CS774 HCI
Week 9, March 29 – Usability

Objectives:
• To discuss how to design and conduct usability studies

Readings:
Shneiderman, Chapter 4, pages 123-150
Neilsen, **Guerrilla HCI (**http://www.useit.com/papers/guerrilla_hci.html, on web site)
Neilsen, User testing a website (http://www.useit.com/alertbox/980503.html, on web site)
National Cancer Institute, usability.gov

Classroom activities:
1. Discuss usability projects
2. Review usability outline
3. Conduct mock usability test

Outline:
I. Usability testing vs. functional testing
       Traditional SE functional testing asks if the software can perform a function
       HCI oriented usability testing asks if the user can get the software to work

II. Three + one stages of testing
       Prototyping – refine interface ideas (big issues)
       Implementation – refine actual interface (smaller issues)
       Release – acceptance testing
       Maintenance – ongoing methods of evaluation

III. How to conduct testing
       Surveys
       Walkthrough
       User testing and observation
       Interview
       Expert review
       Community process

IV. Universal issues
       Focus of study (what is being measured as related to original goals, guidelines)
       Informed consent
       Documentation of observations (notes, videotape, screen/keyboard capture)
       How controlled are variables, use of statistics, randomization
          Hallway tests vs. lab tests
       Review of supporting material (guidelines, help, training books, etc)

Is testing too late? Involving users early in the process in participatory design

V. A classic "user test"
       Pretest – survey to find out what they know, background,
       Test – give user tasks, observe/inquire about their actions and thoughts (cognitive)
       Post-test – ask them about the experience (affective as well as cognitive)

VI. Types of expert review
       • Heuristic evaluation
       • Guidelines review
       • Consistency inspection
       • Cognitive walkthrough
       • Formal usability inspection

Mock usability test activity

Tasks:
a) find article on usability testing on Loyola library web site
b) find book on usability testing at Loyola library (in stacks or available by loan)

Step 1. Design test
       pretest, test, posttest survey

Step 2. Choose subjects

Step 3. Carry out pretest

Step 4. Carry out test on one subject

Step 5. Carry out test on second subject – vary method

Step 6. Post test survey