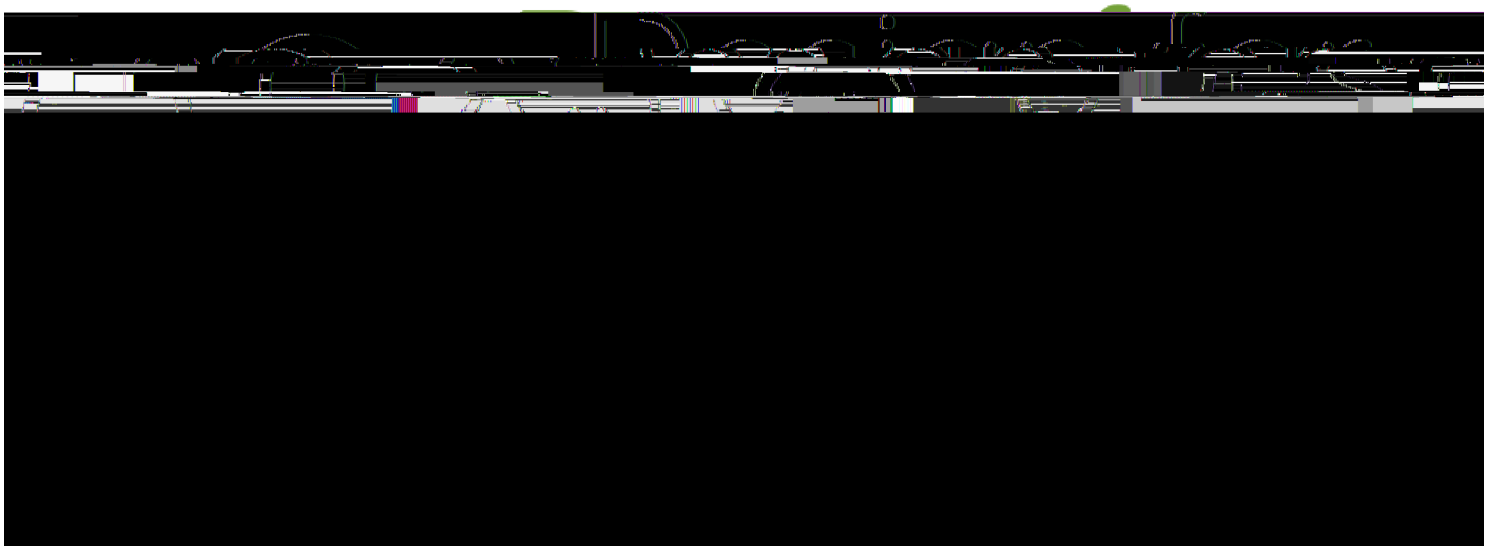

Remi The Reminding Device

University of Colorado Boulder
Engineering for Social Innovation

By: Dania Alhamli, Josh Creany, Lizbeth Montoya Dominguez, Drake Nosker, Jesse Rice, Whit Whitall

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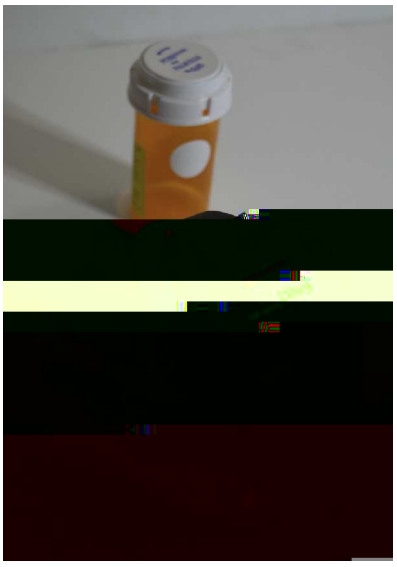

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Design Overview

Remi is designed to be a wearable piece of technology that mirrors a standard watch aesthetically, contains the necessary functionality of a smartwatch, and keeps the product cost substantially lower. These were the considerations taken with our design process, from functional prototypes to our projected moonshot product.

Remi has two central areas of design; mechanical and electronic. Due to the product's design timeline, our team had to develop the software, hardware, and enclosure simultaneously, which resulted in the product's constant development, function, and integration.

Priorities and Requirements

Since the original intent was to design a wearable device and minimize the overall footprint of the entire product while also maintaining prototype functionality, having to first focus on developing the technology to read and write NFC tags portably, our prototype design prioritized functionality over aesthetics and wearability. However, we have maintained our desire to achieve a minimal footprint throughout the process.

The housing for the wearable device is to enclose the electronic components with protection from the external environment. The housing design incorporates features and materials to thwart all these unwanted intrusions. The material is made from Delrin, which provides good durability, structure, and permeability for the NFC frequency to travel to and from electronic components.

Testing Results

Arguably the most critical piece of technology on Remi is the Near Field Communication Reader and Writer. The main functional purpose of the device is to recognize when a scheduled activity is complete, and this is done by registering a scan of a task tag with the NFC component. Therefore, ensuring its reliability and success a distance and reliability test of the NFC communication was conducted.

This test was conducted by using the NFC components mounted on our enclosure to scan NFC tags. When a scan was successful an ultrasonic sensor registered the distance

Business and Market Consideration

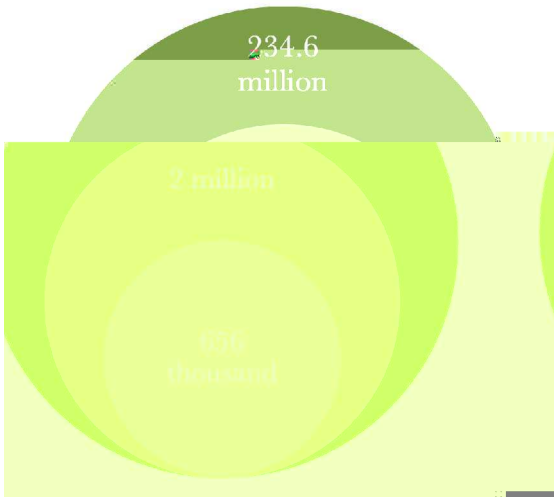
Market Opportunity

D4IL plans to tap local independent pharmacies to market Remi to patients in exchange for access to data which can demonstrate the efficacy with which patients are taking their medication. Direct and Indirect Remuneration (DIR) fees represent a major pain point for pharmacies. DIR fees are assessed against pharmacies by insurance companies, with the aim of incentivizing pharmacies to achieve good patient outcomes. However, with few effective ways of assessing pharmacy patient outcomes, DIR fees are known to be arbitrary and ineffective. Remi offers a method for pharmacies to provide proof of patient outcomes and lower DIR fees assessed against themselves.

Users and User Cases

D4IL has designed Remi for students and working adults between the ages of 16 and 40. While countertop pill dispenser designs appeal to older users who spend an overwhelming amount of time within their homes, these designs don't work for students or young professionals because they lack portability. Remi is easy to travel with and discreet in various social settings. Remi is affordable for young users growing their net worth.

Addressable Market



Project Revenue

Meet The Team

Special Thanks !

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