Questions?

- Reading
- Project #1
- Homework #1
User centered design and prototyping

• Two approaches to design
  – System centered design
    • Design what is easy to implement or cool
    • Limiting yourself to a specific platform/toolkit
    • Limiting yourself to using tools you know
  – User centered design
    • Users capabilities
    • Users tasks
    • Users needs
User centered design

- Goal: satisfied customers
- Collaboration with users
  - Users primary source of information
    - *Expert in the subject matter*
  - Designer assist users in establishing their needs
    - *Designer must be honest!*
  - On going collaboration between designers and users
    - *Users*
    - *Testers*
    - *Informants*
    - *Design partners*
How to extract users knowledge and needs?

• Ethnographic approach
  – Interviews
    • Preferably where they will perform the task
    • Phone
  – Diary
    • Paper, annotated photographs, video
    • Debrief with them
  – Direct observations at their work place
    • Paper, photographs, video
    • Debrief with them
  – Logging
    • Google, Amazon
What to ask and to whom?

• To the stakeholders

• Subject matter expert

• To users and customers

• Danger
What to ask and to whom?

• To the stakeholders
  – Constrains: cost, schedule, resources…?
  – Business objective?
  – Perception of their users?
  – How their vision differ?

• Subject matter expert
  – Develop an ongoing relationship with them

• To users and customers
  – Problem and frustration with the current state of affair
  – What, When, Where, Why and How do they reach their goals?
  – Could you show me

• Danger
  – Steering the conversation to your design or away from technical challenges
User centered design: difficulties

• Where to find users?
  – User might be fearful

• Several Masters
  – Real users
  – Their representatives
  – The persons will buy the product

• Users might not know how to formulate their needs
  – Users are not designers

• Designer might influence users
  – Pushing a cool idea
  – Pushing what you have been working on for the last month
How to explain your design to users?

- Verbal description
  - Often difficult to do
- Storyboarding
- Low fidelity prototypes
- Wizard of Oz
- Medium fidelity prototypes
- High fidelity prototypes (products)
  - From your company
  - From other companies
Storyboard example (Troops)

See http://www.theforce.net/theater/shortfilms/troops/
Storyboarding (Summary)

• Technique
  – Series of key frames depicting key steps in reaching a goal
    • *Use a pin board for easy editing*
  – Describe the interaction in context
    • *Relationship between the user and its environment*
    • *Relationship between the user and the system*
  – Can be “played” in front of users (or other designers)

• Goals
  – Check your understanding of the process users are going through
    • *Observe user reaction*
    • *Debrief users*
  – Good reference point during the design process