Work Completed

The work I have completed up until this point has been mainly focused on the completion of the Game for Improving Speed and Accuracy of Name Recall. At the end of last semester it was determined that our design using Dragon Naturally Speaking would be much too costly. During the winter break and the first week of the semester other less costly alternatives were researched. Out of all these alternative designs two possibilities emerged that would best fit our needs. One possibility was to use a voice recognition chipset purchased from Sensory Incorporated. This chipset could be programmed to recognize certain words and names and then interfaced with the computer using a serial connection. The other possibility was to use Visual Basic with the Microsoft Speech Software Development Kit. Since this seemed to be the easiest and most cost effective way to complete the project this was the alternative was chosen.

During the first week I spent time going through tutorials of the Visual Basic programming language. This was to learn the syntax of the code that I would be using to program the game and also to learn the capabilities of the programming language. I also spent time going through the samples that came with the software development kit I had downloaded onto the computer. This development kit will serve as the Speech Recognition Engine for the computer game and contains all of the grammar that will be involved for interacting with the game. I spent a great deal of time looking at the code contained within the samples. This was done so that I could determine how to code the speech recognition into the computer game I will be developing. After looking through these samples I was able to code a very simple program in which a certain word was spoken into the headset and a button on the screen was pressed. To show that the button was pressed there was code placed into the button click event so that when it was called text was displayed on the screen. I was able to compile and run the program and everything worked perfectly. Along with this simple voice recognition game I also spent time developing the first screen for the game. This screen will be the Main Menu and will be the starting point for the game. I opened a new form and placed all of the necessary buttons, text boxes, and labels onto the form.

I have also begun to run tests on the LED’s and infrared sensors that we received over the winter break. I spent time reading through the specifications sheet to determine how these two devices worked with each other to send signals. I determined from the specifications that I would need to send actual signals to the infrared sensor using the LED. To do this I set up an experiment in which the LED was connected to LABView
using the DAQ. The infrared sensor was placed right in front and was also connected to
the DAQ so that we could measure and record the output once again using LABView.
We will be testing the two together using the test signals supplied with the specification
sheets.

This is one test signal and the output to be expected from the infrared sensor.
Another test signal we will be applying to the system is as follows:
Future Work

Over the next week I hope to get several things accomplished. I hope to complete a LABView program that will supply the necessary signal to the system and record the voltage coming from the output pin on the infrared sensor. This will tell us whether these two devices will be able to work together and from how far they can communicate. This information will be very important in our design and will tell us whether we will be able to use these devices. If this test does not work we may have to find other options to communicate in infrared.

I also hope over the coming week to complete the Main Menu screen of the computer game and begin working the Load Data screen. I also want to create other simple programs using the voice recognition code to fully examine the capabilities of the Microsoft Speech Development Package. This will help us to determine whether we should switch to another alternative for our voice recognition game.

Project Review

I believe that we are moving along with our design project at a very good pace and that we are meeting the goals of the first two weeks. I think every group member is contributing equally to the completion of the project and unless we encounter problems with the Speech Recognition Engine or the Infrared sensors I think we will be completing our design project right on time.

Hours Worked

12 hours