

REDESIGN OF ORAL-B ELECTRIC TOOTHBRUSH

Kirk Santure
Ethan Kruder
Jess Spoll
David Alvarado

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Team #6

This report will explain the detailed steps we undertook during the redesign of a Braun Oral B electric toothbrush. The goal of this project was to increase the sustainability of the electric toothbrush through a user center design process that simultaneously allowed us to create a user-friendly toothbrush. The 2003 Oral B toothbrush we redesigned contains several construction flaws, which we aimed to correct in our final design. Through collective brainstorming, our team analyzed the problems associated with the old toothbrush. We decided which aspects needed improvement, which ones needed to be redesigned, and which ones could be left alone. Our team conducted a survey of potential customers and examined the data through various PCC and AHP charts. From the results of the survey and our team's ideas, we felt the most important features that needed to be improved were the power source, the grip, and the overall weight. Each of these features needed to be redesigned in order to create a high quality user centered design. We successfully accomplished our overall goal of creating a more sustainable toothbrush by modifying key aspects of the toothbrush design and power mechanism.

The new toothbrush is simple to use, yet it has an elegant design. The toothbrush has a two touch button, light press will give you precise power, or you can completely press the button down and have power without keeping your finger on the button. It is all powered by a servomotor which spins the head of the toothbrush. The spin on the bristles is a dual action spin with the outside bristles moving clockwise and the inside moving counter clockwise. This dual action will in theory clean your teeth better than the single spinning bristles. The toothbrush itself features an ergonomic handle with comfort in mind. With the cut outs for the fingers padded with soft rubber lining. Another advantage with our new toothbrush is the fact that it is rechargeable. The toothbrush has a wall plug in charger that charges the rechargeable battery inside the toothbrush. This will cut back on overall user expense because they no longer have to purchase and replace AA batteries.

