

Emerging Technologies



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There have been major advances within Market Research in recent years with social media, mobile communication and consumer technology all driving change within the industry. This has seen the emergence of a number of new research approaches.

At GfK, we offer a range of new developments that include **measurement techniques**, such as facial coding, **new modes of data collection**, such as mobile surveys, **passive listening**, such as online behavior tracking, and **participant interaction**, such as digital qualitative research.

In this issue of the digital digest, we'll have a closer look at facial coding, to see how it can inform market research. GfK's facial coding solution – EMOScan - delivers real-time data during exposure to marketing stimuli, adverts for example. Unlike neuroscientific methods, such as EEG, EMOScan is unobtrusive and does not require the attachment of uncomfortable electrodes. The only input required is a video of the participant's face, while he or she is watching the stimulus. You will see the online version of our facial coding approach in early 2012!

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What is automatic facial coding? How is it used in market research?

Put simply, it is a technology that tracks facial expressions over a period of time. The major benefit of this is that you can use it to detect the precise instant when something makes an emotional impact on an individual. This is particularly useful for marketing applications where facial coding can highlight the most relevant and important scenes and visual content, on a second-by-second basis.

In extensive validation studies, facial coding time-series data has delivered powerful and relevant insights into respondents' emotional reactions towards the stimuli shown. The scaled valence – one of the appraisal dimensions that underlie emotions – of facial reaction, delivers discriminating and valid results as an individual watches an advert's unfolding storyline.

Facial coding can measure facial expressions in response to adverts, TV for example. It can be applied in large samples and therefore allows analysis of results on both an individual and aggregate level. Relevant target groups can be analyzed against each other and this can help you develop an optimal storyline according to different target groups' brand proximity.

You can also re-expose individual facial expression data to respondents, enabling you to carry out an in-depth analysis.

In addition to copy testing, facial coding has wide-ranging uses. In usability and website testing, you can create intuitive consumer applications through an analysis of facial expressions. In prototype clinics in the automobile industry, for example, it can be used to identify attractive and emotionally appealing concepts. In short, facial coding can be used to add benefit whenever you need to understand consumers' emotional responses.

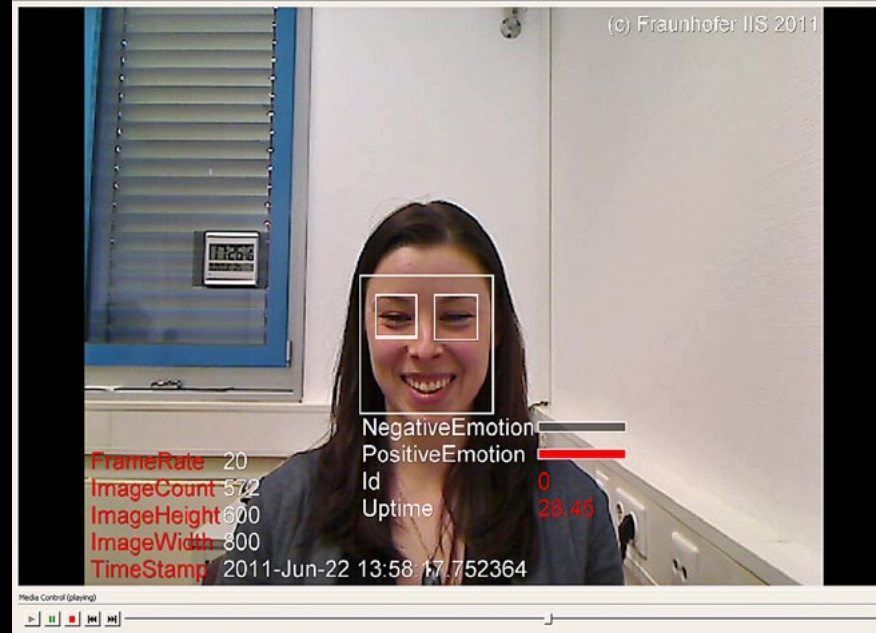
GfK EMOScan

GfK EMOScan emerged from an on-going co-operative project with GfK Verein, the Fraunhofer Institute and the University of Geneva.

Requiring just a webcam rather than complex equipment, EMOScan automatically detects the subtle emotions that are most prevalent in response to marketing stimuli. Rather than targeting specific basic emotions, the software focuses on the appraisal dimensions that underlie emotion. Valence can already be tracked by the currently available version of the software, and novelty and control will be added in future releases.

The software generates a numeric value per video frame, that can be interpreted as the intensity of the intrinsic valence shown in the recorded facial expression.

The screenshot shows the software at work.



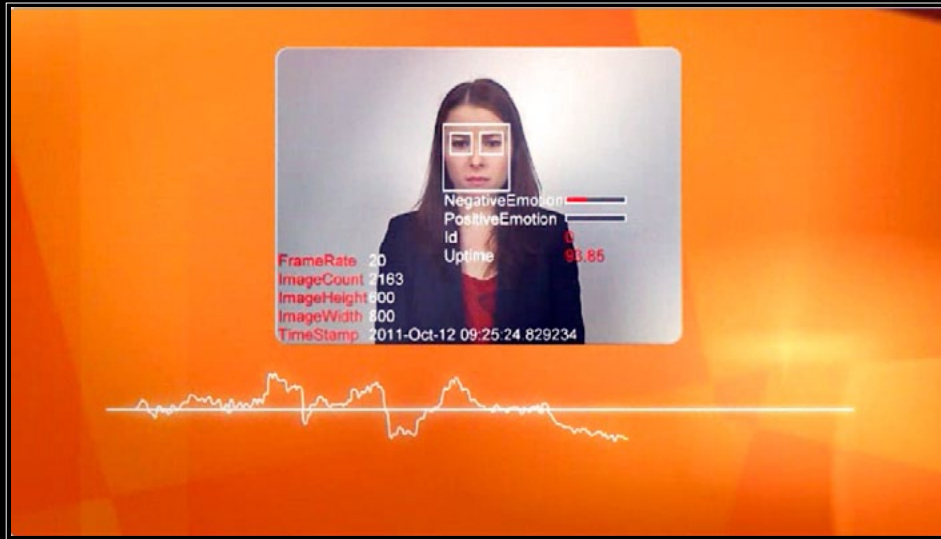
GfK EMOScan

Valence of respondents' facial expression while being exposed to stimuli is displayed visually through a special reporting software developed by GfK. The software simultaneously plays video-recordings of respondents who gave us permission to use their videos, the stimuli and result graphs. This means that you can identify key scenes with strong positive or negative emotional impact.

This software supports the creative process of developing strong copy for adverts. In the chart below, for example, the TV advert initially generates a slight negative emotional response but then slowly builds up emotional engagement and culminates in two strong peaks during the second half of the advert.



GfK EMOScan in action



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EMOScan delivers real-time data whilst viewing adverts for example, this video shows how it works. Our colleague Sandra watches a commercial, while we track her facial expressions in response to the different scenes.

To experience facial coding, watch the EMOScan video now.