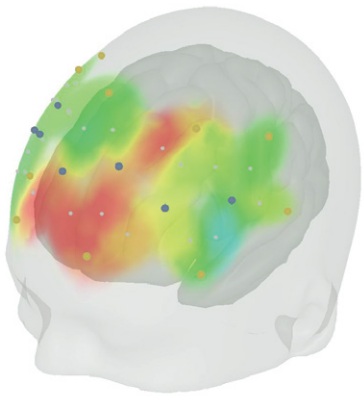
OxySoft 4

Enhanced (f)NIRS monitoring software

OxySoft 4, our elevated software version, comes with exciting features to facilitate the acquisition and analysis of NIRS and fNIRS data and provide maximum flexibility. OxySoft 4 is compatible with all latest Artinis devices:

- Brite family
- PortaLite MKII
- PortaMon MKIII
- PortaSync
- fNIRS - EEG combination, such as TMSi APEX and SAGA



Get a quote

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Facilitating (f)NIRS data acquisition and analysis

DIRECT AND EASY EXPORT TO .SNIRF

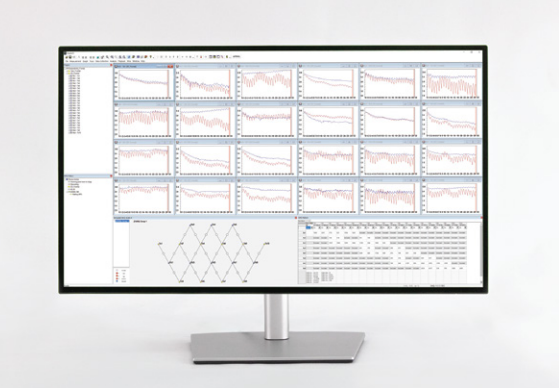
The shared near-infrared file format (.snirf) is a structured format based on the Hierarchical Data Format (HDF5). It is specifically designed for organizing, storing, and sharing Near-Infrared Spectroscopy (NIRS) data. This format includes essential metadata like stimuli information, transmitter and receiver positions, and measurement date and time. The .snirf format greatly simplifies the exchange and analysis of (f)NIRS data across diverse hardware and software platforms. It is compatible with various fNIRS analysis tools and software, including Homer3, MNE, FieldTrip, NIRS Brain AnalyzIR, and NIRStorm.

OFFLINE RECOVERY TOOL

To establish a wireless connection to OxySoft and measure NIRS data, our devices use Bluetooth. However, in rare cases, if Bluetooth range is exceeded, connection loss may occur. This can lead to missing samples in the data. To mitigate this issue, we have implemented a robust recovery tool that empowers researchers to retrieve data with utmost ease in just a few clicks.

DEVICE EVENT MAPPING

OxySoft 4 makes it possible to perform event mapping for events inserted using hardware devices. Alphabetic characters from A to Z can be assigned as event keys to each button. By pressing the assigned letter buttons, events will automatically be inserted in OxySoft. This makes additional steps, such as converting triggers of the PortaSync to events, superfluous and facilitates event usage and synchronization.



INTUITIVE SIGNAL QUALITY ASSESSMENT

Achieving good signal quality is crucial when performing (f)NIRS studies. Therefore, in OxySoft 4 we aim to further improve options and layout to check for appropriate data quality. For this reason, we developed and implemented the Signal Quality Index (SQI), an algorithm, which rates signal quality on a numeric scale from 1 to 5 for quick and easy data check. Additionally, we have optimized the user interface to provide a clear and concise view of signal quality per channel.

OPTIMIZING BRAIN MAPPING: DUALBRITE SYNCHRONIZATION

To cover larger areas of the brain, two Brites can be combined on one headcap, as OxySoft allows to connect multiple devices at the same time. The DualBrite synchronization feature in OxySoft 4 allows for adjusted firing pattern. This ensures that the Brite devices can be placed close to each other (< 6 cm) without crosstalk occurrence. During a DualBrite measurement, the synchronization status can constantly be monitored giving warnings in case of lost connection or failed synchronization to avoid crosstalk.

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