Distributed-PD: Challenges and Opportunities

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ABSTRACT

A limitation of Participatory Design (PD) is that it has primarily focused on project stakeholders being co-located, whereas in recent years we are starting to see software development projects involve more distributed collaborations. This panel grows out of the issues raised from a series of workshops on Distributed Participatory Design (http://distributedpd.com/) and discusses the experiences and challenges of performing PD in distributed design teams.

Keywords

Participatory Design, Distributed-PD, CSCW, distributed software development, Meta-design

INTRODUCTION

PD initially grew out of Scandinavian concerns to bring democracy into the work place, by involving users in the design stage of the software development process. However, the focus of PD has since shifted from introducing democracy into the work place to a belief that one key success factor for design is to support the direct participation of stakeholders (including end users) in system analysis and design. Originally, PD was developed with a focus on co-located design activities, where the users and designers meet face-to-face in order to establish some common ground. As such, PD becomes challenging in projects that involve a large number of users and stakeholders, who may be distributed across space, time and organizational structures.

This panel discusses key dimensions required in order to perform PD over a distributed setting and further examine them in order to understand the usefulness and constraints of distributed-PD.

DISTRIBUTION

Design is inherently collaborative. Collaboration in design could take place along several dimensions: spatial, temporal, technological, and social. The success of many Open Source Software systems and open contents

environments such as Wikipedia, Second Life, 3D Warehouse have demonstrated that given the right socio-technical conditions, design through the collaboration of many can flourish creating the need for a deep understanding of distributed participatory design (Distributed-PD). However, it remains a great challenge to understand what the right socio-technical environments for collaborative design are and how to design such socio-technical environments in a systematic way.

PARTICIPATION

What are the forms and requirements for participation in distributed setting? How "participation" can be defined when performing PD over a distributed setting? Why do we want such participation, and who wants it for what? How such participation can be motivated in distributed-PD? How much of participation is desirable and what is crucial for spanning boundaries?

METHODS AND PROCESSES

What are the methods that can be used to enable a direct user participation in distributed settings? How methods and approaches such as participatory design, user-centered design or meta-design can be applied in distributed settings?

What methods should be used to ensure a balanced mixture of synchronous (collocated/distributed) and asynchronous (distributed/collocated) to ensure developed systems can be modified by their users and evolved at use time, supporting more complex interactions (rather than linear or iterative processes).

MANAGING DISTRIBUTED PARTICIPATION

Participation cultures are transforming the *industrialized information economy* (specialized in producing finished goods to be consumed passively) to a cyber-enabled

networked information economy (in which all people are provided with the means to participate actively in personally meaningful problems). Therefore, it is important to recognize if there is a need to coordinate/control asynchronous/synchronous distributed activities? And determine the settings - synchronous, asynchronous, distributed and/or collocated – that are appropriate for negotiating solutions/conflict between stakeholders?

RPRESENTATION / TOOLS

Being distributed carries challenges that are not only about the issues involved in being distant but also about the different interpretive frames and expectations in a project team. A challenge for distributed-PD is how to capture the dialogue of synchronous/collocated activities and make it available for asynchronous/distributed activities? What are the appropriate tools and representations to support evolving requirements across synchronous, asynchronous, distributed and/or collocated settings and the stakeholders within these settings? How can stakeholders interact with artifacts in such settings? How to effectively foster communication between stakeholders who have different cultures, skills, perspectives and languages?

PANELISTS

Amir M Naghsh (Chair)

Amir is a researcher working at Sheffield Hallam University and one of the organizers of the Distributed-PD workshop series. His research is mainly in the area of interaction design, PD and CSCW. One of the projects that he is currently involved with is the European Guardians project where he is part of a distributed team designing advanced human-robot interaction techniques for emergency services. As part of his PhD, he developed an electronic paper prototyping tool (Gabbeh) offering mediating representations to facilitate interactions among stakeholders in a distributed design team.

Karin Danielsson

Karin is a researcher at Umea University and one of the organizers of Distributed-PD workshop series. In her research, she observes what aspects of PD are applied, and what obstacles occur during design of edutainment games in short-time, real-life design projects carried out by practitioners. Observed design processes are either distributed or collocated. She has collaborated with the Swedish Broadcasting Company, the Swedish Parliament and the BBC.

Gerhard Fischer

Gerhard is a Professor of Computer Science, a Fellow of the Institute of Cognitive Science, and the Director of the Center for Lifelong Learning and Design (L3D) at the University of Colorado at Boulder. He is a member of the Computer Human Interaction (CHI) Academy. His research is focused on new conceptual frameworks and new media for learning, working, and collaboration with a focus on distributed intelligence, social creativity, meta-design, and participation cultures.

Tone Bratteteig

Tone is Associate Professor and Deputy Chair at Department of Informatics, University of Oslo, Norway. She was an early PD researcher, working with Kristen Nygaard on developing a nursing-based system in the 1980s. Her current research interests are the shifting relations between design and use encouraged by new technologies, and how we can design for user autonomy before as well as after design.

Jeanette Blomberg

Jeanette manages the interdisciplinary Service Practices group at the IBM Almaden Research Center. Prior to her current position, Jeanette was a founding member of the pioneering Work Practice and Technology group at the Xerox Palo Alto Research Center (PARC), a Director of Experience Modeling Research at Sapient Corporation and an industry affiliated professor at the Blekinge Institute of Technology in Sweden. Since joining IBM Research she has led projects focused on interactions among IT service providers and their clients, collaboration practices among globally distributed sales teams, the place of stories in corporate imaginaries, and new approaches to work-based learning. Over the years her research has explored issues in social aspects of technology production and use, ethnographically-informed organizational interventions, participatory design, case-based prototyping, and service innovation.

Jose Abdelnour-Nocera

Jose is Senior Lecturer at the Centre for Internationalisation and Usability, Thames Valley University, UK. His interests lie in the design of people-centred systems, having worked in this area both as researcher and consultant in Latin America, Africa and Europe. The distributed nature of development and design teams has been a common denominator of the projects in which he has been involved. One of these projects is the multidisciplinary and geographically distributed VESEL project, aimed at designing and implementing interactive systems to support the farming practices of rural communities in Kenya. Jose's research and consultancy work spans several domains: social development, e-learning, e-commerce, e-government, medical devices and enterprise resource planning systems. Over the years her research has explored issues in social aspects of technology production and use, ethnographically-informed organizational interventions, participatory design, case-based prototyping, and service innovation.