

CS/ECE 3992 - Spring 2014
Assignment 4: Sketchbook Engineering Examples
Due Jan 29, before class, via canvas

This is another sketchbook assignment. For this week you should note in your sketchbook at least five examples of what you consider “good engineering” and at least five examples of what you consider “poor engineering.” You should record these both with text and with sketches.

This is yet another exercise about paying attention, and also to get you thinking about engineering design qualities, human-computer and human-machine interfaces, and what leads you to appreciate a good design over a poor one. I’m thinking of things like the interface to an iPod, which seems to be on everybody’s list of good design, compared to, say, the blue parking meter vending machines downtown which nobody seems to like. What is it about the iPod that makes it intuitive and easy to interact with, and what is it about the parking meter vending boxes that makes them hard to deal with? For a somewhat dated example, why was nobody ever able to figure out how to program their VCR to record a show at a later time? (Perhaps that’s before your time, but you’ve probably heard about it! ☺). Of course these are just examples – engineering design, especially things that we would consider part of “computer engineering” that have a computer-control aspect to them are pervasive in the modern world. You can choose any engineering design you like, but at least some of them should be “computer engineering” designs – that is, designs/interfaces/products that have some sort of embedded computer control aspect to them.

Like the other sketchbook assignments, you should note whatever strikes you as interesting about the designs that you choose (remember, both text and sketches). Make sure to describe the designs, and also describe why you think they’re particularly good or particularly poor. Also, for the poor designs, say something about how you would improve them. It’s easy to criticize. It’s better to propose solutions. Of course, some of your “good designs” could shed light on how to improve the poor ones.

Bring your sketchbooks to class and turn them in on Wednesday Jan 29. I’ll return them to a box in the SoC office on Thursday so that you take them with you and continue to use your sketchbooks for your own project ideas and project planning.