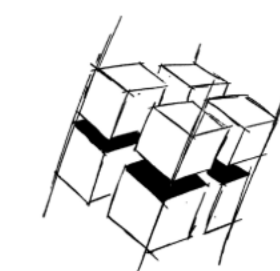


# KOM – Multimedia Communications Lab



TECHNISCHE  
UNIVERSITÄT  
DARMSTADT



KOM – Multimedia  
Communications Lab



(1. floor, room 125)

## Multimedia Technologies & Serious Games

Serious Games combine game technology and game concepts with further technologies and concepts such as sensor technology, multimedia technology or pedagogic and didactic concepts and apply it in a broad spectrum of application domains covering the educational sector (learning games, training and simulation), health and sports, marketing and advertisement, architecture and urban planning or tourism and culture. Research and development area include the creation (authoring and configuration), control (personalisation and adaptation) and evaluation (measurement of effects and affects) of Serious Games.

## Knowledge & Educational Technologies

Learning and knowledge acquisition in general and at the workplace is increasingly characterized by the use of different tools and different resources from the Internet. Informal learning in open learning arrangements becomes more and more popular. Due to the missing support by teachers or trainers the learner has to meet different challenges. We work on adaptation mechanisms and services and new adaptive learning applications to support learners individual learning processes and their task-processing.



(1. floor, room 127)



(2. floor, room 213)

## Mobile Systems & Sensor Networking

Increased living comfort and safety are achieved by environments which automatically adapt to the needs and preferences of their inhabitants. Environments need therefore intelligent sensors in order to realize their supporting functionality. The Present-IT shows the function of cooperative perception methods and adaptive communication mechanisms in the application scenarios of networked vehicles.

## Self organizing Systems & Adaptive Overlay Communications

The increasing number of end devices and the growing dynamics of the network environment pose new challenges to the networking infrastructure and the deployed protocols. In this Present -IT we show adaptive overlays for the Future Internet using an example of live video streaming. If the communication structure (the media server or the access network ) is overloaded, this is recognized by the overlay and a transition is triggered. The devices organize themselves into a distributed peer-to-peer system so that smooth video playback is possible again. Construction methods and techniques which trigger such automated and cross-layer transitions are being researched at the Multimedia Communications Lab within the Collaborative Research Center 1053 - MAKI.



(2. floor, room 217)