EVALUATION: OBSERVING INTERACTION
Today

• Evaluation
  – Heuristic evaluation recap and reflection
  – Observing interaction

• Presentation feedback

Tomorrow (section):

• Usability testing checkin: Bring your paper prototypes!
Heuristic evaluation

get information from the user
Heuristic evaluation

• Have evaluators go through the UI twice
• Ask them to see if it complies with heuristics
  – note where it doesn’t & say why
• Combine the findings from 3 to 5 evaluators
• Have evaluators independently rate severity
Nielsen’s heuristics

• Visibility of system status
• Match between system and the real world
• User control and freedom
• Consistency and standards
• Error prevention
• Recognition rather than recall
• Flexibility and efficiency of use
• Aesthetic and minimalist design
• Help recognize, diagnose, and recover from errors
• Help and documentation
mailto is not a registered protocol.
You are saving this document in Adobe Illustrator 9.0 format. Saving this document in an older format may disable some editing features when the document is read back in.
Save Warning

You have unsaved data on this page. Click OK to go back and save, or Cancel to continue.
Are you sure you want to change the extension from “.do” to “.pdf”?

If you make this change, your document may open in a different application.

Keep .do  Use .pdf
Caution: Changing your RAID configuration will erase all its data in the drive (J:), are you sure?

If you wish to continue, enter the confirmation number "029732" below and click Yes.

Confirmation Number: 029732

Yes    No
Heuristic evaluation vs User testing
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<th>Heuristic evaluation</th>
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*Combine two methods!*
OBSERVING
INTERACTION
Evaluation Techniques (re-cap)

• Asking users
  – Questionnaires, interviews, focus groups

• Observing users
  – Passive observation, think-aloud protocol, ethnography, empirical user studies

• Make users observe themselves
  – Diaries, experience sampling

• Ask experts
  – Heuristic evaluation, cognitive walkthrough
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What to measure or observe?

...at what granularity?

Data Source

Behavioral (objective)

Attitudinal (subjective)

Data type

Qualitative (direct)

Quantitative (indirect)

What people do

What people say

Why & How to fix

How many & How much

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What to measure or observe?

...at what granularity?

- Behavioral (objective)
- Attitudinal (subjective)

Data Source

Data type

Qualitative (direct)  Quantitative (indirect)

Why & How to fix

What people do

How many & How much

What people say

 Depends on your goal!
User Satisfaction vs. Performance Metrics
Methods for observing interaction

Passive observation  Think-aloud protocol  Comparative study
Methods for observing interaction

- Passive observation
- Think-aloud protocol
- Comparative study
Use case: “If this then that”
Passive observation

Data Source

Behavioral (objective)

Attitudinal (subjective)

Data type

Qualitative (direct)

Quantitative (indirect)

What people do

How many & How much

Why & How to fix

What people say

1

2

3

4

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Exercise

• Get in pairs
  – one person is the observer
  – the other is the participant

• Participant task: Write a recipe that sends you an email everyday at 9pm to tell you tomorrow’s weather

• Observer: Observe, take notes, and ask questions at the end
Methods for observing interaction

Passive observation

Think-aloud protocol

Comparative study
Think-aloud

"Thinking aloud may be the single most valuable usability engineering method."

J. Nielsen
Explaining the think-aloud
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• All you do is speak your thoughts as you work.

• If you forget to think aloud, I'll remind you to keep talking.

• Would you like me to demonstrate?
Think-aloud observation

- Behavioral (objective)
- Attitudinal (subjective)

Data Source

- What people do
- Why & How to fix
- What people say
- How many & How much

Data type

- Qualitative (direct)
- Quantitative (indirect)

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Exercise

• Get in pairs
  – one person is the observer
  – the other is the participant

• Participant task: Write a recipe that sends you an email when a new listing for “mountain bike, seattle” is posted on Craigslist. Think aloud!

• Observer: Observe, take notes, and ask questions at the end
Methods for observing interaction

Passive observation

Think-aloud protocol

Comparative study
A/B testing

Key performance indicators?
A/B testing

Recommendations based on cart content?

Pro: cross-sell more items
Con: distract people at check out
A/B testing

Recommendations based on cart content?

Pro: cross-sell more items
Con: distract people at check out

Highest Paid Person’s Opinion
“Stop the project!”
A/B testing

Recommendations based on cart content?

- **Pro**: cross-sell more items
- **Con**: distract people at check out

Highest Paid Person’s Opinion

“Stop the project!”

Simple experiment was run, wildly successful
A/B testing
What is being compared?

“conditions”
What is being compared?

Independent variable

- **interval**
  - Continuous values
- **ordinal**
  - Ordered discrete values
- **categorical**
  - Unordered discrete values

“conditions”
Comparative observation

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Timing

• 8 minutes is very short
• Plan the timing ahead
• Practice, practice, practice
Nerves

• Even Obama gets nervous before a speech
• More severe at the beginning
  – Think about exactly what to say on the first few slides
• Practice, practice, practice
Respecting other presenters

• When someone is presenting, put your phones and laptops away
• Presented in class, did not come to section :-(

Content

• Contextual inquiry
  – Participants, process
  – Findings, themes
  – Implications for tasks
  – Implications for design

• Tasks as verbs from user perspective

• Storyboards: walk-through
Ooops, out of time!

• Will come back to it next week...