Questions?

• Project #4
• HW #7 due Dec 3
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 no implication on their life
  - Records will be made anonymous
    - Videos

- Use standard informed consent form
  - Especially for quantitative tests
  - Be aware of legal requirements
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

<table>
<thead>
<tr>
<th>Time</th>
<th>Desktop activities</th>
<th>Absences</th>
<th>Interruptions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Computer</td>
<td>Desk</td>
<td>Telephone</td>
</tr>
<tr>
<td>9:00</td>
<td></td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>9:02</td>
<td></td>
<td>e</td>
<td></td>
</tr>
<tr>
<td>9:05</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9:10</td>
<td></td>
<td>s</td>
<td></td>
</tr>
<tr>
<td>9:13</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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: Wii

- Design an interview to evaluate the first reaction to a Wii
  - Target population: 35-45 years of age
  - Decide the setting and the questions you will ask
  - Conduct the interview at the end of the class