

Towards the Development of a Comprehensive Culturability Index for International User Centered Design

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It has been argued for a long time that user centered design (UCD) should consider cultural characteristics of target users. For example, it has been said that background color for international web sites should be changed according to different cultural and ethnic characteristics. A few cultural dimensions, such as individualism vs. collectivism, have been found to accurately measure important cultural characteristics across different countries. However, a comprehensive set of UCD factors that are substantially affected by the cultural dimensions have not been identified yet.

Our research goals are threefold. First, we want to identify a set of cultural dimensions that have strong impacts on user experience. Second, we like to identify a comprehensive set of UCD factors on which the cultural dimensions have substantial effects. Finally, we like to establish culturability index that measures the strength of relationship between certain cultural dimensions and UCD factors. Below I present what we have done in the past, what we are doing now, and what we plan to do in the future to accomplish our research goals.

Past

Our researches in the past focused on a specific domain of information technology, mobile data service (MDS, hereafter). MDS is defined as mobile access to the Internet through handheld devices such as mobile phones. Differences in MDS usage patterns may be more profound across countries than they are with the traditional stationary Internet. This is because mobile devices, which operate only within local areas, access the wireless network, whereas globally uniform devices access the stationary Internet. Our past studies in the MDS domain can be classified into two groups.

First, we have identified key cultural dimensions that were important to MDS and actually measured them in different countries. We selected a few cultural dimensions based on prior researches in HCI and major characteristics of MDS. We then constructed survey questions for each of the selected cultural dimensions. Finally, we conducted online surveys with the questions in seven different countries. The survey results indicate that our cultural questionnaire can measure cultural characteristics reliably and validly across different countries (Kim, et al, 2006).

Second, we explored important user-experience attributes of MDS and investigated how cultural characteristics influence users' preferences for those attributes. To address these questions, we interviewed 24 MDS users in three different countries. The interview data was analyzed using the grounded theory approach. Through grounded theory analysis of the long interviews in the three countries, we elicited critical user-experience attributes of MDS. Furthermore, we confirmed that users' preferences for mobile data service attributes differ across countries according to cultural profile (Choi, et al, 2005).

Present

Our current research efforts are twofold. First, we are investigating methods to explicitly measure the relationship strength between cultural characteristics and user-experience attributes. Our past researches investigated them one by one, but the relationship strength between the two has never been directly measured. Based on the relationship strength, we can construct culturability index that measures how suitable a product is to cultural target groups. Second, we are expanding our target domain from MDS to general consumer electronics including mobile phone, MP3 players, refrigerator and digital television. They are strategically selected to cover two products dimensions: the mobility dimension (mobile vs. stationary) and motivation dimension (utilitarian vs. hedonistic). Finally, we are searching for new data collection methods other than online surveys and long interview. They were found to be effective in our study but they were expensive and taking long time. We are exploring possibilities of utilizing UGC (user generated contents) that may be prevalent with the advent of Web 2.0.

Future

We plan to embark a massive data collection starting from June 2007. We have secured financial as well as institutional supports to cover 25 countries including developed countries such as USA

and UK, as well as developing countries such as India and Chile. We believe this workshop can provide excellent research environment for our study. We expect to share our research plan in the workshop as well as get acquainted with future colleagues who can participate in our research project in their corresponding countries.

References

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