Games User Research: Practice, Methods, and Applications

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Abstract

Games User Research (GUR) is an emerging field that ties together Human-Computer Interaction (HCI) and Game Development. The GUR community has rapidly evolved over the past few years (spawning an International Game Developers Association Special Interest Group). In this workshop, we are investigating different methodologies currently used in practice. We will highlight benefits and drawbacks in assessing game design issues hoping to gain insights into player experience. The outcome will be a collection of best practices online, showing practitioners and researchers how to apply these techniques. We will also peer-review and publish extended versions of paper submissions in a Cognitive Science Research Papers Special Issue on GUR. This will extend the discussion of topics beyond the workshop and serve as a platform for future work.

Author Keywords

Games User Research; Video Games; Game Design; User Experience; Usability

ACM Classification Keywords

D.2.10 [Software Engineering]: Design - Methodologies

Introduction

Games user research (GUR) is a new area using evaluation methods from HCI and Psychology for improving game design to enhance the user experience (UX) [1,

Figure 1: Working materials from the CHI 2012 GUR Workshop.

Figure 2: A collection of methods on sticky notes used for discussion.
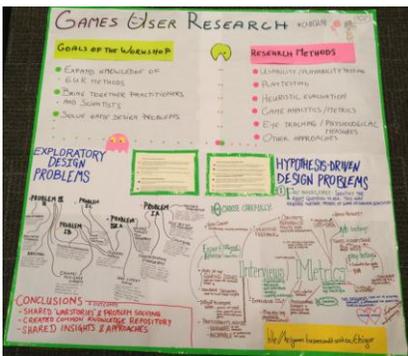

Figure 3: Games User Research Workshop Poster from CHI 2012.

9]. Although traditional evaluation methods have made progress towards understanding the usability of productivity applications and websites, the specific characteristics of video games mean that many established methods of user research cannot be applied in the same way for video games evaluation. For example, frustration is allowed in games as long as it is part of the game design and embedded in the game loop. Therefore, optimization of evaluation methods suitable for GUR is an important topic for the HCI community.

During these first years of GUR, the adaptations of productivity evaluation methods to entertainment have provided an undeniable advancement of the field [1,2]. However, the variety of adaptations and the lack of consistency in variable-manipulation could be seen as shortfalls in assessing methodological efficiency and reliability. This situation reverberates in industry settings, where methodological optimization has a direct impact on including GUR in the development process and on return on investment (ROI).

While there have been player research and game UX workshops before (e.g., [3,4,8]), the CHI 2012 GUR workshop [5] participants identified different GUR methods and techniques such as, for example, A/B testing, interviews, heuristic evaluation, game analytics, ethnography, eye tracking and/or physiological measures. Practitioners and academics discussed the *pros* and *cons* of the techniques based on the experience in their respective fields by using examples of exploratory and hypothesis-driven design problems (see Figure 1 and 2).

The results were crafted into a poster presentation (see Figure 3) and a wiki to distribute the gathered knowledge. Building upon this knowledge repository, the

workshop at CHI 2013 will focus on the adaptation of the methods and techniques in academia and industry focusing on the 'how-to' of, for instance, methodological setups, expert and player recruitment, analysis techniques and technical solutions.

This workshop will focus on a developing trend of HCI techniques being translated into the Games User Research field (e.g., [6,7]); the plurality of early adoptions calls for a methodological revision from both practitioners and academics.

This workshop serves as a milestone in the field to critically discuss how diverse adaptations of methods converge and differentiate within the games user research community, in both academic and industry settings.

The workshop invites contributions on the following topics:

1. Industry practice (e.g., case studies)
2. Methods (e.g., how to design calibrated questionnaires)
3. Analysis techniques (e.g., automatic video analysis through face recognition)
4. Solutions (e.g., presenting new techniques to deal with a particular issue)

Workshop Goals
The workshop will invite contributions in the topics described above. Position papers and industry contributions along with authors' short bio will be reviewed in light of the relevance and quality. On the day of the workshop, participants will be invited to present an overview of their work, and will collaborate together in practical group sessions to explore the potential relationship between academic methodologies, and prac-

tice-oriented development. For example, to sketch out a model of *how*, *what*, and *when* different approaches can be applied during the game development lifecycle.

Industry representatives from the organizing team and from participants will present practical issues involved in GUR during game development as well as current practices for dealing with them. In turn, research methodologies and theoretical game research contributions will be presented and critically evaluated for their potential to contribute to the real world of game development and production.

Participants will benefit from being introduced to cutting edge research approaches and from the opportunity to discuss and review their own work with leading experts in the field. Furthermore, the gathering of a large number of research institutions and game development studios means participants will have a unique opportunity for networking and crosspollination.

Workshop Plan
Pre-Workshop
We will ask participants to prepare position papers, practice videos, or case study presentation slides, which will be posted on a community website before the workshop[1]. We have also put together a GUR Wiki[2] for the workshop, acting as an anchor point for knowledge building. In addition, we have prepared a *Google+* community[3] and will be using the *#chigur* Twitter hashtag from last year's workshop again to encourage community participation and online social networking between workshop participants and the exist-

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[1] http://hcigames.businessandit.uoit.ca/chigur/

[2] http://hcigames.businessandit.uoit.ca/gur/

[3] http://goo.gl/zlijK

ing IGDA GUR SIG community[4]. Participants will be asked to comment on the topics from the community website before the workshop as a way to prepare for the discussions within the workshop, with content migrating to the Wiki on a running basis. Furthermore, participants will be asked to submit a series of GUR problems beforehand and the organizers will select the most relevant to discuss during the workshop and share current practices and brainstorm better solutions.

Workshop
The workshop will be run over a single day. During the initial orientation, workshop organizers and participants will present an overview of their own work, issues facing them, and current best practices in their field. The afternoon sessions will provide an opportunity for participants to gather together into smaller teams to collaboratively address issues relevant to their group. In these practical task sessions, problems encountered in real-world settings will be discussed with the goal of proposing methodological approaches for their resolution. It is expected that this could form the start of future collaboration between the participants. The outcome of the group exercise will be presented and documented on the Wiki.

At the end of the workshop, we will reflect on the workshop results. As we discuss how to continue the discussion. Summaries of discussions and presentations will be documented on the websites as well as the Wiki.

Post-Workshop
Organizers of the workshop will make sure that summaries of workshop events are documented in a clear

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[4] http://www.linkedin.com/groups?gid=1873014

and concise way. This will be done through constant review and edits after the workshop.

Outcome

This workshop is designed as a community-building activity and its most noticeable output may not be tangible but in the social connections formed and the exchange of knowledge between workshop participants and the GUR community. Following the workshop, we aim to pass on to the community a review of the event's talks and presentations, to facilitate ongoing dialogue between workshop participants and peers in the field. The results of the workshop will be presented through the following portals: The GUR Wiki, the CHI GUR workshop website and a poster at CHI2013—the poster will describe the workshop and present a summary of findings to the CHI audience. We will make the position papers available on the workshop's website as well as the videos of the workshop talks, presentations and highlights. Accepted submissions will be invited to revise and extend their papers to be peer-reviewed and published as a Cognitive Science Research Papers Special Issue on Games User Research (issue number: CSRP 604 – ISSN: 1350-3162) by the University of Sussex, and indexed by, for example, the British Library and Google Scholar.

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