HCI and Design

Admin

Assignment 3 is March 21st before class

• Questions?

A note on grades in this class

- I am not going to give everyone a C ... I swear!
- The average grade in this class will likely be a B+

Anything else?

Today

Understanding prototype fidelity

What is Digital Prototyping?

Introduction to various digital prototyping tools

Reminder: What is a prototype?

A prototype is an incomplete, early version of a product

There are many approaches to building prototypes for software user interfaces

UI prototypes can be as simple as a drawing on a piece of paper or as complex as web application

Or anywhere in between those extremes!



Benefits of Prototyping

Low cost: requires little time, technical expertise

High return on investment:

- Getting user feedback early in the design process
- Uncovers problematic design choices before they are committed to code
- Minimizes miscommunication between designers

Generally results in a better UI: this has been proven in research

Lo-Fi vs. Hi-Fi

Traditionally, prototypes are categorized as either lo-fi (low fidelity) or hi-fi (high fidelity)

Fidelity can be thought of as how close of an approximation of the final product is being attempted

In this class, we will often use lo-fi as a synonym for paper prototyping and hi-fi as a synonym for digital prototyping

Your design process should use *multiple* levels of fidelity as you move from an idea to a fully designed product

But as you are about to see, it's actually more complicated than that!

Dimensions of Fidelity

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Fidelity can be broken down into four basic dimensions:

- Breadth
- Depth
- Look
- Interaction

Breadth

The "breadth" of a prototype refers to how much of the product's functionality is represented in the prototype

- A very narrow prototype only represents a single feature
- A broad prototype represents all intended functionality
- Prototypes should generally be as broad as needed to cover basic or most important tasks, but not much more

Depth

The "depth" of a prototype refers to how much of the prototype is functional, and how robust it is

- A very shallow prototype has no backend at all and is hard-coded to respond as though the user had provided ideal input
- A deep prototype has some logic and error-handling capabilities
- At first glance, depth may seem unimportant, but it affects the amount of exploration a user can do
- Thus depth can actually have a profound influence on user testing!

Look

"Look" is probably what most people think of when they think of prototype fidelity

It refers to how accurately a prototype represents the product's intended appearance, including fonts, colors, and graphics

It's generally a good idea to hold off on something which has a high fidelity look until later in the design process

- People are less likely to point out flaws and mistakes
- People can easily fixate on the "little" things
- You are less likely to throw it out and start again

Interaction

"Interaction" refers to how the prototype handles input and output

Interaction can often be simulated

For example, you might create a digital prototype for an iPad application which runs on your desktop and responds to traditional a traditional mouse and keyboard

You might use hyperlinks or animation to simulate clicking interaction (e.g., in Powerpoint)

Hi-Fi Prototyping

Once you have developed a lo-fi prototype and solicited feedback on it through peer critique and user testing:

- You may wish to create another lo-fi prototype (isn't iterative design fun?)
- Or you may be ready to move on to a hi-fi prototype

Which choice you make will be a function of how much of your original design you feel needs to change

Remember, a high fidelity prototype is a non-trivial time investment

It is good for evaluating a working design that has been derived from a few rounds of less costly paper prototyping

Digital Prototyping Tools

There are many... let's talk about some.