Methods for Evaluating Games – How to Measure Usability and User Experience in Games?

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ABSTRACT
This workshop addresses current needs in the games developers' community and games industry to evaluate the overall user experience of games. New forms of interaction techniques, like gestures, eye-tracking or even bio-physiological input and feedback present the limits of current evaluation methods for user experience, and even standard usability evaluation used during game development. This workshop intends to bring together practitioners and researchers sharing their experiences using methods from HCI to explore and measure usability and user experience in games. To this workshop we also invite contributions from other disciplines (especially from the games industry) showing new concepts for user experience evaluation.

Categories and Subject Descriptors
H.5.2. [User Interfaces]: Evaluation/Methodology. H5.5. [Miscellaneous] User Experience Evaluation.

General Terms
Measurement, Design, Human Factors.

Keywords
User Experience, Evaluation, Games, Interaction Techniques.

1. INTRODUCTION
Evaluation of user experience was addressed during the last five years in several publications and workshops [5, 3]. Various methods and new methodological developments have been proposed to evaluate user experience in various application fields. Most of them did not take into consideration recent developments in the area of gaming. Various definitions have been used to explain user experience. Taking a factor-related definition of user experience, several other concepts are related to user experience in games. Terms like fun, flow and playability are most often used to explain user experience in game design. However there is an open discussion to include other factors which might have relevance for games and playing.

The number of methods used to evaluate user experience and related concepts is high, but no general framework exists showing what kind of methods shall be used to evaluate the various interaction concepts used in game design. This workshop is intended to close this gap.

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2. Evaluation of Games

During the past decade the number of scientific contributions on game evaluation has grown steadily. As an example evaluations took place showing the building and influences for social communities within games [1] and how to evaluate them.

Other evaluations were more close to the concept of user experience, taking into account flow, fun or playability of games. Järvinen et al. [4] proposed a framework for the evaluation of playability during game play. Taking a definition of user experience into account, this user experience is the sum of several factors, like playability, flow or usability. Playability can be seen as a key factor in the user experience. Sweetser et al. [6] presented GameFlow as a possible concept of evaluating user experience in games. Other authors started to adapt 'traditional' usability evaluation methods to address the specifities in games evaluation. For example Desuvire et al [2] presented an adoption of traditional heuristic guidelines.

Today there is no common agreement what kind of (usability evaluation) methods can and should be used to enhance the design of games. Various aspects can contribute to the evaluation of games. But several questions arise:

- What kind of evaluation concepts and methods actually are used in the industry, and what are their limitations?
- Do today's evaluation concepts and methods address industry needs?
- What factors of game experience are measured and have to be measured?
- User experience and usability will be especially influenced by input and output devices/modalities and interaction techniques. How can we evaluate new forms and developments of interaction techniques in gaming – for example emotion or eye-movement as input for games, ambient displays or virtual environments as output?
- Is there a common framework of methods that are appropriate to evaluate the user experience in games? Or are current approaches just focused on several

aspects of user experience - not on a general concept of user experience?

- What are the proc and cons of available methods and what are the innovations potentials toward other methods?
- What can the (HCI) community do – to support a classification of methods used in that area?

3. WORKSHOP GOALS

Goal of the workshop is to bring together practitioners and researchers to discuss possible concepts and methods for the evaluation of games. Based on several use-cases and scenarios submitted by the participants, the goal is to develop a rough framework of first what kind of 'traditional' methods in the area of HCI are applicable in the domain of gaming. Second possible extensions and enlargements of these methods shall be discussed, and how they overcome current limitations of existing methods. Third, based on the use cases, new ways of evaluation shall be explored, and how these new concepts might better address the needs of the games industry.

4. WORKSHOP ORGANIZATION

The workshop is intended for researchers and practitioners. We aim to address a wide range of professions and areas like game design and development, media entertainment, designers, user experience researchers, product designers and industrial designers, academics working in the field of user experience evaluation methods. The workshop addresses people from any field dealing with evaluation methods either for evaluation usability, user experience or related concepts like fun. We especially encourage the submission of use-cases showing the limitations of currently applied methods.

Workshop attendees will submit a 4-page position paper related to methods used during game evaluation, specifically addressing possible shortcomings. Before the workshop the organizers will identify the application domains and methods used. Participants will be asked to present a 5 min statements in one of the defined groups. Then all the position papers within the group will be discussed. The workshop is closed with a final discussion rounds on possible next steps to enhance the methodological development in the area of gaming.

The positions papers will be made available on a website, forming the basis for a white paper on current evaluation methods for user experience in games. The white paper is intended to serve as a basis for a planned edited book on new trends in evaluating games.

This workshop aims to provide a forum for researchers and practitioners to lay the basis for a common framework in evaluating the user experience of games.

5. WORKSHOP ORGANIZERS

Regina Bernhaupt is currently working as assistant professor at the HCI Unit of the ICT&S-Center. Her main research focus is on new forms of usability evaluation methods in non-traditional environments. She holds two master degrees (in psychology and in computer science) and a PhD. (computer science) from the Salzburg University. She is leading several projects in the area of home entertainment (interactive TV, games, new ways of entertainment) and is responsible for new forms of usability and user experience evaluation in various contexts like mobile interfaces and ambient technologies in various industrial projects.

Manfred Eckschlager is currently working as game programmer at Tragnarion Studios making games for mobile game consoles. Besides programming his interest lies in making fun challenging games using novel interaction methods. He holds a master's degree in computer science from the university of Salzburg and was involved in several scientific projects before working in industry.

Manfred Tscheligi is professor for Human-Computer Interaction & Usability at the University of Salzburg. He is a member of different expert groups and very active in the international research scene. He was General Conference Co-Chair of CHI2004 (ACM SIGCHI Conference on Human-Factors in Computing Systems) and he was chairing the MobileHCI 2005 conference. He is author of several publications and is a distinguished speaker at conferences and seminars. He has been responsible for more than 150 national and international projects (basic research, applied research, industrial co-operations) and several national and international initiatives.

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