

IS 214 Needs Assessment and Evaluation of Information Systems

Task Analysis

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 than 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?