

[wearLab] – Transfer of Mobile and Wearable Technologies to Industry and Business

The Idea of [wearLab]

The Center for Computing Technologies at the University of Bremen (TZI) has an elaborate history doing research and development in the area of mobile information processing - focusing on the potential of wearable computing in the field of industrial application. One core task in this context is to reveal the huge innovative potential of cutting edge mobile technology and, furthermore, to transform this potential into economically useful mobile solutions. Wearable computing touches a variety of related research areas, e.g. engineering, social, work and economic sciences as well as psychology and cognitive sciences and, of course, most areas of computer science. In addition there is major influence from the fields of design and clothing technology. In order to be able to process the occurring topics interdisciplinarily, to cover a broad range, the TZI has initiated the foundation of the [wearLab], which is meant to bundle all related research and institutional efforts around its focus to serve as a single point of entry to the area of wearable computing.

What is [wearLab] ?

- [wearLab] is an interinstitutional and interdisciplinary network of research and development dealing with one special subject in the field of mobile and wearable information processing – virtual research network
- “[wearLab]” is an umbrella brand, and [wearLab]@... serves to extend the competence of the virtual research network, e.g. “[wearLab]@tzi” stands for “[wearLab] at the TZI”.
- Central research supply for the industry
- Co-initiator and companion of the competence network “Mobile Co-operative Work” (MCW) with more than 60 companies.

Topics of [wearLab]@tzi

- Wearable Computing
- Mobile Knowledge Management
- Intelligent Information Presentation
- Mobile Information Retrieval

- Intelligent Mobile Assistance
- Methods for Location-Based Services
- Wireless Mobility
- HCI for Mobile Applications
- Mobile Security
- Mobile OCR
- ...

Selected Projects at [wearLab] @tzi

- *Winspect*: Wearable Computing for Inspection (Stahlwerke Bremen, State of Bremen)
- *TourServ*: Personalised Tourist Services Using Geographic Information Systems via Internet. (EU-IST)
- *Study* “Technological and Application-Oriented Potential of Wearable Computing” (Xyberonaut, State of Bremen)
- *Global Identifier Service (GIDS)*: Global Context-Sensitive Information Access (wearLab)
- *Location-to-Location-Network (l2l)*: Peer-to-Peer Network based on spatial models (wearLab)
- *FreeMobileSoftware (FMS)*: Virtual Home for Free-Software projects in the domain of mobile and wearable information processing (fsf-europe, wearLab)

The offer of [wearLab]

In order to further improve and expand the operations of the [wearLab] we are looking for partners coming from the industrial and/or research sector who are interested in or even fascinated by our focal approach. The [wearLab] is meant to improve the efficacy of the information flow in the area covering wearable computing and other innovative methods of mobile information processing. As a medium term milestone we intend to build the basis for an efficient and competent handling of projects and work packages. If you feel addressed by this outline or if you have further questions or suggestions - please contact us at the [wearLab].