Questions?

- Project #4
- HW #7
  - Extended by one week;
  - HW #8 cancelled;
The participant standpoint

- Testing is a distressing experience
  - Pressure to perform
  - Feeling of inadequacy
  - Looking like a fool in front of your peers, your boss,…

(from “Paper Prototyping” by Snyder)
Treating subjects with respect

• Follow human subject protocols
  – Individual test results will be kept confidential
  – Users can stop the test at any time
  – Users are aware (and understand) the monitoring technique
  – Their performance will have not implication on their life
  – Records will be made anonymous
    • Videos

• Use standard informed consent form
  – Especially for quantitative tests
  – Be aware of legal requirements
Ethics: The Stanford prison experiment

• Was it useful?
  “…that’s the most valuable kind of information that you can have - and that certainly a society needs it” (Zimbardo)

• Was it ethical?
  – Could we have gather this knowledge by other means?
Conducting the experiment

• Before the experiment
  – Have them read and sign the consent form
  – Explain the goal of the experiment
    • *In a way accessible to users*
    • *Be careful about the demand characteristic*
    • *Answer questions*

• During the experiment
  – Stay neutral
    • *Never indicate displeasure with users performance*

• After the experiment
  – Debrief users
    • *Inform users about the goal of the experiment*
  – Answer any questions they have
Managing subjects

• Don’t waste users time
  – Use pilot tests to debug experiments, questionnaires, etc…
  – Have everything ready before users show up

• Make users comfortable
  – Keep a relaxed atmosphere
  – Allow for breaks
  – Pace tasks correctly
  – Stop the test if it becomes too unpleasant
Qualitative approach

• Gather users perception of the interaction

• Methods
  – Introspection
    • Walkthroughs
  – Direct observation
    • Simple observation
    • Thinking aloud
    • Constructive interaction (co-discovery)
  – Interviews, questionnaires and surveys
Walkthrough

- Designer tries the system (or prototype) out
  - Does the system “feel right”?
  - What if?

- Problems
  - Completely subjective
  - Designer is a non-typical user

From “The inmates are running the Asylum” (A Cooper)
Direct observation

- Observing (and recording) users interacting with the system
  - In lab or in the field
  - For a set of pre-determined tasks or through normal duties
    - *Be prepared!*

- Excellent at identifying gross design/interface problems

- Three general approaches:
  - simple observation
  - think-aloud
  - constructive interaction
Be prepared!

• Select the correct population

• Set objectives and Tasks
  – Realistic
  – Informative

• Apply for the IRB
  http://www.umresearch.umd.edu/IRB/

• Hardware
  – Computer, video equipment…

• Software
  – Up and running, properly debugged…

• Facilitator
  – Using a checklist might be useful
  – Practice!
Recording observations

• Need a record
  – Further analysis
  – Proofs during discussion

• Techniques
  – Paper and pencil
    • Simple to set up
      – Free form
      – Coding scheme
    • Might be biased
  – Audio/Video recording
    • More accurate
    • Time consuming to analysis
      – Encoding is a time consuming process

From “Observing the user experience” (Kuniavsky)
## Coding scheme example

- Tracking activity in the office

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<th>Time</th>
<th>Desktop activities</th>
<th>Absences</th>
<th>Interruptions</th>
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Simple observation method

- Evaluator observes users interacting
  - Sometime behind a half-silvered mirror

- Drawback
  - No insight into the user decision process or attitude
The think aloud method

• Subjects are asked to say what they are thinking/doing
  – What they believe is happening
  – What they are trying to do
  – Why they took an action

• Widely used in industry

• Drawbacks
  – Awkward/uncomfortable for subject (thinking aloud is not normal!)
  – “Thinking” about it may alter the way people perform their task
  – Hard to talk when they are concentrating on problem
The constructive interaction method

- Two people work together on a task
  - Normal conversation between the two users is monitored
    - *removes awkwardness of think-aloud*
  - Variant: Co-discovery learning
    - *Use semi-knowledgeable “coach” and naive subject together*
    - *Make naive subject use the interface*

- Drawback
  - Need a good team
Debriefing

• Post-observation interviews
  – Questions from your notes
  – Questions from users diary
  – Questions from a video footage

• Pros and Cons
  – Avoids erroneous reconstruction
    • Provide many constructive suggestions
  – Time consuming
    • But extremely valuable
Example