

GNG 2101 – Project Deliverable E

Prototype I & Client Meeting Preparation

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Following a couple meetings with the client at Saint-Vincent's hospital in Ottawa, the group has pulled together its talents and resources into building our first prototype. The design of the product was inspired with our two meetings with the client, as well as our conversations with a representative at the hospital. This document is a summary of our gatherings regarding these meetings and our prototype.

Client Feedback

The initial client meeting was primarily to establish a general direction for the project, given that at this point we had no concepts to run with. We were able to speak with both the client and one of his caretakers, Bocar. In both meetings we discussed the project at hand, the conditions of the client we wish to satisfy and his current personal setup regarding his laptop computer. We decided that our project would be more of a stand-like device than an overall keyboard.

The meetings with the client and Bocar that occurred two weeks later was shorter, and we primarily sought to verify whether our project plan was suitable for our client's needs. Bocar was critical that we had not returned with a functioning prototype, although we were still early on in conceptualizing our project. The client, on the other hand, took well to our ideas.

The concept of a stand that could alter either the angle or the screen or the height of the computer – we hadn't decided on which design to pursue at the time. He informed us that a pocket for his typing implements would be helpful, and that another for food would be unnecessary. He also enjoyed the idea of including a fan, a design choice that, whilst preferable, would only make it into the project if we had the rest of the device sorted first.

Product simulation:

Given that the device is unfinished yet entirely functional, the laptop stand should be somewhat easy to test. Each member of our group has a laptop that they can use it with – the most valuable simulation will be that of the client's laptop in particular, which is an older model and somewhat bulky.

Providing the product does not malfunction or sustain damage on the journey, we hope to test the product with our client's personal computer at the hospital during our next client meeting.

Preparation for upcoming client meeting:

For our next client meet, we hope to have our client try out the prototype. We have currently assumed the weight and balance to be the same as some of our personal laptops, with our meeting, we would like to test how well it can support his current setup, with respect to weight and balance. Furthermore, the max angle we should be supporting would also be determined.

The pictures shown below show the prototype we will be showing the client. It is a functional prototype, so we can get very useful data of the client using it. The plan currently is to observe the client, and to ask questions after 15 min. We would really need to see what he likes and dislikes, and how he would like us to improve. This should give us a good start on our next iteration of the product.

Summary of first prototype:

The first prototypes purpose is to test the idea that the client will use the adjustable laptop stand and that he will be able to comfortably use it himself. The prototype is currently able to create an angle up and down using a motor, and will soon be operational using buttons to go up and down. Please find below a series of pictures showing the prototype. The prototype was used purely out of scrap flat bar cut and welded to create the prototype. The linear actuator (the motor) was purchased on sale and will be used in the final design no matter how much the prototype gets changed.

The following images are pictures of the prototype we have built, taken by Angus Cowan:



