IMOTIONS ®

Eye Tracking - Screen-based

Understand Visual Attention

Screen-based Eye Tracking

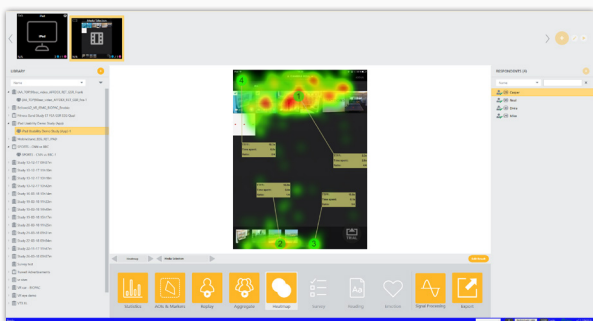## Complete eye tracking research platform

The Screen-based Eye Tracking module enables users to connect, record, and live visualize eye tracking data from a complete range of eye tracking devices. A full suite of analysis tools are available to advance understanding of human attention.

- Single platform for integrating eye tracking with experimental control and stimuli presentation

- Full and native integration with 30+ eye tracking models from a range of vendors

- Advanced analytic tools for screen-based multimedia stimuli (images, videos, websites, games, software interfaces, and 3D environments)

Watch the video below to see how Associate Professor Alessandro Canossa from Northeastern University uses iMotions in his gaming and psychology research.
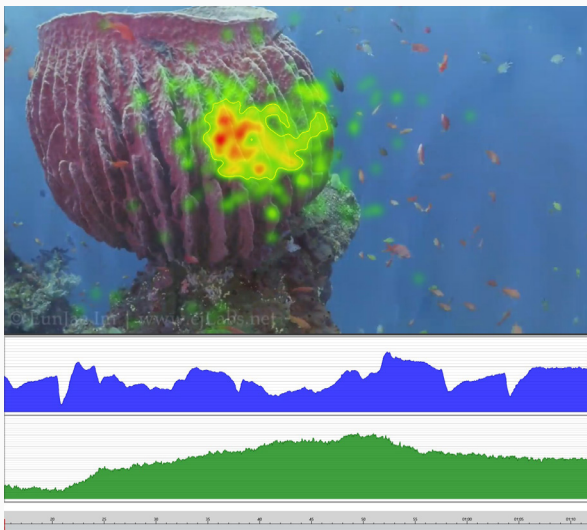
Screen-based Eye Tracking Module Features
Quickly and easily understand attention

Connection to a variety of leading eye tracking devices

iMotions provides the ability to integrate screen-based eye trackers from Smart Eye, SMI, Gazepoint, EyeTech, The Eye Tribe, and ASL, with more partners on the way. Choose the right equipment for your research needs, experience, and budget.
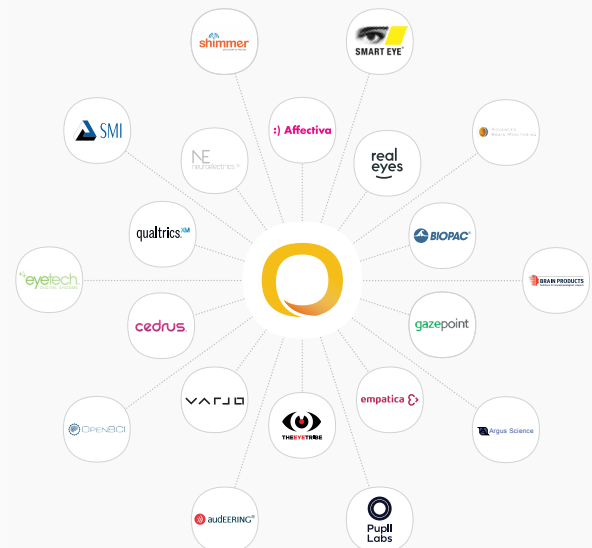

Live visualize and analyze

Live visualize all incoming data, from gazes, to pupillometry, and distance from screen. Get instant results in the form of metrics - time to first fixation, heat maps, time spent etc. Use areas of interest to dissect crucial parts of the scene. Export data in suitable formats for further analysis if needed.
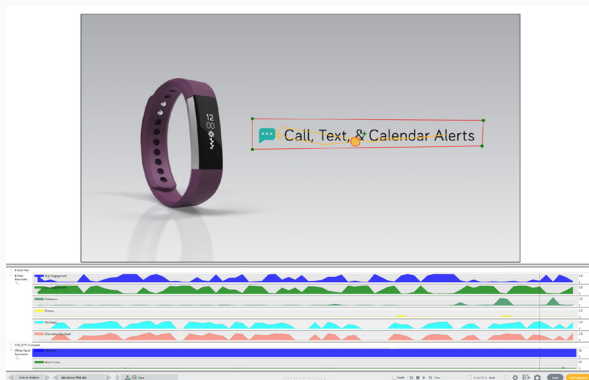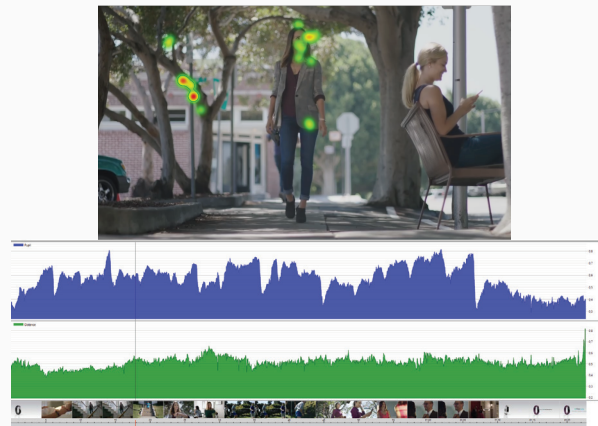
Seamlessly integrated with other biosensors

Integrate and synchronize 50+ different sensors from 20+ independent vendors, across 10+ modalities. Add even more sensors through the Lab Streaming Layer. Forward data in real time and import external sensor / software data and loop it back into the platform via the API.

Full experimental suite

iMotions provides all the tools needed for eye tracking research, from calibration, to stimuli presentation, to both quantitative and qualitative analytical tools. Get quick insights within an intuitive experiment environment.

Static and dynamic areas of interest

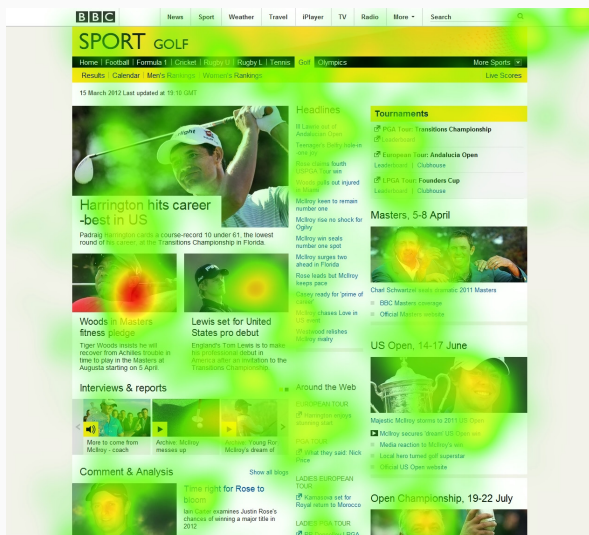Track areas of interest (AOIs) across moving stimuli in videos, to see how attention changes to that area over time. Understand how the content can influence attention dynamically.

Real-world use and behavioral metrics

Present any screen-based stimuli, including website browsers (Chrome, Firefox, and Edge). Integrate eye tracking data with metrics such as mouse clicks, key strokes, etc.
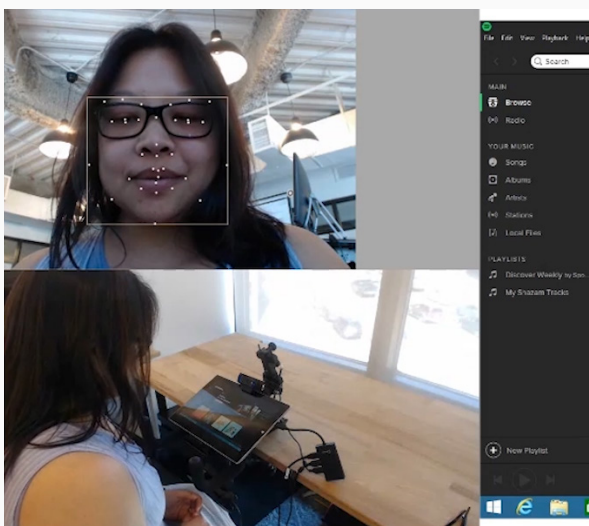

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Fully automatic gaze-mapping

Use gaze-mapping to translate moving, dynamic stimuli into observable data. Convert webpage recordings from either monitors or mobile devices into single images to see user behavior across the whole scene.

Get the full picture

Record and live view participants through a camera feed. View how participants use different devices and follow eye movements to assess how interactions change with attention. Create segments of the scene and aggregate the data.

Mobile and tablet device testing

Understand user behavior on mobile phones, tablets, or other devices. Use specially designed calibration screens for smaller devices to ensure eye tracking accuracy. Integrates with mobile stands for standardized use.

Screen-based Eye Tracking Hardware Options
Ideal equipment to meet your needs

iMotions seamlessly integrates a range of eye tracking devices, that cover various technical requirements and budget levels. All eye tracking equipment can be easily synchronized with other biosensors on a modular basis.
All of the following eye tracking companies are fully compatible and natively integrated with iMotions.

EyeTech

EyeTech offers a range of affordable screen-based eye trackers that cover a variety of use cases within both academic and commercial research environments.

The EyeTech VT3 mini is an accurate device available at a range of different capture rates, from 40Hz to 200Hz, making it a suitable choice across different experimental scenarios.

With a range of 2-3m, the EyeTech VT3 XL is a versatile option for long-range eye tracking. This makes the devices particularly suitable for capturing attention data in a natural environment. This device is also available at speeds of 40Hz to 200Hz.

Smart Eye

Smart Eye currently sells two devices - Smart Eye Pro, and Aurora.

Smart Eye Pro features the best combined head box, field of view and gaze accuracy on the market. It is also the best horizontal/vertical remote tracker on the market today.

A true multi-camera system, Smart Eye Pro is scalable from 2 up to 8 cameras allowing 360 degree head and eye tracking. Free and wide placement of cameras both horizontally and vertically makes it ideal for a large number of environments, setups and situations, particularly for car and flight simulators, vehicle studies, etc.

The Aurora device is a compact, high-performance eye tracker that can be easily set up for a laptop or computer-based study.

SMI

Although no longer in production (after being acquired by Apple in 2017), SMI eye trackers remain widely used, and have been well-regarded within the academic world. iMotions offers support for all SMI eye trackers, that cover a range of different capabilities. Models are available from 30Hz to 500Hz. Simply plug your SMI eye tracker in to a laptop or computer and get up and running.
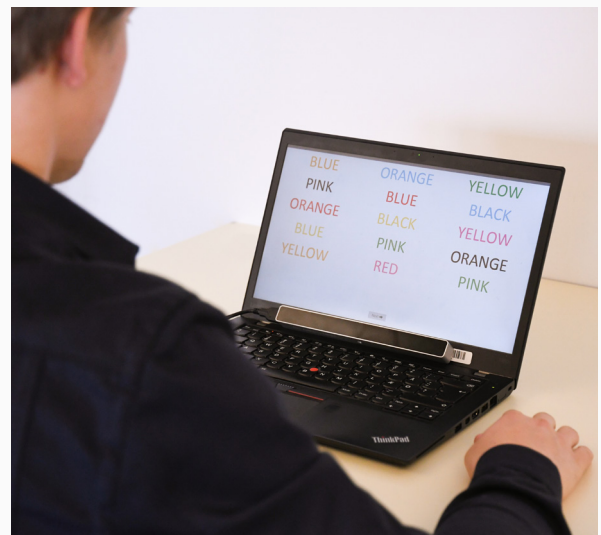

Gazepoint

Gazepoint offers high performance eye tracking solutions at affordable prices. Two models are available from Gazepoint - the GP3 (60Hz), and GP3 HD (150Hz), making them suitable for most eye tracking applications.

Mirametrix

Mirametrix provides eye tracking solutions that are used by both commercial and academic clients. The device is 60Hz making it appropriate to use in a wide range of research scenarios.

The Eye Tribe

While The Eye Tribe now longer manufactures eye tracking devices (following their acquisition by Oculus in 2017), the devices were renowned for their accessible price, making them a first choice for many users on a tight budget. The devices are able to capture data at 30 to 60Hz.

LC Technologies, Inc

LC Technologies provides both binocular and monocular eye tracking devices, that offer the largest amount of free head movement of any remote eye tracker in the world. The binocular systems run a 120Hz, making them suitable for natural research environments.

ASL

ASL's D6 Desktop EYE-TRAC™ is designed to be used with a range of participants (infant to senior citizens), and captures data at 60Hz.

Selected Publications

Screen-based eye tracking research made possible with iMotions

JAKE® Multimodal Data Capture System: Insights from an Observational Study of Autism Spectrum Disorder

Authors: Ness, S. L., Manyakov, N. V., Bangerter, A. et al.
Institutes: Janssen Research and Development, Duke University School of Medicine, Northeastern University, University of California, University of Washington

View publication

Choice Certainty in Discrete Choice Experiments: Will eye tracking provide useful measures?

Authors: Uggeldahl, K., Jacobsen, C., Lundhede, T. H., Olsen, S. B.

University: University of Copenhagen

View publication

Self-Control: Skill, Knowledge, or Perishable Resource?

Authors: Palma, M. A., Segovia, M. S., Kassas, B., Ribera, L. A., Hall, C. R.

University: Texas A&M University

View publication

Psychophysiological responses to short-term cooling during a simulated monotonous driving task

Authors: Schmidt, E., Decke, R., Rasshofer, R., Bullinger, A. C.

Company / University: BMW / Technical University Chemnitz

View publication

Uncertainty in Stated Choice Experiments: Will Eye-Tracking provide useful measures?

Authors: Uggeldahl, K., Jacobsen, C., Lundhede, T., Olsen, S. B.

University: University of Copenhagen

View publication

Role of Accentuation in the Selection / Rejection Task Framing Effect

Authors: Chen, J., Proctor, R. W.

Universities: New Mexico State University / Purdue University

View publication

In Harm's Way: On Preferential Response to Threatening Stimuli

Authors: March, D. S., Gaertner, L., Olson, M. A.

University: The University of Tennessee

View publication

Using sequence mining to reveal the efficiency in scientific reasoning during STEM learning with a game-based learning environment

Authors: Taub, M., Azevedo, R., Bradbury, A. E., Millar, G. C., Lester, J.

University: North Carolina State University

View publication

Dale Jolley, Professor, and Director of SMARTLab at Utah Valley University, describes his experience of using iMotions for his eye tracking research in the video below:

Want to know more?

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