Project Identity

Augmentative and Alternative Communications
Tristan Ramas

Work completed

This week I generally focused on developing my knowledge on FLASH programming and deciding on a new design for the output device.

FLASH Program Work

This week I reviewed the paper design for the FLASH program, I compiled a list of objectives that had to be done in order for the program to be completed. I searched on the internet for various tutorials and found that most of the necessary functions that need to be done can be completed. I first started with basic functions of FLASH. I worked with several tutorials involving basic functions such as drawing tools, basic movie making, button usage, and collision detection using Actionscript. I have learned how to use basic drawing features and how to use frames and keyframes. In addition, to online tutorials I found a book online on Beginner FLASH design that will be very helpful.

Figure 1. Animation through the use of frames and keyframes
The above figure is a screenshot of a program I did with frames and keyframes in FLASH. By using frames and keyframes, I can animate the movement of the scanning agent as it moves across the room.

Work on the Display

The LCD display’s power and video output was tested. The power supply was tested via a car charger in Ryan’s car. I also confirmed with Ryan a power circuit that would be used to power it. This is however subject to changed since I have decided to add a wireless receiver that duplicates the function of the VGA cable. The wireless receiver will make the display more easily used from any point in a house. A transmitter connected to the laptop will also be needed.

Future Work

FLASH Program

I will continue to research more programming techniques that are required. I will also continue research tutorials that will allow me to complete objectives on the list I have made so far. Some program requirements that need to be accomplished include collision detection for when the avatar is touching the object. The movement of the scanning agent must be programmed in a set automated pattern. An efficient speed for movement of the scanning agent must be chosen for the user to have enough time to select object. I must also learn how to create a menu system. Also, how to create a banner at the bottom of the screen that shows the last three messages made. All these functions appear to be possible in FLASH.

Input Device

For the input device, the enclosure design is for the most part complete. Satisfactory button design has not been found, so I will be fabricating one. Mounting of internal components still has to be arranged. Rubber feet are needed to prevent the input device from moving while in use. Also, the enclosure will probably be painted since the top part of the enclosure is transparent.

The functionality of the input device still has to be tested via a protoboard. The USB Keyboard Matrix Control Board will be tested with a keyboard switch and will be plugged into a USB port to test connectivity. I will probably perform this test within the next week.

Output Device

The wireless receiver will most likely be enclosed into the output device. As a result, enclosure design, power supply, and costs required for the new display device design still need to be worked out. Also, how to configure the wireless transmitter and receiver will still need to be worked out.
Project Review

I am confident in the project so far. There is an enormous amount of information on the internet on FLASH programming. By forming a list of necessary functions that need to be performed I was able to pick from tutorials that I had to focus on. I was able to utilize several online tutorials which show that the program is feasible. I am excited about the new wireless transmitter/receiver addition of the display. It will add more ease of use for the person with the display, since the person will now be able to communicate virtually anywhere with the person transmitting messages. The input device has the least design changes and will most likely be completed within the span of 2 weeks.

Hours Worked

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