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(Lauren Marone)

ART385

Project 3: Mapping physical interaction to and from the virtual
(software + hardware) as imaginary prototypes

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"C3PO AND R2"

05/07/20

VIDEO DOCUMENTATION LINK: <https://youtu.be/Rm2rCpZtNuU>

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DOCUMENT INFO (FROM 4/30)

I plan to create AI robots of C3PO and R2D2 from "Star Wars". They each are life-size and have a real-life purpose. C3PO is a translator and can speak any language in the galaxy, just like in the movies. R2 is a mechanic and displays holograms of things like movies or messages from people. Obviously, I cannot create these droids (yet), so the Arduino board and Processing code will stand in place of that. As you will see in my interaction diagram, I plan to have three outputs and inputs, one button that switches between C3PO and R2D2 (on-screen images), one potentiometer that when turned changes the language C3PO is speaking or the hologram that R2 is displaying, and one button that turns on an LED light that eventually will turn off once the droids need "charging".

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AUDIENCE

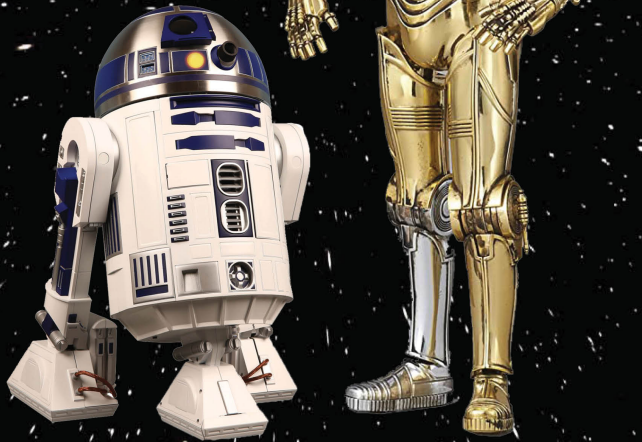
The audience for this project are Star Wars fans and geeks, mostly adults/teens. I want them to get the immersive experience of the Star Wars universe, right from home. These personal droids are customizable, to a point, and will help with anyone's intergalactic travels.

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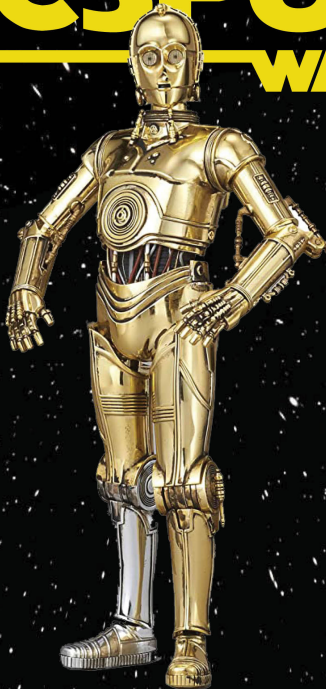
HAND-DRAWN SKETCH

(On Next Page...it is computer created, not hand drawn)

STAR
C3PO AND R2D2
WARS

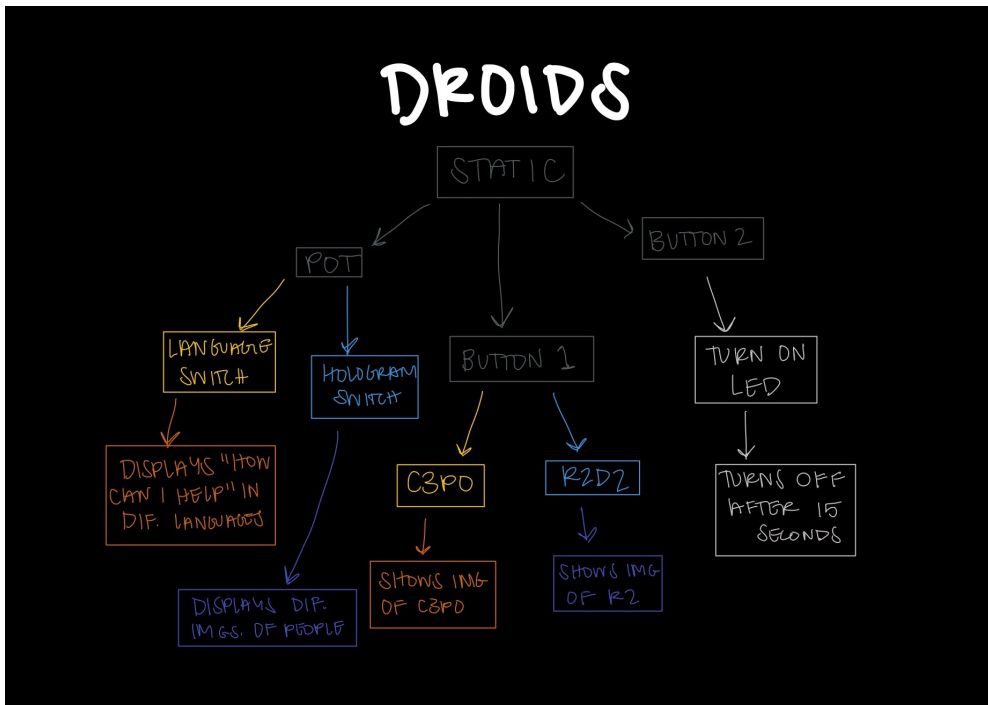


STAR
C3PO
WARS





INTERACTION DIAGRAM



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SOFTWARE DESIGN

This project allows the user to interact with everyone's favorite droids, R2D2 and C3PO. When you start the program, C3PO is the first droid you see. There are three inputs, the keyboard keys, the potentiometer, and the mouse, and two outputs, the LED and the screen. If you press the '1' key, you will see C3PO's page and if you press '2' you will see R2D2. On 3PO's page, if you turn the potentiometer, he will say "How can I help you?" in 5 different languages (Aurebesh, Wookie, French, Spanish, and English) as 3PO is mostly a translator. For R2, if you turn the potentiometer, he will show 5 different holographs: Han, Leia, Luke, Yoda, and Scott. For either droid, there are two buttons (written in Aurebesh) on the bottom of the screen. The one on the left is the "ON" button and will light up the green LED when clicked with the mouse. The other is the "OFF" button and will turn off the green LED when clicked with the mouse. This is to symbolize turning "ON" or "OFF" the droids that you are using so that it doesn't waste their battery!

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REFLECTIONS

This project was bittersweet because it was the last one that I will ever do at USF but I had a lot of fun doing it. I was a bit too ambitious at the beginning considering that I wanted to use buttons, timers, keyboard clicks, and mouse interactions. I eventually parsed that down (thank god) and ended up with something simple and fun! I love Star Wars and I would kill to have real working droids to hang out with like Luke did on Tatooine, considering I feel about as isolated and lonely as Luke probably did. It was interesting to step into that world and contemplate what it might be like to have 3PO and R2 saving the galaxy with me. Overall, I enjoyed this class and I learned quite a bit and I think this is the perfect project to end my time here on.