

CSC 484 Lecture Notes Week 3, Part 1

(Re)Introducing Evaluation

I. Relevant reading.

A. Textbook Chapter 12

B. Papers of the fortnight:

- *Storyboarding: An Empirical Determination of Best Practices and Effective Guidelines*
- *Developing Use Cases and Scenarios in the Requirements Process*

II. Class Schedule.

-- see the notes and handout

III. Assignment 2.

-- see the notes and handout

IV. Intro to class project.

-- see the notes and handout

V. Intro to evaluation (Sec 12.1)

A. Collect info about users.

B. Multiple possible methods.

C. You've done it in A1; there's more to come.

VI. Why, what, where, when (Section 12.2).

A. *Why?*

1. Check that users can do something useful.
2. Check that they like it.

B. *What?*

1. Evaluate the product itself.
2. Evaluate domain-specific attributes:
 - performance,
 - aesthetics,
 - physical characteristics.

C. *Where?*

1. Evaluate in controlled lab setting.
2. Evaluate in natural settings of use.

D. *When?*

1. At any stage of development.
2. Concept evaluations at the beginning.
3. Specific new features when upgraded.
4. Finished product, standards compliance.

VII. Evaluation terminology (Box 12.1).

- A.** *Analytic eval* -- not with actual end users

- B.** *Controlled experiment* -- actual users
in controlled setting

Evaluation terminology, cont'd

C. *Field study* -- real-world use

D. *Formative eval* -- done during design

E. *Heuristic eval* -- employ well-known guidelines, expert judgments

Evaluation terminology, cont'd

F. *Predictive eval* -- employ theoretical models

G. *Summative eval* -- ensure standards are met

Evaluation terminology, cont'd

- H. *Usability lab* -- designed specifically for usability studies
- I. *User study* -- any kind of study, at any stage

Evaluation terminology, cont'd

J. *Usability testing* -- a quantified study

K. *User testing* -- have users perform
specific tasks

VIII. Approaches and methods (Section 12.3).

A. Three main approaches:

- usability testing
- field studies
- analytic evaluation.

B. Used at various stages, separately or in combination.

IX. Approaches (Section 12.3.1).

A. *Usability testing*

- 1. Done in a lab.**
- 2. Well controlled by evaluators.**

Usability testing, cont'd

3. Test subjects must *focus*.
4. Quantified performance:

Usability testing, cont'd

- a. All users do the same tasks.
- b. A form of regression testing.
- c. Used with successive product releases.
- d. Called "usability engineering".

Approaches, cont'd

B. *Field studies*

1. Done in users' natural settings.
2. Subjects are observed, recorded.
3. Asked to fill out questionnaires.

Approaches, cont'd

C. *Analytic evaluation*

1. Using *heuristics* or *models*.
2. Does not involve actual end users.
3. Rather, conducted by developers.

Approaches, cont'd

4. Heuristics characterize typical behavior.
5. Models characterize measurable behavior.
6. E.g., Fitt's law.

Approaches, cont'd

7. *Cognitive walkthroughs* simulate users.
8. Analytic eval never a replacement for actual end user testing.

X. Methods (Sec 12.3.2).

A. The main methods:

1. *Observing users.*

- a. In a lab.**
- b. In the field.**
- c. With direct or indirect contact.**
- d. Recording in various ways.**

Methods, cont'd

2. *Asking users their opinions*

- a. Individual in-person interviews.
- b. Group meetings, discussions
- c. Questionnaires.

Methods, cont'd

3. *Asking experts their opinions.*

4. *Testing users' performance.*

5. *Modeling users' performance.*

B. Table 12.1 is useful summary.

XI. Case studies (Section 12.4).

A. The book provides six.

B. Overview of evaluation methods in 484:

- 1.** Heuristic evaluation in Assignment 1.
- 2.** Interview, questionnaire in Assignment 2.
- 3.** Lab-based usability study in Assignment 3.

