

**Aim:** To design and develop a dog grooming tool that provides both the user and dog with a pleasant, stress free, and time efficient grooming experience

## Background

The current process used to brush and remove mats from a dog's fur is difficult, time consuming, and stressful for both human and dog.



## Project Objectives

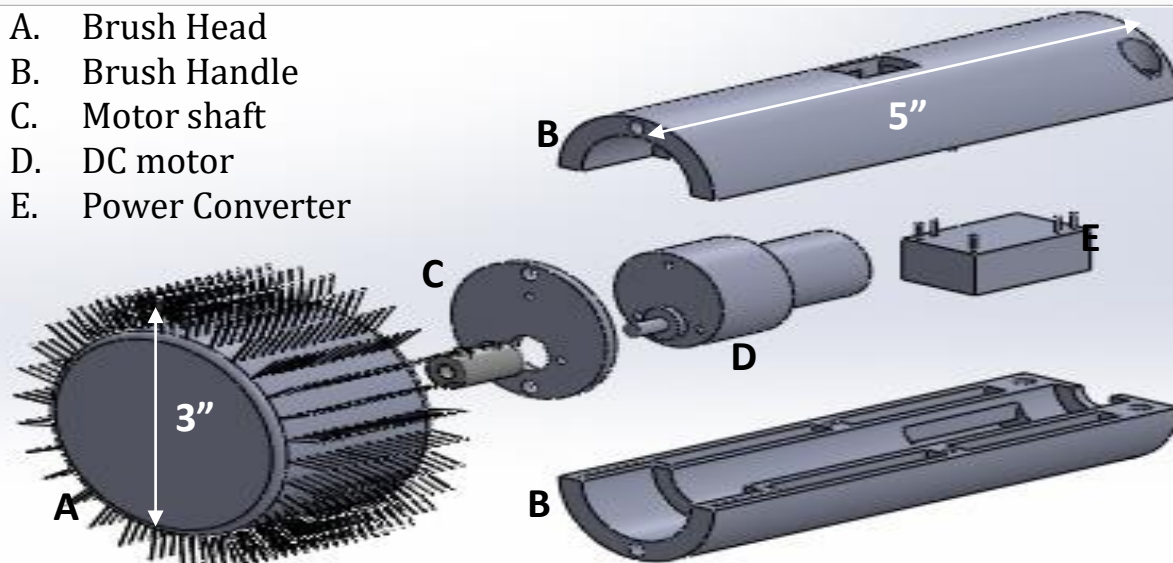
- Design a grooming tool for dog groomers and owners
- Tool is to untangle, de-mat, and order dog fur
- Develop rotary grooming tool that is stress-free on dog and for users

## Design Constraints

- Tool must be hand-held and ergonomic
- Tool must be easy to clean and sterilize
- Total weight must be  $\leq 1$  lbs.
- Must be able to operate at least 2 hours
- Tool must be quiet when used

## Prototype Design

- Brush Head
- Brush Handle
- Motor shaft
- DC motor
- Power Converter



## Assembled Grooming Tool



## Brush Head Designs



## Key Design Features

- Ergonomic finger form handle
- Electric motor torque  $\sim 3.4$  in-lbs.
- 60 RPM DC motor
- Large brush head diameter  $\geq 2.5$  in.
- AC to DC wall adapter
- Boar and plastic bristle brush head

## Future Work

- Test for success against varying types of matted fur
- Develop solution for excessive motor torque
- Begin field trials
- Get feedback from customers

EETCG

Engineering To Go

