Human Computer Interaction

Lab class **#2**

The computer

1. A typical computer system is comprised of a QWERTY keyboard, a mouse, and a colour screen. There is usually some form of loudspeaker as well. You should know how the keyboard, mouse and screen work - if not, read up on it.
   1.1. What sort of input does the keyboard support? What sort of input does the mouse support? Are these adequate for all possible applications? If not, to which areas are they most suited? Do these areas map well onto the typical requirements for users of computer systems?
   1.2. If you were designing a keyboard for a modern computer, and you wanted to produce a faster, easier to use layout, what information would you need to know and how would that influence the design?

2. What is the myth of the infinitely fast machine?

3. Consider the following scenario: "Word processor for blind people" and choose a suitable combination of input and output devices to best support the intended interaction. It may help to identify typical users or classes of user, and identify how the devices chosen support these people in their tasks. Explain the major problems that the input and output devices solve.

4. Describe Fitts' Law (see chapter 1). How does Fitts' Law change for different physical selection devices, such as a 3-button mouse, a touchpad, or a pen/stylus? (You'll need to do some research for this.)

5. Identify input and output devices that could benefit users with special needs.

6. Consider a typical modern video games console (such as a PlayStation or Xbox). This represents a computer in a highly interactive environment, and is one with a different type of input device from the standard mouse and keyboard. Draw a sketch of a particular console, labelling all forms of input. Explain why the choice

of inputs might be appropriate for supporting video game interactions. Explain how the different nature of the device makes it easier and more intuitive than the keyboard and mouse for all levels of user to interact with the system, because the device is tailored precisely to meet the needs of the user and the requirements of the system. It is interesting and instructive to analyse the input devices and output styles of many computer and arcade games, since they are often the result of careful and sensible design.