

CMSI 370-01

INTERACTION DESIGN

Fall 2013

Assignment I I05

This assignment, already much-referenced in class, is meant to appeal to the other side of your brain while you are hacking away at some raw code. I recommend that you switch between them as a “break” from each assignment. Do *not* plan on doing them sequentially.

Outcomes

This assignment will affect your proficiency measures for outcomes *1a*, *1b*, *1c*, *2a*, *2b*, *4d*, *4e*, and *4f*.

Background Reading

The following textbook readings will be helpful for this assignment, in addition of course to readings specific to your chosen topic:

- Norman Chapters 1 and 2
- Shneiderman/Plaisant Chapters 1 and 2
- Nielsen Chapters 2, 4, and 5

For Submission

Mental Model Research and Analysis

Write a concise paper that addresses one of the three topics given below (i.e., choose one):

Is metaphor dead?

Metaphor has been a fixture in graphical user interfaces, most visibly in icons and control elements, since nearly their earliest days. *Skeuomorphism* takes this to an extreme, giving resemblance to the real world top priority in visual design decisions. More recently, though, user interfaces appear to have taken a distinct turn toward the abstract, with some designers explicitly stating that, with the current generation of users, metaphor is no longer necessary because we are now able to interact with systems without needing real-world mappings. For this topic, you are asked to explore metaphor and, using the concepts seen in class, provide your own conclusion on what role metaphor plays in user interfaces today.

Evaluate the evaluator: The “Mobile OS User Experience Shootout” from Pfeiffer Consulting

With the recent release of iOS 7, a consulting company called *Pfeiffer Consulting* released what it calls a “user experience shootout” among mobile

operating systems. This “shootout” appears to be similar in spirit to the usability studies that you have performed recently, except with different metrics and methods. For this topic, you are asked to examine the final report and critically assess its metrics, methods, and results based on what you have seen (and experienced) in class. It is also fair game to search the literature for comparative studies, and to look at these as a whole.

The second screen—niche technology, passing fad, or mainstream in the making?

Second (and more) monitors have been available for decades, yet recently they seem to have come into their own—so called “second screen” applications and devices have taken what used to represent “just more space” and laid claim to new families of applications whose very existence owes itself to having that “second screen.” For this topic, you are asked to investigate the history of second screen technologies and to place the latest such offerings in the context of this history. The main question: Is the second screen poised to become a new baseline technology, or does it remain a niche for specialized or vertical applications?

Common Criteria

For all of the papers, you are expected to make effective use of the concepts learned in class to inform and enlighten your chosen topic. Are there guidelines documents that codify certain ideas explicitly? What principles or theories might come into play? Most of all, how do the issues in these topics relate to the way *mental models* are formed and communicated across developers and users? You are free to make a final call, but make sure to base your call on the material we have seen (and beyond!—don’t hesitate to visit the library or find additional information sources for your work). And yes, regarding the library—see the end of this assignment write-up for additional motivation...

Recommended Outline

Most papers of this type follow the same general structure. Unless you have strong, justifiable reasons for diverging from this, you would do well to stay with this:

1. *Introduction*—Bring the reader into the topic: what is it about? Why does it matter? Are there any terms that you need to define right away? (the topic descriptions already given have the kind of tone expected in an introduction)
2. *Background/Prior Work/Literature Review*—No intellectual endeavor is an island. Every topic here comes with a wealth of previous work that can inform it—you just have to look. What has been said about your topic in the past? Who said it, and on what basis do they say it? Low-hanging fruit: start with the recommended textbooks. Beyond that, online resources such as the ACM Digital Library and IEEE Xplore will lead you to a wealth of sources. The Internet at large is also a resource, but keep a critical eye on the credibility and authority of what you find there. And oh yes—*try the library*.
3. *Methods*—The traditional title of this section is perhaps the most difficult to map to this paper; in other work, this is the section where you state “what you did” to investigate your topic. For this particular assignment, you can view this section as your “final roundup” of the information that you found—what work seems to be the most relevant or important? What have you chosen as the most authoritative information and why? What appears to be the prevailing set of views (which you will then tackle in the next section)? In a sense, “what you are doing” is reviewing all of the information that you have found, so that is what’s expected in this section.
4. *Discussion*—This is the section where you bring in your own thoughts. Given what you have seen and learned, what do *you* think influences the topic the most? Do you agree or disagree with what the literature has stated, and why? Have you noticed something that the literature has not covered? This is the section for that.
5. *Conclusions*—OK, we’re done, wrap up. Recap the topic, your key sources, what they said, and finally what *you* say. Readers should get a sense of what the paper is about just by reading this section—the rest of the work is detail.

Also, make sure that you lead off with an *Abstract*, then end with a *References* section for the work that you used and cited (these sections are not formally numbered, but they are as much a part of academic writing as the others).

The *Abstract* is like an executive summary of the paper—it gives the reader a “preview” of what they are about to read. Pro tip: Write the abstract *last*, when your paper is all done.

The *References* section should list all of the information sources that you used. On a practical level, it is there so that your readers can follow up or learn more about what you said. You must therefore put enough information in this section so that the reader can find your sources on their own.

How to Turn It In

For this assignment, *very strongly consider* using LaTeX to write the paper. With the need for proper references, figure management, clear sectioning, and others, this assignment truly plays to LaTeX’s strengths. Of course, I am available to help you figure out anything that you are unable to do on your own.

Commit your work to a folder called *mental-model-paper/* in your repository.

Entry Into LMU ULRA

If you use the services, resources, and collections of the William H. Hannon Library while working on your paper, you can enter it into LMU’s annual *Undergraduate Library Research Award* (ULRA). Information about ULRA can be found here:

<http://digitalcommons.lmu.edu/ulra>

Three words: One. Thousand. Dollars.