User-Centered Design

Workshop on User-Centered Design of Language Archives
Christina Wasson
20-21 February 2016

This material is based upon work supported by the National Science Foundation under Grants No. BCS-1543763 and BCS-1543828.
What is user-centered design?

The chief difference from other product design philosophies is that UCD tries to optimize the product around how users can, want, or need to use the product, rather than forcing the users to change their behavior to accommodate the product.

-- Wikipedia
History of computer users
From DOS to graphical user interface (GUI)

Welcome to FreeDOS

CuteMouse v1.9.1 alpha 1 [FreeDOS]
Installed at PS/2 port
C:\>ver

FreeCom version 0.82 pl 3 XMS_Swap [Dec 10 2003 06:49:21]

C:\>dir
Volume in drive C is FREEDOS_C95
Volume Serial Number is 0E4F-19EB
Directory of C:\

FDOS <DIR> 08-26-04 6:23p
AUTOEXEC BAT 435 08-26-04 6:24p
BOOTSECT BIN 512 08-26-04 6:23p
COMMAND COM 93,963 08-26-04 6:24p
CONFIG SYS 801 08-26-04 6:24p
FDOSBOUT BIN 512 08-26-04 6:24p
KERNEL SYS 45,815 04-17-04 9:19p
  6 file(s) 142,038 bytes
  1 dir(s) 1,064,517,632 bytes free
Paradigm shift to UCD
Cog psych and human factors

1 person + 1 machine
Anthropology

Social groups
Cultural practices and meanings
4 basic components of UCD

1. Identify user groups
2. Work with users to identify needs
3. Interdisciplinary and collaborative process
4. Iterative
1. Identify user groups

• What groups of people are currently using the technology?
• What other groups might benefit from using it?
Questions for language archives

• Surprisingly little holistic consideration of user groups

• First pass at user groups
  – Linguists
  – Language communities
Questions for language archives

• Second pass at user groups
  – Users may belong to more than one group
  – Other user groups and divisions within groups
  – Users yet unborn
  – Users who aren’t users
  – Archives are only user-centered for some users
# Accessible to archivists and linguists

## OLAC Record

**Title**: Crúbadán language data for Ewe

**Contributor (data inputter)**: Edward Jahn
Dustin Joosten
Nick Lewchenko

**Contributor (developer)**: Kevin Scannell

**Contributor (researcher)**: Kevin Scannell

**Contributor (sponsor)**: National Science Foundation

**Creator**: Kevin Scannell

**Date (W3CDTF)**: 2015-08-18

**Description**: A dataset containing word and character n-gram frequencies and lists of URLs for Ewe

**Format (IMT)**: application/zip

**Identifier (URI)**: [http://crubadan.org/writingsystems/ee](http://crubadan.org/writingsystems/ee)

**Rights**: Creative Commons Attribution 4.0 International License

**Subject**: Ewe language

**Subject (ISO639)**: ewe

**Subject (OLAC)**: computational_linguistics
lexicography
text_and_corpus_linguistics
writing_systems

**Type (DCMI)**: Dataset

**Type (OLAC)**: lexicon
Accessible to broader audiences
2. Work with user groups to identify needs

- Map “user experience” by conducting “user research”
- Create space for voices of users
Typical research questions

• What are the main ways that people use the technology?
• What would they like the technology to do that it doesn’t do?
• What problems do they encounter, and how do they work around those problems?
• What is the broader cultural context within which the technology can help people achieve their goals?
Levels of participation

Participatory research
Small, defined communities

Traditional ethnographic research
Large, amorphous populations
3. Interdisciplinary and collaborative process
4. Iterative

1. Concept
   - Competitive analysis
   - User experience research activities
   - Functional specification
   - Usability/UI development plan
   - Personal development

2. Design
   - Information architecture
   - Graphics creation
   - Design specifications
   - Taskflows
   - Iterative UI design
   - Paper/pencil prototype
   - Realistic prototype (e.g., html)
   - User experience research activities
   - User evaluation
   - Heuristic evaluation

3. Develop
   - Formal usability test
   - Formal design review
   - Heuristic evaluation

4. Release
   - Competitive usability test
   - Benchmark test
What might it mean to bring UCD into field of language archives?