9.6-9.13

At this stage, after much deliberation and reflection on the existing device, I conceived a new device design which I discussed with Yadira. In this new proposal, I combined a tricorder with a servo and introduced an infrared distance sensor as an input device. The purpose of this design is that once a spectator approaches the device, the servo will drive the tri-prism to rotate and thus refract the light.

Behind the prism, I plan to arrange a screen and connect a photosensitive element. When the light refracted by the prism hits the photosensitive element, the element will transmit data to the TFT screen, triggering my pre-programmed video playback.

In my discussion with Yadira, she gave me full recognition for this new design. Therefore, I started working on the new device. Firstly, I estimated the size and weight of the tricorder and ordered a high-power servo to support the tricorder. Next, I was going to test the IR distance sensor, servo, and trigonometer working together. I will assemble these components and write code to ensure that the system has the flexibility to detect the approach of a spectator.