

Project Deliverable I: Design Day Pitch and Final Prototype Evaluation
GNG 2101 – Intro. to Product Dev. and Mgmt. for Engineers
Faculty of Engineering – University of Ottawa

Date: November 28th 2019

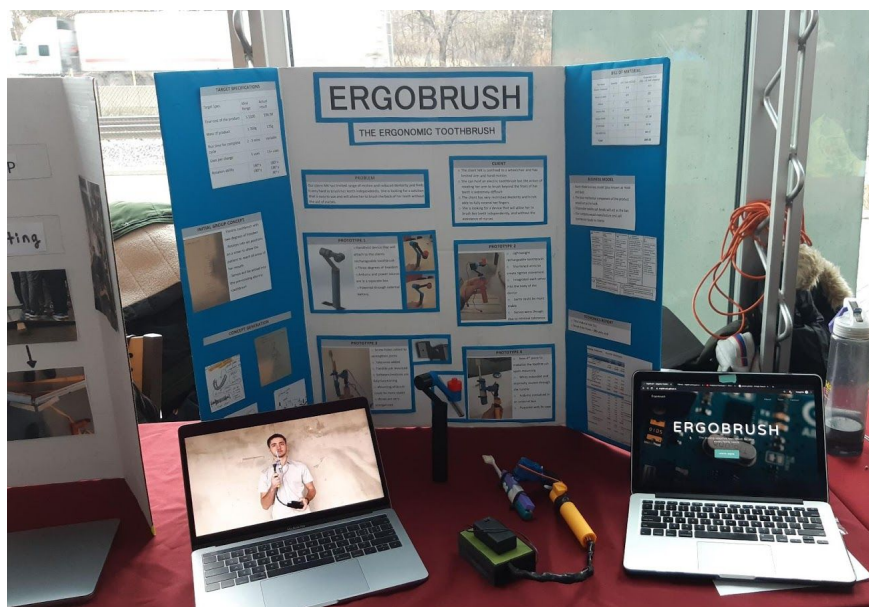
Group number: Group 10

Group members: Andre Fernet, Anbo Xu, George Abou-Hamad, Kate Ford, Lucas Hubert

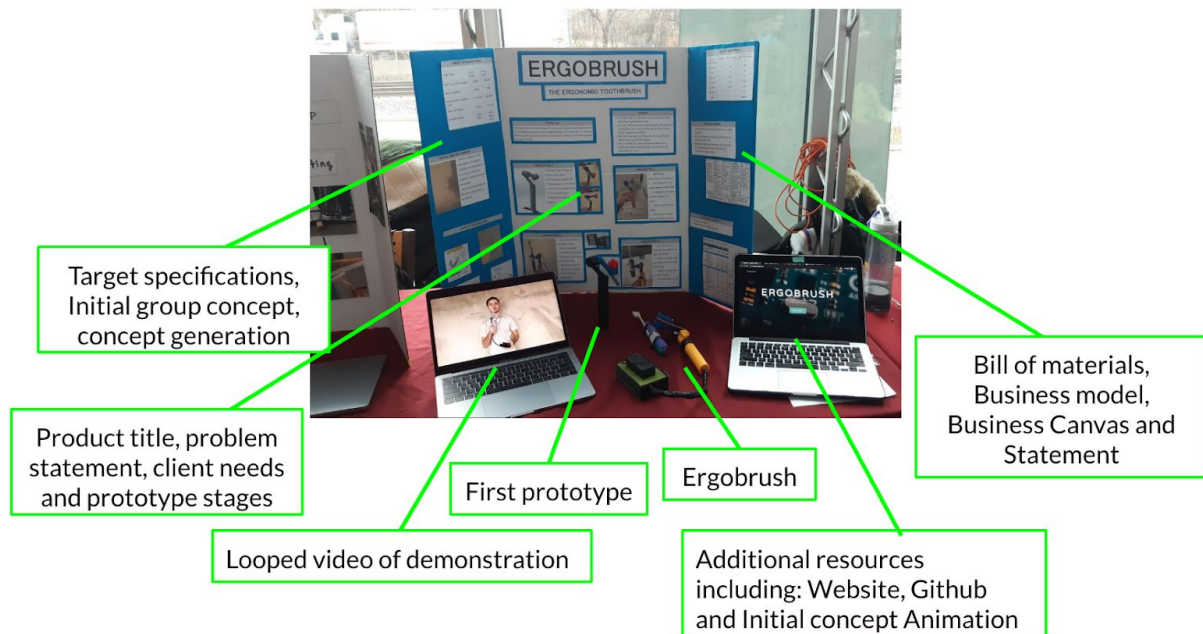
Introduction

In preparation for this long awaited and important day, our group got together to brainstorm ideas on how we could best present our final prototype. Together, we prepared a 2 minute pitch that we would deliver to our judges, peers, professors, potential users, customers and anyone who else who may be interested in our product. We also prepared ourselves to answer any potential questions that may be asked pertaining to our design. This two minute pitch contained the information regarding the “So What?”, “Who Cares?” and “Why us?” aspects of our device and ended in a live demonstration of our fully functional prototype.

We also provided our visitors with various visuals to refer to during our presentation. This included a presentation board, our first prototype model, our final prototype and two display screens as shown below.



Design Day Presentation Material breakdown:



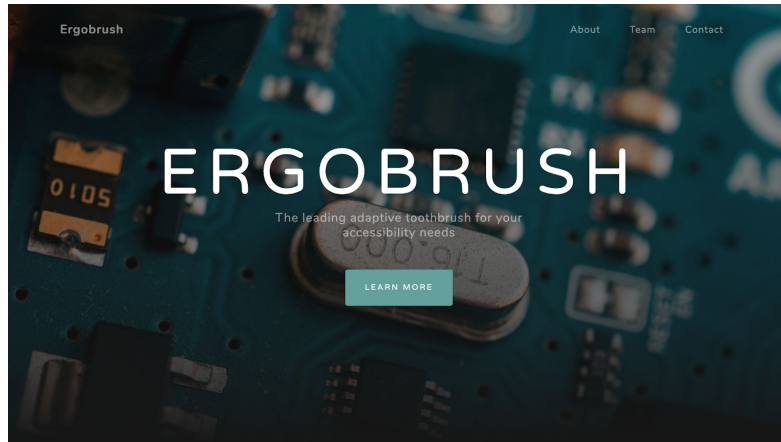
We used a presentation board to illustrate the design process we had followed throughout the semester. On the left we have the target specifications, initial group concept and concept generation. In the middle we have our product name, problem statement, client needs and animations and pictures of our various prototypes we designed. Finally, on the right we included the bill of materials, our business model, business canvas and a 3 year economics statement.

On the bottom left screen we have a video of one of our team members demonstrating the device in use. We uploaded this video to youtube and looped it throughout the day to provide visitors a quick glimpse of how the device functions.



https://youtu.be/_NtiQT6FsQm

On the bottom right screen we provided additional resources that we believed would be of use to our judges and visitors. This included a link to our website and github page which was used to view the code implemented. We also demonstrated a short animation of our initial concept we rendered in cinema 4D.



<https://ergobrush.github.io/>

```
1 #include <Servo.h>
2 Servo s0;
3 Servo s1;
4 Servo s2;
5
6 void setup() {
7   // put your setup code here, to run once:
8   pinMode(LED_BUILTIN, OUTPUT);
9   digitalWrite(LED_BUILTIN, LOW);
10
11   s0.attach(A0);
12   s1.attach(A1);
13   s2.attach(A2);
14
15 }
16 void loop(){
17   //Position 1
18   s0.write(100);
19   s1.write(170);
20   s2.write(100);
21   delay(5000);
22
23   //Position 2
24   s0.write(75);
25   s1.write(180);
26   s2.write(10);
27   delay(5000);
28
29   //Position 3
30   s0.write(125);
31   s1.write(180);
32   s2.write(10);
33   delay(5000);
34
35   //Position 4
36   s0.write(125);
37   s1.write(0);
38   s2.write(0);
39   delay(5000);
40
41   //postion 5
42   s0.write(75);
43   s1.write(0);
44   s2.write(0);
45   delay(5000);
46
47 }
48
```

<https://github.com/ergobrush/ergobrush.github.io>



<https://www.youtube.com/watch?v=FklP977luZg>

Two-line summary:

Ergobrush is a hand-held assistive toothbrush that allows the user to brush their teeth without requiring the need to move their hand. By offering three axis of rotation, Ergobrush effortlessly emulates a natural brushing experience through the execution of timed positioning sequences.

Conclusion

Although we did not place in the competition, we had a great time presenting the product of our hard work. We received many compliments on our design as well as good feedback and potential adjustments to better improve our product moving forward. Most importantly, as a team we believe we gained a lot in terms of technical and team working skills. From communication to group management, we will carry and apply what we've learned together in our future experiences to come.