

PRESS RELEASE

PRESS RELEASENovember 7, 2016 | Page 1

Contactless interface for hospital IT avoids germ transmission

Medical technology from Fraunhofer HHI at Medica 2016: Proxemic Monitor optimizes the processes at intensive care units while digital stereoscopy provides new insights

In intensive care units every second counts. In emergencies right decisions have to be made quickly. Fraunhofer HHI has developed a smart “Proxemic Monitor” in order to optimize processes in hospital’s most sensitive areas. The system gathers information from all connected medical devices, provides the data in a clear and user-adapted interface and prevents false alarms. Touchless interaction from the distance using head and hand gestures as well as voice commands reduce the risk of spreading pathogenic germs.

This monitor was developed in the “Leitwarte” (control room) joint project, funded by the Federal Ministry for Economic Affairs and Energy (BMWi). It quickly provides doctors and nurses with crucial information about vital signs of intensive care patients. The screen has interfaces to bedside medical devices, hospital information systems and patient databases. A web-based user interface implementation ensures suitability for mobile monitors such as tablets.

The most important benefit of gesture control: Doctors and nursing staff do not have to touch the equipment to control it. Three different cameras and a microphone scan the area in front of the monitor. The integrated Fraunhofer HHI software analyses the video data to determine the presence and distance of a person and which movements and gestures they perform. Pre-programmed gestures allow touchless short-cuts, for example to quickly initiate a video call with other physicians. Also the displayed information and graphical user interface adapts to the distance from which they are viewed. “From the door, the doctor sees the data in a correspondingly large size. As he gets closer, the screen displays detailed information”, explains Paul Chojecki, scientist from the “Vision & Imaging Technology” department at the Fraunhofer HHI.

Digital stereoscopy in medical applications

Fraunhofer HHI also presents first results of the project 3DinMed, which is funded by the German Federal Ministry of Economy and Energy. Digital stereo camera

FRAUNHOFER HEINRICH HERTZ INSTITUTE

systems open new possibilities for obtaining information and improve work processes of the medical staff in the operating room. Shown are the latest research results for optical measuring tasks, medical instrument tracking, augmented reality applications (AR) and optimized 3D playback.

You can experience the medical monitor to improve hygiene and usability as well as the project 3DInMed yourself from November 14 to 17 at Medica in Düsseldorf, Germany at the Fraunhofer joint exhibition booth in **hall 10, booth G05**.

PRESS RELEASENovember 7, 2016 | Page 2

Innovations for the digital society of the future are the focus of research and development work at the **Fraunhofer Heinrich Hertz Institute HHI**. In this area, Fraunhofer HHI is a world leader in the development for mobile and optical communication networks and systems as well as processing and coding of video signals. Together with international partners from research and industry, Fraunhofer HHI works in the whole spectrum of digital infrastructure – from fundamental research to the development of prototypes and solutions. www.hhi.fraunhofer.de

The Fraunhofer-Gesellschaft is the leading organization for applied research in Europe. Its research activities are conducted by 67 institutes and research units at locations throughout Germany. The Fraunhofer-Gesellschaft employs a staff of 24,000, who work with an annual research budget totaling more than 2.1 billion euros. Of this sum, more than 1.8 billion euros is generated through contract research. More than 70 percent of the Fraunhofer-Gesellschaft's contract research revenue is derived from contracts with industry and from publicly financed research projects. Branches in Europe, the Americas and Asia serve to promote international cooperation.

Press Contact: **André Gröger** | andre.groeger@hhi.fraunhofer.de | phone +49 30 31002 822

Technical Contact Proxemic Monitor: **Paul Chojecki** | paul.chojecki@hhi.fraunhofer.de | phone +49 30 31002 281

Technical Contact 3DInMed: **Jean-Claude Rosenthal** | jean-claude.rosenthal@hhi.fraunhofer.de | phone +49 30 31002 269