FORMATIVE EVALUATION
OF USER INTERACTION:
BEFORE EVALUATION SESSION

Chapter 10 (b)

TOPICS:

• Developing the experiment
• Developing tasks
• Participant selection
• Preparing for participants

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BEFORE EVALUATION SESSION: DEVELOPING THE EXPERIMENT

• Developing tasks

* Structured use: Identification of representative and critical tasks

- Benchmark tasks: tasks a user performs, written out in detail; metrics (for usability specifications) are taken

- Should already be started (for usability specifications)

- Informal tasks: other tasks a user may perform, also written out in detail; no metrics are taken

* Exploratory use

* Training materials, when appropriate

None should be needed for calendar
DEVELOPING THE EXPERIMENT

• Procedures

* Usability lab and field evaluation

  Lab: more control, but conditions more artificial

  Field: less control, but more realistic

  Alpha and beta testing NOT usability evaluation

* Equipment

• Typical length of time of evaluation session for one participant: 30 minutes to 4 hours, average 2 hours or less

• Design should not have known ‘show stopper’ usability problems
DEVELOPING THE EXPERIMENT

• Participant selection

* Representative users

- Knowledgeable of target system domain

- Know what they don't like, but don't usually know how to fix

* User interaction design expert

- Broadly knowledgeable in interaction development and use

- Can find subtle problems

- Can offer alternative suggestions for fixing problem
DEVELOPING THE EXPERIMENT

• Participant selection (continued)

* Focus not on large number of experiments with large number of users, but rather on extracting as much information as possible from every user

* Optimum number of participants is 3 to 5 per user class per major version/iteration

* 1 participant is too few, more than 10 not worth it

* 80% of usability problems detected with 4 to 5 participants [Virzi, 1992]

* More severe usability problems are typically detected by the first few participants

• Expected number of iterations per version is 3

• In subsequent cycles of evaluation, keep "best" participant from previous cycle, add 2 (or more) new participants

Best protocol, found most problems; best match to representative user
DEVELOPING THE EXPERIMENT

• Preparing for participants

* Develop instructions
  
  See p. 299-300 in book

  "You are helping us evaluate the system — we are not evaluating you!"

  Evaluator can say: "I didn't design this; you can't hurt my feelings.

* Develop informed consent form and non-disclosure agreement
  
  See p. 300 in book
DEVELOPING THE EXPERIMENT

• Pilot testing
  * Pilot testing and rehearsal are essential

• Establish evaluator roles
  * Facilitator or session monitor – to keep evaluation session going
  * Observers – to help collect data
  * "Executor" – to run the prototype