Battery operated costume screen

## Overview

A large number of costume designs requires more than simple printed images to get the correct effect. Flashy Fashion allows for a small, wearable, screen to be incorporated into a wide range of fashion accessories, allowing for a user defined image or text string to be displayed. With this freedom of creation, costume designers will be able to incorporate moving text or images into their designs for optimal effects.

There are shirts on the market with LCD screens attached, but they are large and bulky, and can run upwards of $200 a shirt. After seeing these designs, and having made smaller, similar projects, the same technology can be made into a universal design with a user friendly programming interface.

## Goals

To create a wearable, battery operated device, with a small yet practical screen, for use during costume design. Wearable is defined as being able to be incorporated into the most costume designs with a single universal base unit. It must be the lightest, and therefore smallest that it can practically get away with. To be battery operated, total components should be kept to a minimum and when able, operated in a low-power mode. The smallest practical screen would be in the 2” or 3” class.

## Deliverables

* PCB with Microcontroller
  + To include: routing for attachable screen, 1x USB or SD slot, status indicator LEDs, and battery slot.
* Windows or GNU based user interface for programming the device.
* 3D Printed enclosure

## Knowledge Requirements

* Software Engineering
* Computer Engineering
* Electrical Engineering