

Project Beach Funk

Alexis Bertholf
berthola@my.erau.edu

McKenna James
jamesm13@my.erau.edu

Follow this and additional works at: <https://commons.erau.edu/asee-edgd>

Bertholf, Alexis and James, McKenna, "Project Beach Funk" (2016). *ASEE EDGD Midyear Conference*. 9.
<https://commons.erau.edu/asee-edgd/conference70/posters-2016/9>

This Event is brought to you for free and open access by the ASEE EDGD Annual Conference at Scholarly Commons. It has been accepted for inclusion in ASEE EDGD Midyear Conference by an authorized administrator of Scholarly Commons. For more information, please contact commons@erau.edu.

Student Poster Abstract: Project Beach Funk

Alexis Bertholf
Department of Aerospace Engineering
Embry-Riddle Aeronautical University

McKenna James
Department of Aerospace Engineering
Embry-Riddle Aeronautical University

Abstract

The beach is great - the sand, the sea, the salt... the sand. Except when it follows you home. You know what we're talking about - those nitty gritty bits of beach funk that you just cannot seem to remove, the ones that remain long after the memories of that glorious beach day has faded. Thus, Project Beach Funk was born. The focus of the project quickly changed from the prevention of sand, to the removal of sand. The largest problem area seemed to be the feet and legs, as they were the biggest culprits for carrying sand into the car or home. The idea of combining a brush and an air compressor to remove sand from the feet/legs came up, and testing ensued. Air blown at 40 PSI gave the desired results - removing excess sand, and drying the remaining fine bits so they could be easily swept away by the brush. The most efficient brush proved to be a rotating facial cleanser, as the bristles were firm enough to remove sand, yet still gentle on the skin. Improvements on the design of the Sand Be Gone, or SBG for short, would include an updated head with a longer air compressor hose, and a larger gearbox housing with room for the air nozzle to be placed in the middle of the brush. A new plastic head for the brush would need to be created to house the larger gearbox and air nozzle combination, and a grooved handle design would be incorporated to increase grip of the handle. The redesign is currently being created in CATIA.

The poster is a promotional graphic for 'SAND BE GONE!' (SBG). It features a central title 'introducing the SAND BE GONE!' with the tagline 'The newest way to leave the beach funk at the beach'. The background is a beach scene. The poster is divided into several sections:

- The Team:** Photos of McKenna James (Team Lead) and Alexis Bertholf (Engineer).
- The Problem:** Text: 'After visiting the beach, sand seems to get everywhere in cars and homes.' Accompanied by a photo of feet covered in sand.
- The Product:** A black and white device labeled 'SBG'.
- The Solution:** A white handheld device with a blue brush head, shown being used on a person's legs.
- Traction:** Photos of people at a beach.
- Market:** Statistics: '-The 75 million Americans who visit the beach each year' and '-The 8 million Americans who visit Daytona Beach each year'.
- Advantages:** A list: '-Clean feet', '-Reusable', '-No mess', '-Portable', '-No sand!'.
- Competition:** Photos of people at a beach and a bottle of Johnson's Baby powder.

At the bottom, a text box states: 'The SBG removes all the sand before the customer gets in their car with the help of a spinning brush and compressed air.'