Project Identity
Interactive Wheel of Fortune Game
Week 9
April 5, 2007
Meghan Schmidt

Work Completed

The wheel was completed this week. The numbers that can be seen below (Fig. 1) were applied to the corresponding pie pieces. The wheel was also outlined with a silver sharpie to increase visual enhancement/stimulation. A first layer of topcoat was also applied. This was applied on Friday, March 30. Additional layers will be applied throughout the next week. The top coat increases the shine of the wheel as well as adding extra protection to the paint. By having multiple layers of the top coat applied this will increase the durability of the wheel itself. This has been our goal throughout this project, creating a durable wheel. The wheel was also tested with the motor attached. It (the wheel) spun at the perfect speed. We were afraid earlier that the motor would not be strong enough but we now know that this is not the case. This was a big development for us as a group because we can use the original motor we bought which means that we do not have to search for and buy a new one. The figure below shows the completed wheel in its entirety.

Figure 1: Completed Wheel
Another big project for this week was to attach the motor to the wooden block that we had previously made. Kristen and I went to the machine shop on Tuesday, April 3 to talk with Serge about the best way to connect everything together. Previously we were going to use a bearing block that would prevent the motor from spinning but allow the wheel to spin. However, after careful consideration we decided to not use it. We decided against it because it would add extra weight as well as tension. It would also make the attachment of the motor to the aluminum shaft that much harder. Instead we decided to just attach the motor right into the wooden block. Figure 2, shown below, depicts the entire wooden block with the motor attached to the top.

Using just a wooden block to hold the motor was deemed to not be efficient and durable enough. You cannot use a lock screw or anything else along those lines that would hold the motor in place. We do not want the motor to be able to freely spin because it would in turn prevent the wheel from spinning. To prevent this from happening we used a thin piece of metal that is actually used in place of the bearing block. Figure 3 shows what the top of the block looks like with the metal piece attached as well as the motor. The black screws that you can see on the side of the metal actually serve to keep the motor in place. If we need to readjust the motor all that needs to be done is to loosen up the black screws and the motor will be moved freely. This will help us greatly when it comes time to attach the aluminum shaft to the shaft of the motor; which will actually be done in the upcoming week.
Future Work

Throughout the next week many things will be worked upon. We will finish the layout of the circuit so that a PCB board can be ordered. This will be done next Monday so that we can have the board as soon as possible. The wooden block with the motor in it will be bolted down onto the plastic box. In order to do this the center of the box must be found with the shaft of the motor going into the center. Having the shaft of the motor in the middle will mean that the motor will be off center, but this is a good thing. The aluminum shaft that connects the motor to the wheel also has to be shortened by using the lathe.

Project Review

The past week was very productive. The wheel was completely finished with the correct numbers on it. A first layer of top coat was also applied. This top coat will help protect the wheel and keep the colors vibrant. Many more layers will be added to ensure one hundred percent protection. The motor was also attached to a wooden block. This will help to keep the motor still while the shaft is spinning. This is important because without the shaft spinning the wheel will not spin. Work was continued upon the circuit towards the purchasing of the PCB board. This week many things were accomplished thus making it a very productive week.

Hours Worked
13 hours