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This is a proposal paper for the User Centered Design and International Development workshop at CHI 2007. We will share our experience in this area, specific findings from our research and our areas of interest for discussion at the workshop.

Experience

The Design for Digital Inclusion research group is an interdisciplinary project investigating issues of information and communications technologies in underserved communities nationally and globally. Part of our current work focuses on the use, adoption and design of information and communication technologies in the region of Central Asia, particularly the countries of Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. This particular project, the Central Asia + Information and Communications Technologies Project (CAICT, see the website at <http://depts.washington.edu/caict>) is a longitudinal investigation of ICT adoption and adaptation patterns; the results from this project will inform future ICT design efforts.

Our work to date has included a multi-method approach that incorporates broad social surveys, interviews, ethnographic observation, policy monitoring, web archiving, monitoring and analysis of chat sites, focus groups, and design ethnography.

Central Asia is a multi-ethnic, multi-lingual area that has several characteristics common to emerging markets and developing regions, including infrastructure and material constraints. In addition, the region is still in early stages of general ICT adoption, and existing infrastructure and economic constraints have resulted in a relatively slow diffusion pattern for ICTs. However, the characteristics of the slow diffusion pattern have made Central Asia an especially productive research site and have allowed our research to identify a variety of local conditions that impact ICT adoption and design considerations and constraints for future ICT development.

Findings

From research conducted to date, we have generated the following findings:

- Mobile phones and mobile technologies are the pervasive technology in this region like many other developing regions. Mobile phone penetration rates are much higher than Internet penetration rates, and mobile phone usage patterns also reflect the more extensive level to which the mobile has infiltrated daily life activities when compared to the Internet.
- The Internet has not taken root as part of everyday life in Central Asia in the same way that it has in more developed regions and is often accessed infrequently and is accessed outside of the home in Internet cafes.
- Citizens of post-Soviet countries are skeptical and even distrustful of official institutions and media. Conversely, friends and family are the most trusted source for information. In countries within the Central Asia region traditional institutions are untrustworthy, infrastructure is outdated and bureaucracy often makes accomplishing the tasks of daily life frustrating and time consuming. As a result, informal social networks are traditionally

of great importance and also are a necessity in terms of getting things done. These patterns in information seeking influence the extent to which the Internet seamlessly integrates culturally as an information source.

- Design ethnography provides an important methodological component in moving from broad social data to design specifications. We are currently analyzing data from a design ethnography conducted in Kyrgyzstan and Tajikistan in July 2006, but the formulation of the study protocol and initial analysis of textual and photographic data demonstrates that design ethnography can provide a crucial intermediate step between participatory and collaborative design processes.

Based on our research and findings conducted to date we are currently exploring the creation of mobile social software applications for the developing world and underserved communities by using a user-centered and participatory design approach.

Interests

We are interested in participating in this User Centered Design and International Development workshop to engage in productive conversations with other researchers and designers. We are especially interested in discussing the challenges, responsibilities, and issues surrounding technology design and development for projects in developing regions. The CAICT project has been underway since 2002, and in that time we have accumulated a wealth of experience regarding cross-cultural research that includes negotiating difficult geo-political shifts. In particular, we are interested in discussing the following questions:

- How can we expand or broaden a traditional UCD methodological approach, which is rooted in democratic principles but often focuses primarily on Western constructs of what is useful or usable, to be culturally appropriate in a variety of contexts?
- Is it possible to be inclusive of users' participation throughout the production phase of the project if it is not being developed within the same country or region it will be deployed in? Is design ethnography a methodological approach that can help forge more collaborative and participatory design efforts?
- If, and in what way how, can design principles from one context be mapped from or translated to other contexts? Similarly, how can we extrapolate findings from one research site to general principles relevant to underserved communities? This question is especially interesting when considering how research conducted in international sites can apply to design approaches for domestic populations.
- If projects are sponsored by, accountable to, and financed by entities in developed countries, what techniques can be used to advocate for in situ research and local partnerships?
- How can we accommodate shifting political landscapes in longer-term projects, especially when such shifts may affect the kinds of data a team can collect and the ability to revisit initial research sites?
- In what ways can we broaden the conversation about developing countries to be more inclusive rather than focusing only on the BRIC (Brazil, Russia, India, China) region when considering underserved populations and emerging markets?

We look forward to the opportunity to discuss our research and engage in conversation with other researchers at the workshop.