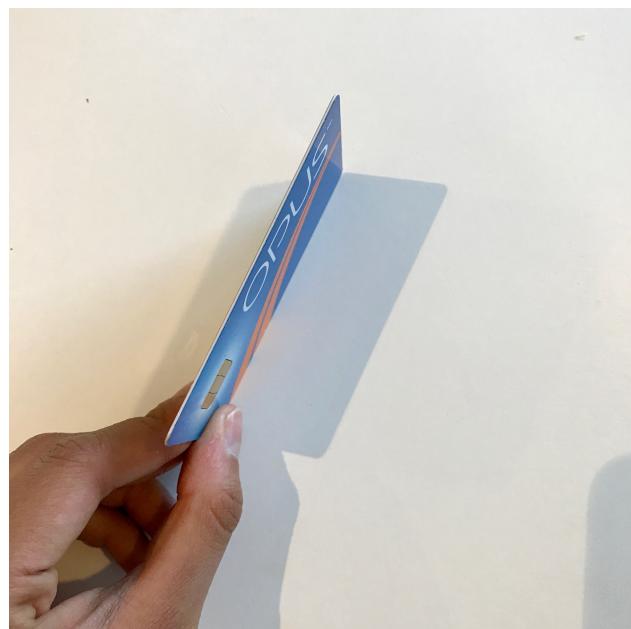


CART 360 - Etude 1
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Object 1: OPUS Card



Analysis:

The object that I chose to present as my first conductor is my OPUS card. Not only is this object a necessity in my life because it allows me to access the city bus, it is also with me every day. At first sight, this card seems like an insulator, as it is mainly made out of plastic. However, if you look carefully, the card contains a small square-shaped gold metal surface, used to scan when one enters the bus or metro. The multimeter detected that only the small middle part of this metal surface conducts electricity, what is around it does not. This is interesting because although the surface looks identical from the top, what is underneath this thin surface is what differentiates some parts as conductors and others as insulators. My OPUS card is extremely lightweight. It is hard and does not bend, and 95% of the card is made out of plastic. The thin metal surface takes up around 5% of the whole object's material and it is in the shape of a square with round edges. The metal surface has crease lines that also outline the part of the card that conducts electricity. This object is very small, with a length of 8 cm, a height of 5 cm and a width of around 1-2 mm. Overall, it is not a very resistant object. It can easily break if bended too much and its size does not help secure its structure. However, since it is mainly made out of plastic, it would not break if it were to fall on the floor, thus it is not fragile. Additionally, the aesthetic feel of the OPUS card is quite weak. The card is blue with two orange stripes, with the words OPUS written on it. On the back one can find the picture of the card's owner on a white background. The metal surface is what really gives a nice feel to it, making it seem more digital. Its texture is more of a gloss while the metal surface feels more like a smooth cold surface because of how equally flat it is. Overall, this card's light features gives me the ability to bring it anywhere without any difficulty while the small metal surface allows me to access the metro and the bus. It is the switch that allows me to transport myself from place to place.

Object 2: Gold-Plated Sunglasses



Analysis:

The object that I chose to present as my second conductor is a pair of gold-plated sunglasses. This is quite a meaningful object to me as it is my most used pair of sunglasses, and to find out that it conducts electricity was very exciting! Its resistance is very low, rounding off to about 0.4 Ohms. Only the parts of the sunglasses that are gold plated are the ones that conduct electricity. These parts are the arms, the bridge, the nose pad, the earpieces and the hinges. Only the lenses are insulators. It is a shiny bright gold object that contains reflective lenses. It has a smooth glossy feel to it but contains hard edges from the thinner parts of the object such as the arms and the bridge. The sunglasses are very fragile, especially since its structure relies on its thin arms and because of its delicate lenses. Thus, it could easily be damaged both if dropped on the floor or if something were to fall on it directly. They are also lightweight and easy to carry around in my hands. However, I do constantly feel like I have to be careful with them at all times. Aesthetically, this object is very beautiful to look at. It is clean and simple, not a lot of things going on, just a nice gold-plated structure. The lenses are round and the rest of the object's parts are slick and thin. It is a very minimal type of object. It is mainly because of its aesthetic properties that I wear this pair of sunglasses on a daily basis. Not only do they achieve their main function very well, the one of protecting my eyes while allowing me to see better when it is very sun outside, but they also look great!

Object 3: Cardioid Condenser Microphone

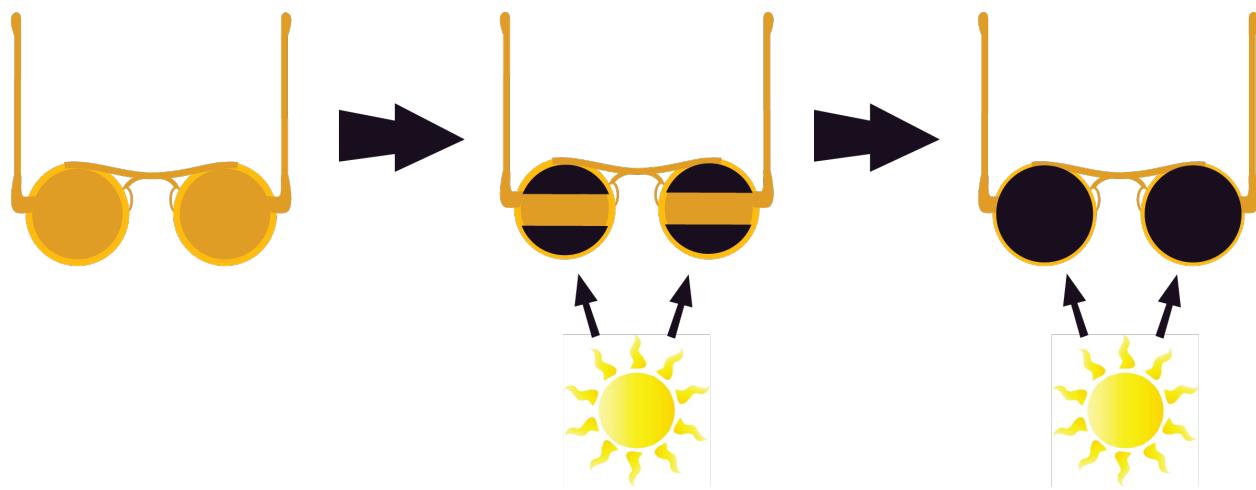


Analysis:

The object that I chose to present as my third conductor is my condenser microphone. I use this microphone on various occasions to record sounds for projects or to record myself singing. It is the medium between a sound and how that sound goes into my computer. The microphone itself is conductive all around and has a very low resistance, but the black pop filter in front of it however is not as it is made of thin sheer fabric and plastic. The mic is gold-plated and has the shape of a small cylinder. The top part resembles a flat cylinder. The bottom part feels very smooth, almost similar to an aluminium thick flat matte surface. It does not shine, has no bumps and really slides well in one's hand. The top part however is very textured. It contains wires of gold-plated aluminium that cross each other vertically and horizontally, forming a pattern. If you look well inside this top part, you will notice that there are smaller wires inside as well. Overall, the top part feels like a bumpy but compact shiny structure. The mic has very minimal features which is what gives it a simple look. It has a modern feel to it and contains two parts that together form a good-looking professional microphone condenser. It is very easy to carry, but it is not extremely light. It has a small mass to it but easy enough to hold it in your hand and walk around with it, although putting it in a bag would be more ideal. This object does not seem very delicate. Its hard thick surface allows it to be manipulated with ease and its overall tight structure seems hard to break. What this object's properties afford me is a well-structured, compact microphone that will last several years. Not only am I able to record sounds with this microphone, but I am guaranteed an object that will not break with the slightest manipulation.

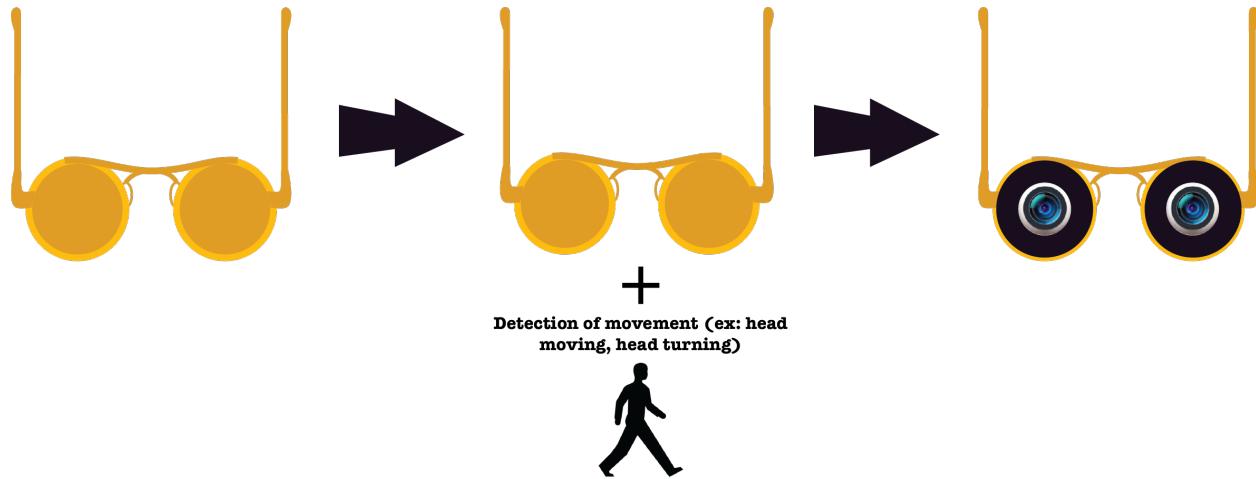
Favorite object: Gold-Plated Sunglasses

Switch 1:



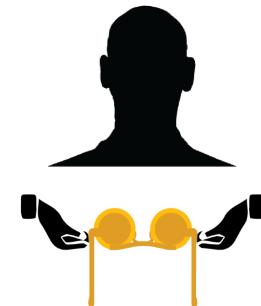
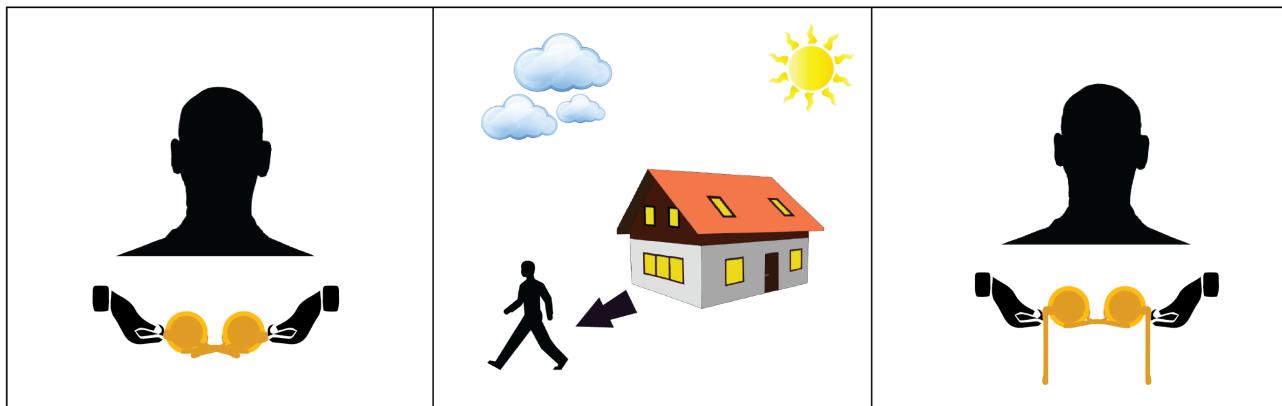
The first switch is activated when the lenses come in contact with rays of sunlight. This triggers UV protected lenses to quickly drop down on the surface of each lens.

Switch 2:



The second switch is activated when the sunglasses are put on the user's face and movement coming from their head is detected. The switch thus allows a small camera to turn on from the lens, which turns your sunglasses into a phone camera.

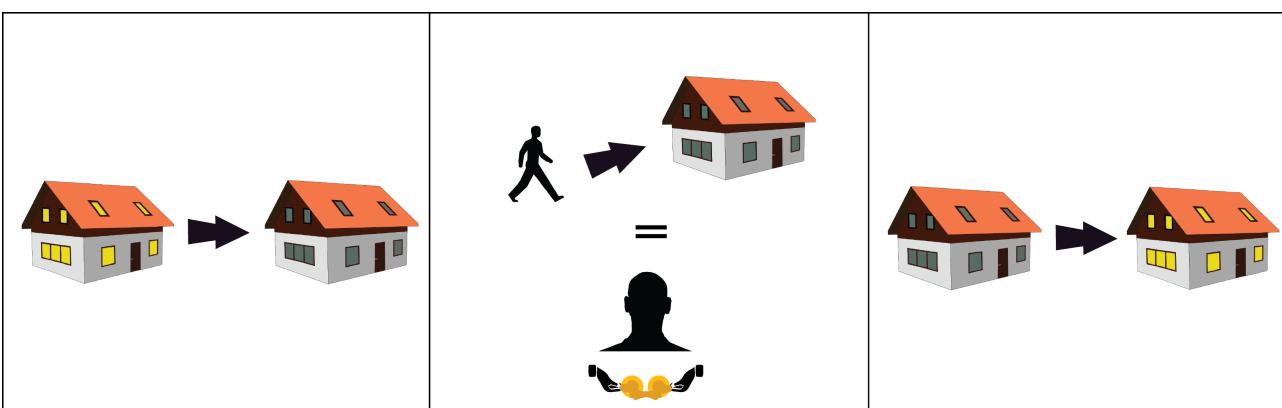
Switch 3 - Storyboard:



1. User is inside his/her house and their sunglasses are closed because they are not needed.

2. User goes outside to take a walk and leaves his/her house. The lights are turned on.

3. User opens up his/her pair of sunglasses and puts them on.



4. When the sunglasses open, this creates a switch that activates the lights to turn off in the house.

5. When the user walks back in the house, this means he/she will close the sunglasses when entering.

6. This will cause a switch to turn the lights back on again.

This storyboard represents how the act of opening and closing my sunglasses can be a switch to turn the lights of my house on and off. Usually, one opens up their sunglasses when they exit their house, and might forget to turn the lights off. This switch is connected with the house lights and when the sunglasses are opened, they automatically turn the house lights off, and turn them back on when the sunglasses are closed again. Thus, opening and closing the pair of sunglasses is the switch in this scenario.