

Palm Ball Stylus

DESIGN RATIONALE

Introduction

This device is intended for users that cannot use traditional stylus pens for a variety of reasons. Instead of a traditional pen style stylus, it ends in a large ball that requires much less strength and dexterity to grip. The device uses a length of wire and conductive foam to allow the user to interact with the capacitive touchscreen.

Research

No other commercial or DIY palm ball style styluses were found on the market.

Requirements

Goals

G01	Create a conductive stylus device with a palm ball grip
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Functional Requirements

F01	Device must have a ball grip
F02	Device must work with phone style touch screens

Non-Functional Requirements

NF01	Device must be low cost
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Constraints

C01	Device must be 3D printable
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Testing

The original OpenSCAD model was printed first to get a feel for the device. Since it was meant to be printed in conductive filament, it did not work to operate a screen. A modified version was created in Fusion 360 that incorporated a channel for a wire to conduct from the user to the touchscreen. This design was printed and found to work well.

Opportunities for Improvement

In future iterations, more wire channels could be added to allow more rings of wire to be added, so the ball could be gripped in more positions without risk of breaking contact with the wire.