Art Assistant, Alternative Mouse Input Device, Name Game
Week #8
3/21/08
Andrew McLean

Work Completed:

Alternative mouse input; The foot mouse that has been mostly complete for a long time now inched even nearer to completion. The foot pedals were mounted onto a plastic backing. In addition Velcro straps were purchased but still need to be added to the final product. No additional work was done to the track ball this week, and no work was done on the games.

The second project, the game to improve name recall is progressing well. The game is programmed. It is able to call forth random pictures and assign names to a multiple choice sheet. The voice recognition software has been integrated, and is in the process of testing. We are using a command and control voice recognition prompt, this may allow user to call forth specific names and will help in the programs recognition of various commands.

The mounted art instrument has posed a lot of difficulties for us. Continued work has been done on the X-Y track system, the second track for the system was completed over spring break. Both tracks have been assembled, a full X-Y track system has been manufactured. In order to propel this system motors will need to be attached, currently the attachment we have made is faulty and causes vibration in the system, but as u can see below the motor has been successfully attached to propel the device.
As has been stated, tests were done with the motor and the manufactured drive shaft. While the motor could successfully drive the system, however issues occurred with vibrations. These vibrations are hypothesized to originate from the connection piece between the motor and the shaft. This piece may need to be re-made with more precise holes.

The motor movement will be done with motion accelerometers which have been already purchased. I have begun work with the PIC microcontroller, the PIC has been wired into the proto-board, and can now be programmed with the MPLab IDE. I have been going through programming tutorials this week and have a better grasp for the programming concept. A lot of the actual programming still needs to be done, however I am confident that it will be done on time.

Future Work:

Alternative mouse input system – For the foot mouse, a foot strap needs to be integrated and then finally painting needs to be done. The track ball needs to be placed in the housing the buttons need to be fitted and wired. After wiring assembly of the entire system and painting will need to be done on the outside housing. We do not anticipate any problems, and the track ball should be completed within the next few weeks. The housing needs to be assembled internal wiring completed. Based on user feedback some changes will be made to the two games. This will result in completion of our first project.

The game to improve name recall is also nearing completion, final testing with voice recognition software is starting using command controls. Continuation with the voice recognition integration will continue over the next few weeks. Additionally we would like to add a ‘relationship’ variation to our game, this will be done after the voice
recognition is completed. Additional changes may be made to make the program more eye pleasing and user friendly.

Our last project still has the most to be done, however a lot of work was done over the spring break. The second track for our mounted art instrument was completed, this was assembled to our first track system. So we now have a X-Y grid system finished. Work will be done with our PIC, and programming motor control. Some additional machining will be done to mount the entire X-Y system onto a base. Next week we will spend lots of time working on this.

**Hours Worked:**

Andrew:
Monday – 10 – 12:00 (2 hours)  
Wednesday – 12 – 3:30 (3.5 hours)  
Friday – 10:30 – 5:00 (6.5 hours)  
Sunday – 6:00 – 8:00 (2 hours)  
Total Time = 14 hours