Telepresence System

Friederike Kört, Mirza Özokyay

Who we are

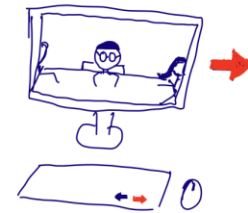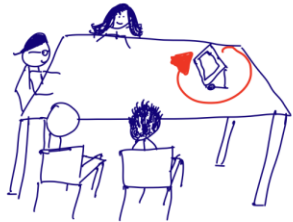**Friederike**

- Bachelor student

- Starting her advanced studies

- Knows about HCI

Mirza

- Master student

- Familar with electronics
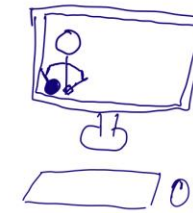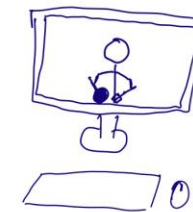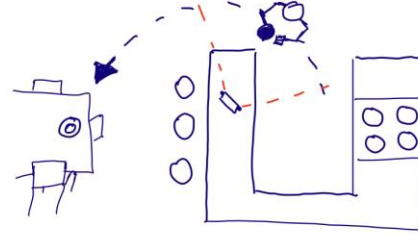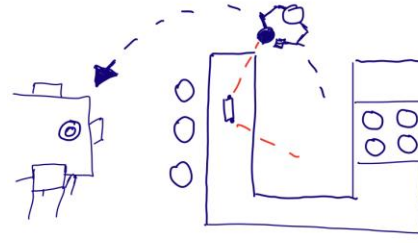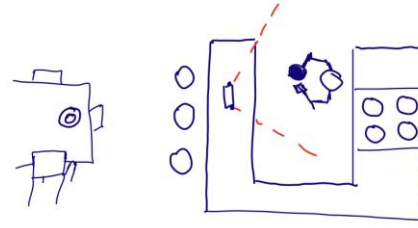
Our product

Use case 1: Conference Room

Multiple participants of a video conference are in the same room. The telepresence device is set up on the table. One participant is remotely connected to the device.

The remote participant wants to look at the person on the right. They press the right arrow key to orient the camera toward this person. The device rotates as long as the key is pressed.

The device is rotated clockwise to film the person on the right.
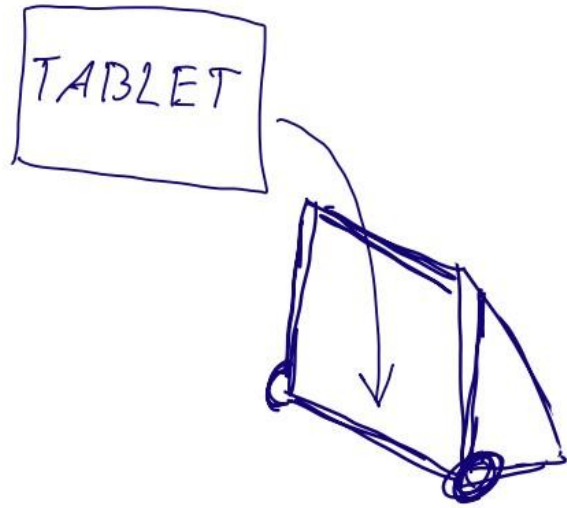
Use case 2: Kitchen

The telepresence device is used in a video conference with two or more participants. The participant with the device is in their kitchen.
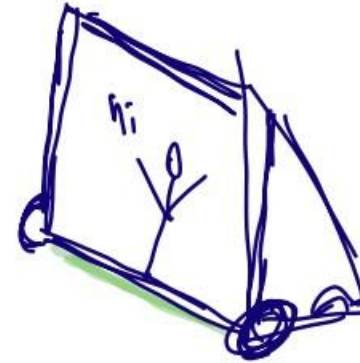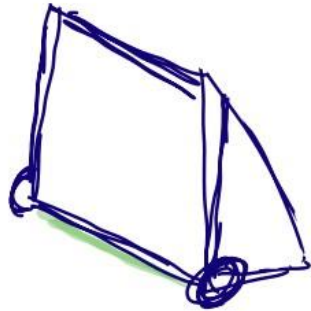

The participant in the kitchen moves. This causes them to go near the border of the video frame.

The device rotates counter-clockwise so that the moving participant stays in the frame. The conversation with the other participants is not interrupted.
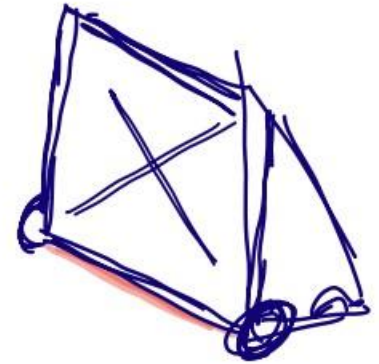
Our product

TABLET

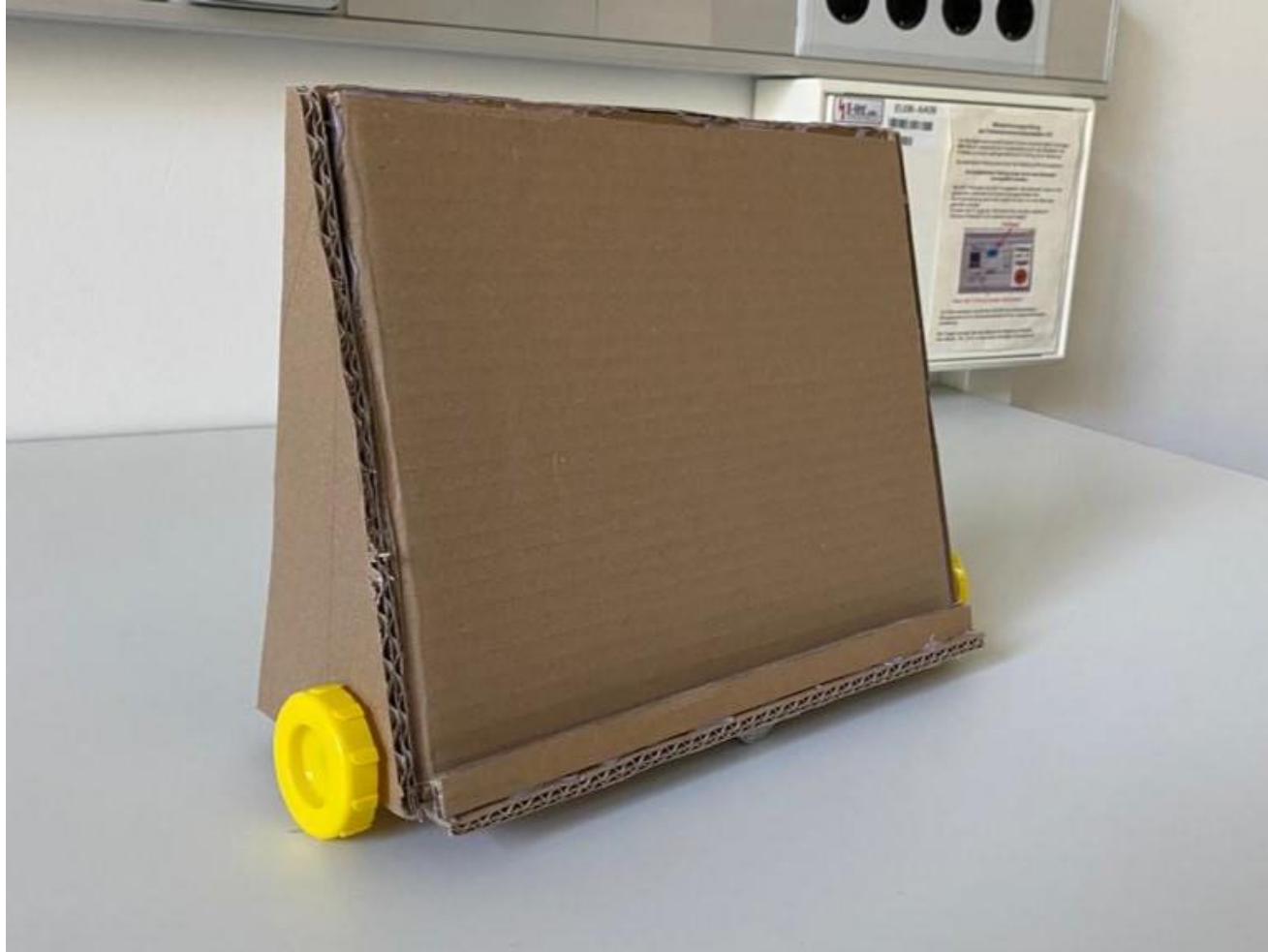The device turns on when a tablet gets placed into the holder
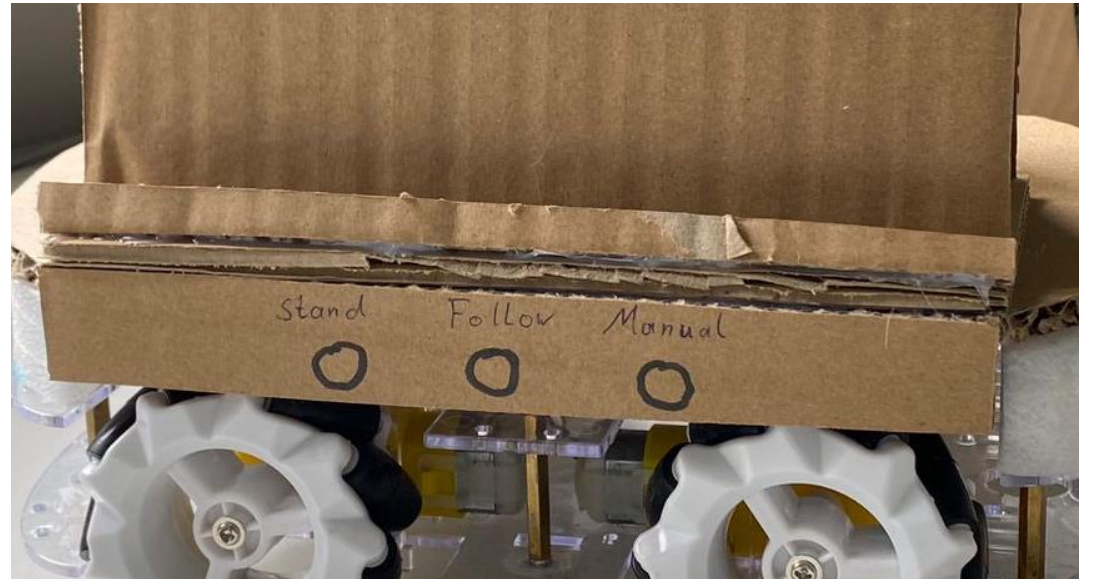
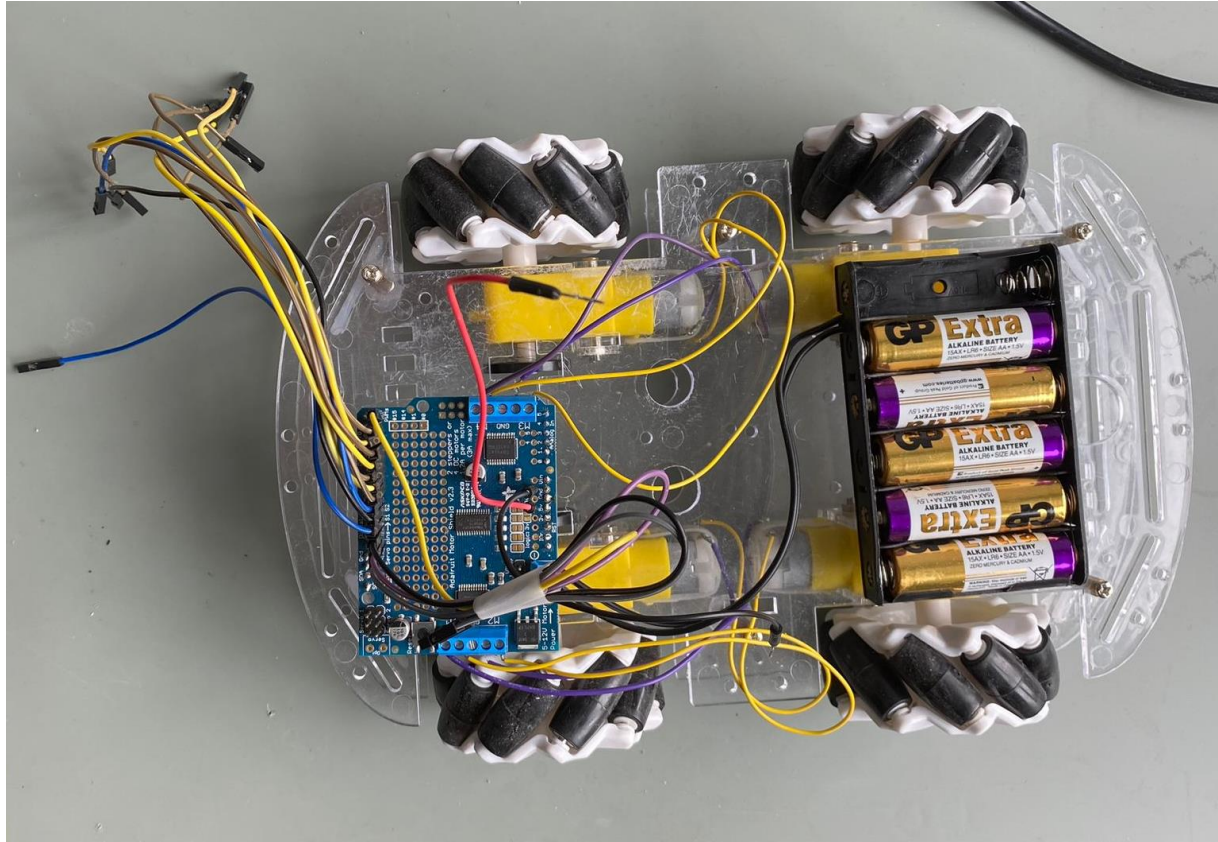Green light: On and connected

Red light: On but not connected

Prototype 1

Prototype 2

Prototype 2

Component List

- Raspberry Pi or Arduino (if the RPi cannot be powered with batteries)
- MicroSD card for the RPi
- Batteries (AA and 9V) and **power adapter**
- Omni Wheel Platform
- Three red and three green LEDs OR three RGB LEDs
- Three Push-buttons with integrated white LEDs OR additional white LEDs
- A suitable switch that requires little force so that it can act as the main power switch
- Jumper wires
- Beadboard
- Resistors
- Wood or plastic pieces for the case and tablet holder
- Maybe 3D-printed parts