

# 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 gathered 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

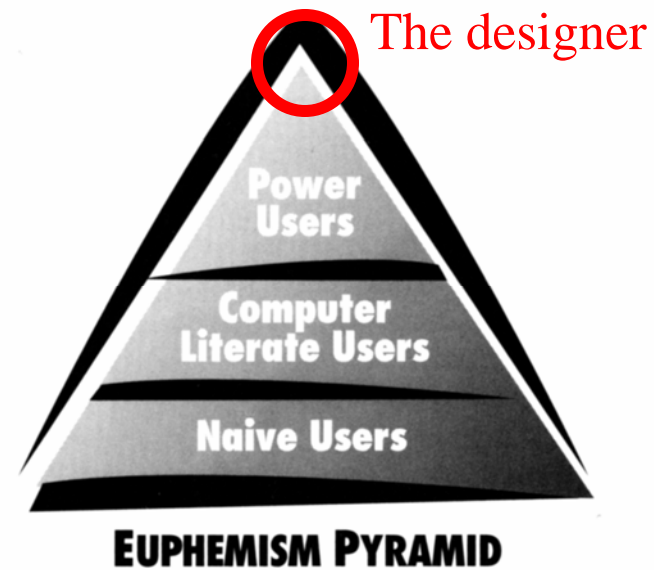
- Don't waste users time
  - Use pilot tests to debug experiments, questionnaires, etc...
  - Have everything ready before users show up
- Make users comfortable
  - Keep a relaxed atmosphere
  - Allow for breaks
  - Pace tasks correctly
  - Stop the test if it becomes too unpleasant

# 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

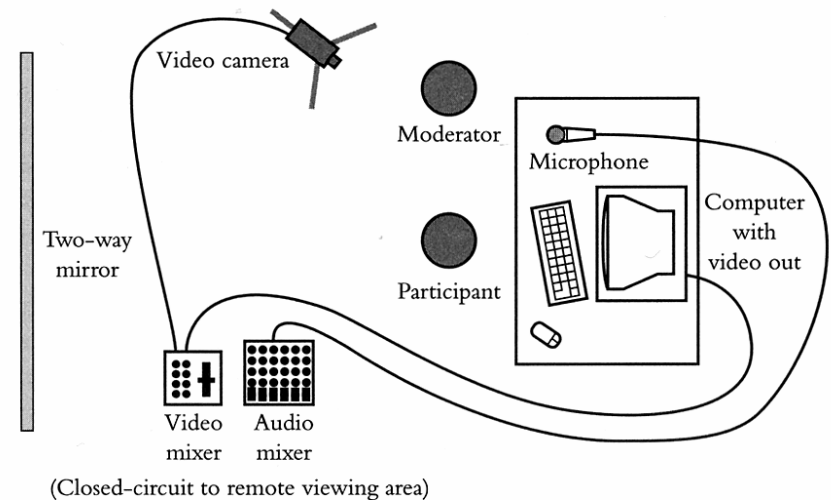
- Observing (and recording) users interacting with the system
  - In lab or in the field
  - For a set of pre-determined tasks or through normal duties
    - *Be prepared!*
- Excellent at identifying gross design/interface problems
- Three general approaches:
  - simple observation
  - think-aloud
  - 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

Time	Desktop activities			Absences		Interruptions	
	Computer	Desk	Telephone	Desk	Room	Visitor	Telephone
9:00	s						
9:02	e					s	
9:05					s	e	
9:10			s		e		
9:13							

# 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