

Raising the Challenge for a More Accessible Information Society: Case Studies and Perspectives from Persons with Disabilities”

Global Initiative on Inclusive ICTs

1st Global Forum

Monday, March 26, 2007

**United Nations Headquarters, New York,
Room 4**

Introduction

- **Provide overview of NCD's research on the accessibility of ICT products and assistive technologies**
- **Topics for discussion are:**
 - **User study, Product analysis, Industry study, and Market study**
 - **implications of NCD research findings for global market and work of G3ict**

Market for ICT

- **ICT global marketplace \$3 trillion in 2006**
- **ICT global marketplace will be \$4 trillion by 2009 (WITSA, Digital Planet 2006)**

“Design for Inclusion” (NCD, 2004)

- **NCD’s examined the roles and perspectives of industry, Federal Government, and consumers vis-à-vis:**
 - ◆ **ATMs,**
 - ◆ **cell phones,**
 - ◆ **PDAs**
 - ◆ **Distance learning software**
 - ◆ **TVs, and**
 - ◆ **Voice recognition software**
- **Analyzed emerging ICT markets in top 5 developing countries: China, India, Russia, Mexico, and Turkey.**

Guiding Questions for NCD's Research

- **Is there a market for more accessibly designed products?**
- **Does the capacity exist to develop more accessibly designed products in each of the presented product lines?**
- **What factors influence the market for more accessibly designed products for each of the product lines presented?**

User Study

- **We documented user acceptance and use of products. Five focus groups with participants with disabilities were recruited. Participants discussed the six products, including their positive and their negative experiences.**
- **We analyzed the data from the 5 focus groups, resulting in a list of features that maximize the accessibility of specific product lines for the range of functional limitations represented by this study.**
- **We worked with focus groups to evaluate or performance test each product line. The ability of each participant to perform the task was**

User Study – Key Findings

- **Users with disabilities are often asked to pay high prices for phones with feature sets that are not useful to them.**
- **Rapid changes in technology often cause decreases in accessibility.**
- **Users are reluctant to adopt technologies that have proven frustrating in the past.**
- **Users have difficulty finding devices that match their functional capabilities.**
- **Users are reluctant to invest in technologies that have an unproven accessibility record.**
- **Accessibility solutions must consider the needs of the individual with disabilities.**

Product Analysis

A detailed product line analysis was conducted for each of the 6 product lines selected for study to document:

- **accessibility issues that prevent people with disabilities from fully accessing the selected products,**
- **and to document accessibility features that either are currently offered or could be offered by manufacturers.**

The end result of this product analysis was assignment of an accessibility grade to each product line for each disability group.

Industry Study – Grading the Product Lines for Accessibility

- A = Excellent accessibility. Users with an impairment are generally able to make full use of the product, with few limitations.**
- B = Good accessibility. Users with an impairment are able to make good use of the product, but some areas of product functionality are not accessible.**
- C = Fair accessibility. Users with an impairment can access some of the functionality of the device, but many aspects of product functionality are not accessible.**
- D = Poor accessibility. Users with an impairment can make use of a small proportion of the functionality of a device, but most aspects of product functionality are not accessible.**
- F = Accessibility failure. Users with an impairment are generally not able to use the product.**

Table 1. Accessibility Grades for Each Target Population for the Six Product Lines

Industry Study

The purpose of the industry study was to document Universal Design practices within industries represented by the six product lines selected for study. Five categories of facilitators and barriers to accessible design were examined:

**design,
organizational,
informational,
financial, and
legal.**

Industry Study – Key Findings

The most common approaches to addressing accessibility issues are—

- **Increasing awareness of employees**
- **Integrating accessibility requirements into the design process**
- **Performing accessibility verification testing**
- **Establishing an accessibility program office**

Implications for G3ict

NCD's research results demonstrate that the classes of people making up the market for Universal Design products and services include users—

- **with disabilities**
- **with temporary disabilities**
- **with functional limitations due to situational factors**
- **with low literacy skills**
- **in low bandwidth areas**
- **desiring increased functionality and usability**
- **who do not speak English as their primary language**
- **in high-population-density areas**
- **who are elderly**

Implications (cont.)

Designing with access in mind can significantly increase the size of ICT markets on a global basis. Groups at the highest risk of unintentional exclusion are—

- **People with disabilities**
- **Individuals 65+ years old**
- **Consumers living within low-bandwidth information infrastructures**
- **Users of English as a Second Language (ESL)**
- **Tourists traveling to nonnative language destinations**
- **Consumers living in high-density populations**

Implications (cont.)

- **Consumers spend one out of every four ICT dollars worldwide.**
- **Per capita ICT spending between 2005 and 2006, from \$538 to \$567; has increased every year since 2001 (WITSA, Digital Planet 2006)**
- **It is estimated that there are 600 million people with disabilities world wide.**

Conclusions

People with disabilities want:

- * **to use the same products that everyone else uses;**
- * **do not want to be limited to specialized products that are more costly**

Implementation of universal design is the best way to satisfy this desire of people with disabilities, while also providing more cost-effective products for all users.

Products and services that come closer to accommodating a variety of physical and cognitive differences will benefit both users and companies.