

IMST GmbH  
Presseinformation

## Smart Textiles through Radio Technology IMST develops textile-integrated sensor networks for vital signs

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Future clothing will also play a role as of the doctor's personal assistant. "Smart" shirts and jackets will measure the man's vital functions like heart rate, blood pressure or fluid balance. Individuals with cardiovascular disease, elderly people, or during sports routine, textiles will automatically monitor climate conditions and vital signs. The system will give alarms in emergency situations.

Together with its partners, University of Karlsruhe, Lodenfrey Service GmbH, Mehler Vario System, Breuer GmbH & Co. KG and ruhlmat Automation GmbH IMST GmbH develop a system called "climate-Jack". The integrated sensors within the clothes will communicate wirelessly with each other. The special feature of "climate-Jack" is that it will regulate itself automatically by its integrated smart control functionality. In addition to the permanent monitoring of human vital signs, the body climate is regulated as well.

This sophisticated, three-year research project has been awarded in 2008 in the framework of the Federal Ministry for Education and Research (BMBF) and is financially supported by this public authority.

IMST GmbH, a development house for radio systems and microelectronics, will be the project coordinator. Technically, IMST will concentrate on the underlying radio technology base for the project. The company expects a significant impact on the prevention of cardiovascular diseases and faster help in emergency situations.

### IMST GmbH

IMST GmbH is an international development service provider for radio systems and microelectronics. IMST develops customized system solutions, sells own design tools and offers EMC testing services in an accredited test center facility.

<http://www.wireless-solutions.de>

### the port folio in the overview:

**IMST.Research:** Applied research for radio communications, radar systems, microsystems and nanoelectronics.

**IMST.Development:** Contract-based industrial design and development, from microelectronics to product realizations in software and hardware.

**IMST.Products:** EDA-Electronic Design Automation Software: Empire - A full 3D electromagnetic simulation tool, wireless solutions and radio modules - customized and taylored to our clients needs.

**IMST.Testing:** Accredited test center for general Type Approval, mobile terminals, antennas and RF circuits.

### University of Karlsruhe

The Institute for Technology of Information Processing (ITIV) belongs to the University of Karlsruhe. The scientific focus of the institute is research on methods and tools for computer aided design (CAD) of electronic systems and microsystems.

### Lodenfrey Service GmbH

Lodenfrey Service GmbH is a subsidiary of Lodenfrey Ltd. and a pioneer in "clothing with built-in electronics components" for the entertainment industry, medical and personal monitoring.

## IMST GmbH Presseinformation

### **Mehler Vario System**

Mehler Vario System GmbH is one of Europe's largest manufacturer of bullet protective vests and personal products. It is integrated in the KAP AG / MEHLER AG Textile Group.

### **Beurer GmbH & Co. KG**

Beurer is a full-service provider for health and wellbeing. A strong focus is on the company's own research and development coupled with analysis of future markets.

### **ruhlamat GmbH**

ruhlamat is a mechanical engineering company from Thuringia. It is working the areas of smart cards and passport processing and assembly technology. With machines and complete solutions of independent design, development, manufacture and assembly ruhlamat is a competent partner in custom-tailored machinery development..

### **Press Contact**

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