## Physical Computing Midterm Summary

While the original idea for this project was an intervalometer that responds to motion, ultimately I just wanted to create a camera triggered by the body without using a remote controller (i.e. a hands-free manipulation of the camera). Ideally, this was meant to be a playful game between the user and the camera.

The two types of non-traditional sensors I chose were (1.) an IR Breakbeam with a transmitter and a receiver, and (2.) a Force Sensitive Resistor.

Both sensors were affixed to a chair. The IR receiver and transmitter were placed facing each other on opposite arms of the chair. The FSR was zipped inside of a pillowcase placed on the seat of the chair.

Nikon DSLR still camera on a tripod was placed about two feet in front of the chair. Affixed to the camera is a single IR LED placed in front of the IR sensor of the camera. Once the camera is turned on and switched into remote mode, the IR sensor of the camera is ready to respond to pulsing of the IR LED just as it would respond to a manual remote controller.

In this project, the initial interaction was meant to occur when the person begins to sit. It was to be a “test shot” making the user aware that the camera in front of them is responsive. The camera response was supposed to occur as a result of the IR beam between the IR transmitter and receiver being broken by the user’s body. The breakbeam was to be listened for only if the FSR had not yet been triggered.

The subsequent interaction takes place when the pressure from the user on the FSR inside the seat cushion triggers the camera to take continuous stills as long as the FSR indicates that the user is still on the seat of the chair. Once the user gets up, the camera shutter ceases to go off unless triggered again by pressure on the seat cushion. The IR breakbeam should not be listened to as the user rises from the chair.

While I was able to get the camera to respond to the IR LED triggered by the FSR and the IR Breakbeam separately (see draft sketches), I was unsuccessful in coding the logic of my intended user interaction. Nevertheless, that sketch is included in my documentation.

Ultimately, I was disappointed by the lack of functionality of the Multicamera IR Library. It would have been nice if I could have coded for two distinct outputs to the camera (e.g. the breakbeam triggering just a flash while the FSR triggered continuous shutter release). Once I realized the limitations of the library and that degree of functionality was specific to brand of camera, I felt stuck in how dynamic of an interaction could be created by two sensors mapped to the same variety of camera output.