Beyond Current User Research: Designing Methods for New Users, Technologies, and Design Processes

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Abstract
With the rapid diversification of computing technologies, user researchers often encounter new applications, new users and scenarios of use, and even new design processes that require new research approaches. (For instance, how do you assess the usability of a roving, multi-user, activity-based system? Or how do you assess a device intended to support a social network?) In this workshop we will examine case studies from user researchers who have modified a classic user research technique or created a new technique to meet the exigencies of such challenges. The workshop is organized around three aspects of methods design: the *impetus* for creating the new or modified method, the challenges of *implementing* the method, and the *impact* of the innovation on the design or design process.

Keywords
Usability testing, evaluation techniques, methodology

ACM Classification Keywords
H5.2 [User Interfaces]: Evaluation/Methodology

Introduction

Much of the established methodology for creating and evaluating technology has emerged from the traditional focus of the field, that is, software used in workplace settings. But technology has expanded beyond the workplace and proliferates within daily life. This expansion of the scope of technology has also tested the limits of the methods themselves. These challenges provide opportunities for researchers to develop new or modify existing methods of evaluation to investigate technology and its use in nontraditional domains [18].

We find examples of innovative methods in both field and lab techniques. Modifying traditional ethnographic practices in order to adapt them to the software development process has lead to the technique of design ethnography [13]. Additional fieldwork methods have been re-imagined to address the specific challenges faced by usability researchers [8]. Employing design games [15] has yielded new and playful ways in which to include users in the co-creation of design. Researchers have found that the use of comics in design [17] yields productive results. In addition, advances in both the technology and the use of eye-tracking [1] have helped to gather empirical evidence to strengthen methods such as the Retrospective Think Aloud Protocol [4].

Several emerging domains have also called for adjusting or inventing new methodology. The increasing popularity of computer and online games has caused researchers to ask whether traditional usability methodologies yield useful data for design [10] and to seek out new methods to answer research questions such as 'how can we measure enjoyment?' [14]. The challenges of studying mobile and wireless technologies such as cell phones, PDAs, and GPS devices have prompted researchers to develop new techniques and methods [6].

It is not just the technologies themselves that have prompted the need for new methodology, but also new approaches to development and evaluation such as agile development and eXtreme programming [7], and the need to create usability methods that can complement the software development cycle, such as the RITE method [11].

Finally, researchers are facing challenges of investigating types of users who have not previously been included within traditional design approaches, some examples include users in the developing world [3], emergency responders [9], people who want to increase their physical activity [2], children [5], [19], and those with visual disabilities [16].

This workshop will provide a forum for sharing knowledge among practitioners and academic researchers interested in usability and user research methods who have faced design challenges that required new approaches to user research.

Goals of the Workshop

The workshop offers a venue for collaborative reflection on methods-design experiences. Participants will share detailed case studies that will help us understand the dynamics and challenges of creating or modifying methods to address new contexts. The published workshop findings will provide guidance to others facing the same challenges in the future.

Workshop Organization

Before the workshop, applicants will submit a 4-page paper describing their experience with modifying an existing method or designing a new method. These case studies will discuss the *impetus* for the innovation, the details of the *implementation*, and the *impact* of the innovation on the design or design process. Papers will be judged on the relevance of the case study to the goals of the workshop, the concreteness and detail of the presentation, the appropriateness of the methodological innovation for its context, and the rigor of the discussion of impact. (Note that case studies may report on innovations that *did not* succeed or have an impact on the design or design process, if accompanied by a discussion that carefully considers why.) We also will try to achieve a diverse mix of perspectives and experience among the participants.

Before the workshop, the organizers will post the accepted papers to a web site and, through several channels, provide an opportunity for preliminary exchanges among participants.

At the beginning of the workshop, participants will quickly review and clarify each case study. Participants will then construct a summary analysis of the **impetus** for the design of the new or modified methods that addresses questions such as: (1) What problems, circumstances, or special user-group characteristics created the need for new or revised methods? (2) What were the expressed goals that the methods had to meet in order to address these issues? (3) What data were needed or wanted, and why?

Next, to summarize the factors that led to success (or lack of success) during **implementation**, participants will answer questions such as: What process was followed in developing the details of the methods? (2) What methodological issues or problems came up in the process, and how were they addressed? (3) Was the quality (validity, reliability, usefulness of data generated, etc.) of the methods evaluated, and if so, how? (4) What worked well about the process and what could be improved? How?

Finally, the participants will summarize the factors that contributed to the methods' **impact**—how did the methods or resulting data influence the design or the design process? Participants will answer questions such as: (1) What features or circumstances led to having an impact (or not) on the design? (2) What was the impact, how broad, how was it achieved, and how extensive/durable was it? (3) Who actually was affected—the designer, the manager of the product-development team, marketing, or who? (4) Could the impact be tracked or documented, and if so, how? (5) Was the impact immediate or longer-term? (6) What features or circumstances limited or prevented the impact on design of the methods? The workshop will end with a final reflection and summary of findings, based on which the group will create a poster for display at the conference.

Following the conference, the workshop organizers will update the website with the session deliverables and poster, and continue the conversation online. We also hope to revise the papers into a special issue of a journal or edited book.

Conclusion

Our set of user research methods must always be open-ended to accommodate the demands of evolving

technologies, emerging user scenarios, and changing design practices. This workshop, coupled with its follow up activities, will foster a continuing information exchange and conversation among user researchers who face the challenges of working in this context.

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