**Abstract**

The objective of this project was to analyze the present products in the market and redesign the product based on targeted customer needs. First, we researched the product which was the Advanced Power 400 Oral-B toothbrush. Some aspects of our research included literature, patent, and product dissection. Our next step was to revise the design by using the pairwise comparison chart.

**Final Design**

In our final design, we incorporated various concepts such as the dual brush head, the retractable brush head, and rechargeable AA batteries. The on/off button is just one button. The brush head retraction function is completely manual; the user must push the head down into the body when the toothbrush is not in use. To prepare for use, the user must pinch the sides of the brush head that are made accessible through the gaps on the side of the body and pull up. The head snaps in place so that it does not move while the user is brushing their teeth. To move the head the user must use some force to override the snap mechanism.