
EXPLORING AFFORDANCES OF SURFACE GESTURES ON TEXTILE USER INTERFACES

—
A collection of textile samples



| 1

VISUAL DESIGN

A gently ascending triangle with the squares indicating intermediate steps

SUPPORTED GESTURE

One-finger horizontal slide and/or press of intermediate squares

BASE MATERIAL

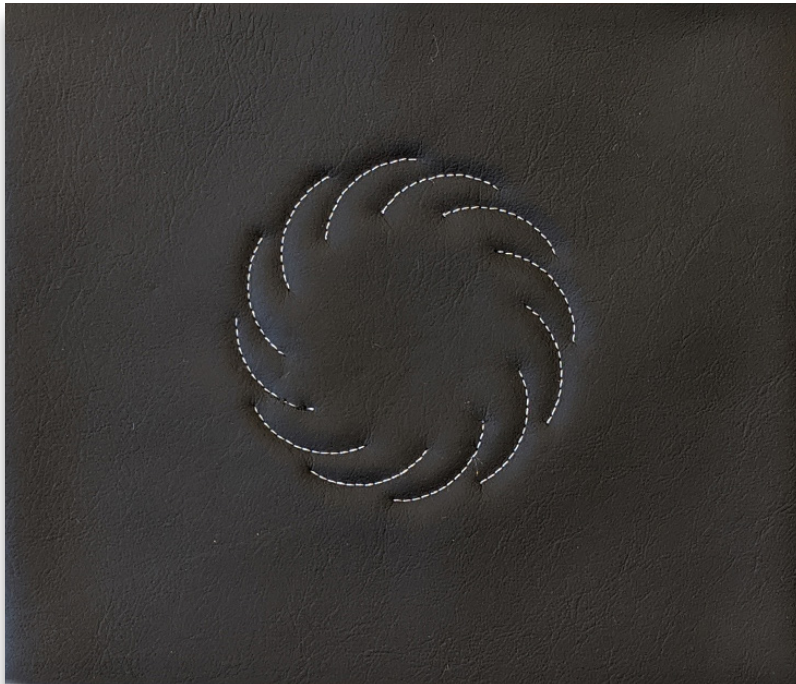
Velvet

FABRICATION METHOD

Laser cutting

SENSING CAPABILITIES

Non-functional sample



| 2

VISUAL DESIGN

Slanted single arcs connected into a full circle

SUPPORTED GESTURE

One-finger clockwise dial

BASE MATERIAL

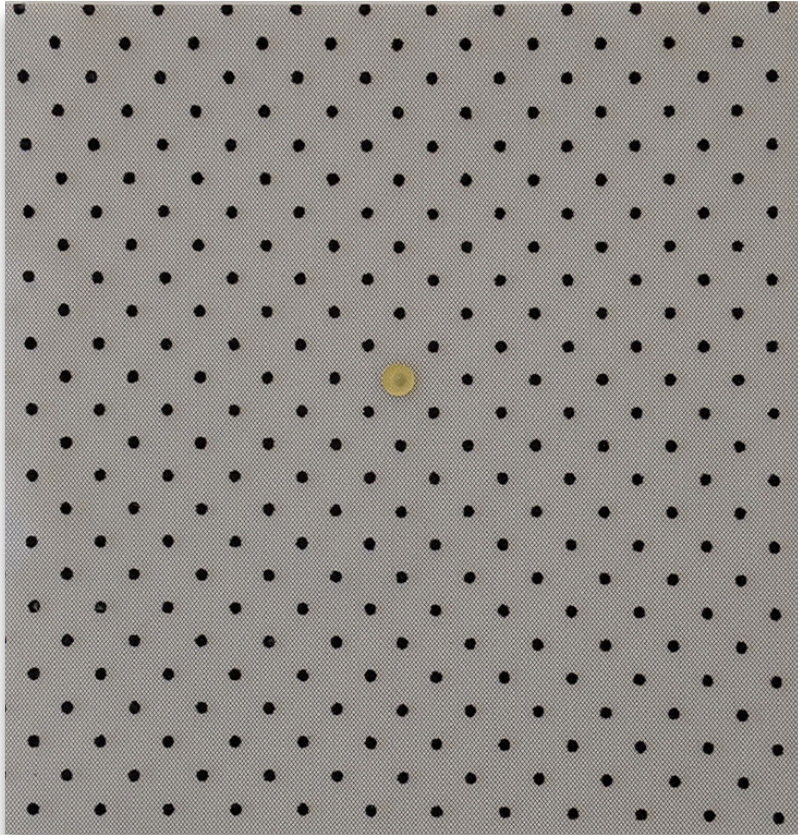
Artificial leather

FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Elektrisola Textile Wire embroidered on the bottom side. Two arcs are connected into one sensing step of the dial



| 3

VISUAL DESIGN

One circle differing in colour and size, creating visual hierarchy

SUPPORTED GESTURE

One-finger tap

BASE MATERIAL

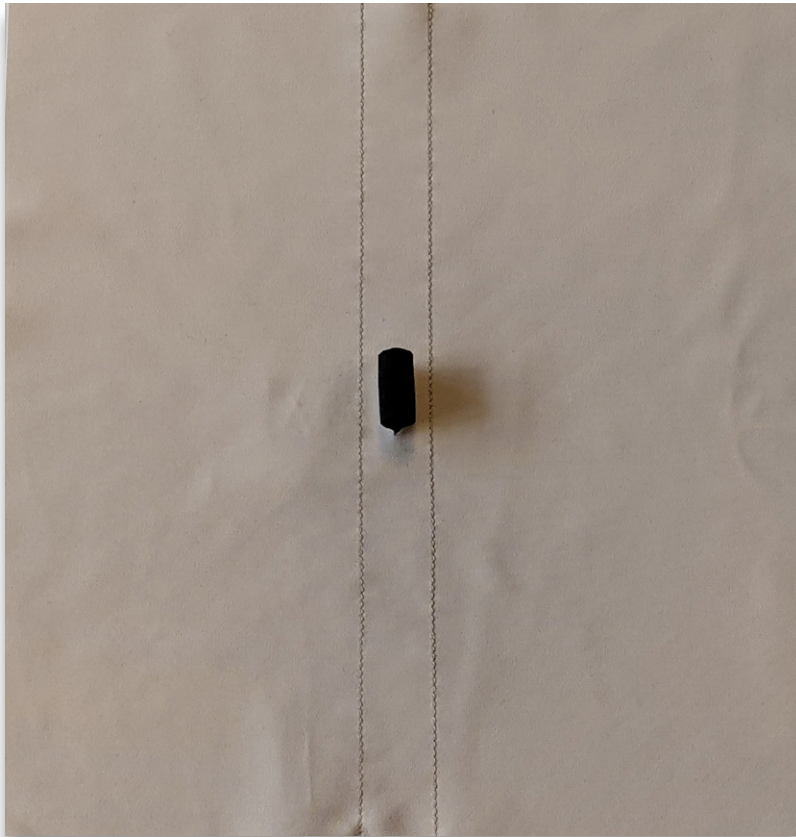
Tulle with velvet dots

FABRICATION METHOD

Lamination

SENSING CAPABILITIES

Non-functional sample



| 4

VISUAL DESIGN

Two vertical lines with a pull tab between them

SUPPORTED GESTURE

One-finger press on both sides (like a switch)

BASE MATERIAL

Single jersey

FABRICATION METHOD

Sewing and bonding

SENSING CAPABILITIES

The polymerised flap creates a connection with the Amann Silver Tech 120 conductive thread lines when pressed on each side



| 5

VISUAL DESIGN

Eight circles varying in size, colour, and line thickness to achieve an illusion of distance and space

SUPPORTED GESTURE

Five-finger expand

BASE MATERIAL

Velour

FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Non-functional sample

| 6

VISUAL DESIGN

One elevated circle

SUPPORTED GESTURE

One-finger press

BASE MATERIAL

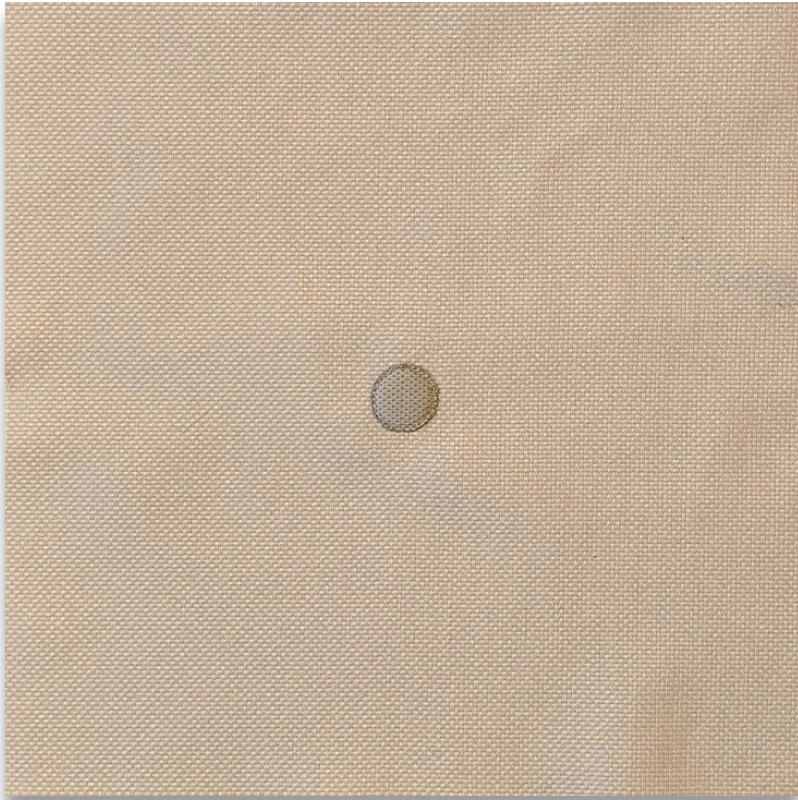
Woven synthetic fabric

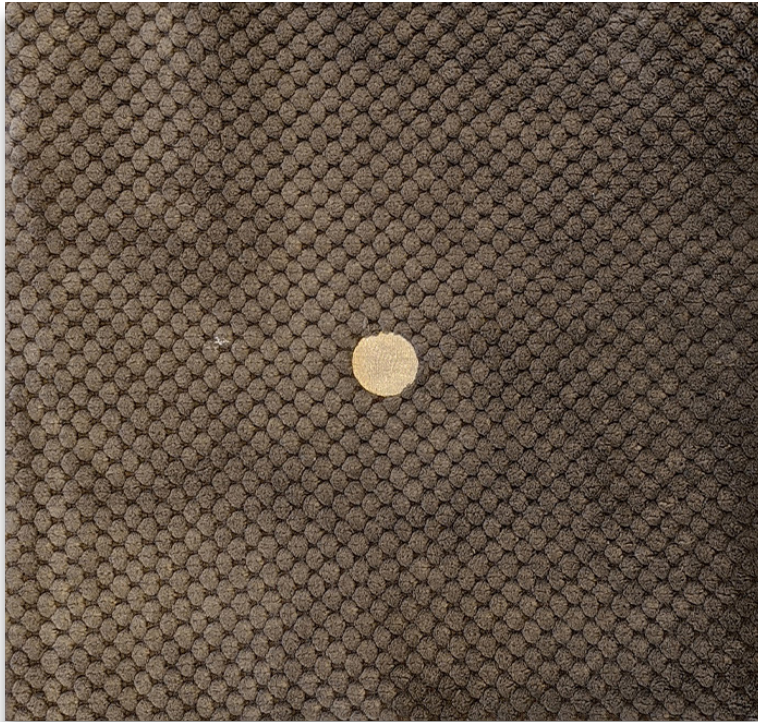
FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Non-functional sample





| 7

VISUAL DESIGN

A concave circle

SUPPORTED GESTURE

One-finger tap

BASE MATERIAL

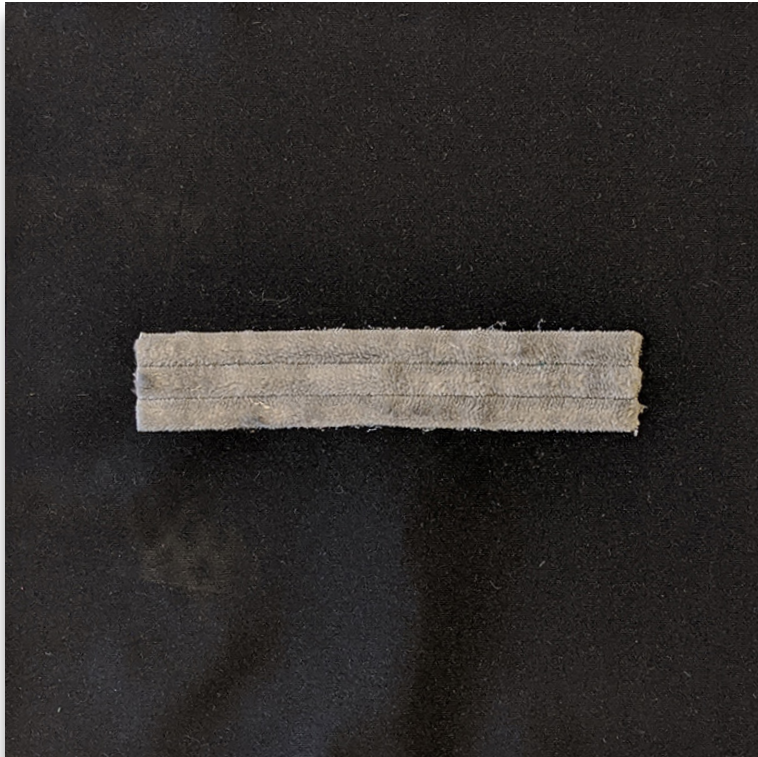
Textured fleece

FABRICATION METHOD

Laser cutting (top material) and bonding

SENSING CAPABILITIES

Adafruit woven conductive fabric as the bottom material



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VISUAL DESIGN

Horizontal rectangle with horizontal ribbs

SUPPORTED GESTURE

Three-finger horizontal slide

BASE MATERIAL

Ribbed fleece on single jersey

FABRICATION METHOD

Bonding and sewing

SENSING CAPABILITIES

Lines of Amann Silver Tech 120 sewn on top of the slider, each line with a few mm distance to the next



| 9

VISUAL DESIGN

Huge circle with long hair artificial fur

SUPPORTED GESTURE

Palm stroke

MATERIALS

Long hair artificial fur on single jersey

FABRICATION METHOD

Bonding

SENSING CAPABILITIES

Polymerized fur connected as one sensor



| 10

VISUAL DESIGN

Free form horizontally paralel shapes

SUPPORTED GESTURE

Whole palm vertical slide

MATERIALS

Single jersey in two colours

FABRICATION METHOD

Sewing

SENSING CAPABILITIES

Non-functional sample



| 11

VISUAL DESIGN

Green horizontal rectangle with vertical folds

SUPPORTED GESTURE

One finger horizontal slide

MATERIALS

Pleated nylon on plain cotton

FABRICATION METHOD

Sewing

SENSING CAPABILITIES

Non-functional sample



| 12

VISUAL DESIGN

Top to bottom vertical folds of fabric

SUPPORTED GESTURE

Whole palm horizontal stroke

MATERIALS

Foil jersey

FABRICATION METHOD

Sewing and bonding

SENSING CAPABILITIES

Lines of conductive fabric bonded on inner sides of each fold

| 13



VISUAL DESIGN

Convex and concave button

SUPPORTED GESTURE

One finger press

MATERIALS

Foam compound fabric

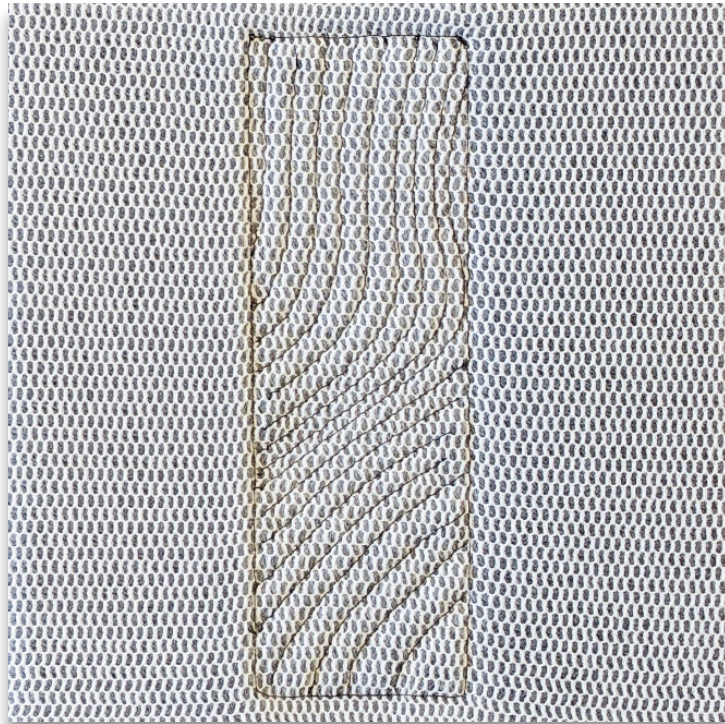
FABRICATION METHOD

Embroidery as pattern to contract the foam (left), and a second layer of foam top (right)

SENSING CAPABILITIES

Non-functional sample

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VISUAL DESIGN

Vertical rectangle with complex inner pattern

SUPPORTED GESTURE

Four-finger vertical slide

MATERIALS

Net spacer fabric

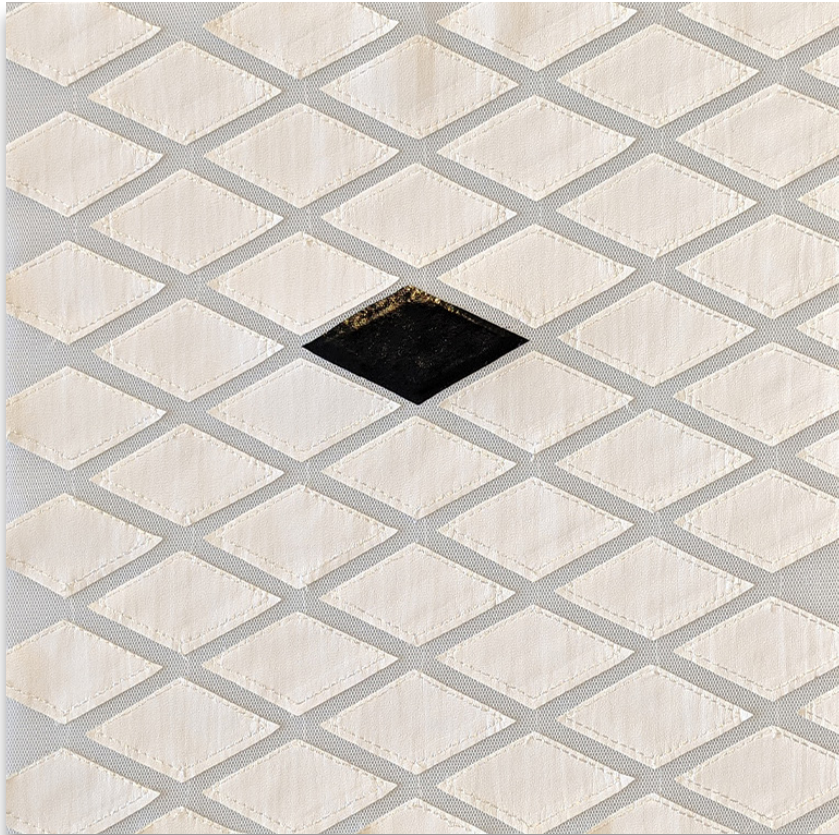
FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Madeira H40 on top of the base material,
connected as one sensor

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VISUAL DESIGN

Several white diamond shapes, one black one in the middle, with added foam from the bottom side

SUPPORTED GESTURE

Three finger press

MATERIALS

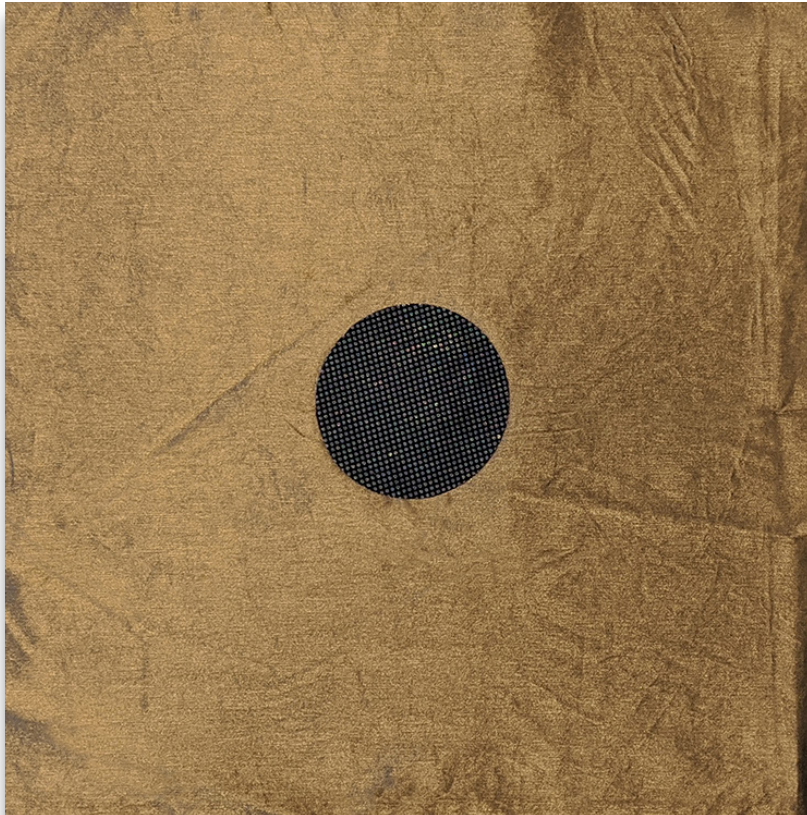
Tull with artificial leather squares

FABRICATION METHOD

Bonding from the bottom and top side

SENSING CAPABILITIES

Non-functional sample



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VISUAL DESIGN

Huge flat circle

SUPPORTED GESTURE

Whole palm press

MATERIALS

Foil jersey and plain cotton with heat transferred pattern on top

FABRICATION METHOD

Bonding

SENSING CAPABILITIES

Non-functional sample

| 17



VISUAL DESIGN

Stripped fabric, draped on a triangle pyramid, forming a convex shape rising from the base material

SUPPORTED GESTURE

Two finger pinch

MATERIALS

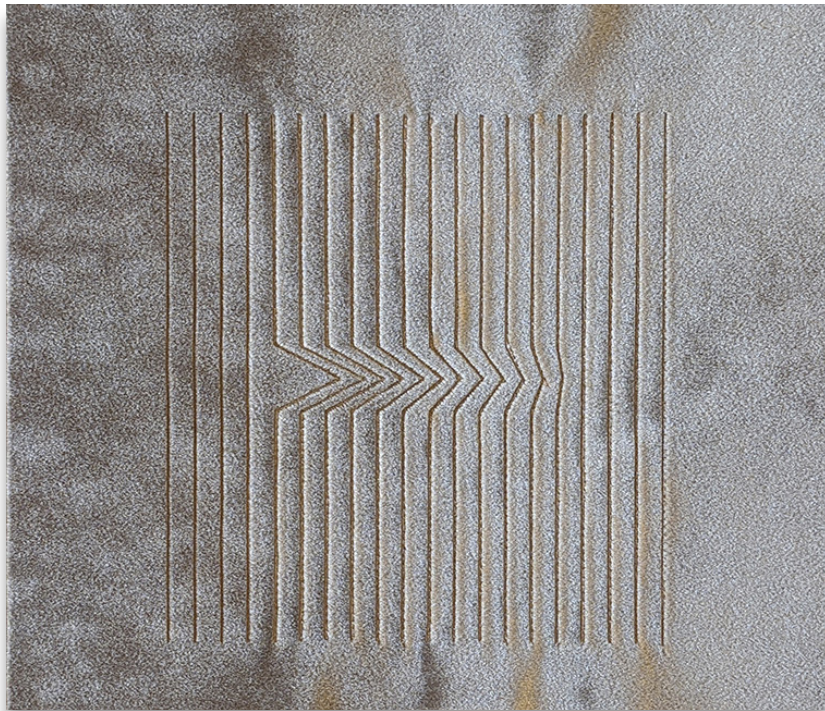
Artificial leather with knitt and lamination pattern

FABRICATION METHOD

Bonding, draping, and lamination

SENSING CAPABILITIES

Non-functional sample



VISUAL DESIGN

A parallel lined graphic with an arrow-like intervention hinting a direction

SUPPORTED GESTURE

One finger horizontal slide

MATERIALS

Valvet

FABRICATION METHOD

Laser cutting and sewing

SENSING CAPABILITIES

Madeira H40 is sewn into the laser engraved lines

VISUAL DESIGN

Halftone pattern going from bigger to smaller circles, creating a hint of direction

SUPPORTED GESTURE

Whole palm vertical stroke

MATERIALS

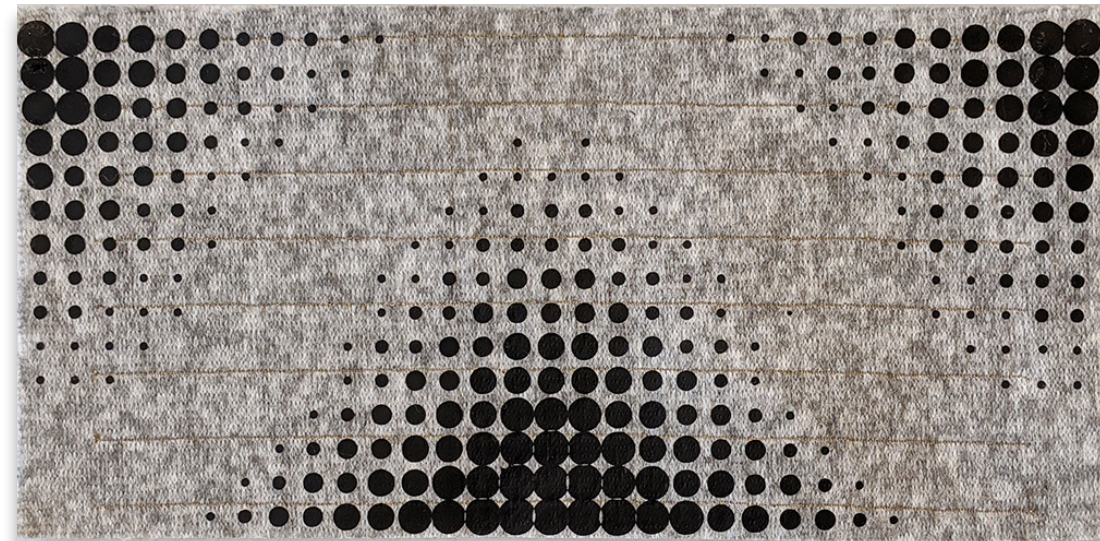
Felt with laminated pattern

FABRICATION METHOD

Sewing and lamination

SENSING CAPABILITIES

Madeira H40 sewn in parallel horizontal lines





| 20

VISUAL DESIGN

Parallel vertical lines going from thicker on one side to thinner on the other, indicating direction

SUPPORTED GESTURE

Whole palm horizontal stroke

MATERIALS

Artificial fur

FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Madeira H40 on top of the base material, each line connected as one step of a slider

| 21

VISUAL DESIGN

Two squares each one with a circle in the middle

SUPPORTED GESTURE

One finger press

MATERIALS

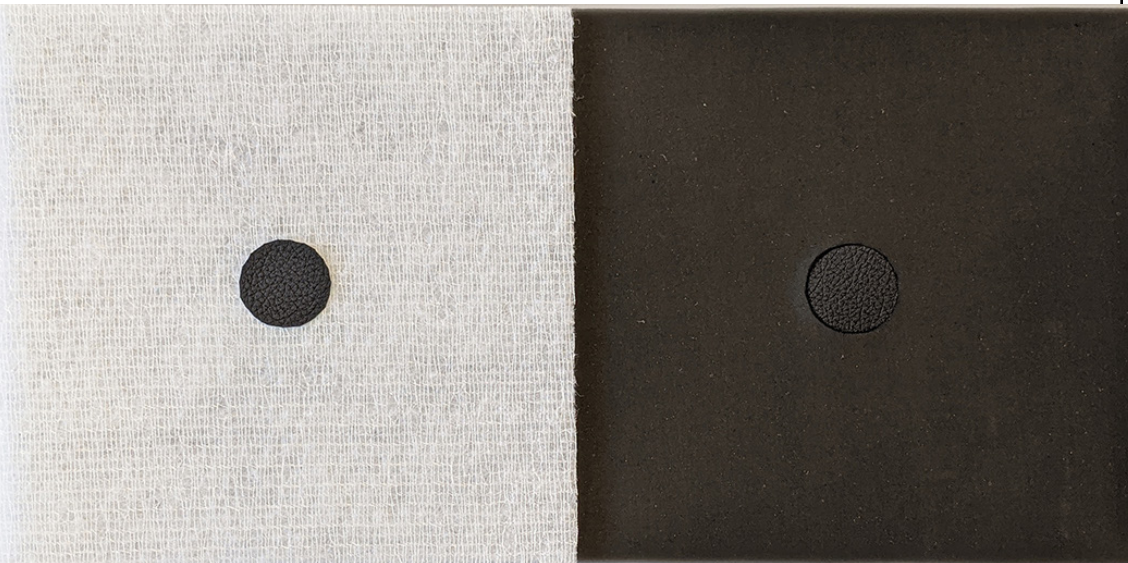
Artificial leather (middle circle), wadding backing (left), chiffon-like fabric (right)

FABRICATION METHOD

Bonding

SENSING CAPABILITIES

Non-functional sample



| 22

VISUAL DESIGN

Diagonal ribs meeting in the centre

SUPPORTED GESTURE

Five finger expand

MATERIALS

Synthetic woven with internal structure

FABRICATION METHOD

None

SENSING CAPABILITIES

Non-functional sample



| 23

VISUAL DESIGN

Eight parallelograms of loose fabric, only fixed on one side

SUPPORTED GESTURE

One directional, horizontal, one finger slide

MATERIALS

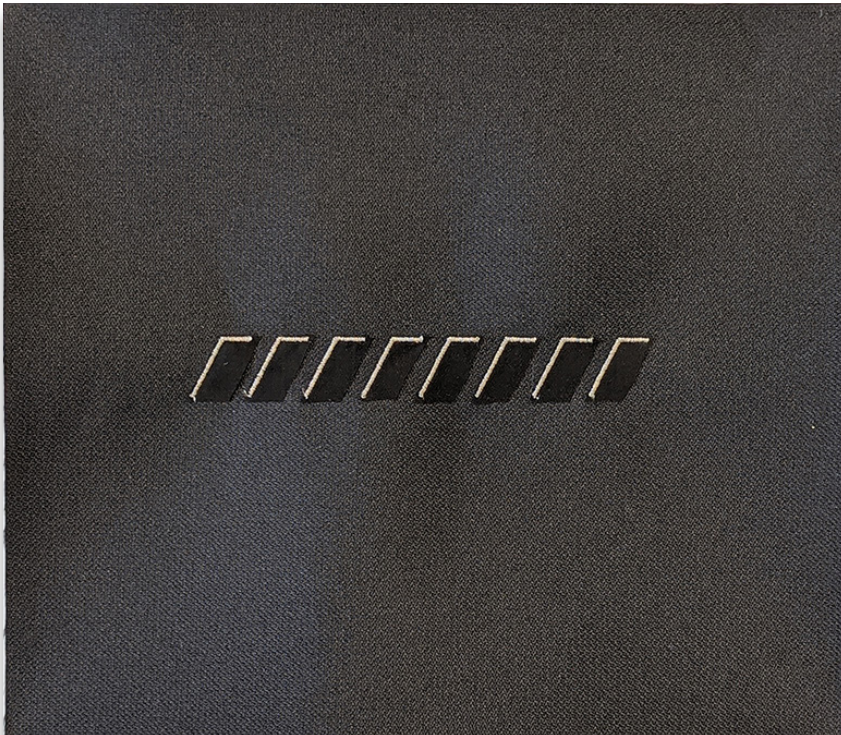
Chiffon-like fabric on bedge textile (embroidery)

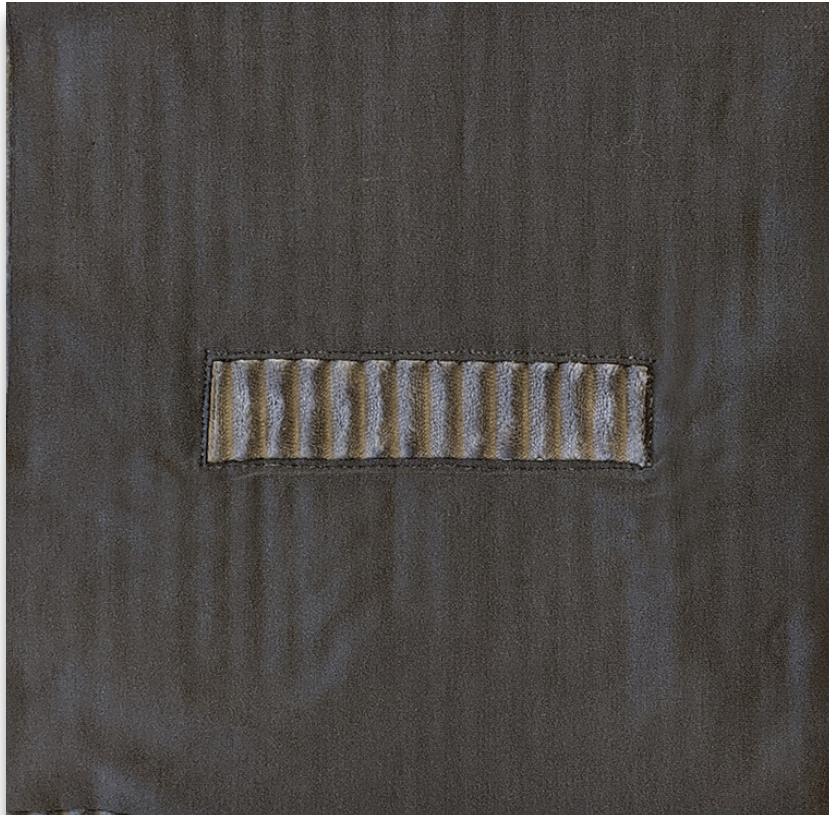
FABRICATION METHOD

Sewing

SENSING CAPABILITIES

Madeira H40 is used to hold the conductive fabric in place, each parallelogram is connected as one step of the slider





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VISUAL DESIGN

Horizontal rectangle with vertical ribbed textile

SUPPORTED GESTURE

One finger horizontal slide

MATERIALS

Single jersey over ribbed fleece

FABRICATION METHOD

Sewing

SENSING CAPABILITIES

SilverTech 120 sewn into each vertical line of the slider

| 25

VISUAL DESIGN

Eight vertical parallelograms

SUPPORTED GESTURE

One finger horizontal slide

MATERIALS

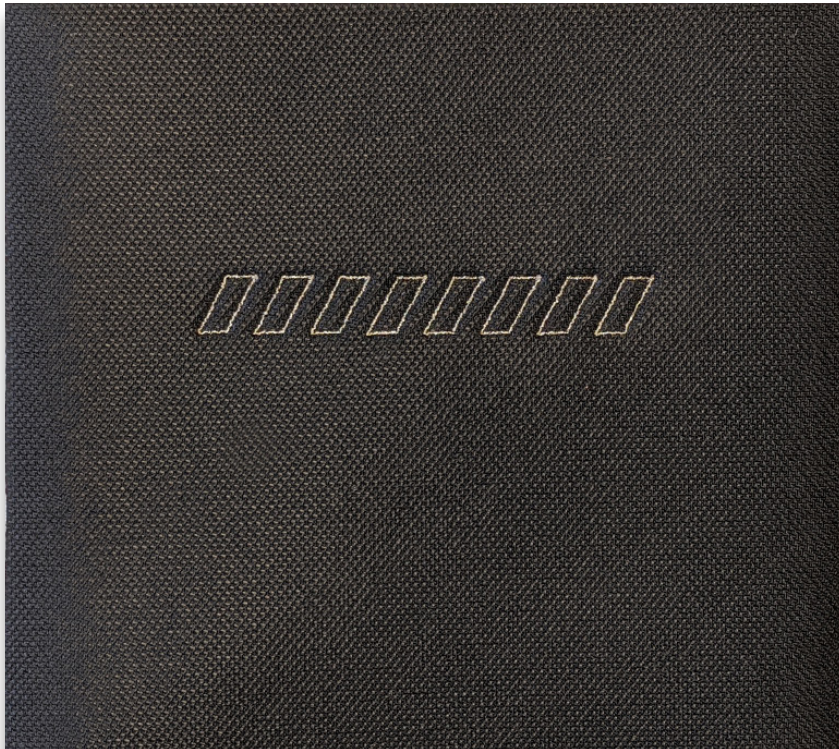
Foam compound fabric

FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Madeira H40 is used as the top yarn, each parallelogram is connected as one step of the slider





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VISUAL DESIGN

Huge circle

SUPPORTED GESTURE

Three finger press

MATERIALS

Quilted fabric with wadding filling on textured fleece

FABRICATION METHOD

Sewing

SENSING CAPABILITIES

Non-functional sample



| 27

VISUAL DESIGN

One horizontal side-to-side fold

SUPPORTED GESTURE

Three finger press on each side (like a switch)

MATERIALS

Thin felt with foil jersey in the middle

FABRICATION METHOD

Sewing

SENSING CAPABILITIES

Two lines of Madeira H40 conductive thread on each side of the fold

| 28

VISUAL DESIGN

Click wheel shape

SUPPORTED GESTURE

Three finger press

MATERIALS

Foam

FABRICATION METHOD

Embroidery

SENSING CAPABILITIES

Non-functional sample

