eye square

VIDEO GAME UX

Improving User Experience and Gameplay on Mobile, PC and Console

TABLE OF CONTENTS

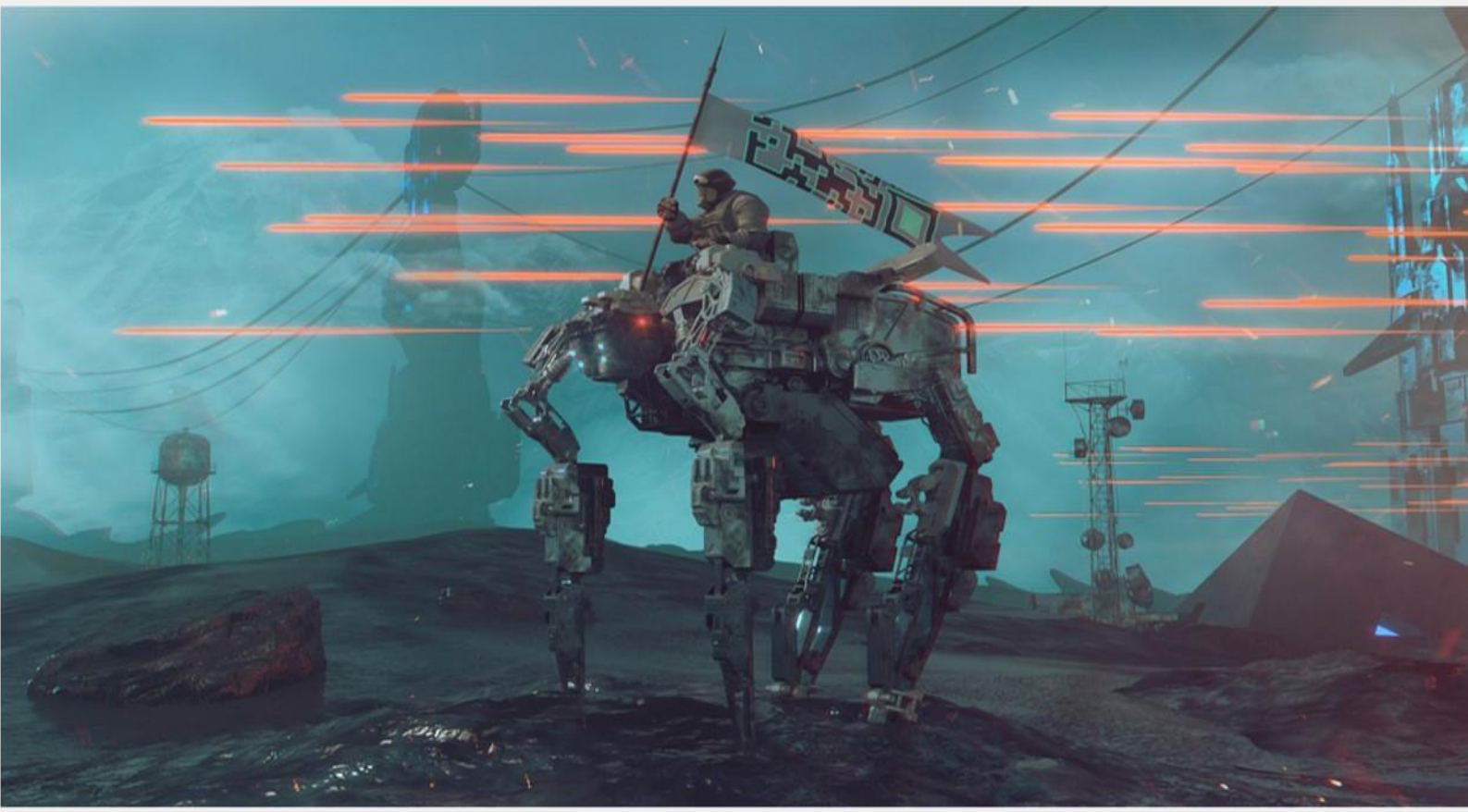
IGNITING THE SPARK - UX RESEARCH SUCCESS FACTORS IN VIDEO GAMES

Eye tracking and facial emotion tracking are two central technologies to better understand your players and your game. Implicit data can reveal information that explicit data doesn't, which is key to completely understanding UX. Learn how you can benefit from our expertise in all development stages of your game and drastically improve the user experience.

How does a player experience a game and how can we build upon it? Which emotions are involved? Do they fully understand the game? What parts of the game do they actually perceive and see? What attracts the gamers' attention? Do they see what they need to see? What are the reasons for certain emotions and attitudes?

What do gamers think about my video trailer? What was their first impression of the game? How do they like the concept? How effective is in-game advertising and sponsoring? How effective are micro- transactions integrated into the user interface?

These are questions at the heart of the video game development, in order to create fantastic experiences that fascinate players and keep them playing. eye square has the tools to help you answer these questions and help you develop your games from the early alpha stage to the already released and now to the free to game and season pass 15.



NEUROSEMIOTICS: COMBINING IMPLICIT AND EXPLICIT RESEARCH

System 0: PERCEPTION

Effects that occur immediately based on attentional processing

System 1: IMPLICIT

Automatic encoding and processing that is not directly conscious to us.

System 2: EXPLICIT

Central and conscious processing

EXPERIENCE RESEARCH

With over 20 years of experience in market and UX research, eye square has developed a unique approach to understanding cultural products from both the implicit and explicit side. Our technologies are used to measure experience, consumer behavior, advertising impact, neuro marketing and other relevant market research topics. Our software solutions are developed in-house by our development team and offered to our customers in an automated, integrated and licensable way.

Neurosemiotics is an integrated analysis model for the understanding of human experience, i.e. feeling and experiencing brands, advertising and products.

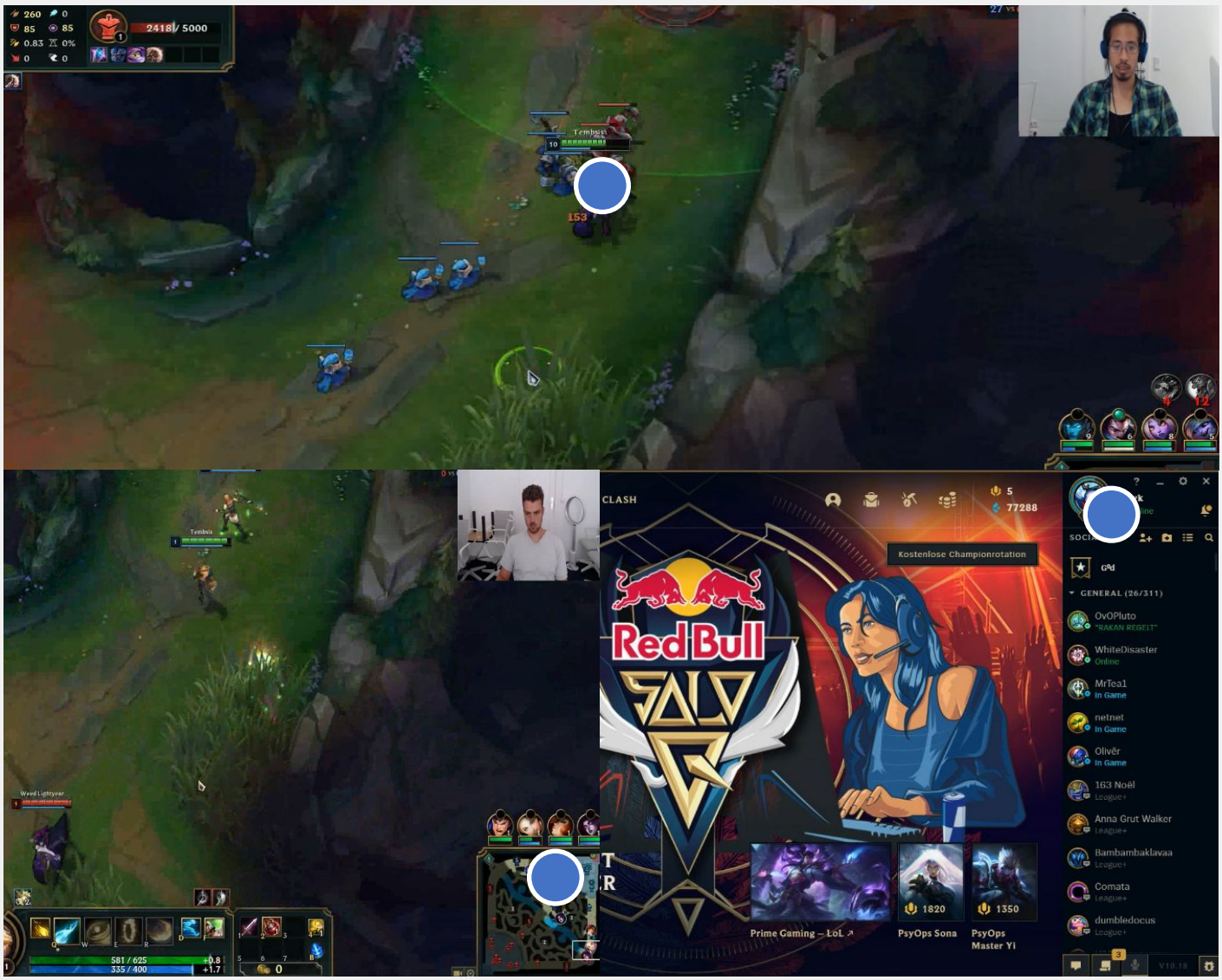
The theories and insights of neuromarketing, deep psychology and social cognition are used to create a descriptive model that combines the often-divergent categories of qualitative methods and quantitative measurement methods. The model represents the central levels of psychological representation: Sys0 perception, Sys1 feeling and Sys2 thinking.

Questionnaires and interviews are the ideal way to understand the more conscious, top-down aspects that influence the behavior of users. Physiological measures such as **eye tracking, face emotion tracking and ProductREACT** focus on behavior and subtle reactions such as emotions or visual fixations that are not consciously accessible and difficult to remember.

EYE TRACKING:
MAKE ATTENTION VISIBLE

Eye tracking has a key advantage - that it's the only viable tool for measuring, understanding and displaying people's implicit, normal visual behaviour. The eye square implicit research core methods can be performed in four different ways: webcam eye tracking, mobile eye tracking, desktop eye tracking, and virtual reality eye tracking – depending on context and needs.

We develop our own exclusive high-end, eye-tracking software, which is needed to perform and analyze eye-tracking data. Only in this way can we understand the process of attention and extract real value from the analysis.



Eye tracking demonstrations with Blizzard's *League of Legends*

EYE TRACKING: YOUR BENEFITS

Which parts of the game do players really see and perceive?

HEAT MAPS
What do they overlook, what doesn't catch their attention?

- Maps, health and mana bars, buildings, structures, etc.
- Main menu, sub-menus
- Loading screens, character selection options
- Ads for DLCs, season passes, etc

Which parts of the game are important and which are irrelevant?

DWELL MAPS
With eye tracking, we can measure how long players look at texts, descriptions and objects.

Measure the impact of your strategies

Understand how players apply the tools you prepare for them, for example: let different types of players test your game with and without having played the tutorial and visually see the effects on their actual behavior.

Environmental Interaction Research

With our latest ability to record eye tracking data on buses and trains (Mobile Ethnography), we can research the impact of commuting and traveling on mobile and augmented reality game applications and interactions

Various ways to collect the data - even during Covid times

- NEW: Mobile ethnography: We join players on their daily commutes from home to work and back all over the world with our brand-new, mobile-phone based eye tracking solution
- In-home ethnography: We visit players with our laptop and mobile eye tracking solutions at home and probe them in their natural environment
- Remote: We send your mobile eye tracking solutions to players around the world, teach them remotely how to use it, give them certain tasks and let them record the data on their own

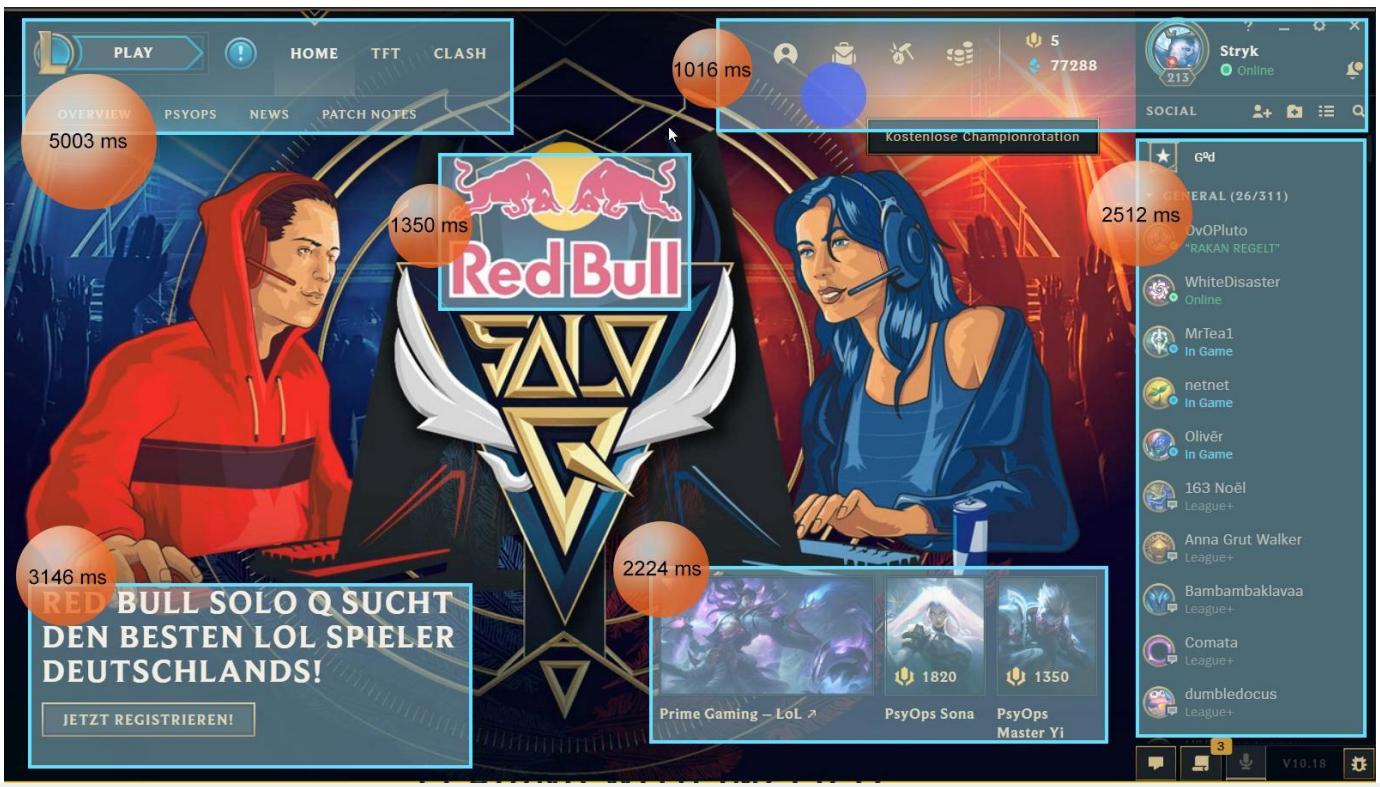
QUICK, RELIABLE, PRECISE AND SCIENTIFICALLY PROVEN

Within days, you can test all stages of game development with new characters or screen drafts and receive actual data on how players perceive the new creations

EYE TRACKING: EXAMPLES

Heat Map - Showing attention hotspots

Dwell Map – Displaying the duration of attention in ms



FACIAL EMOTION TRACKING

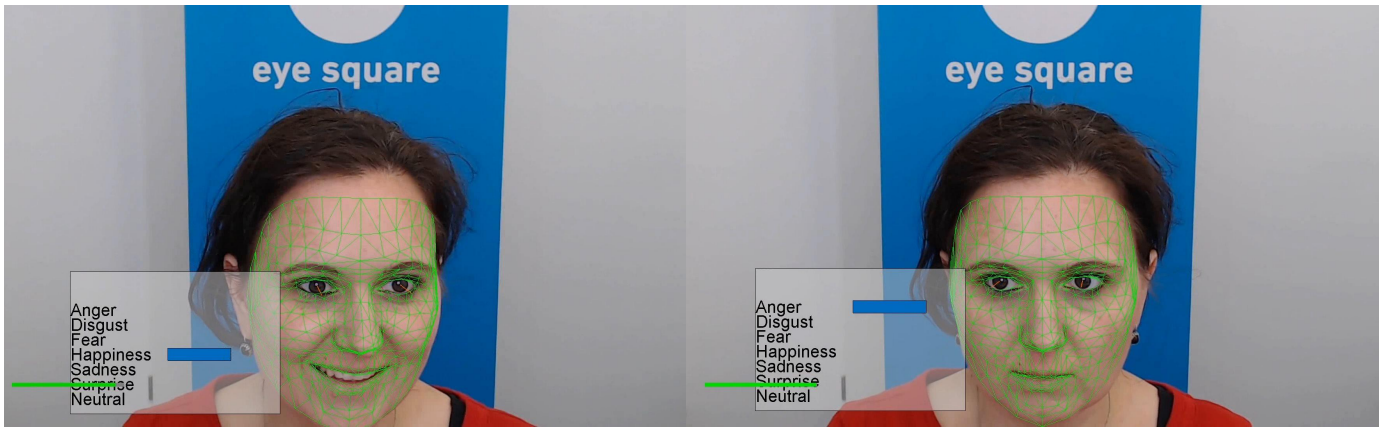
“THE TRUTH IS WRITTEN ALL OVER YOUR FACE.”
- PAUL EKMAN

Scientifically proven, culturally universal – facial expression is the language spoken by all people. Little moments such as when game items bring a smile, when new features spark amazement, and when new game additions surprise the player - all are recognized by the facial expression tracking. The technique analyzes universal facial expressions because each person's smile looks the same. Learning algorithms recognize the most important, internationally recognized facial expressions. We're analyzing the most important moods, such as joy, surprise and frustration.

Our relationships with games and in-game characters are like relationships with people: the relationships are established by emotions and feelings - we're talking about sympathy, awareness and seduction.

Psychological research has also shown that these feelings can not be measured by questionnaires. That's why we're using implicit measurement methods to track the gut feelings that players have. With facial emotion tracking, we have been successfully using time-based emotion tools for almost 10 years, which uncover associations that people would not explicitly reveal to us.

Face emotion tracking can be used to measure what players feel emotionally about your main character, your art style, or other crucial parts of the game.



Live screen featuring our Face Emotion Tracking

FACIAL EMOTION TRACKING

Emotional analysis gives you the benefit of findings from the automated detection of gamer's facial expressions and helps you to better understand what emotionally touches and appeals to them. What is their implicit reaction when they first see an in-game character or menu? Do they smile and like it, or does the facial expression convey that they don't understand what they see?

Facial emotions can be tracked at the user's home PC via a standard webcam. The emotions can be processed and visualized in real time. There is no requirement to record and transfer a webcam video file – which is a process that can be critical in privacy concerns.

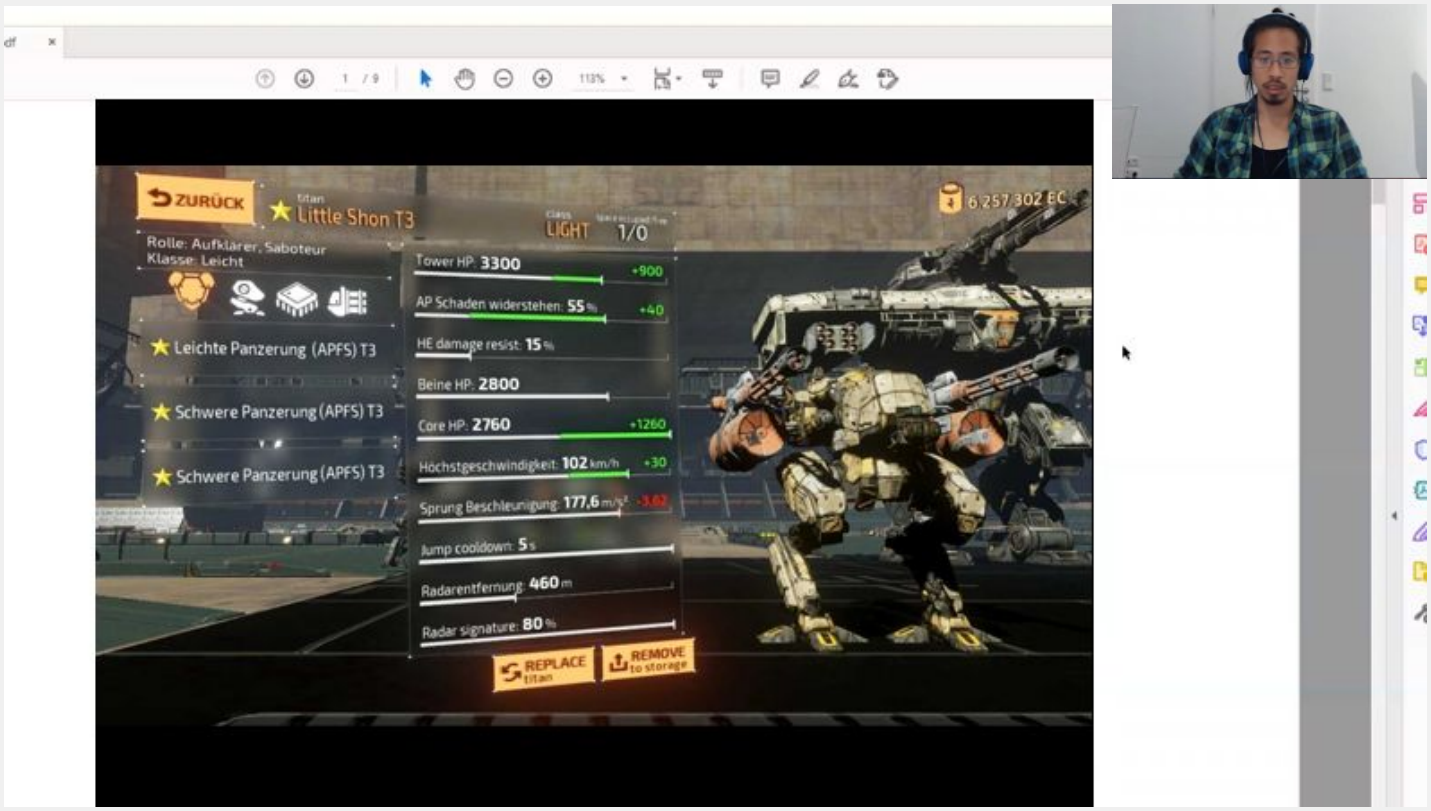
Live facial emotion tracking demonstration

(REMOTE) IN-DEPTH INTERVIEWS & FOCUS GROUPS / ONLINE SURVEYS

eye square is a company driven by implicit data; however, **qualitative data** is given just as much importance**.** Implicit research gives us a lot of insight into what people actually do, their real behaviour, feelings and what is normally hidden - but it doesn't tell us

- why they do what they do,
- why they do it the way they do it
- what their decision making process is
- what is their motivation
- their values
- their rationalizations

We add (remote) in-depth interviews, focus groups and online surveys to make implicit data more valuable and also to provide empirically funded explanations of gamer behavior. Only when both implicit and explicit data are taken into account can players' behavior be fully explained.



In-depth survey demonstration

See the experience

Human Insight Technologies

eye square offers a unique live & implicit market research approach to detect decisive signals in the "digital now". eye square specializes in brand and media experience, user experience and shopper experience.

Founded in 1999 eye square pioneered the use of eye tracking for user and market research. Besides eye tracking, we enrich the classic methods of market research by live "in context research", reaction time measurement, emotion recognition, behavioral analysis and neurosemiotics using a groundbreaking 3 level-model. We develop unique and profound market research technologies in-house.

Based on our experience, we have built up one of the largest databases of commercial eye tracking and emotion measurement data worldwide. This allows us to benchmark how users experience new websites, mobile applications, products, advertisements and marketing material against established biomarkers. eye square's extensive client portfolio includes major companies such as Google, Facebook, eBay, P&G, Daimler, Unilever and more. Our teams based in Berlin, London, Hong Kong, Tokyo, and Kerala are dedicated to helping you understand your customers and succeed.

IMPROVE YOUR GAME, UNDERSTAND YOUR PLAYERS.

Profit from over 20 years of experience in tech-driven UX and market research.

gaming@eye-square.com

+49 30 698144-0

Dr. Jan-Michael Kühn
Tribe Lead Gaming & Market Research Specialist

Currently playing:
War Robots, Battle of Titans, Subnautica, Mutant Year Zero

All-time favourites:
Titanfall 2, Tomb Raider

Favourite platforms:
PC, Android, BlueStacks

Leopold Meinert, M.A.
Market Research Specialist

Currently playing:
Overwatch, Call of Duty Modern Warfare, Warcraft III, The Last of Us

All-time favourites:
Starcraft, Counterstrike 1.6, Need for Speed Underground

Favourite platforms:
PS4, MAC, IOS