

Keynotes for AITAmI'06

- **Michael Berger (Siemens AG): "Towards Ambient Intelligence - An Industrial View"**

Ambient Intelligence (AmI) refers to the emerging computing paradigm where human users are empowered through interacting with ambient digital environments (such as our homes, workplaces, transportation infrastructures, etc). The environments are aware of the presence and context of the user, able to provide personalized services to their requirements, capable of anticipating their behavior and responding to their presence. Agent and AI technologies play a key role for realizing AmI systems and applications by providing the fundamental information processing technology.

The presentation will set the background of Ambient Intelligence from the speaker's industrial and scientific perspective. Own practical examples and application case studies in the industrial and consumer area including architectures, applied agent and AI technologies, applications and evaluation results will be presented. The presentation will conclude with remaining challenges and an outlook on future development perspectives.

- **Boris de Ruyter (Philips Research): "Social Interactions in Ambient Intelligent environments"**

Recent technology developments have triggered the realisation of innovative application- and service scenarios of intelligent environments. However, there is a potential problem with regard to the social acceptance of such scenarios. Aspects such as information overload, violations of privacy and lack of trust in general threaten the introduction of these technologies into our day-to-day life. It also often is not clear whether people will perceive new technologies as beneficial. Within the vision of Ambient Intelligence human needs are positioned centrally and technology is seen as a means to enrich our life. In course terms Ambient Intelligence refers to electronic environments that are sensitive and responsive to the presence of people. Essential in this vision are the aspects of embedding and intelligence. Embedding can be both physical and social. While physical embedding is facilitated by miniaturization and by bringing the cost down of technology, social embedding refers to the demand that technology will become an integral part of our life by supporting, rather than disturbing, the emotional significant moments of our life.

Intelligence can range from context-awareness to more personalised and even adaptive systems. Ambient Intelligence systems are aimed at making user-system interaction and content consumption a truly positive experience. The endless

search for nifty information visualisation mechanism to squeeze yet one more piece of information onto a visual display is surpassed by the challenge to embed interactive displays into our environments that bring true user experience. Examples of experiences supported by immersiveness, social intelligence and freedom have been investigated in the Philips HomeLab. HomeLab offers an unique scientific environment for evaluating the feasibility and usability of technologies that are used in the realisation of Ambient Intelligent scenarios. Equipped with an extensive observation infrastructure of 34 cameras and microphones, the HomeLab has enabled behavioural researchers to study the effect of innovative technologies on the user's acceptance for Ambient Intelligence. In the presentation recent developments resulting from work in HomeLab, with an emphasis on the creation of user experiences, will be discussed.

- **Pertti Huuskonen (Nokia): "Contextual representations for mobile content"**

Context awareness is a key research area on the way towards smart spaces, intelligent appliances, and advanced interaction. The current quest towards ever increasing mobility of people and data underlines the need for novel technological solutions to practical situational sensitivity. This talk explores knowledge representation for contextual applications, with focus on "file context" in the domain of mobile content. Several application examples from industry and research will be discussed, including the LifeBlog application from Nokia.