Technology Design and HCI

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Agenda

* Timeline of HCI4D

    * Examples

    * Challenges

* Speaker: Matthew Kam

* Asobagri: Coffee Cooperative

    * CAM Framework and successful design principles

* Kelesa Konnection

Background on HCI4D

HCI

Design, Evaluation and Implementation of Interactive systems

Development

HCI4D

1. Needs of people in developing regions
2. Social, cultural and infrastructural challenges

Examples

* One Laptop per Child

* Front line SMS

* MILLEE(Mobile and Immersive Learning for Literacy in Emerging Economies)

Challenges

Speaker: Matthew Kam

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* Assistant Professor in HCI

* Worked on MILLEE for the past 6 years with 800 rural children in 40 villages in India

* Video on MILLEE

Speaker: Matthew Kam

* Questions:

  * What makes an HCI specialist working with development think differently than one working in traditional HCI practices?

  * What are specific practices used in an HCI4D environment?

  * With regard to MILLEE how are you evaluating the long term impact of your project?

Design Methods

Asobagri: Coffee Cooperative

* Producer and export cooperative located in Barillas, Guatemala

* Provides market access to over 800 coffee producers

CAM Framework

- Mobile phone software platform for developing rural applications

  - Camera based: Barcodes link CAM to paper-based processes

  - User Interface: tuned to rural users and mobiles

  - Offline networking: uses SMS

  - Mobile phones: long battery life and cheap

- Applications: CAM DPS & CAM RANDI

Secret to Success

* Establishing rapport

  * "Show you are tough"

  * "Show you are capable"

  * "Be local"

  * "Clearly establish rules"

* Designing relevant solutions

  * "Identify natural champions"

  * "Listen"

* Overcoming Evaluation Challenges

  * "Conduct Experiments that are clearly relevant for participants"

  * "Strive for a balance between control and enthusiasm"
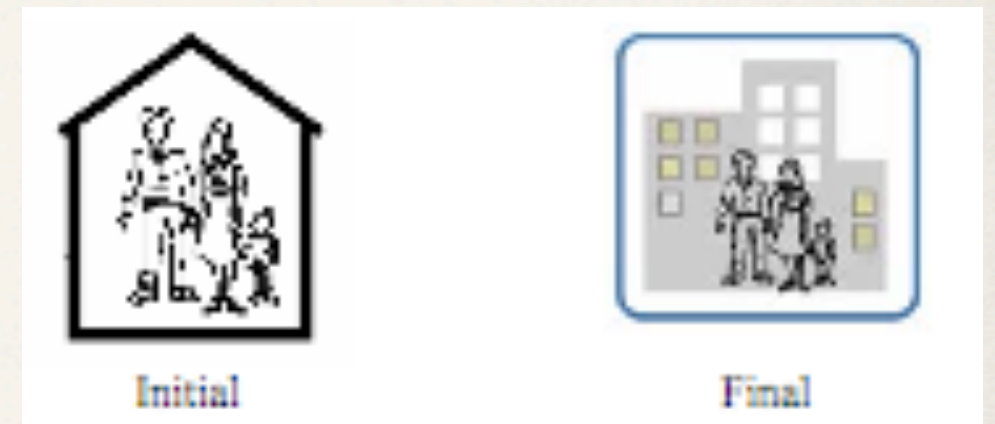
  * "Take compliments with a grain of salt"

Example: Text-free User Interface

Kelesa Konnection

* Text-free interface design for novice and illiterate users

* Employment search application

* Product of contextual and ethnographic design

Design Principles

* Avoid Text

* Use semi-abstracted graphics and photorealism

* Pay attention to subtle graphic cues

* Voice feedback

* Help and Back

Initial   Final

Initial   Final

Bollywood Method

* Tasks are embedded in dramatized stories involving the subject

* Purpose is to motivate participants and keep them engaged

* In a situation where a participant needs to book a flight.

  Example: "The participant's beautiful, young, and innocent niece is about to be married. But suddenly he gets news that the prospective groom is a member of the underground. He is a hit man! His whole life story is a sham, AND HE IS ALREADY MARRIED! The participant has the evidence and must book an airline ticket for himself and the groom's current wife to Bangalore. Time is of the essence!!!"

Questions

Sources

- http://www.humanfactors.com/downloads/jun02.asp

- http://abcnews.go.com/video/playerIndex?id=7854956

- Human Computer Interaction for Development: The Past, Present and Future.

- http://portal.acm.org/citation.cfm?doid=1240866.1240909

- research.microsoft.com/en-us/people/indranim/text-freeui.pdf