

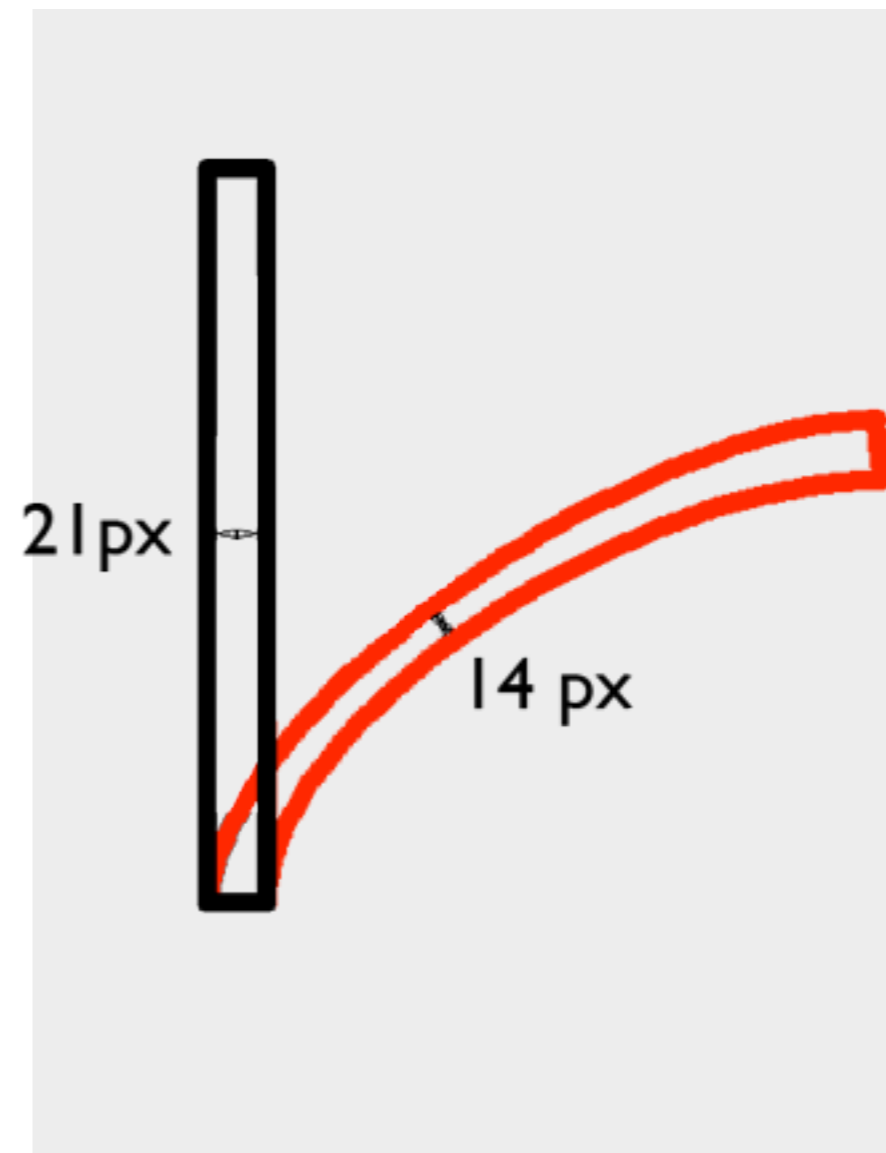
Touch Wristband

Existing Technologies

- Resistive
 - Small gap between conductive layers
- Capacitive
 - Distortion of electric field using finger
- Touch button
 - Finger closes gap using skin resistance

Bended Resistive Touch

- Bending leads to a decrease in the gap
- The thickness of available touch-materials can lead to shortcuts
- Also gap decreases with stretching



Bended Capacitive

- Bending increases width of gap
- Change in field by bending only
- Stretching also affects Gap size



21px

24.6px

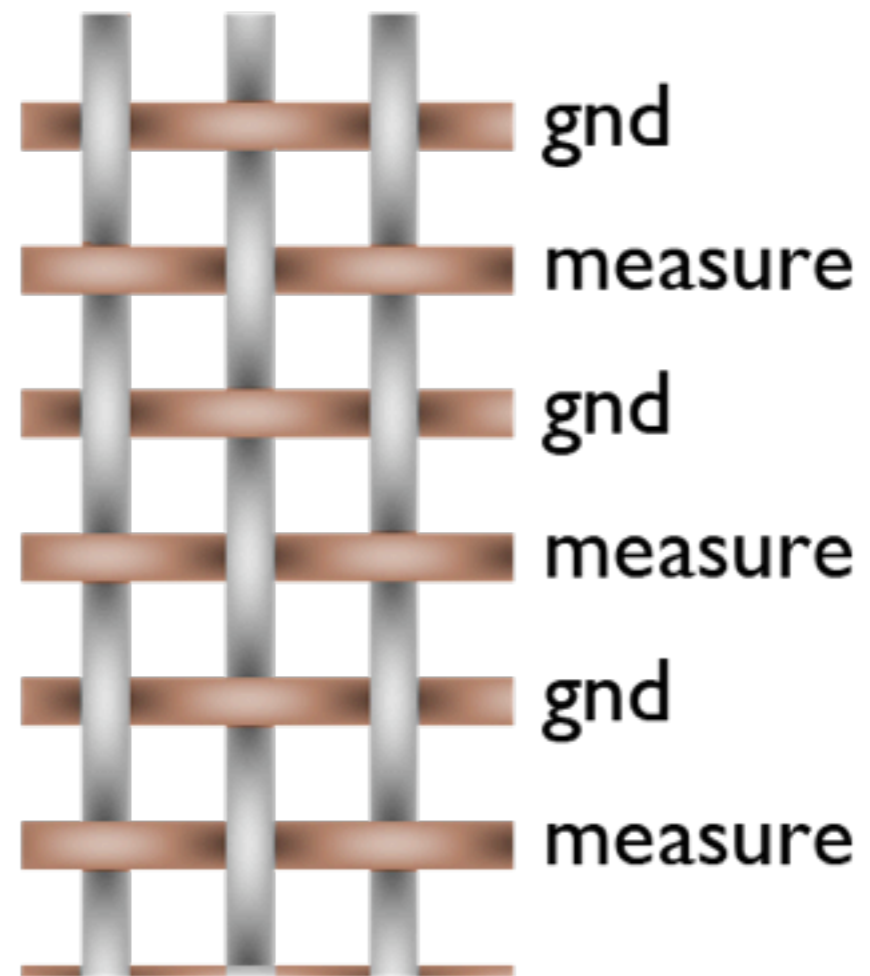
Honeycomb touch button

- 2mm height
- 7mm diameter
- Soft material
- User pushes upper layer through hole to lower layer



Touch thread

- Measure and gnd planes are close to each other
- User shortens the circuit by touch gnd +measure



Getting Honeycomb

- Not easy to get

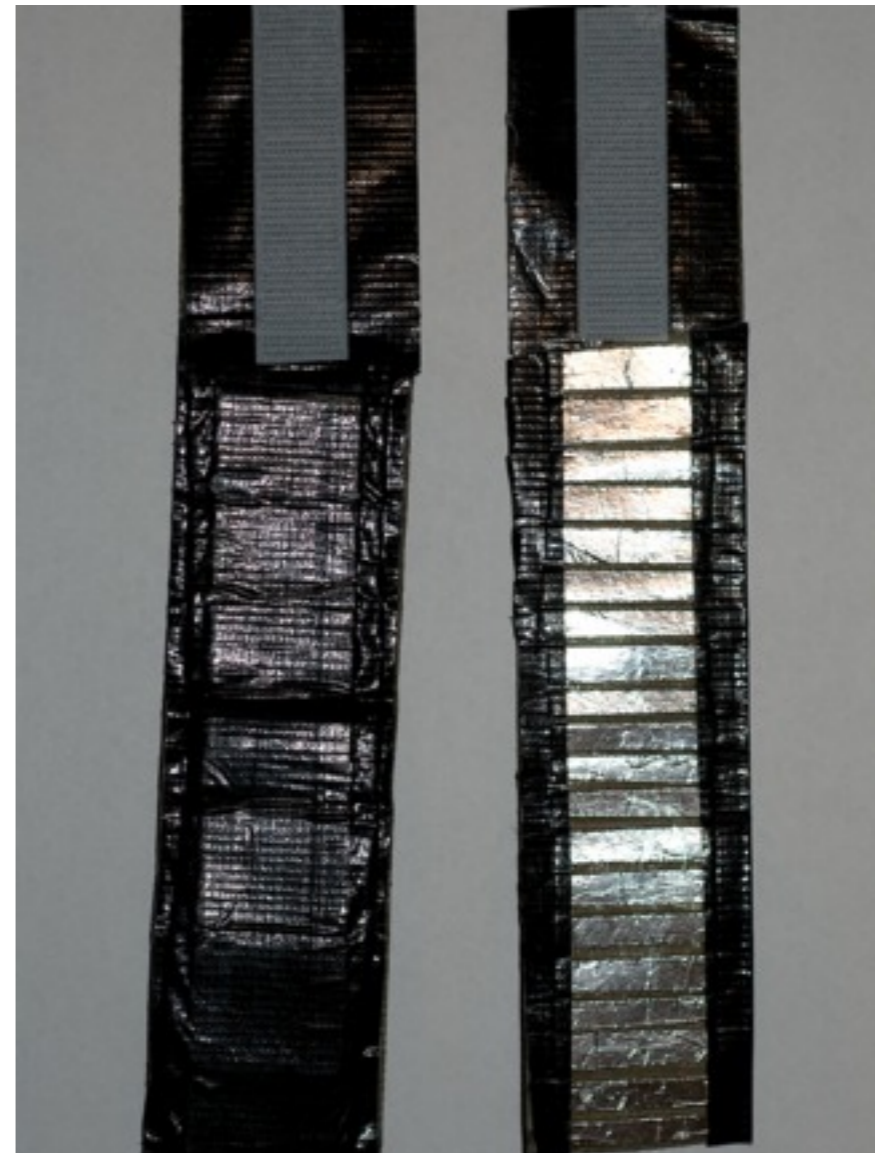
Getting Honeycomb

- Not easy to get

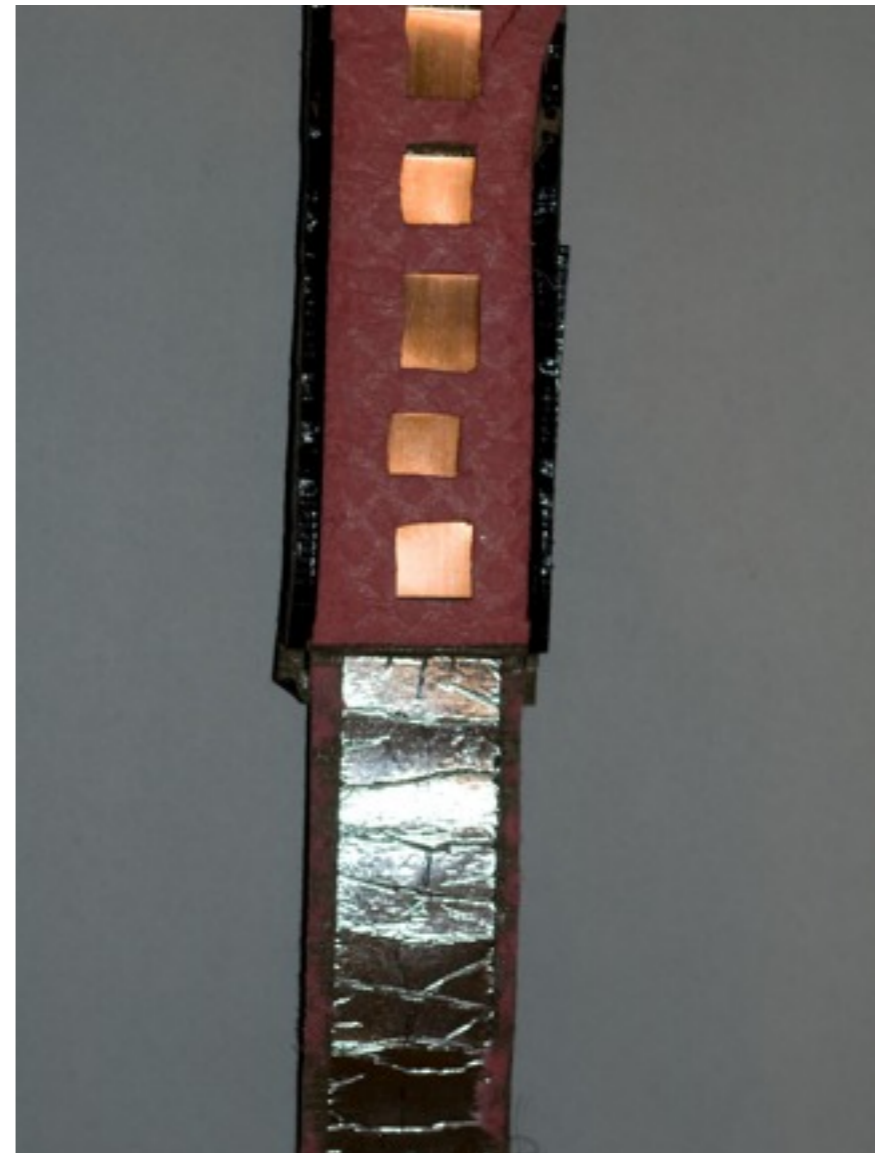


Building prototypes

- Duct tape
- Copper plate
- Aluminum tape
- Card board
- Sponge

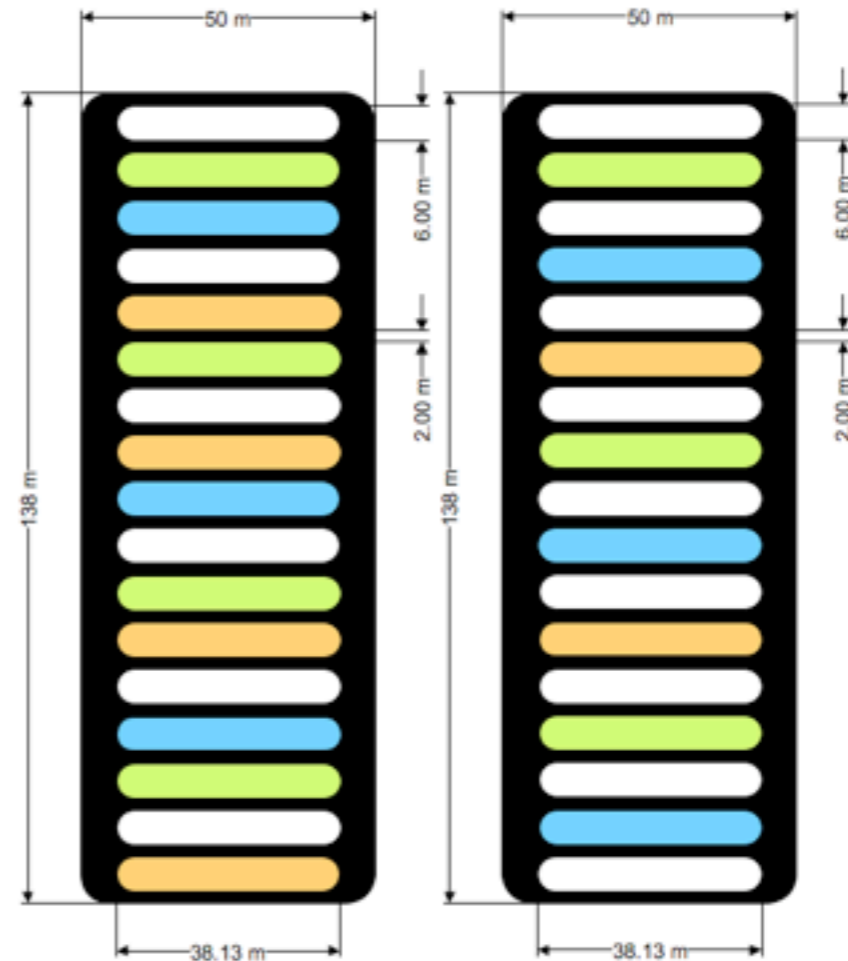


Inside the “honeycomb”



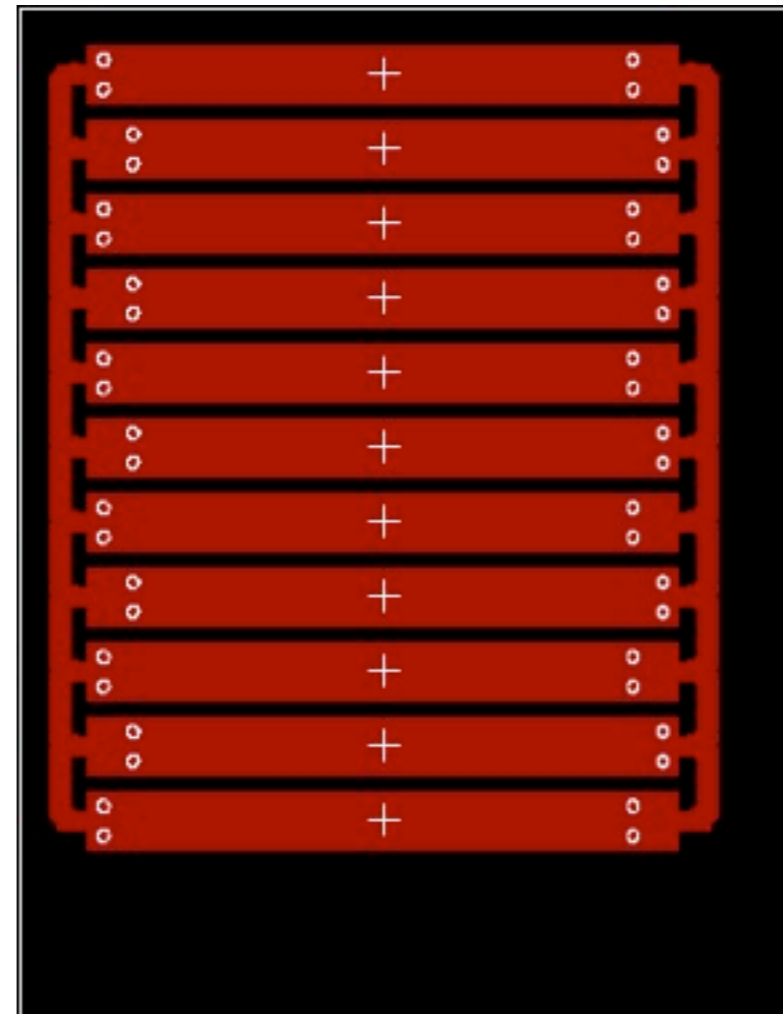
Wiring of the buttons

- 3 Button
- Allows direction detection
- 1 Power supply
- Works very well



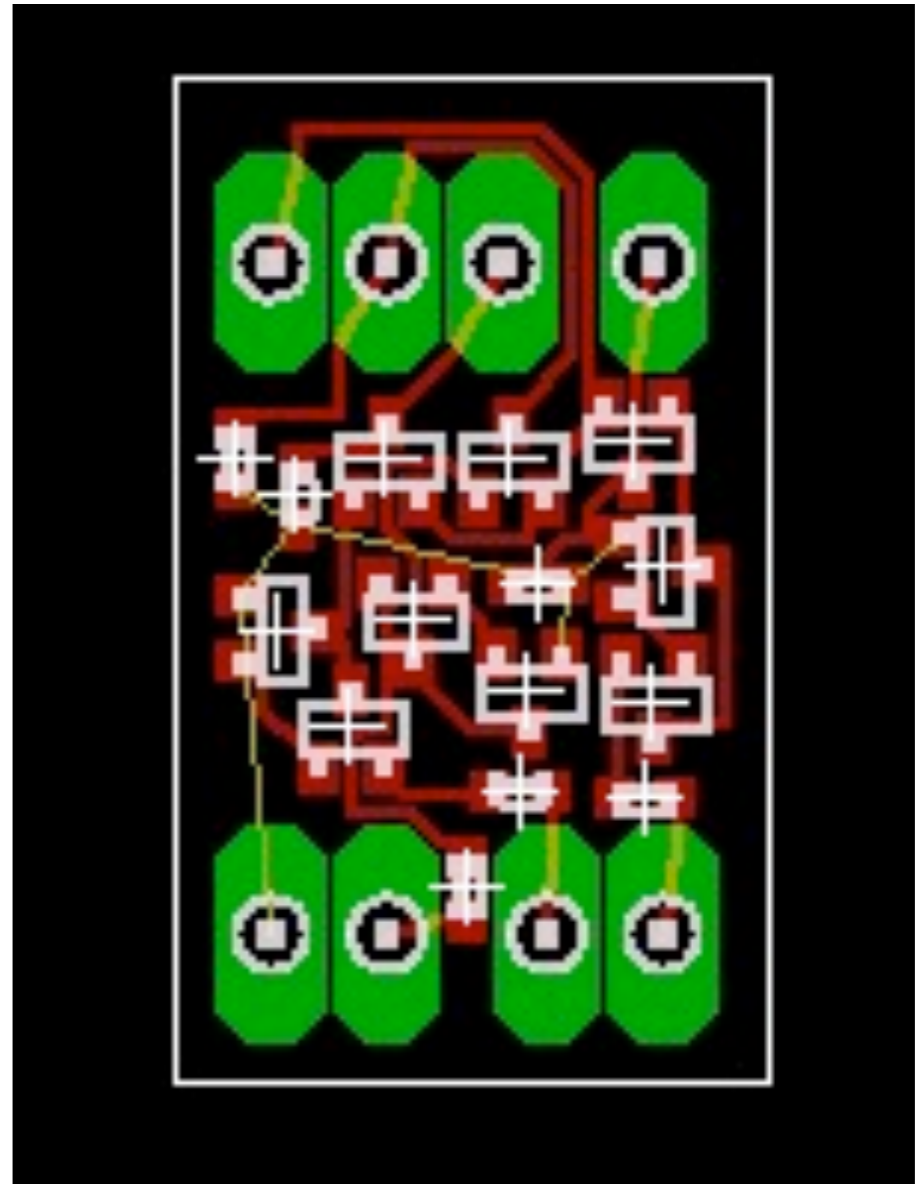
Milling the buttons

- Soldering is easier
- No scissors
- Smaller button area possible
- Equal spacing



Milling the other HW

- Incredible small
- Very low power
- Very sensitive
- Adjustable



Milling the other HW

- Incredible small
- Very low power
- Very sensitive
- Adjustable

