
HCI for Community and International Development

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Abstract

This workshop explores the challenges in applying, extending and inventing appropriate methods and contributions of Human Computer Interaction (HCI) to International economic and community Development. We address interaction design for parts of the world that are often marginalized by the Global North as well as people in the Global North who are themselves similarly marginalized by poverty or other barriers. We hope to extend the boundaries of the field of Human Computer Interaction by spurring a discussion on how existing methods and practices can be adapted and modified, and how new practices can be developed, to deal with the unique challenges posed by these contexts.

Keywords

User Centered Design, International Development, Information and Communication Technology, ICT4D, UCD4ID, Community Design, Participatory Design

ACM Classification Keywords

H5.2 User Interfaces, H5.m HCI Miscellaneous. K.4.0 Computers and Society, K.4.m Computers and Society Miscellaneous

Introduction

A large body of work in the field of International Development emphasizes the need for host communities in development projects to be empowered in designing and controlling these projects [1, 3]. Many projects make use of information and communication technologies (ICT) as part of their plan. However, there have been only a few explicit efforts to bring together the International economic and community Development and the HCI communities to support mutual learning and sharing. In particular, we initiated such a dialogue at a heavily attended CHI 2007 workshop and continued this dialogue via post-workshop activities as well as participation at INTERACT 2007. The aim of this workshop is to deepen this dialogue as well as to broaden it by encompassing a greater number of participants and cultures.

Key Issues

Because this workshop is an attempt to stimulate further dialogue between groups that have been largely separate, it is important to identify and increase awareness about the key issues.

User Centered Design for Development (UCD4D)

One of the tenets of good design is to "Know Thy User." In the context of International Development projects, however, it is *also* crucial to continually question and explain assumptions that may be implicit in design decisions. In order to cope with these unique challenges, we must re-examine many established areas in HCI including:

- **Interaction Metaphors:** Exploring beyond the Western-centric Windows, Icons, Menus and Pointers (WIMP) metaphor to other interaction

metaphors that are more culturally and socially relevant to the intended user groups [8], many of whom are semi-literate or less socialized into the school practices on which Western user-interfaces are based on.

- **User Analysis:** Developing methods to most effectively understand the users and their context, practices, and wants, by understanding Socio-cultural, Educational and Economic differences [4].
- **Interaction Methods:** Localization and customization / alternatives to traditional input output methods [2] as well as styles of interaction.
- **Dissemination Methods:** Although even so-called developed countries are increasingly realizing the value of community in disseminating their products and services, this factor is often even more crucial in the developing world. Community understanding and support is critical at every stage of design, development and deployment.
- **Design for Deployment:** Although deployment issues are always critical for sustained success, designs for the developed world presume and utilize many pre-existing mechanisms (social, economic, and cultural).. These are often different or non-existent in the developing world so special attention needs to be paid to these issues from the beginning of the design process.
- **Evaluation Methods:** We need to think outside traditional methods and make evaluation more appropriate to the target user audience in order to elicit accurate and actionable feedback [8].

Broader Issues To Consider

HCI methods such as User-Centered Design and Participatory design are essential in helping designers better understand their target users. This also requires close collaboration between user researchers from various countries working jointly on a project. If an ICT project is to be successfully implemented, it is important to consider broader issues as well including:

- **Project Aims and Values:** Much of the developed world implicitly subscribes to a largely common world-view and set of values. If not done carefully, those attempting projects in the developing world may easily fall into the trap of presuming that every culture has the same set of values and goals that they themselves adhere to. As a result, one may do an efficient job of doing exactly the wrong thing with respect to the actual values of aims of those in the developing communities.
- **Profoundly Different Contexts:** Developing-world design projects may widen the analysis and design spaces to take into account issues such as local economic conditions, historical context, political structures, resource availability, technological infrastructure, and long term financial sustainability of solutions.
- **Design Constraints:** Developing-world projects are, by definition, conducted against a background of severely constrained resources.
- **Cultural Disparities:** Developing-world projects may involve cultural and language barriers between technologists and hosts, as well as perceived differences in status. These factors can be more

extreme than those encountered in projects in the developed world, leading to difficulty in establishing effective partnerships.

- **Communication as a Two-way Street:** Differences in aims, values, and contexts are not only potential *barriers* to designing and deploying effective solutions to appropriate problems. Such differences are also a potentially *critical resource* to the unsolved problems of the world including both the developed world and other areas in the developing world. It is critical that technology not destroy cultural diversity in the process of trying to improve lives and communities.
- **Sustainability.** Ultimately, developing-world projects are only successful if they are sustainable by the community. Identifying the contextual, cultural, and technical factors are key to making projects sustainable.

Existing work in this area has resulted in researchers innovating to accommodate the various constraints faced by such projects. While in some cases existing approaches have been modified to meet requirements [5], in others, fresh design [2,8] and evaluation [3,8] approaches have been developed to solve problems.

On the other hand, there is much mutual benefit to be had from addressing these challenges; it is not simply about improving the conditions of people in developing countries, but can also help to advance the discipline of HCI. As Papanek [7] recognized, exploring a wider and more diverse scope of users and applications, can enrich our design skills, and improve both process and product innovations for everyone.

How The Workshop Addresses These Issues

This workshop will provide an opportunity for the exchange of experiences, exploring differences between developed and developing world contexts, developing new partnerships, and learning from each other about problems encountered, solutions, and methods.

Topics that we will cover in the workshop include:

- experiences of interaction design in developing countries or with traditionally underserved populations in developed countries;
- uses and adaptations of participatory methods in economic and community development projects;
- cultural factors in designing for economic and community development;
- innovative techniques for engaging users in developing world contexts;
- examples of solutions that are sustainable in context.

We will use this workshop to build an international community of “engaged scholars and thoughtful practitioners” [9] who can bridge between disciplines and boundaries to create appropriate, effective and sustainable community development solutions.

This workshop will be open to anyone with relevant experience or interest.

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