Cart 360
Assignment 1

Laura Hirsh

coded program, trouble shooting / prototyped and prepared hardware.

Ruth Johnstone

Projection setup/mapping, filmmaker and assisted in coding program and preparing hardware.

Van Le

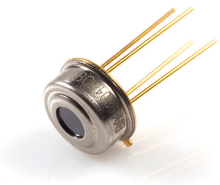
Research, storyboarding, pdf creation, construction and set up of space.

Sensor Research

Sensor: Force sensitive resistor 0.5"

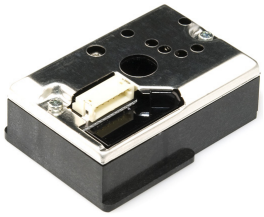
Voltage requirements: Anything less than 1 mili amp
Resistance: 1MΩ (one mega ohm)
Sampling range: between 0 and 1023, 100g-10kg of applied force
Use with Arduino: Gauge pressure on the FSR by receiving numerical value between 0 and 1023 in Arduino. A 10K resistor is needed and the FSR is hooked to 5V and an analog input outlet.
Special requirements: Can't take force over 10kg. The sampling point is specific to direct area of contact on the FSR, this makes extending the space to which an FSR will detect pressure; difficult.

Sensor: Infrared Thermometer



Voltage requirements: 3.3V if 5V then resistors are needed
Resistance: 1kΩ (one kilo ohm) or less
Sampling range: -40 °C to 85 °C outside temperature and -70 to 382.2 for sensor temperature.
Use with Arduino: Designed for non contact temperature measurement for temperature and movement detection, has customizable PWM output for continuous reading and a SMBus compatible digital interface (two analog output/inputs.) Object temperature and outside temperature are the controlled and sensed values.
Special requirements: Extreme high and low temperatures result in less accurate readings, it's important that the temperature be within the range.

Sensor: Optical Dust Sensor



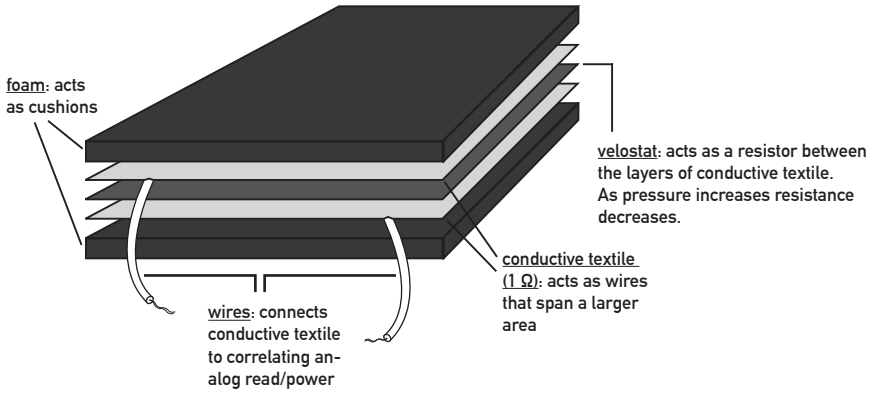
Voltage requirements:from 4.5V to 7V
Resistance: 1kΩ (one kilo ohm) or less
Sampling range: Measures dust particle densities of 1µm from 0 to 8000 particles per liter
Use with Arduino: Needs an added 10k resistor, the output of the sensor is an analog voltage proportional to the measured dust density. To interface with the sensor you need to connect to its 6-pin, 1.5mm pitch connector. The Arduino prints the density of dust detected.
Special requirements: Needs to be cleaned if dust adheres to the sensors. There's an infrared emitting diode and a phototransistor are diagonally arranged into this device, to allow it to detect the reflected light of dust in air. If these components are covered in dust, the readings will be inaccurate.

Sensor Research: final

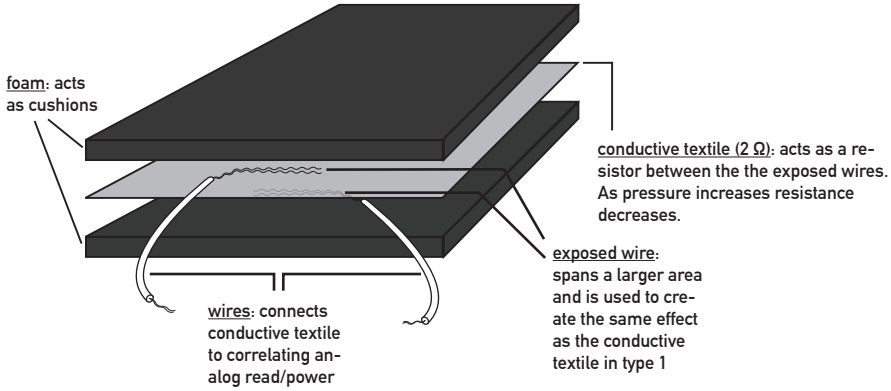
Initially we chose to use the force sensitive resistor (FSR) sensors but due to it's limitations area wise, we decided to recreate the FSR's effect with velostat and conductive textiles.

All story boards were originally based off FSR sensors.

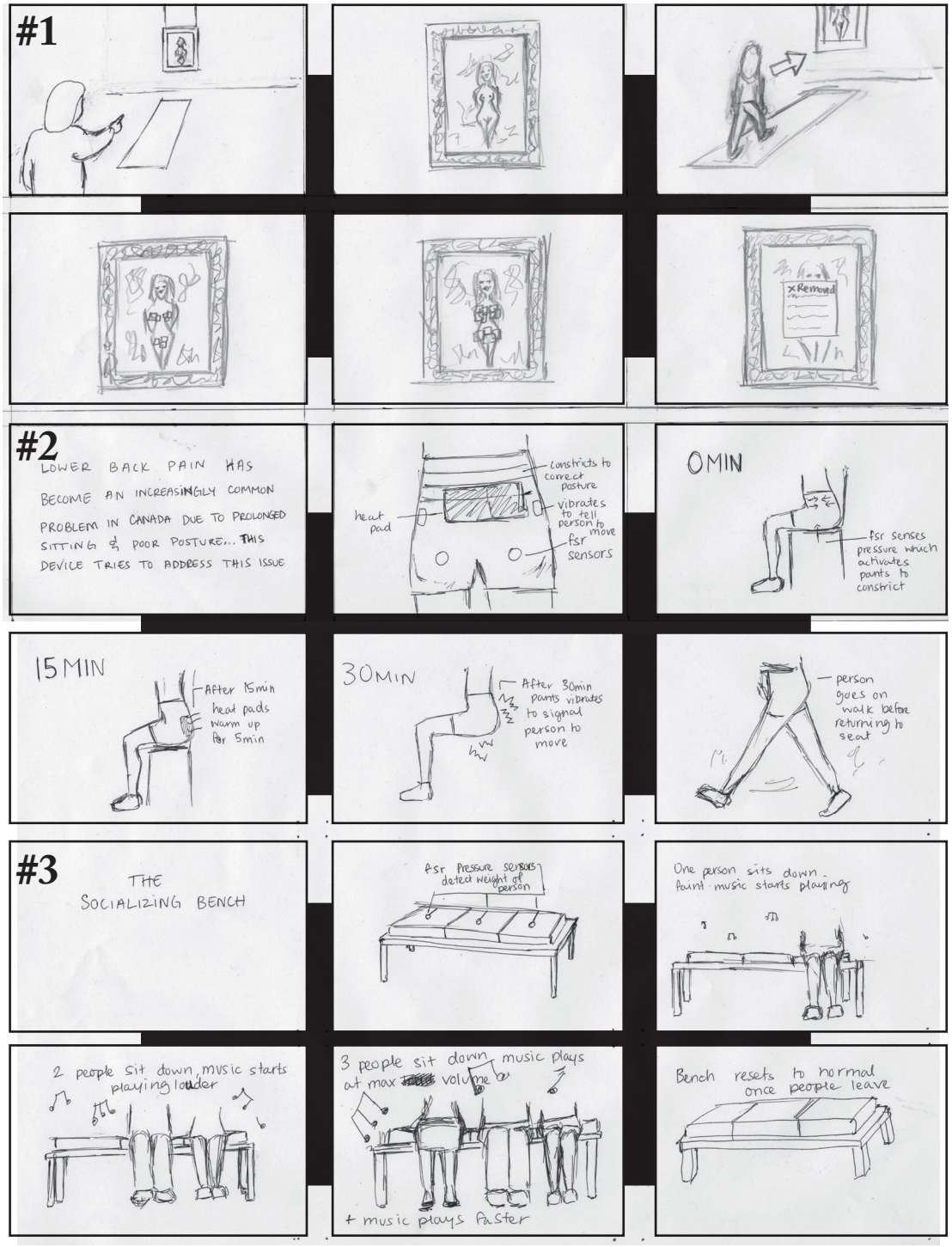
type 1



type 2 (used with a higher resistance conductive material)



Story Boards



Concept

How does media exacerbate social constructs?
Do we have control over our content in the realm of social media?
Why is nudity, particularily female nudity, viewed as perverse compared to their male counterparts?

These were the initial questions we asked ourselves when conceptualizing our project. Ultimately our thoughts on the role of media sensorship today in western society led us to compare the taboo of nudity within media to the validity of nudity within the gallery setting. How is it that female nudity, when placed within a frame is more valued than the content we ourselves produce? Our piece is an exploration of these ideas through symbolism and the subversion of perception. Our goal: to make the viewer question their own agency within society, and whether their sense of freedom is genuine or rather an illusion.

Pressure sensors placed along a pathway were used to measure the viewers distance from a classical nude painting. From a distance the painting is normal but as the person gets closer the image gets increasingly pixelated. When they reach the end a message stating that the image has been removed due to innapropriate content appears.

Aesthetic Choice

Access to art has long been associated to wealth and hence the gallery becomes a method of proclaiming the validity of content by society's elite. In comparison to social media, which is open to most classes, there is an illusion of freedom of information until nudity is involved. Sensorship then becomes a methodology of invalidating content and a method of control.

The opulent gallery setting we tried to stage our work in symbolizes both the classist system which validates content and the illusion that the viewer percieves as their own agency over information.

gilded frame: referencing other painting's frames like the Mona Lisa, a gold ornate frame is a symbol for the worth /prestige of the content.

lighting was also important in emphasizing the different elements within the space, creating drama through contrast.

red carpet: to cover the pathway and add to the gaudy opulence aesthetic.

Final