

Final Project: Phone Helmet

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1. Introduction

Phone helmet, a useless invention holding phones when user is moving and not flexible with his hands. The whole helmet contains a box , two holders and a detector. The intended users are primary school students and middle school students. It's intended to help children introspect their behaviour of watching phones all the time.

2. Related Work

2.1 Useless Invention

The 'useless inventions' by Marina Fujiwara are mostly meaningful according to reflective design of Don Norman. The useless inventions are not attractive from first impression of users. They are usually very rough and symbol. Thus, inventions mostly don't function well like 'selfie stick from under' and 'guardian in bridge'[1]. However, some of her works realize what she wants like 'motivation machine' and 'string phone for talking to myself'. She doesn't intend to build a completely useless invention. The main intention of her is triggering people's thoughts on themselves and different social groups. For example, "Wiping My mouse machine" shows that girls need care from males. Moreover, "Screaming white cane" raises public awareness for the disabled and the social background behind it. Some other inventions are designed just for personal needs. It may be childish but every user is childish in some ways. It keeps their mind stay healthy and energetic. Thus, the first glance of the work may make audience laugh because it functions badly. But they will feel the similarity when they think about the product and find that the true meaning of the product is not the product itself but the concept behind them.

Sometimes, useless is not just about products that don't satisfy its original need but also about the function itself. It's when we solve the question but find out that more serious problem occurs. It triggers us to think about the function we want. Is the product useless or the function? Although the problem is solved, other problems blow up.

2.2 ----- (the name of the work you want to refer)

Screen privacy hat^[2]

sunshaders^[3]

3. Design Concept

The design concept is reducing the phenomenon that children play with phones when they should focus on other things like having dinner with parents, walking on the street. Moreover, it also reminds parents not to indulge their children too much.

4. Implementation

4.1 Prototype

The helmet has two holders in the front to support the phone and a distance detector in the front. A stepper motor can control the distance between the helmet and phone. When children are watching their phones on the helmet, the phone will block out most of their vision and because the distance is too close, they will be more focused on the screen and miss out other things such as reminders and people in front of them. They will find out hard to see the road and remind what others have said. Although the sensor can give some information, they can't get more information about what is in front of them. This helmet blow up the problems when children are watching their phones.

4.2 Implementation

In my design, I use a hc-sr04 distance sensor, an arduino, 3 switches, an mini-speaker, a stepper motor and a stepper motor drive board. The sensor will detect barrier. If the distance is less than 20 cm, the mini speaker will keep making alarm. The 3 switches are connected to different input. One controls the left rotation of stepper motor. The other two control right rotation and stop.

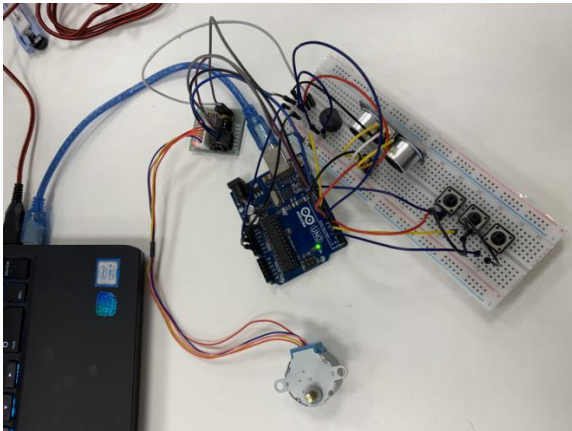


Figure 1: circuit

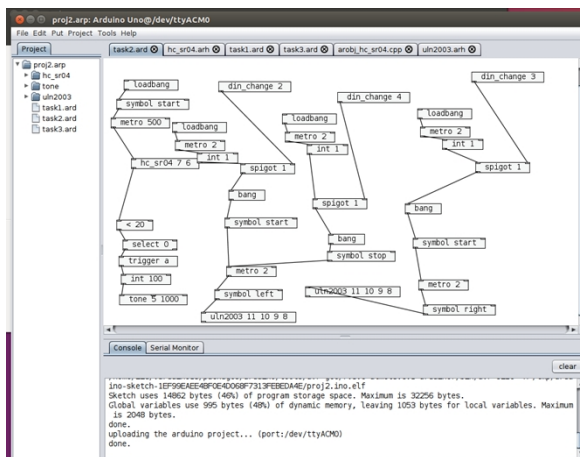


Figure 2: code

5. Discussion

The concept of the invention comes from a problem that we want to release our hands from holding phones. We can use a helmet to hold it instead. However, for some specific social groups, especially the youth, they are stick to phone everyday. Young man holding phones can be seen everywhere. The helmet may help them more focus on the content in their phones but it also blow up some social problems. You are answering someone without figure out who they are and quickly forget what they say. You are watching something on the screen when having dinner with your mum who want to talk to you about your recent life. The surrounding of you are suffering because of it. Then, when juveniles use the helmet, they will learn that the living habit is not what they want and develop their thinking of this social issue. Using a mobile while walking down the street is a challenge for most adults, but it's even more risky for children to play with their phones. Many children

die because of this every year and they are easier to be injured^[4]. These folk are obsessed, and missing so much of the everyday simple pleasures of watching clouds, trees, birds and much more. Some even wear ear-plugs, blind and deaf to the world, oblivious and self absorbed^[5]. I hope my project can help them realize that they are losing something and introspect their behaviour. Moreover, it will trigger parents' attention to their kids and make them notice their children's inappropriate behaviour.

6. Summary

Since phone have invented, it has become part of our lives. Many children are exposed to phone and learn to pay it at pretty young age and develop the habit of playing when they are actually doing other things. Some many are addicted to phones and don't want to put it off. Thus, I create the helmet to help them hold the phones. The holders will hold the phone for them and the sensor together with the mini-speaker will serve as warnings. I want to attract people's attention to children's inappropriate habit and let children learn that it's harmful to watch phones all the time. Although the problem of watching phone may be solved, more problems are blown up. A 'useless invention' is not totally useless but has deep meanings to let people think about their own behaviour and others' behaviour.

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