Task Analysis

- Starting with user goals
- Types and levels of task analysis

Starting with User Goals - Norman’s Seven Stages

1) User forms goal (make more money)
2) User decides task (invest)
3) User specifies action (buy .com stock)
4) User does the action (stock purchase)
5) User perceives state (check stock price)
6) User interprets state (gain or loss)
7) User evaluates (I’m rich! No, broke!)

Starting with User Goals

- Focus on more that what users do
- How users decide which tasks to do
- Users evaluate the value of the user interface relative to goals not tasks
- User interface must support the whole cycle

Types of Task Analysis

- Job analysis - all tasks done by an individual
- Sequence - the order and hierarchy of tasks
- Workflow - collaboration of multiple workers
- Artifacts - things people create, use, modify
- Culture - context of org, politics, values
- Physical - office layout, furniture, hardware

Job Analysis

- What to look for
  - Frequency – how often do they do it
  - Criticality – how important is it
  - Time to complete – how much of their time
  - Difficulty – how much of a problem
  - Division of responsibility
Job Analysis

- Helps you
  - Find new marketing opportunities
  - Understand features needed in product
  - Learn job pressures and what they value

Sequence Analysis

- What to look for
  - When do users perform tasks
  - Does one task need to follow another
  - Do they always do them in order? Why?
  - Do all users do tasks in the same order

Sequence Analysis

- Helps you
  - Guidance for users in your interface
  - Identify flexibility needed in your interface
  - Identify inefficient processes

Workflow Analysis

- What to look for
  - All the people involved in a task
  - Goals of each in the task
  - Order of involvement in the task
  - Information passed from one to other

Workflow Analysis

- Helps you
  - Identify redundancy and unneeded steps
  - Identify collaborative features needed
  - Identify value of interface in meeting goals

Artifact Analysis

- What to look for
  - Tools – software or hardware
  - Documents – softcopy or hardcopy
  - How are they created
  - Who uses them
  - How are they passed from one to another
Artifact Analysis

- Helps you
  - Identify objects to represent
  - Identify information to store
  - Identify user mental models

Cultural Analysis

- What to look for
  - Tone given in workplace – décor, emotion in communication, brand identity
  - Values defined in mission statements, awards given, people given power
  - Policies stated formally and informally
  - How individuals and organizations talk about one another

Cultural Analysis

- Helps you
  - Identify user’s self image to satisfy
  - Identify bias toward user interface style
  - Identify organization obstacles to system acceptance

Physical Analysis

- What to look for
  - Users working at home, office, lab, factory
  - Working space, for equipment, for docs
  - Noise, distractions, interruptions
  - Lighting, temperature, power, danger

Physical Analysis

- Helps you
  - Choose appropriate input devices
  - Choose appropriate documentation format
  - Provide appropriate response time and work contextual cues

What’s Important

- User goals will drive your understanding of their tasks
- Use task analysis to drive design
Class Exercise

- Given three user goals for WebVan
- Apply Norman’s seven stages of user activity using your knowledge of the grocery shopping task
- How would the WebVan user interface support each stage?