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HCI

Project 1

**Part 1:**

**Has to Represent – Historical New England/WPI**

The general audience for this site would be someone from New England. The background gives the sense of history as it seems old and colored like an old document such as the Declaration of Independence. The font used is reminiscent of cursive, which is common in older handwritten documents emphasizing on history. The website also states that WPI is making a new campus is Southborough but doesn’t give a state or address leading the user to already know where Southborough is. The website also assumes the user knows what the buildings are on the left as they are a center point to the design. The buildings themselves looks like a church and a lighthouse which may resemble a learning institution (i.e. Sunday school) and an iconic coastal sight, both of which, locals are familiar about.

**Has to be Functional and Accessible**

The main types of people who would go to such a page would be; administrators, teachers, current students, and people who are interested in learning about the school. All of these categories of people would use the News and Services tabs. So they made them the largest parts of the site then ordered the rest of the categories in reverse use frequency order decreasing in size. Seeing how there is a finite number of administrators and teachers it is fitting that they would get less space than the News tab where all categories would be interested in.

**Has to Show a Technical Aspect**

The circle on the left is similar to a unit circle or another mathematical shape and the lines that protrude out of the circle act like vectors and the overall diagram of the geometric shape ends up looking very technical even if that was not its initial purpose.

**Part 2:**

**What is the goal of the research described in this paper?**

The research in this paper is generally focused on estimation of usability benefits. They have studied the estimation of the time and cost needed for expert users to perform a task with two alternative designs.

**What are two advantages of GOMS analyses?**

GOMS (Goals, Operators, Methods, and Selection rules) is a method for the formal analysis of user interactions with computers. GOMS analyses are used even when the interfaces in questions have not yet been implemented. GOMS analyses is very good at estimating expert user performance disregarding learnability problems and user errors.

**What is the main reason for using a Heuristic method?**

Heuristic methods have mostly been used for the finding of usability problems and to estimate user performance.

**What is a "cost-benefit" analysis?**

An example of a “cost-benefit” analysis that would be a GOMS analysis or a cold estimate because both are relatively cheap and provide detailed feedback.

**Under what conditions were Heuristic Estimates better?**

Heuristic Estimates can be used even when the interfaces have not yet been implemented, and cannot be tested.

**Do they suggest relying on "relative usability estimates" or "absolute usability estimates"?**

They suggest relative usability estimates because they have a smaller spread. Absolute estimates require a larger number of estimates to get a small measurement error.

**What is meant by a "cold estimate"?**

A “Cold” estimate is collected by sending a group of evaluators a written specification of the two interface designs. Cold estimates are to be used when a design team is considering two possible solutions, none of which has been implemented.

**Part 3:**

1. Which WPI Project Centers are in Asia?
2. Is there a Ruth Brown at WPI?
3. Are freshmen required to buy a computer before coming to WPI?

**Did they find the answer in less than 4 minutes?**

1 No

2 Yes

3 Yes

**Did they search?**

1 Yes

2 Yes

3 Yes

**Was searching the first thing they tried?**

1 Yes

2 Yes

3 Yes

**How many links did they select (i.e., how many "clicks")?**

1. 20
2. 3
3. 10

**Based on the subjects' feedback, what was the most confusing aspect of the way that the interface looked or behaved?**

There seemed to be no relevance in the search, all pages that came up had little to no relevance to what the page was actually about. This caused the user to get slightly frustrated and ended up using google on the first question.

**Based on their behavior, when they looked at a link could they always anticipate what information was going to be displayed when they selected the link? Where was that most untrue?**

Project Center page, it only mentioned the one on the main campus.

**Based on their ratings, how easy (or hard) was it for them to find the answers?**

1. 5
2. 1
3. 3

**Based on their suggestions, what changes might be made to improve searching?**

List project sites under locations also rather than just the main campus

**Based on their suggestions, what changes might be made to improve the WPI web pages?**

Break down to just the main phrases / bullets. I’m too lazy to read.

**Part 4**

The paper, “The Word-Gesture Keyboard: Reimagining Keyboard Interaction” by Shumin Zhai and Per Ola Kristensson is about the “revolutionary” design of the way we input characters into a computer by rather than typing the words, a user can now swipe across the screen to input a word. They styles of testing, user feedback, and the mathematical processes of being faster were described in relative detail to the creation of “Shape Writer”. The design process in which they take non-measurable user feedback, theoretical approaches to interface design, and iterations of user interfaces. Describe the process life cycle for the “Shape Writer” application.

The theoretical approach to the estimation of the efficiency of the Shape Writer was very well made estimate as it also saved money on user testing. However when it did come to user testing the experimenters were so focused on how people improved with word accuracy on the Shape Writer rather than having a comparison of the new and old methods of typing which the resulting data would have been more useful in telling if the new design was truly efficient.

The short term, in person critique of the keyboard was not as in-depth as one would have hoped. The researchers focused on non-measurable such as fun or preference. Average word type speed test would have been a much better test for the functionality of the system. Most reviews were anonymous as they were taken from the app store which doesn’t give many honest reviews and often shows bias towards or against new technology. The reviews are also from the first day of release which doesn’t give users much time to get used to the product and use it extensively. It doesn’t even seem as though people read any of the reviews, but rather looked at the word count instead. This method is very unreliable as people could be sarcastic or be a bot and there is no real way of checking who is who and what they truly feel.

I feel as though a newly designed keyboard would have to be made to correspond to the quick gestures of the stylus. The original keyboard was designed for type writers which requires two hands often marked by “J” and “F” because that is where a user’s index fingers were to be resting. The current board is designed for half of the board to be typed with one hand and the other side with the other hand. This new style of input would require a more efficient layout of words that better corresponds to the action of sliding a finger across a small screen. A newly designed keyboard is shown in the beginning but was later changed.