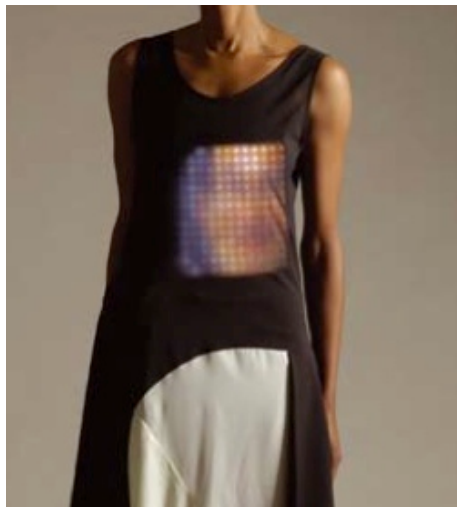# Smart Clothing using LEDs and smartphone application

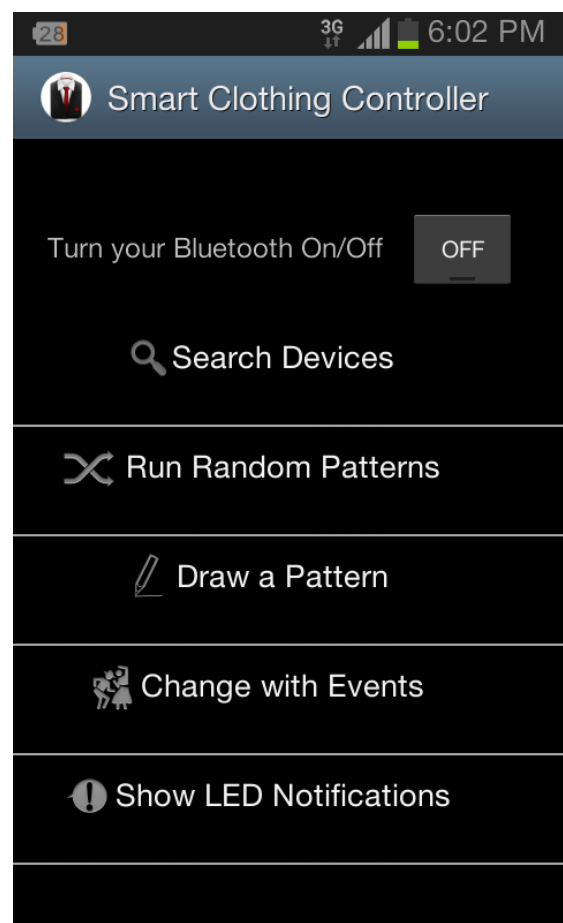*Crystal Lin, Michelle Wong, Humphrey Wong*

Our final year project is to design and make a new product to satisfy future lifestyle and consumer needs. The goal is to build a piece of clothing with an LED system; and this piece of smart clothing can communicate with a smartphone, show special patterns and phrases, and react to different environments or even social occasions. People will no longer change the appearance of their clothes by changing the buttons or zips; simply a smartphone will do the job.
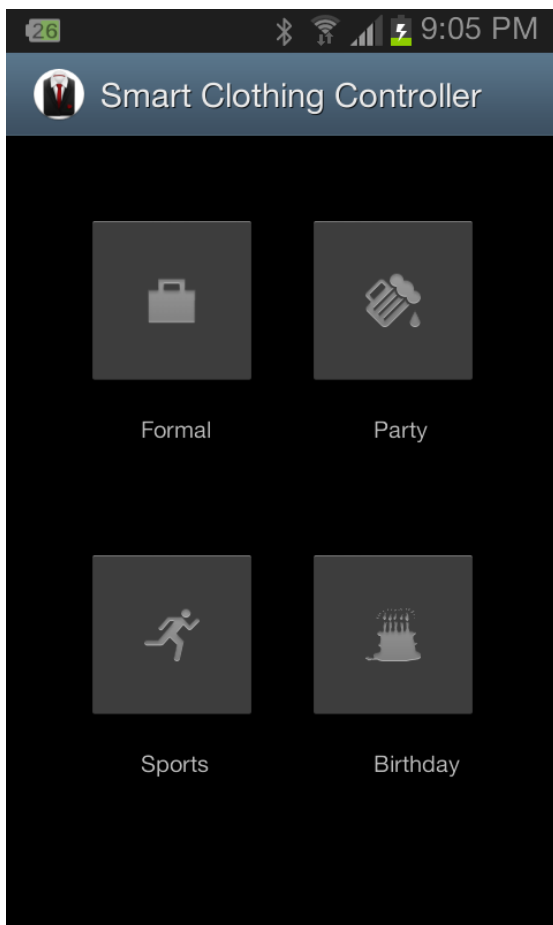

Draft of the final product

What can the system do?

A smartphone app connecting the smart clothing and any Android phone has been developed. The layout is as shown:
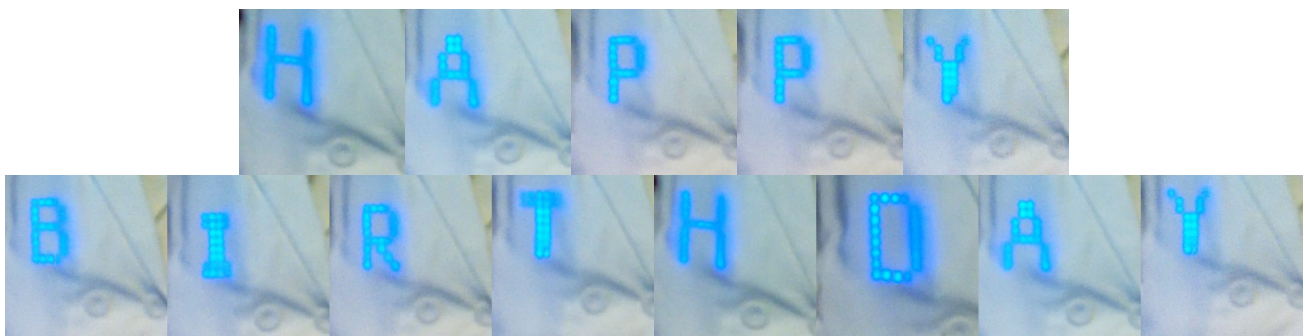
After pairing up with the smart clothing via Bluetooth, users can pick the mode they want. To get the LEDs to change according to different occasions, users can choose "Change with Events".

For the **Sports mode**, the LED colour changes with users' motion. While users are performing various movements, the clothes "move" with them!
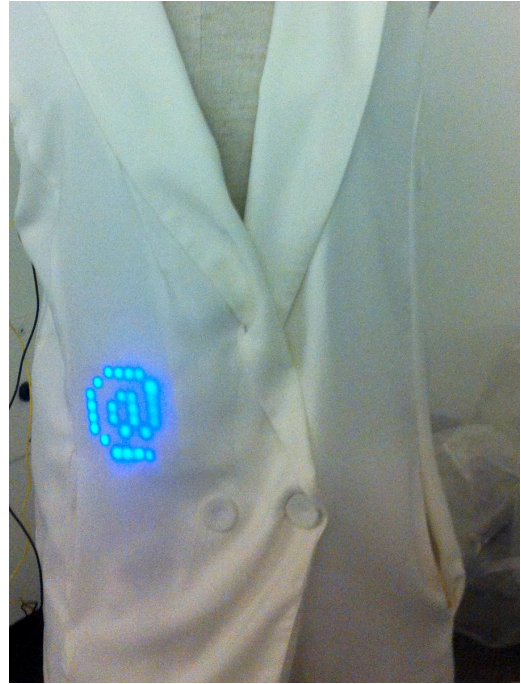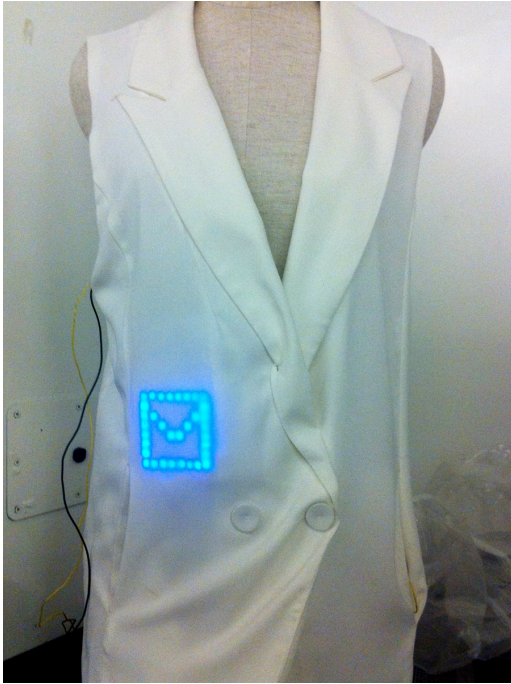
When users attend any formal events, such as a job interview, they can switch on the **Formal mode** to shut all the LEDs off.

For the **Birthday mode**, the LEDs show a birthday message. On a friend's birthday, users can give their dear ones surprise.
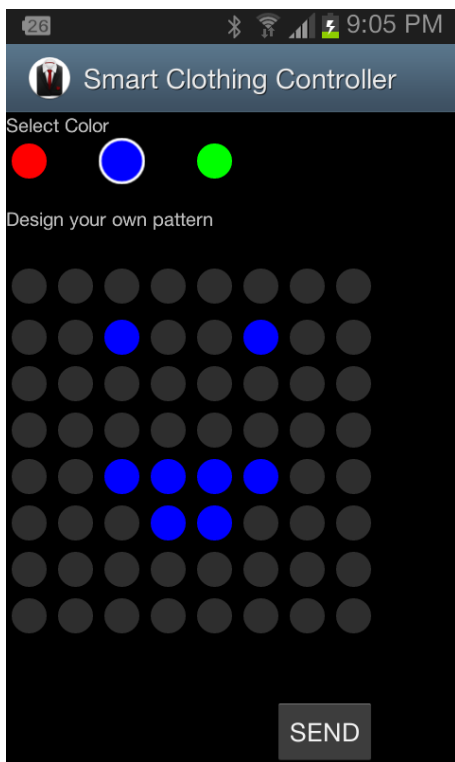

Birthday message shown on the smart clothing

The smart clothing is also able to show notifications for email and SMS. When the **Notification** mode is on, will give you a sign once you get new messages.

Notification icons for text message and email

Besides, users may design their own desired patterns:

Finally, users may feel easy and comfortable selecting the **Random mode**. The smart clothing runs random and colourful patterns under this mode.

Please refer to the following video for your interest: http://youtu.be/dp1iyl_f_eg

P.S. The LED system is detachable from the clothes. Users can stick it with another piece of clothes, bags or accessories!