Discovery

Scott Klemmer
TAs: Marcello Basta-Forte, Joel Brandt, Neil Patel, Leslie Wu, Mike Cammarano

27 September 2007

http://cs147.stanford.edu
“You Can Learn a Lot Just by Watching”
—Yogi Berra
Today

• Approach
• Doing Observational Work
• Announcements & Questions
APPROACH
WHEN USER HITS MACHINE
Variety of observation techniques

- Contextual inquiry
- Ethnography
- Diary studies
- Prompted (pager) studies
- Cultural probes
- Task analysis
ETHNOGRAPHY
Goals

- Natural
- Holistic
- Descriptive
ETHNOMETHODOLOGY
The Practical Logic of the Everyday World
More about Contextual Inquiry

Collections Designers Keep. Contextual Inquiry of designers in NL. Tu Delft. ID-StudioLab

What is Context?

- Activity in its actual place
- Artifacts and tools
- The ecology around it
How to perform Contextual Inquiry?

- Set up a partnership with the people to be observed
- Be taught the steps in the process
- Observe all of the practices
- Validate what you are observing with those observed as you go along
How to record a contextual inquiry

- Notes
- Camera
- Action
Discovery is the root of design

1. Discovery
2. Exploration
3. Refinement
4. Production
Observation is at the heart of Discovery

1. Set goals
2. Observe
3. Synthesize
The Discovery process yields ...

1. What users do now
2. What values do the users have
3. How the users activities are embedded in an overall “ecology”
Don’t just observe process, observe the practice

Process
- Step one
- Step two
- Step three

Ask Why’s?

Practice
- A thousand word picture
Process v. Practice
Jack Whalen & the Call Center
Tacit Knowledge
“That’s Obvious!”
Deep Hanging Out
A Shifting Landscape
DOING OBSERVATION
Makes Explicit Much of What Good Design Does Implicitly
The Importance of Being Curious
Reflective Practice
DESIGN IS ABOUT CHOICE
“Does your employer or his representative resort to trickery in order to defraud you of your earnings?”
• “Is the daily update an important feature to you?”
GOOD QUESTIONS

- Are open-ended
- Avoid Binary Questions
- Let Silence Happen
Erring in the Other Direction...

- “Tell me a story about yourself”
Plans are useless, but planning is invaluable
What works better
(Snowboaring with Scott)
PAY ATTENTION TO ARTIFACTS
Say you were designing...

- A lecture support system
- Here are my steps
Finding People...
Rocket Science
What people can’t tell you...

- Functional fixedness: People understand their world within a structure that imposes limitations. It's hard to see outside that structure.
- What they would do / like / want in hypothetical scenarios
- How often they do things
- The last time they did something
- How much they like things on an absolute scale

So, you cannot simply ask people what features they would like in a tool.
What people can tell you...

- What they “generally” do
- How they do it
- Their opinions about their current activities
- Their complaints about their current activities
- How much they like one thing compared with another
Creating an interview protocol

- Figure out who to interview
- Structuring the interview
  - Start with demographics, overall goals, high-level tasks, company policies, etc.
  - Move on to more open-ended questions (have them walk you through a task/day, what works well, what doesn’t?)
- Cycle back to more detailed questions
Interviewing tips

- Introduce yourself, explain your purpose
- The interview is about them, not you!
- Ask open, unbiased questions
- Ask the question and let them answer
- Follow up
  - Adjust your questions to their previous answers
  - Ask questions in language they (use) understand
  - Pick up on and ask for examples
- Be flexible
Who’s doing all the talking

- Strive for about 20% (or less!)
Recording the interview

- Interview in pairs
  - One person interviews, the other takes notes & listens
- Audiotaping
  - Accurate record of the interview
  - Great for mining lots of information per interview -- your notes will never be as complete
  - Helpful if impressions change as you interview others
  - Tedious to review later (but well worth it)
  - Helpful for presentations - makes the people real
  - Get permission in advance - be aware of security issues
Recording the interview

- Videotaping
  - Same advantages and disadvantages as audiotape
  - Even better for communicating findings to others
  - May be harder to get permission
  - More issues of confidentiality
  - May make people less willing to divulge sensitive information
  - If you can't videotape, take snapshots
Where should you interview?

- In their setting (i.e. their office, home, car, etc.)
  - Gives you much better insight into their activities
  - Gives you a chance to see their environment
  - Allows them to show you rather than tell you
- If not possible to interview in their setting, ask for a tour before or after
Before you go...

- Take a trial run with colleagues or friends
  - Gives you practice interviewing
  - Irons out problems with the questionnaire, redundancies, inconsistencies
After the Interviews

- Keep photos and other concrete details around
- Concrete people help tie all design to use, rather than debating things on an abstract plane
WWMPD?
Medical Records

THICK PRACTICE

CLINICAL NOTES

Date: 24/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 25/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 26/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 27/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 28/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 29/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 30/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest

Date: 31/10/59

Diagnosis: Sore throat, tonsillitis, swollen glands

Treatment: Penicillin, rest
Final Scratch
June 19, 1985

Very sultry and hot last night, thunder close. Sackett says about the hottest night he has ever seen. Thermometer 70°F at 5 a.m.

One Brown Towhee in traps. Good tracks of sand near traps.

Apricot Orchard

Elm

Tobacco Nightshade

Grapes

Cottonwood

Willow

Snake
ButterflyNet

epiphylls - things that grow on cacti
many large spines

dormant mound
cardia

high quality wood

two layers

leaf mining - microlepidoptera
type of herbivory
larvae eat around inside
epiphylism
leaf protected inside leaf

Burseraceae Bursera
gum tree
dioecious
bark peels off (red)
exfoliating bark

green stem - photosynthesis (leaves)

Costus - interesting in flower
- ginger, lots of herbivory

velvet

Costus - types here (are is eaten much)
one desiccated
what is the difference - gland

monocot (grass)
(good oozing, dense)

piper - monocious, soufast
quantum - light greedy

legume - coriandra - "horns"
mutualism (meromorphphy)
ants live in thorns of the
Eye to future: in situ diary studies

Figure 2. Proposed media elicitation pipeline: 1) A participant takes a photo 2) The participant annotates the photo with an audio recording 3) The participant uses a tool to log the photo and audio and add more annotations 4) The researcher provides feedback about the captured data 5) The researcher holds an elicitation interview with the participant using the captured media as prompts.

Figure 3. Reporter’s Web interface. The participant has repositioned and resized rectangles as per questions asked by researchers, including the object that the participant intended to capture (upper left of the photo) and any other information that the participant felt was important in the scene (center and right of the photo).

Eye to future: txt 4 l8r, diary studies innovation

Questions

- About the assignment
- About studio today & tomorrow
- About class in general
FOR TUESDAY

- Reading: Contextual Design
- In general: we went to great lengths to pick seven readings, and they’re all really good
  - As opposed to picking 15 plus another 10 optional readings.
  - Okay, I cheated – there’s one optional reading, but it’s a comic book