

PRESS RELEASE

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A visionary world premier: Fraunhofer IIS presents world's first emotion detection app on Google Glass

Erlangen, Germany, August 27, 2014: The Fraunhofer Institute for Integrated Circuits IIS has adapted its SHORE™ real-time face detection and analysis software to work with Google Glass, the first app of its kind. With the aid of Glass' integrated camera, the app detects people's faces and determines their emotions by analyzing their facial expressions. The so-called Glassware (Google Glass app) simultaneously gauges the person's age or detects their gender among other things, but it cannot determine their identity. All calculations are performed in real-time by the CPU integrated in the eyewear. The image data never leaves the device.

The new development from Fraunhofer IIS is the first emotion recognition software in the world to function in real-time with Google Glass. This opens up an entire spectrum of new smart eyewear applications, including communication aids for people with disorders such as autism, many of whom have difficulty interpreting emotions through facial expressions.

This missing information could be superimposed in the person's field of vision with data glasses. Even the visually impaired can benefit from the new software by receiving supplementary audio information about people in their surroundings. By taking advantage of the additional capability to determine someone's gender or estimate their age, the software could be used in other applications such as interactive games or market research analyses.

The basis: SHORE™ face detection and analysis software

By participating in the Google Glass "Explorer Program", Fraunhofer IIS had the opportunity to test the smart eyewear before it was introduced to the market. The Google Glass app was made possible by adapting and implementing the Fraunhofer IIS SHORE™ software library as Glassware.

SHORE™ is the culmination of years of R&D work in the field of intelligent systems, which resulted in the creation of a highly-efficient real-time C++ software library. The software enables the detection of objects and faces, as well as detailed facial analyses. Because of the high degree of optimization, it can be adapted to nearly any platform and operating system, especially mobile devices such as tablets and smartphones.

Head of Corporate Communications

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FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS

Fraunhofer researchers also have extensive experience in the development of miniaturized and intelligent cameras and the corresponding algorithms. This know-how was a major factor in the high-performance development of the SHORE™-based Google Glass app.

Follow the link below to view a demonstration video of the app:

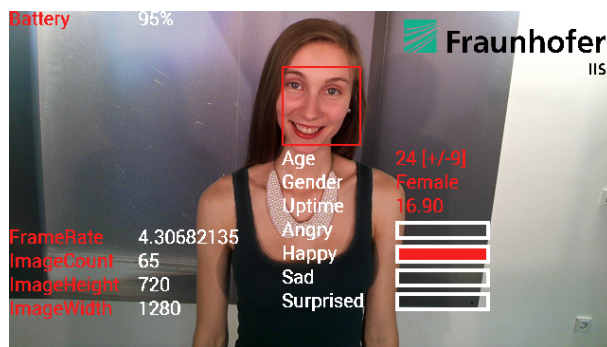
<https://www.youtube.com/watch?v=Suc5B79qjfE>

Further information about SHORE™ is available here:

www.iis.fraunhofer.de/shore

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Founded in 1985, **Fraunhofer Institute for Integrated Circuits IIS** in Erlangen, Germany, ranks first among the Fraunhofer Institutes concerning headcount and revenues. As the main inventor of mp3 and universally credited with the co-development of AAC audio coding standard, Fraunhofer IIS has reached worldwide recognition. In close cooperation with partners and clients the Institute provides research and development services in the following areas: Audio & Multimedia, Communications Systems, Energy Management, IC Design and Design Automation, Imaging System, Medical Technology, Non-destructive Testing, Positioning, Safety and Security Technology, Sensor Systems plus Supply Chain Management.

More than 830 employees conduct contract research for industry, the service sector and public authorities. Fraunhofer IIS with its headquarters in Erlangen, Germany, has further branches in Dresden, Fuerth, Nuremberg, Coburg, Deggendorf, Ilmenau, Wuerzburg, Bamberg and Waischenfeld. The budget of 108 million euros is mainly financed by projects. Less than 25 percent of the budget is subsidized by federal and state funds.

Detailed information on www.iis.fraunhofer.de.