collaborators. CranialCloud also includes a high-speed cortical mapping service.

- High-speed remote creation of cortical surface maps
- Generate white matter/gray matter classifications
- Share and organize all data with team or with remote collaborators
- Share anonymized data with others for review
- Connectivity to EMR/Epic systems

For more information on CranialCloud visit neurotargeting.com

Connected with engineers and processors

Research local processing

The CranialCloud fully integrates with your clinical flow while using state-of-the-art cloud technologies. As easy as a Dropbox, the system uploads scans and data to your account where it is automatically processed to enhance patient care.

SEEG Surgical Planning Features

WayPoint Navigator offers a unique collection of surgical planning tools that have been optimized to simplify the time-consuming task of placing individual SEEG trajectories. Navigator comes with a computer-aided system for trajectory planning of most common SEEG targets to greatly simplify the process. The system utilizes Navigator's deformable atlas to set the initial position of a cluster of trajectories for the selected target, which the surgeon then fine-tunes to create the final trajectories. In addition, Navigator includes automated functions to detect bone thickness for setting drill depth, calculates trajectory angles to indicate skiving likelihood, and provides warning if leads are too close to each other.

Epilepsy Treatment Surgical Planning Features

Once you are visualizing the actual location of the seizure progression you can use Navigator to complete surgical planning for the treatment surgery. Navigator allows users to define target volumes for resection and can perform surgical planning for FHC STarFix, Leksell® and CRW® stereotactic systems. In addition, Navigator supports exporting volumes to separate planning systems if desired.