

Computer/Human Interaction

Lecture 6

Overview:

- Requirements analysis
 - Stakeholders
 - Artifacts
 - Task analysis

Requirements Analysis

Goal: Understand users' current activities well enough to reason about technology-based enhancements

- Mission statement
- Meetings and studies with clients
- Requirements specification

In SBD this is an on-going process that tracks changes in specifications as clients see what technology can do for their goals

Requirements Analysis

- Understand the **work** that goes on now
 - to specify functionality that meets real needs but identifying problems and opportunities for improvement
- Learn about the **people** that use current technology
 - to specify functionality that is convenient and satisfying to use

Requirements Analysis

- Three components
 - Activities: goals and actions of individuals and groups
 - Artifacts: designed objects used by workers such as information, tools
 - Social context: users, organization, roles, interdependence
- How to analyze each?

Who are the users?

- **Stakeholder** is anyone who is impacted by in the system. Document relationships and dependencies.
- Four categories
 - Primary – those who use the system
 - Secondary – those who provide input or receive output from the system
 - Tertiary – those affected by the success or failure of the system
 - Facilitator – those whose job is to create the system

Example

UE recently introduced an on-line course registration system to be used by faculty to register students for courses. Who are the:

- Primary stakeholders?
- Secondary stakeholders?
- Tertiary stakeholders
- Facilitators?

How are users involved?

- Often easy to determine organizational workflow through documents like procedures manuals
- Also want to uncover ***tacit knowledge*** held by experts. Often entails workarounds for problems and possible enhancements.
 - ***Contextual inquiry***: observe and ask questions during observation
 - ***Participatory analysis***: observe and ask questions later during discussion

Artifacts

- Document artifact features: may suggest particular users or uses. E.g., crayon vs. pencil
- Observe artifacts in use: often actual meaning is apparent when in use. E.g., name badge at a conference is used to identify “important people”
- Interview users about artifact use.

Example

To add/drop a course at UE, a student needs to have a signed add/drop slip. What does this imply about the UE registration system?

Task Analysis

- Document what users are doing now
- ***Hierarchical Task Analysis (HTA)*** – tasks (activities) are broken down into subtasks until desired level of detail is reached.
- Selection and repetition of subtasks are noted.

Example

- Develop an HTA for the problem of adding or dropping a course during the first week of classes at UE.
- Consider what exception conditions might arise and how they are handled.