Data extraction for external use

To export session data, click on the download button located next to each specific recording.

This option is useful for further analysis of the raw data and the processed data.

The downloaded archive contains the following files:

Raw Data File

Ordered list of measurements of raw EEG signal captured by the device. The Sensor captures EEG signal @ 500 Hz, i.e. one measurement each 2 msec. The input range of the ADC is 0-5v (pk-pk). Considering amplification of 100 and a 24-bit resolution, EEG Signal Amplitude = raw EEG signal X ~3nv.

Measurements are sent in batches of 100 samples, each 200ms. The timestamp field indicates the transmission time and not the sample time, hence the repetition you see in this field.

File name

SensorName-SessionName.rawdata.txt (e.g. 00a3b4d8a99e-2018-03-18-09-39-55.rawdata.txt)

Structure

rawdata.txt is an ASCII representation of the following fields separated by commas:

#	Parameter	Format	Description
1	Timestamp	EPOCH	Sample timestamp. Number of milliseconds since 00:00:00 01-Jan-1970
2	EEG Sample	Integer	A number representing the EEG signal measurement
3	Battery Level	Short	Sensor battery voltage level represented in millivolts, normal range: 3000-4200

Event Data File

Ordered list of events logged during this session. The system uses events to annotate a given point in time with a specific label. The event description can be inserted by the user or generated automatically by the system.

File name

SensorName-SessionName.events.txt (e.g. 00a3b4d8a99e-2018-03-18-09-39-55.events.txt)

Structure

#	Parameter	Format	Description
1	Timestamp	EPOCH	Sample timestamp. Number of milliseconds since 00:00:00 01-Jan-1970
2	Event Category	N/A	This parameter is not available
3	Event description	Text	This presents the description of the event as entered by the user/system

Features File

A list of Brain Activity Features (BAFs) per timestamp. Brain Activity Features (BAFs) are system generated values representing the processed information extracted from the EEG signal captured by the device. The first 121 features represent BAF channels related to different functional neural networks and compose the real-time heatmap neurogram available in the User-Interface. The rest of the features represent various ratios between these different channels (for internal use).

File name

SensorName-SessionName.features.txt (e.g. 00a3b4d8a99e-2018-03-18-09-39-55. features.txt)

Structure

#	Parameter	Format	Description
1	Timestamp	EPOCH	Sample timestamp. Number of milliseconds since 00:00:00 01-Jan-1970
2	Features	Integer	Each of the 157 features is represented by a number in the scale of -4 to 4

Labels

Deprecated.

File name

SensorName-SessionName.labels.txt

Images

File name

SensorName-SessionName.plot.png

Structure

A visual representation of the 121 BAF channels collected throughout the session duration. The processed data is represented in a two-dimensional information matrix, which translate brain activity into a heat color map. Each channel is associated with a distinct time/frequency pattern that is unique to a specific functional neuronal network. The presentation of the activity using the heatmap indicated the intensity of the activity in each channel in real time.

File name:

SensorName-SessionName.spectrum.png

Structure

A visual representation of the frequency channels collected throughout the session duration. This is the spectrogram of the raw EEG data recorded.