



1 Market research with real time feedback analysis

## DETECTION OF FACES AND FACIAL EXPRESSIONS USED IN MARKET RESEARCH - SHORE™

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### Advertise and Analyse

The face detection software SHORE™ detects and stores relevant informations for market research applications.

Data collection for further analyzing can be automatically and objectively carried out in order to optimize your advertisements, the product look or placement, or to analyze the feedback on TV or internet content.

SHORE™ is able to detect more than one face in real time. For a first analysis the data is displayed via a simple protocol functionality or handed over by a TCP/IP, C++ or text logfile in further analyzing tools.

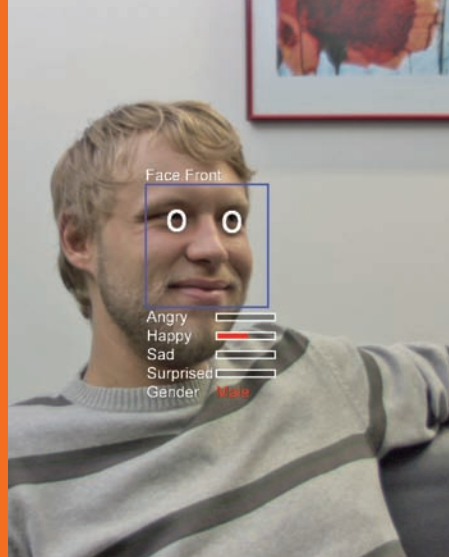
SHORE™ is suitable for quantitative as well as qualitative market research evaluations. In addition to the registered number of test persons, changes of facial reactions, gender and - in the near future - an age estimation can be automatically detected.

### Advantages of SHORE™

- real time analysis
- arbitrary number of test persons
- flexible applications and use in test scenarios
- objective data collection
- suited for quantitative and qualitative data analysis
- protocol and documentation functionality
- stand-alone software or software component for existing tools
- platform independent
- no special hardware needed
- user-friendly

### Demo version

[www.iis.fraunhofer.de/EN/bf/bv/kognitiv/](http://www.iis.fraunhofer.de/EN/bf/bv/kognitiv/)



### Technical Data

- Minimum image size of the face  
24 x 24 pixels
- In-plane-rotation tolerance:  
about  $\pm 10^\circ$
- Out-of-plane rotation:  
about  $\pm 45^\circ$
- Detection rate: 96,3%  
for e.g. BioID data basis
- standard PC, can be migrated to  
DSP platforms or PDAs

### Scenarios

Do your information reach your addressed target groups?  
Fundamental questions for market research to answer are which effects are produced by a certain sort of advertisement and how to improve the marketing impact.  
SHORE™ is an innovative solution to generate objective data, over long periods of time on which further analysis can be based.

### Business Models

The software is available as single or commercial license. The software can be extended or adopted for customers in individual contracts or projects.

### Optimize your market research with automatic face detection software

SHORE™ enables fast detection and analysis of faces and facial expression within single shots or videos. The software runs in real time and is able to detect faces down to a minimum image size of 24 x 24 pixels. SHORE™ is able to detect synchronously a large number of faces and tolerates small variations of in-plane/out-of-plane rotations of the test persons' head.  
SHORE™ works in defined scenarios on a PC or MAC platform as well as for mobil devices like note books or handhelds. During the test every single shot is being analyzed. A special ID can be assigned to every frame for statistical examinations.

These IDs allow to detect and track changes in facial expressions for a certain test person while watching a product. It allows to examine if the same test person is frequently attracted by a special advertisement or product.  
Using the so-called localization data the position of a person or more detailed of his face can serve to estimate if the person has moved, turned away from the display or was hidden by other persons.  
The software is able to detect whether the eyes of the test person are open or closed. The collected data can be processed in analyzing tools via documented interfaces. Currently available interfaces are C++, TCP/IP and text logfiles.

1 Real time analysis with SHORE™

2 Display of Results e.g. intensity of reaction over time

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