

2nd Workshop on Mobile Gaming

Motivation

Mobile games are based on the physical movements of players in a game-world that combines the real world with virtual dimensions. Mobile games unite two game-worlds that were previously mutually exclusive: classic outdoor games and computer games.

But they are also games in the traditional sense as “homo sapiens” has always been a “homo ludens”. Games are part of the every day life, just like eating, breathing, or sleeping. They allow us to try the impossible. We use game rules to voluntarily confine the game space, and then roam this space to imaginatively overcome the limits of reality. But apart from being a pastime, games also mirror the real world and so they can be used to play-test life. Over the centuries, games evolved with the intellectual and technical possibilities of mankind.

The prehistory of mobile games began in the 1980s with Nintendo’s handheld “Game & Watch” electronic games. The early 1990s saw the advent of the “Gameboy”, which introduced exchangeable cartridges to the video games mass market. At the turn of the millennium, the Japanese I-Mode network pioneered mobile data services and thus opened the door for mobile games that used the wireless Internet for communication. On 1 May 2000, the US government announced the discontinuation of the artificial degradation of GPS signals for non-military users. This marks the end of the prehistory and the dawning of mobile games in our sense.

The first such mobile game was Geocaching, where participants use GPS coordinates that they obtained over the Internet to search for small treasures that were hidden by other players. In 2003, Nokia introduced the N-Gage, which was a GPRS-enabled smart-phone with an integrated game-console. Due to its GPRS data-service, it allowed for wide-area

multiplayer games that were connected via a central server. At the same time, it also allowed proximity based multiplayer games via Bluetooth communication. Research project began to sprout world-wide in conjunction with all these technological developments. These projects set out to exploit the new possibilities and developed context-aware and location-based applications that used the new wireless positioning and communication technologies in various ways and thus advanced the field in which mobile games are grounded.

Mobile games utilise mobile and pervasive technology. Small and portable devices are equipped with sensors and models of their environments that allow them to sense their current context, which includes location, and act according to this input. Thus, from a technological point of view, mobile games are part of the field of ubiquitous computing.

Addressees

This workshop is primarily targeted at users, developers, researchers and decision makers in the field of mobile games, who are interested in creative and innovative applications for pervasive and ubiquitous computing. In addition to this, the workshops also seeks to address people beyond the field of computer science, who are fascinated and inspired by the technical possibilities offered by mobile games and want to give growth to their own ideas.

Goals and research questions

Mobile games open up a wide range of research and developments questions from a multitude of perspectives, including the conceptual, the aesthetic and the technical. They require research into new types of games and experiences, their concepts and design strategies, as well as into the technical domain.

Researchers around the world utilise the human intellect of mobile gamers to test prototypes of new interfaces for

human-computer interaction, infrastructures, and design concepts in order to advance the new technologies. Games define their own rules – this opens up a truly unique field for research into ideas and technologies. The context of mobile games also provides opportunities for research into the individual and social processes that circumvent the use of information technology.

Game design faces new challenges. Until now, only a few games exploited the possibilities offered by augmented and mixed reality, global networks, location services and various sensors. Theory and methods of analysis of the player experience in mobile games are still in its infancy. What is the meaning of mobility and physical movement in these mixed reality game-worlds? How to analyse the experience of mobile players that are roaming the area rather than sitting in a laboratory? What is the role of game communities and cultures for mobile games?

Design and development of mobile games confronts us with the grand challenges of ubiquitous computing: the complexity of mobile, distributed services, its dynamic and ever changing contexts, the diversity of participants, and the interaction in a post-desktop paradigm which entails the body, various senses and modalities. The technological diversity of hardware and software needs to be bridged so that mobile gamers can interact across device boundaries. The rapidly evolving diversity of sensors, actuators and user-interfaces demands for flexible frameworks that allow for an easy integration.

This workshop contributes to revealing the research and development possibilities offered by mobile games, and has a particular focus on the German science and industry sectors. Researchers and developers can use this field to exchange their experiences, formulate new research questions, identify innovation potential, and find ways to improve the business environment and leverage the potentials offered by this exciting new field of research.

Topics:

Contributions to the workshop can be either technical papers or position statements. Topics of interest include, but are not limited to:

- Mobile games in the everyday life
- Context of mobile games
- Mobile game experiences and activities
- Mobile gamer as producer
- Alternate reality games
- Traditional games and mobile games
- Serious games – learning, testing, creating value in a serious context
- Interfaces and interaction techniques for mobile games
- Augmented and mixed reality for mobile games
- Development processes and architectures for mobile games
- Authoring systems for mobile games
- Complexity of hard- and software – problems and solutions
- Exploiting technical boundaries

Dates:

- Submission deadline **22.05.2009**
- Notification of acceptance: **12.06.2009**
- Final submission: **01.07.2009**
- Workshop date: **29.09.2009**

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- Steffen P. Walz, ETH Zürich
- Andreas Weber, Universität Bonn

Form of contributions

The goal of the workshop is to provide a forum for presenting and discussing research, results and practical hands-on experiences. The thematic focus of the workshop is on mobile games and other (cooperative) applications of a similar character that take location and context, as well as the players' mobility as an important design parameter.

Apart from presentation of research results, we also envisage to include demonstrations of innovative mobile games, as well as discussion rounds on controversial topics. We therefore welcome the following kind of contributions to the workshop:

- Research papers
- Demos of prototypes of mobile games or authoring systems
- Outlines of theses / disputes (short, concise, informal)

Contributions can be made either in German or English language.

Submissions have to adhere to LNI guidelines and can be up to 6 pages long. LNI guidelines and templates for Word and Latex can be found on the workshop's homepage. The proceedings are printed in black and white. In case that you are using colour figures, please ensure that they do not lose their meaning without colours.

Workshop contributions should be submitted in electronic form via the conference system. A link to this system is provided on the workshop homepage.

Accepted contributions will be published in the joint printed proceedings of the annual GI meeting as part of the GI-series "Lecture Notes in Informatics (LNI)".

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