

Human-Computer Interaction

10% of your final grade

Project #2

Assigned: Monday 2/2/2015

Due: Friday, 2/20/2015 (before class)

[GREEN - Undergraduate requirements](#)

[BLUE - graduate requirements](#)

Overview:

1. Find an interface that can be improved.
2. Identify an HCI concept to apply that might improve the interface.
3. Research existing solutions and research papers that would influence your approach.
4. Propose a solution.
5. Interview potential clients.

Propose Interface (100 points)

Write a proposal for your course project (5 pages - 12 point font, single space, 1" margins, PDF) -10 points if you exceed length.

Use the following subject headings in your project.

A. Background research - 75 points

1. Interview clients –

Graduate students - Conduct an in-person focus group of six clients. If there is a logistical reason why that is not possible (okayed by TA), you can email questions to clients.

Edge students – Email questions to clients. Focus group is optional.

Undergraduates – Email questions to clients. Focus group is optional.

- a. Determine clients' impressions of the problem you are trying to address
- b. Determine existing solutions
- c. Determine improvements the clients want
- d. Determine clients' solutions to the interface

Grading Criteria:

- *Number of client interviews*
- *Analysis of what the clients are saying about the interface*
- Turn in as an appendix to your project: (not part of the 4 pages), recap of the interview clients (you do NOT need to submit the entire transcript)

2. Identify the problem –

a. Overview

b. Current Interface

- What is the current interface?
- What are existing solutions?

c. Problem with current interface

- Describe the problem.
- Describe the ramifications of the problem
- Why do existing solutions not address the problem?

d. Applying which HCI guideline, principle, or theory would help address the issue?

Grading Criteria:

- Clearly state who you are helping
- Clearly state what they need help with
- Clearly state what metric will improve through you addressing this problem
- Clearly state the issue with the existing interface.
- What HCI concepts are you applying?
- How are the papers influencing your proposed design?
- What are other solutions/programs already exist?
- Have you programmed for that platform before? If not, you should at least be able to create a hello world app before proposing your project using specific hardware or software
- Is what you are proposing *clients* of the interface are *asking for*? (as opposed to you suggesting)
- How are you going to find users to test it?
- What tasks are you going to have users do?
- What is the programming component?

3. Find supporting scientific literature (30 points). Each student on the team must identify (UG: 1, G: 2, Edge: 3) papers from SIGCHI or UIST or a paper reference from the book. Use of a paper not from those sources should be okayed by the TAs For each paper, write one paragraph that encapsulates the citation's results and at least one paragraph on how it impacts your design decisions.

Grading Criteria:

- Quality of papers
- Summarization of paper
- Applicability to your project

- Impact on your design
- Use a formal citation method for references (e.g. MLA style)

B. Propose Interface Design

4. Describe your design. Explain how you are leveraging the literature references and client interview.

Criteria:

- Interface redesign rationale
- Integration of cited papers

The scope of building an interface is larger for graduate students. Estimate building the interface to take (for each teammate) about 20 hours for a undergraduate, 30 hours for a graduate student.

Report Guidelines: (5 pages max)

Page 1 – Interview (20 points)

Describe population interviewed (including # of people) (5 points)

List questions asked and Discuss the answers and the variance in responses to your questions (10 points)

Identify the pressing issues users had (5 points)

Page 2 – Current Interface (25 points)

Describe the current interface (5 points)

Describe problems with the current interface (5 points)

Describe existing solutions (10 points)

Describe HCI guideline, principle, or theory you plan on applying to address the issue (5 points)

Page 3 and 4 – Research (30 points)

(Undergrad) Summary and appropriateness of each paper (7 points),

Integration of findings into your project (3 points)

(Grad) Summary and appropriateness of each paper (3 points), Integration

of findings into your project (2 points)

REMINDER: Use a formal citation style (like MLA). Include links to the papers.

Page 5 – Proposed Interface Design (25 points)

Describe your proposed approach to solving user's issues – 10 points

Describe your interface (highlighting how the research impacted your design) – 10 points

Technical description (software, hardware, languages) of your design – 5 points

NOTE: you can include sketches of your interace in an appendix (1 page max) optional

Notes:

- 1) ***Do not propose a small interface fixes. Identify a specific principle to apply***

- 2) ***You can work on existing research or other class projects, but cannot get double credit for the same work (“double dip”).***

Coming up with a project:

Overall Approach:

- 1) Identify a client population (be very specific... e.g. not just novices, but novices at email who are unfamiliar with any email client)
- 2) Identify what the problem is with the existing interface (only choose one thing, and be specific again... not just 'it is confusing')
- 3) Read papers to identify other prior approaches
- 4) Integrate those ideas into a proposed solution

What makes a good issue? Something you are passionate about!

Within the guidelines mentioned on this page, you are free to choose any area or topic for your project. All of us have a hobby, a passion - it could be music, sports, cooking, design or programming. Here is your chance to use computers to explore things related to your passion as part of a class project. Choose an area you are fond of and think about an interface problem worth solving in that area - this will make an interesting and rewarding project. Something that you will be proud of and can talk about at interviews!

Common project areas:

- 1) Writing a browser plug-in for Chrome or Firefox
- 2) Mobile app development
- 3) Assistive Technologies

I'll ask you the following questions when you ask me if it is a good idea.

- 1) What HCI concepts are you applying?
- 2) How are the papers influencing your proposed design?
- 3) What are other solutions/programs already exist?
- 4) Have you programmed for that platform before? If not, you should at least be able to create a hello world app before proposing your project using specific hardware or software
- 5) Is what you are proposing *clients* of the interface are *asking for*? (as opposed to you suggesting)
- 6) How are you going to find users to test it?
- 7) What tasks are you going to have users do?
- 8) What is the programming component?

Finding clients: You must use participants from your target demographic (e.g. elderly, children). Doing so requires significant planning, and discuss with me about if your project requires a very specific demographic.

Equipment: If you want to develop for a specific piece of equipment, e.g. tablet, phone, etc. you need to develop ON that item (not just use an emulator) as to ensure validity.