

Eye tracking and biosignals for your research

Eye tracking technology has become an important tool in research in recent years. The ability to track the eye movements of test subjects opens up new possibilities in many areas, from market research to medical diagnostics.

But what exactly makes eye tracking so special? Well, it is the possibility to measure visual perception without the subjects being able to actively influence it. It is a method based on objective measurements that provides a variety of data that can contribute to the interpretation of visual perceptual processes.

And these data can become even more valuable when collected in conjunction with other physiological data. Synchronous acquisition of data such as EEG, ECG, and skin conductance can lead to a deeper understanding and provide new insights into the relationships between visual perception and bodily responses.

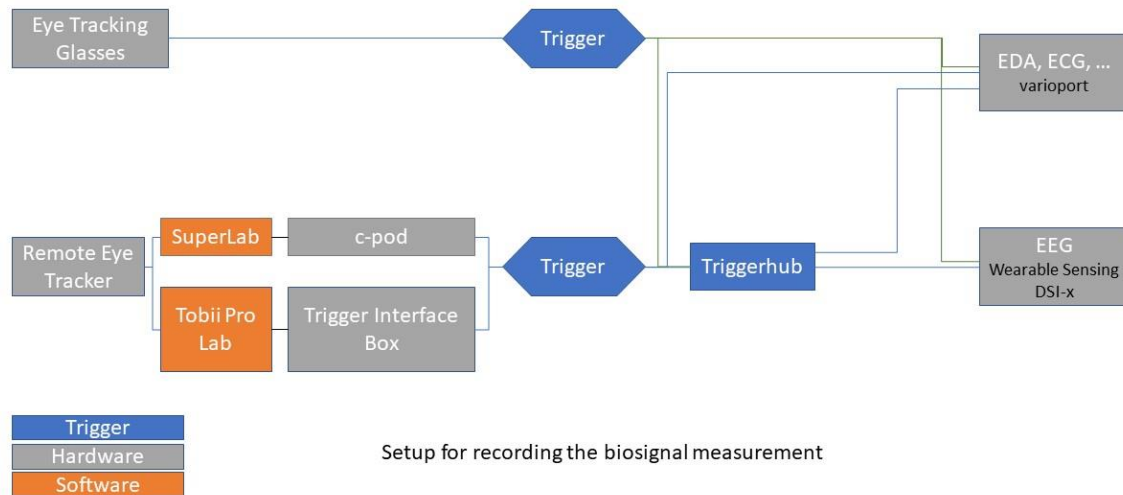
The technology is inherently interdisciplinary and encourages collaboration between experts in different fields. Based on this multidisciplinary approach, the BiSigma team develops individually configurable hardware and software solutions for effective use in your research area as well.

Our solutions

As shown in the diagram below, there are different ways to combine eye trackers with other devices for recording bio signals.

Both remote eye trackers and eye tracking glasses offer the possibility to send exact time synchronization signals via hardware interfaces. These can be received and recorded directly either by the amplifier of the bio signals or by their recording software. This makes it possible to use the software products of the various manufacturers and then combine the acquired data in a time-synchronized manner for joint analysis.

In addition to the classic bio signals such as EEG, EMG, ECG as well as skin conductivity (EDA/GSR), the analysis of bio signals such as pupil size, facial expression/emotion recognition and voice analysis can also be evaluated. EEG acquisition can be performed classically with gel electrodes or via Wearable Sensing's dry EEG headset, which allows for quick and easy subject preparation.



If you want to learn more about the importance of eye tracking, physiological signals and their use in research, we recommend the

BiSigma tutorial on bio signal analysis at this year's conference ETRA on Tuesday, May 30, 2023, 8:45 a.m. - 5:30 p.m. at the University of Tübingen.

There, the latest developments and applications of eye tracking and its connection with other physiological data will be presented using real-world experiments.

You don't have time to come to ETRA? Then please contact us at info@bisigma.de and arrange an individual demo appointment. In addition to advice, we will provide you with customized solutions for your individual problem.

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