

## Assignment HCI-5

Title: Evaluating Interface

Date of Completion:

Problem Statement:

Evaluate an interface using usability evaluation techniques.

Learning Objectives and Outcomes:

- Understand need of evaluation of interface
- To choose and understand importance of ethics of evaluation.
- To carry out evaluation and record responses.
- Carry out actual work.

Requirements:

Notebook and Pen, Product system, response recorder.

Theory:

⇒ Ethical Issues of Evaluation

- People's privacy should be protected, which means that their name shouldn't be associated with data collected about them or disclosed in written reports.
- General rule to remember when doing evaluation is to do onto others only what you wouldn't mind being done to you.

⇒ Guidelines of Evaluation

- Tell participants, goals of study and exactly what they should expect if they participate. Form of final report should be described and if possible



copy offered to them.

- Pay users whenever possible because this creates a formal relationship.
- Make sure users know that they are free to stop evaluation at any time if they feel uncomfortable with the procedure.
- Ask user's permission to quote them, promise them anonymity and offer to show them copy of report.
- Be sure to explain that demographic, financial health or other sensitive information that users disclose or its discovered from the tests is confidential.

## → Evaluation Techniques

### A) Observational Methods

#### 1) Think aloud

- User observed performing tasks.
- User is asked to describe what he's doing and why.
- What he thinks is happening

#### 2) Co-operative evaluation

- Variation of think-aloud.
- User also participates in evaluation.
- Both user and evaluator can ask each other questions.

#### 3) Protocol Analysis

- Paper pencil
- Audio
- Video
- User notebooks

#### 4) Post-task Walkthrough

- User reacts on action after event.
- Used to fill intention.

#### B) Query Techniques

- Interviews
- Questionnaire

Interviews are open ended and questionnaires are pre-defined set of questions. Questionnaires are specific, goal-centered whereas interviews must be maintained goal-specific.

#### C) Physiological Methods

- 1) Eye Tracking
- 2) Physiological measurements
  - Heart activity
  - Sweat glands
  - Activity in muscle and brain
  - Hard to interpret

#### D) Evaluating through User Participation

##### 1) Laboratory

- controlled and specialized environment
- no noise / distraction
- if system location is dangerous then this is the appropriate technique.

##### 2) Field Studies

- Natural environment



- Noise / distraction is present
- Content of evaluation is retained here.

### E] Cognitive Walkthrough

- Performed by expert in cognitive psychology.
- Experts walk through design to identify potential problems using psychological principles.

### Conclusion:

Evaluation of mouse stimulator is carried out using concepts of AI.