Contextual Inquiry and Task Analysis

590 F Discussion Section
Monday Oct 9 &
Tuesday Oct 10, 2006

Role of discussion section
- Answer questions you have about material covered in class
- Cover topics related to class in more detail
- Cover techniques you will use in group projects

Who here has
- Read the paper?
- Designed a UI?
- Done a Contextual Inquiry?
- Done fieldwork of any kind?

Why are user interfaces are hard to get right?
- Your intuition could be wrong
- Designers / Engineers are not necessarily typical users
- You are only 1 person
- Require iterations

What can fieldwork discover?
- Gap in specified procedures and practice
  - People don’t always do what they are supposed to
  - Customer (Manager) may not know what the users (Employees) actually do
- Gap in what users say and what they do
- Examples
  - Use of margins in forms
  - Dodgy Solicitors
  - Role of paper
Other fieldwork methods
- Questionnaires
- Interviews
- Participatory Design
  - Involve the user in the entire design process
  - Iterative
- Ethnography
  - Qualitative description of social phenomena
  - Long term, detailed, general

Contextual Design
- Looks at work in context
- Gets data about the structure of work
- Gets at unarticulated knowledge
- Gets at low level details
- Makes what good designers do explicit
- Allows designers and users to have a shared language
  - Labels are related to the user’s mental model and not underlying system
- Contextual Inquiry (CI) is the first step in Contextual Design

4 principles of Contextual Inquiry
- Context
- Partnership
- Interpretation
- Focus

Context
- The work artifacts, environment, people, interruptions, other tasks etc that affect the important task
- What is the benefit of context?
  - Summary vs ongoing experience
  - Abstract vs concrete data

Partnership
- Make you and customer collaborators in understanding work
- Withdraw and return
  - Alternate between watching and probing

Interpretation
- Design is based on interpretation of facts
- Confirm interpretation
- Umm… could be = no
### Focus
- What do you care about?
- What are your goals?

### But I’m making something totally new...
- There is still a way to study it!
- Define what work your system will replace
- What are people trying to achieve?
- Does anyone do something similar in another domain?
- What metaphors are important?

### Why is contextual inquiry valuable?
- Users are expert at the task
- You may think of a better solution or new approach when you get more data
- You may discover something you didn’t know was important
- Why is this?
  - People tend to think in abstract rather than concrete
  - People tend to ignore details
  - Often details that people think are unimportant can have a large impact on their work
- There may be social effects

### Tips for Contextual Inquiry
- Act like an apprentice
- Ask a “tour” question
  - Describe a typical day on the help desk
  - Describe how you take a call
- Ask for a story or example
- Check for exceptions

### Tips for Contextual Inquiry
- Clarify expectations
  - Was that what you expected?
- Generalize
  - Do you often encounter problems like this?
- Question a term or concept
- Summarize and draw a conclusion

### Traps not to fall into
- Losing the master / apprentice model
- Stopping work
- Surprises and contradictions
  - Thinking an action is idiosyncratic or random
  - Thinking someone is doing something “wrong”
- Not asking the user when you don’t understand
Task Analysis

- What are the major tasks you intend to support?
- What are the new tasks?
- What are existing tasks?
- Are they easy, moderate, or difficult?

Task Analysis

- Use key events and terms
- Identify key patterns
- Use spatial methods
  - Affinity Diagramming
  - Identify application structure
  - Look at data

Tips for Task Analysis

- Divide major tasks
- Add your own ideas and concrete information about the task
- Think about tasks in the context of your application

Task Analysis Questions (1)

- Who is going to use the system?
- What tasks do they perform now?
- What tasks are desired?
- How are the tasks learned?
- Where are the tasks performed?

Task Analysis Questions (2)

- What’s the relationship between the user and data?
- What other tools does the customer have?
- How do customers communicate with each other?
- How often are the tasks performed?
- What are the time constraints on the tasks?
- What happens when things go wrong?

Questions?

- Discussion section cancelled next week