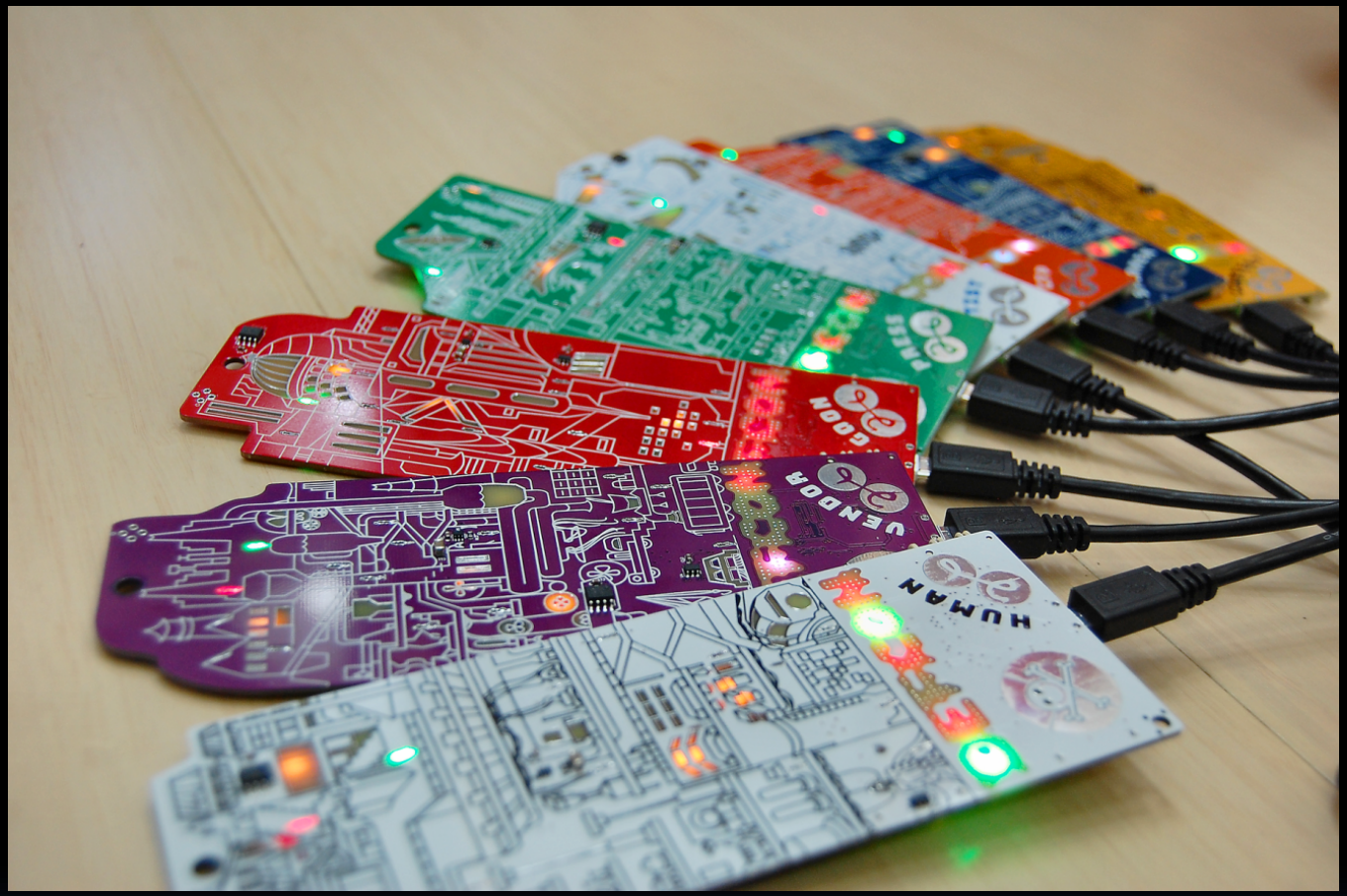


DEFCON 26 OFFICIAL BADGES

@TYMKRS

Homage to those before us

- Joe 'Kingpin' Grand
  - Years 14 - 18

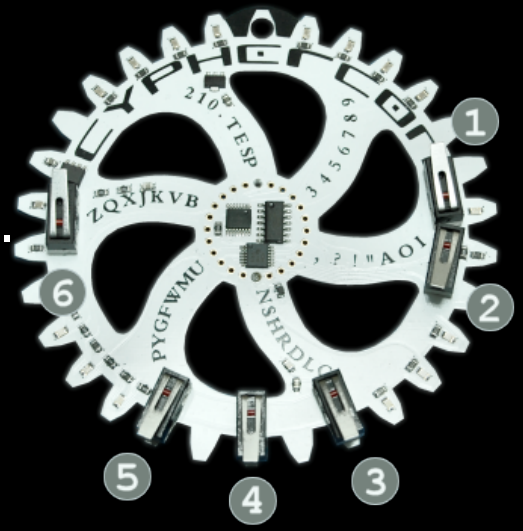




- Ryan '1057' Clarke
  - Years 19 - 24

Who are we?

- The Tymkrs!
  - Hardware Engineer, Software Ninja, a Whisker, and a Nurse.
  - Got our start from making badges for CypherCon











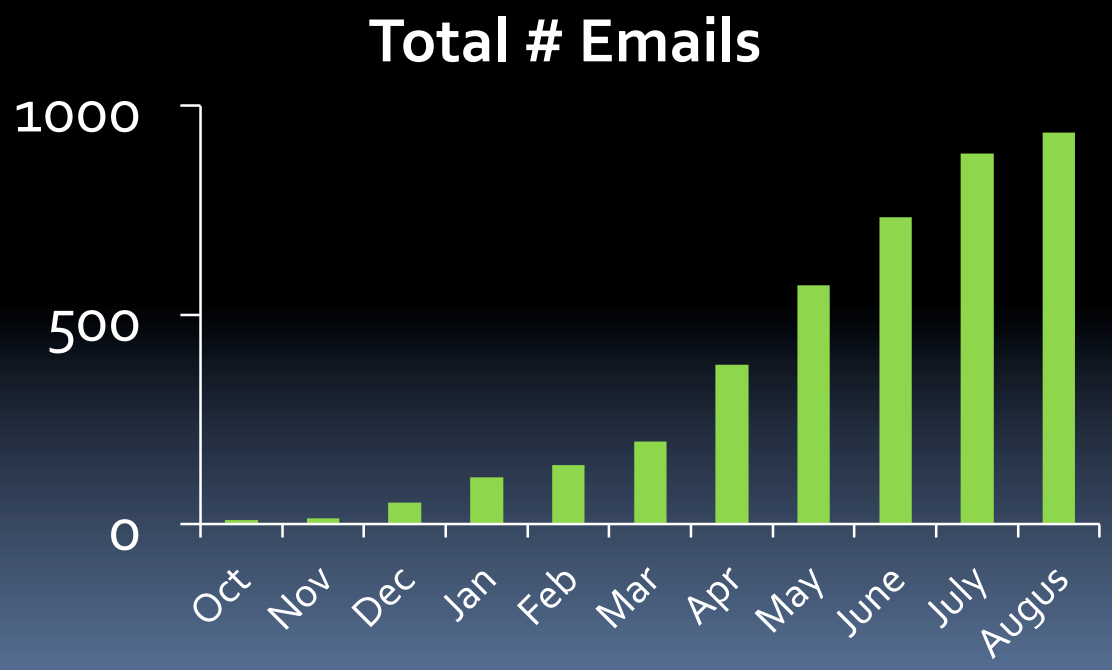




Numbers!

- 28,220 badges!
  - Human – 26,300
  - Press – 250
  - Goon – 500
  - Contest – 400
  - Vendor – 250
  - Speaker – 350
  - Artist – 100
  - CFP – 45
  - Uber – 25

- 91 components per badge: 2,639,000 total
- 43 LEDs per badge



Timeline



- Brainstorming: Nov 2017
- Initial Design: Jan 2018
- Parts Ordering: Feb 2018
- Prototype Complete: May 2018
- Firmware Complete: June 2018
- Production of badges (E-TekNet): June 2018
- Program Microcontrollers: June … July 2018
  - Special time in the life of the badge.
- Badge shipment: July 25, 2018 - Monday

Theme: 1983

- 1984 by George Orwell
  - Ministry of Truth
  - Ministry of Plenty
  - Ministry of Peace
  - Ministry of Love
- We are time travelers!
  - Welcome to the year 1983!
  - Decisions can still be made to change the future.
  - Decisions are made by people like us.
- Design Aesthetic: Everyday buildings for everyday people.



Story/Game

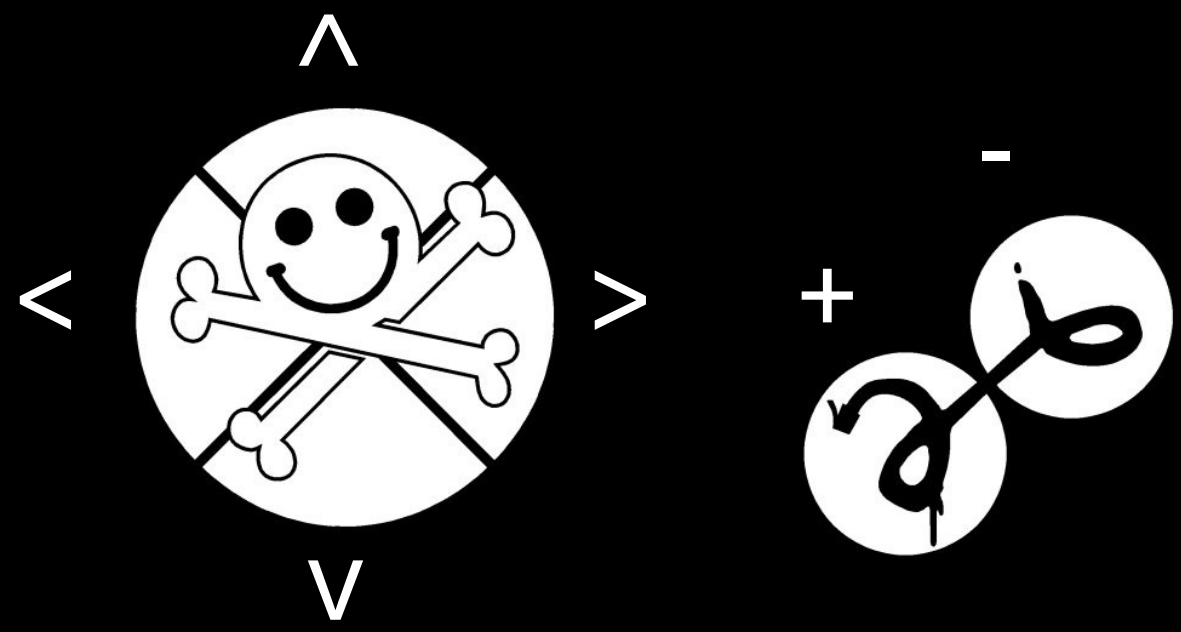
- Everyday people have different stories.
  - Each type of badge is a different interactive story.
  - Start out as an employee, visitor, student, etc

- DEFCON Letters
  - Colors reflect the choices that have been made in your story.
  - The letter N = What the sum of your choices identify you as.
  - Red = Contributing to rise of dystopian doom
  - Green = Contributing to a healthy hacker-friendly future

- Little People!
  - Green = You!
  - Red = Your goon!

- Decisions you make matter!
- Connecting to others will help or harm you.
- Goal: DEFCON lights to be all of the same color – RED or GREEN

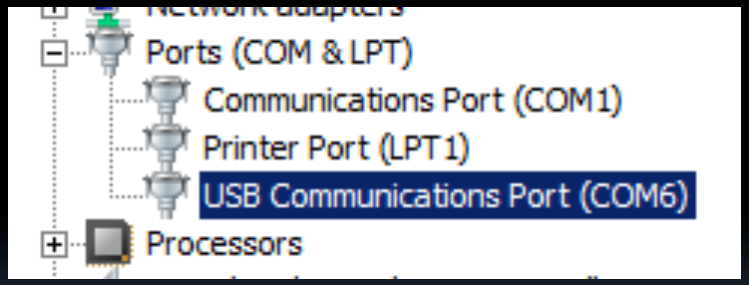
Badge Basics



- USB
  - Capacitive touch may not work for all people in all environments
  - Can power the badge
  - Can make the game MUCH easier

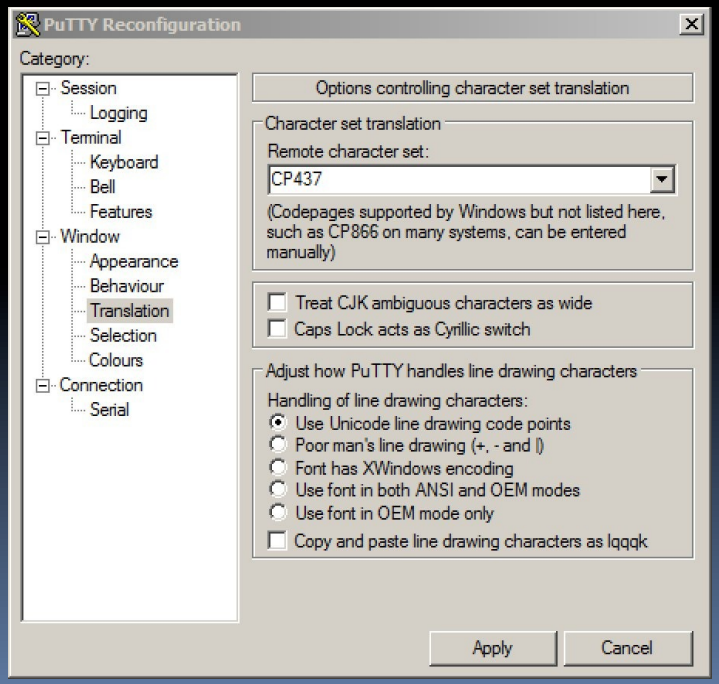
How to access the details!

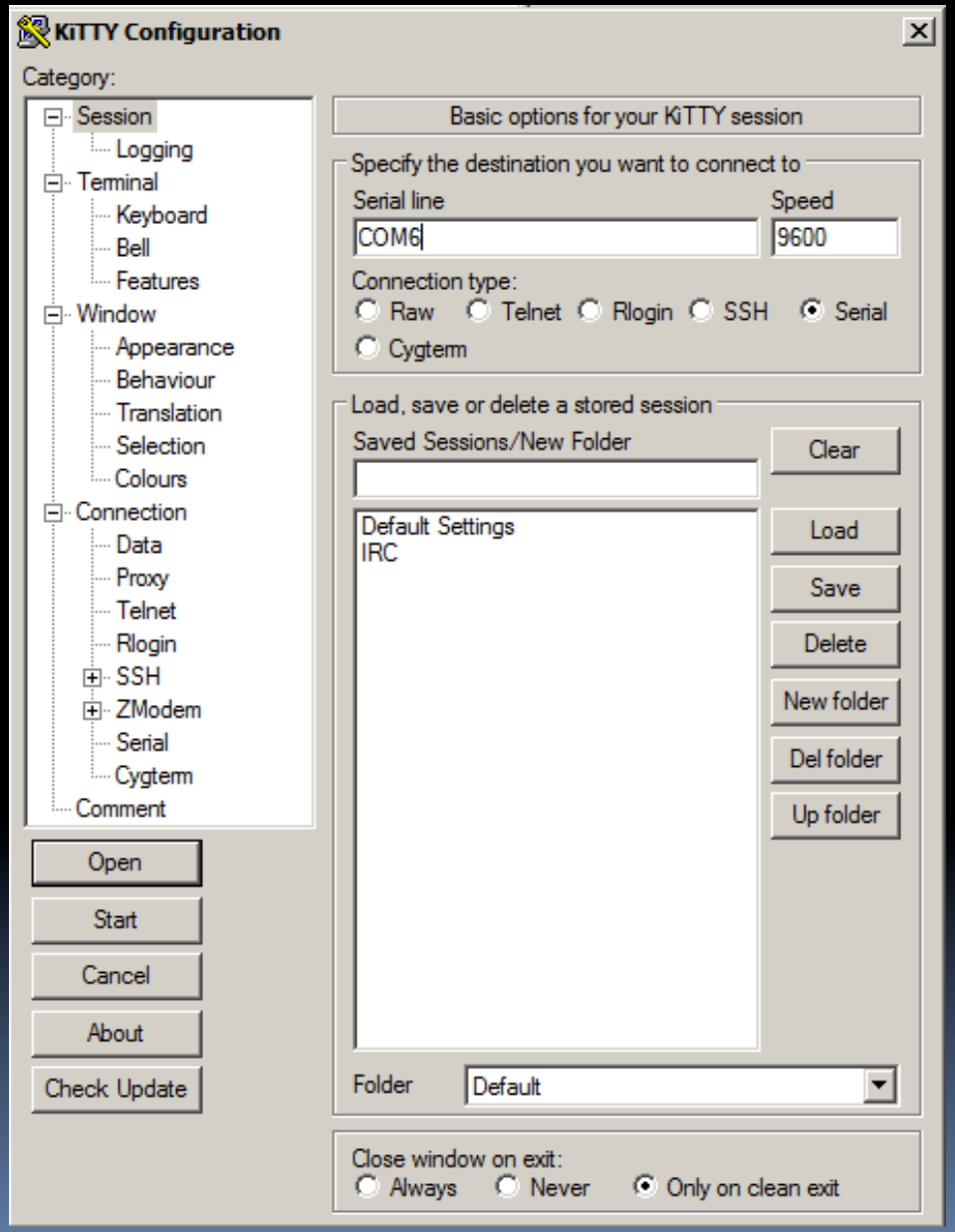
- Plug Badge in via USB micro cable
  - If it says you do not have drivers:
    - Download Microchip's USB CDC drivers
    - Go to your device manager and update the driver for the device (Usbser.sys and Usbser.inf)
- This will assign a COM PORT to the badge



- Open up a Serial Terminal Emulator
  - Windows: PuTTy
  - Mac: Screen
  - Android Phones: Serial USB Terminal

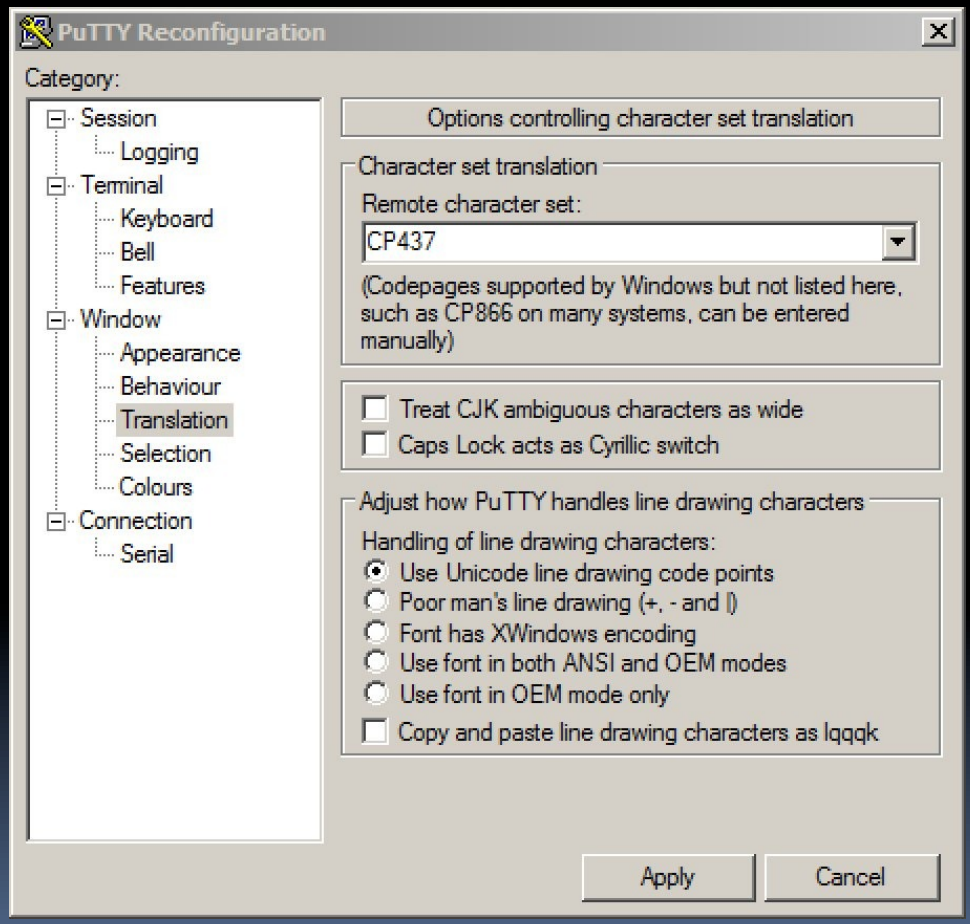
- Make sure to write the correct COMPORT associated to your badge
- Translation: Turn on IBM Code Page: 437





ANSI Version

- ANSI Version of Badge
- ANSI: Used by artists in the text-mode art scene on BBS's
- Artwork: 80 columns wide x 80 rows tall
  - Terminal Screen – 80 columns wide by 25 rows tall at a time.

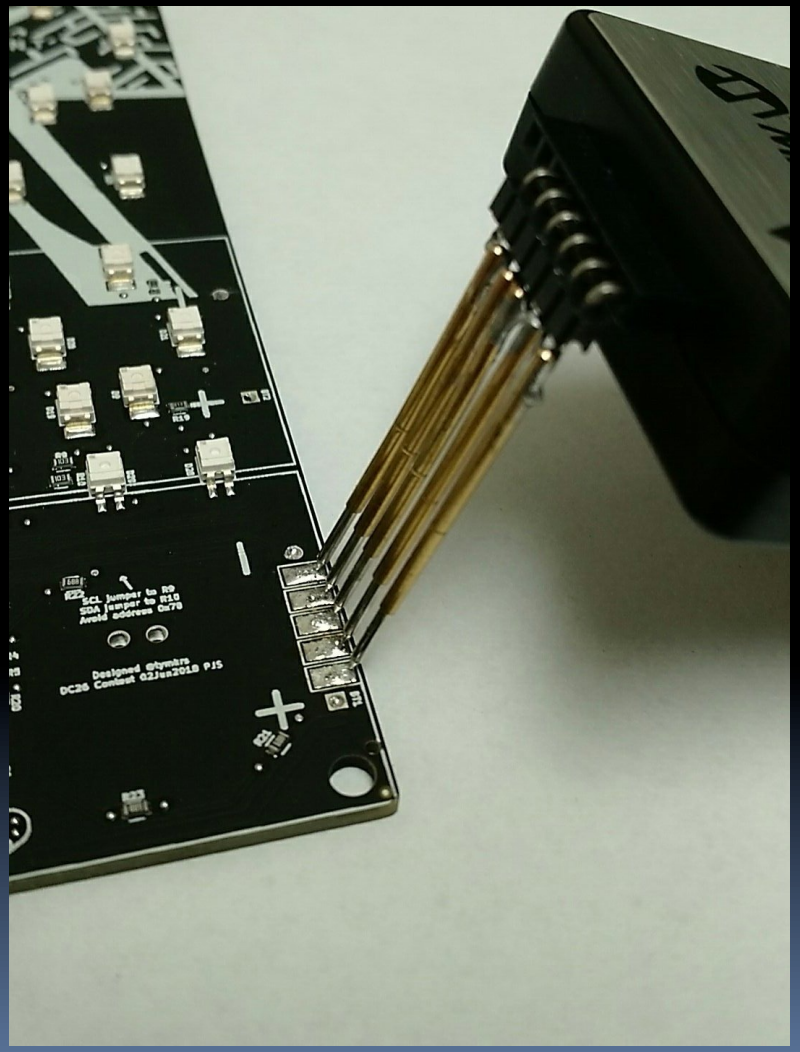


Terminal Emulator!



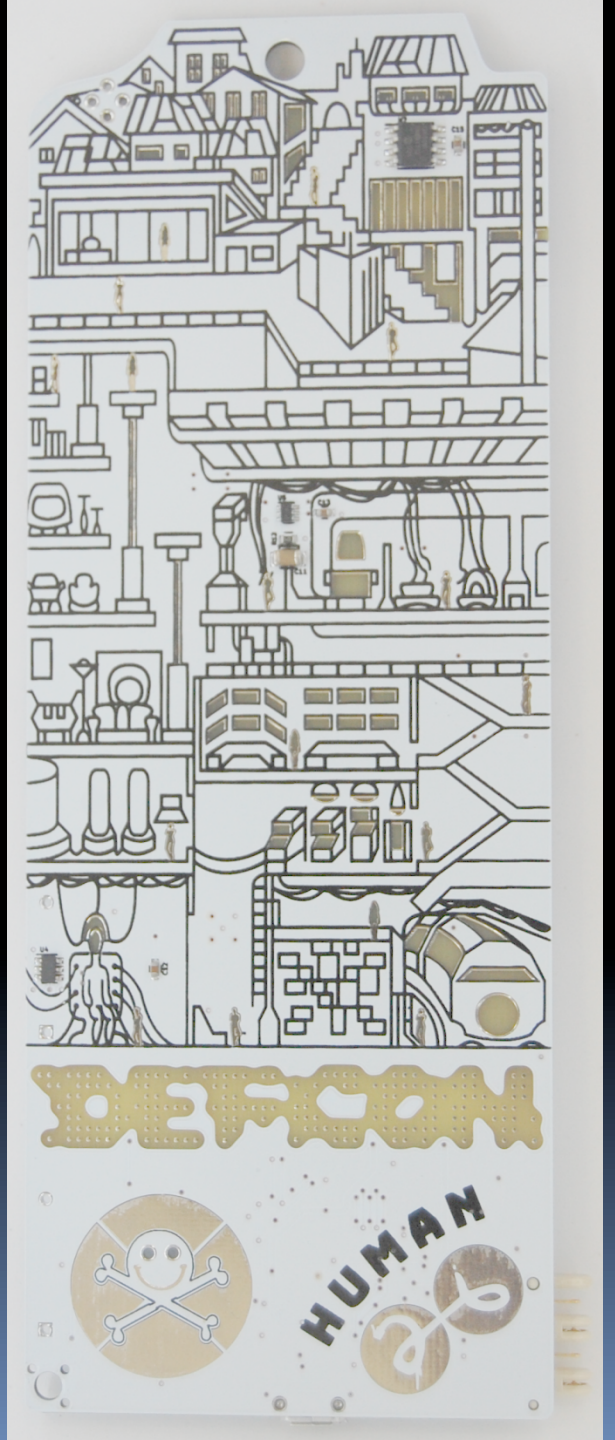
Puzzles

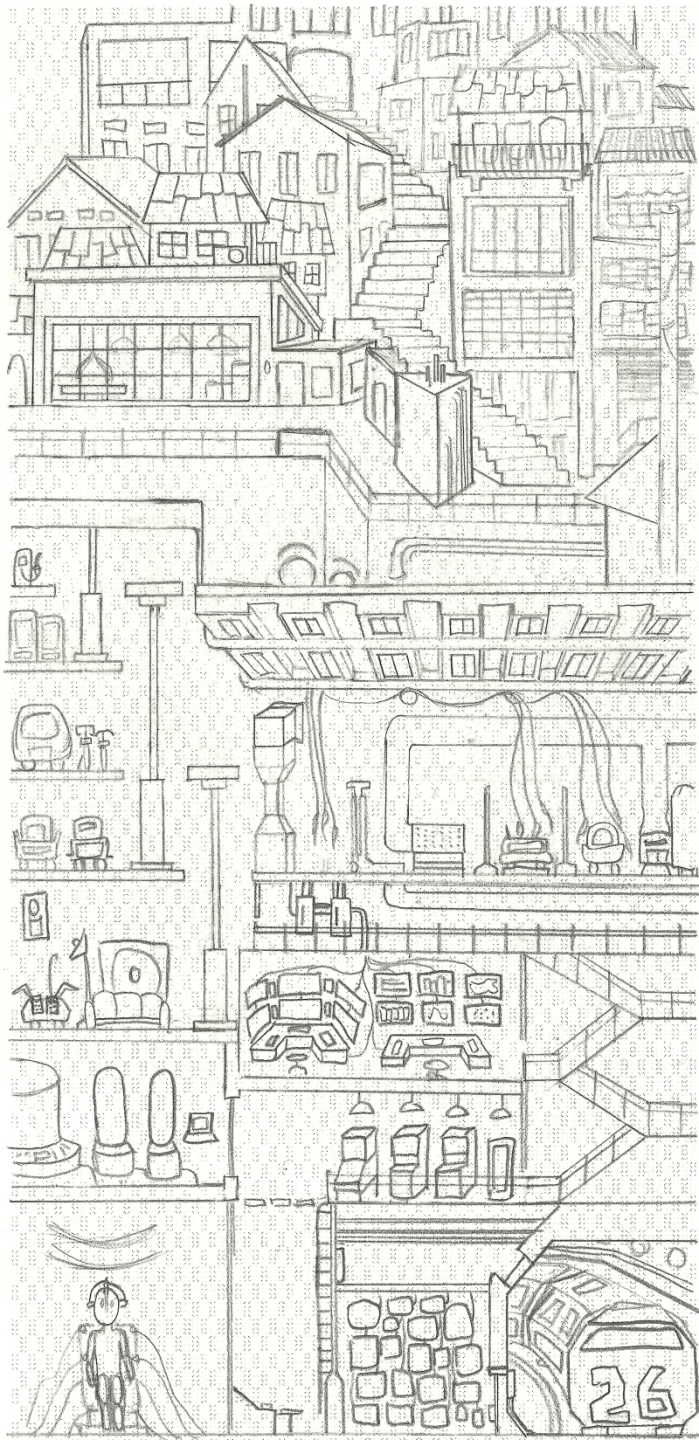
- Software Puzzles
  - Main Microcontroller: Microchip's PIC32MM0256GPM048
    - MPLab X IDE
    - PICKit 3 or 4
- Hardware Puzzles
  - They exist!



Human Badge

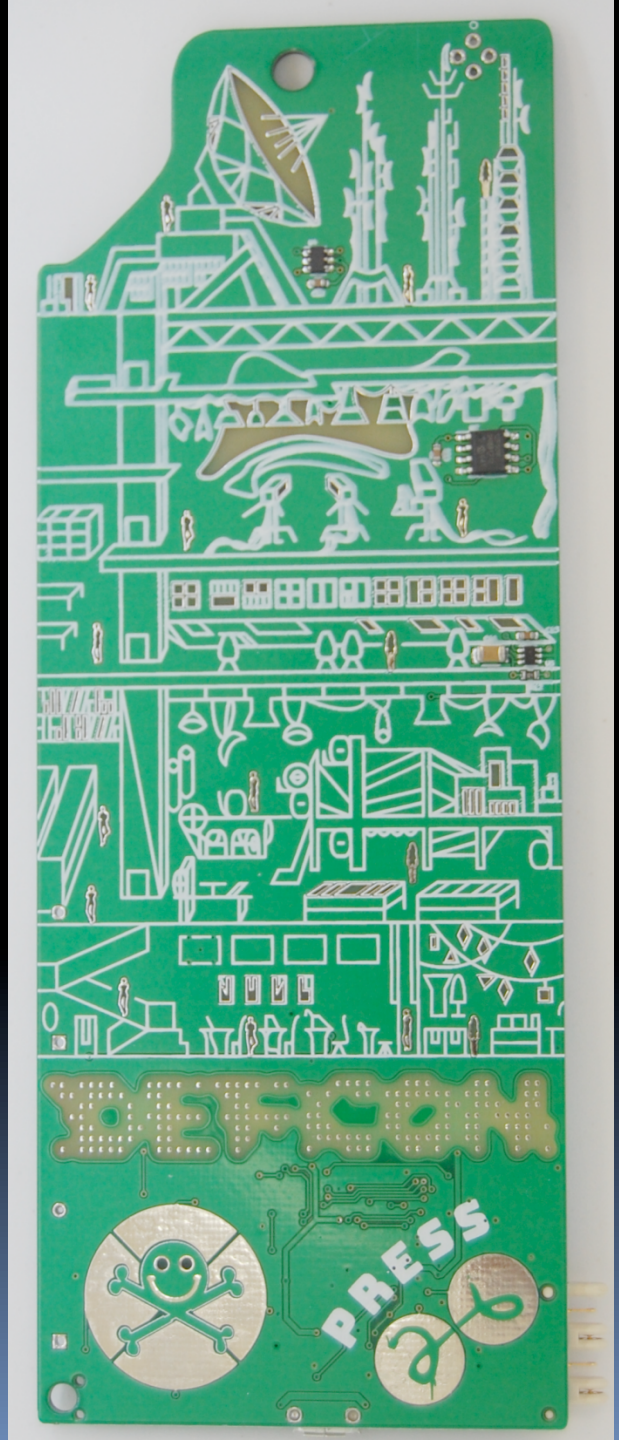
Garage

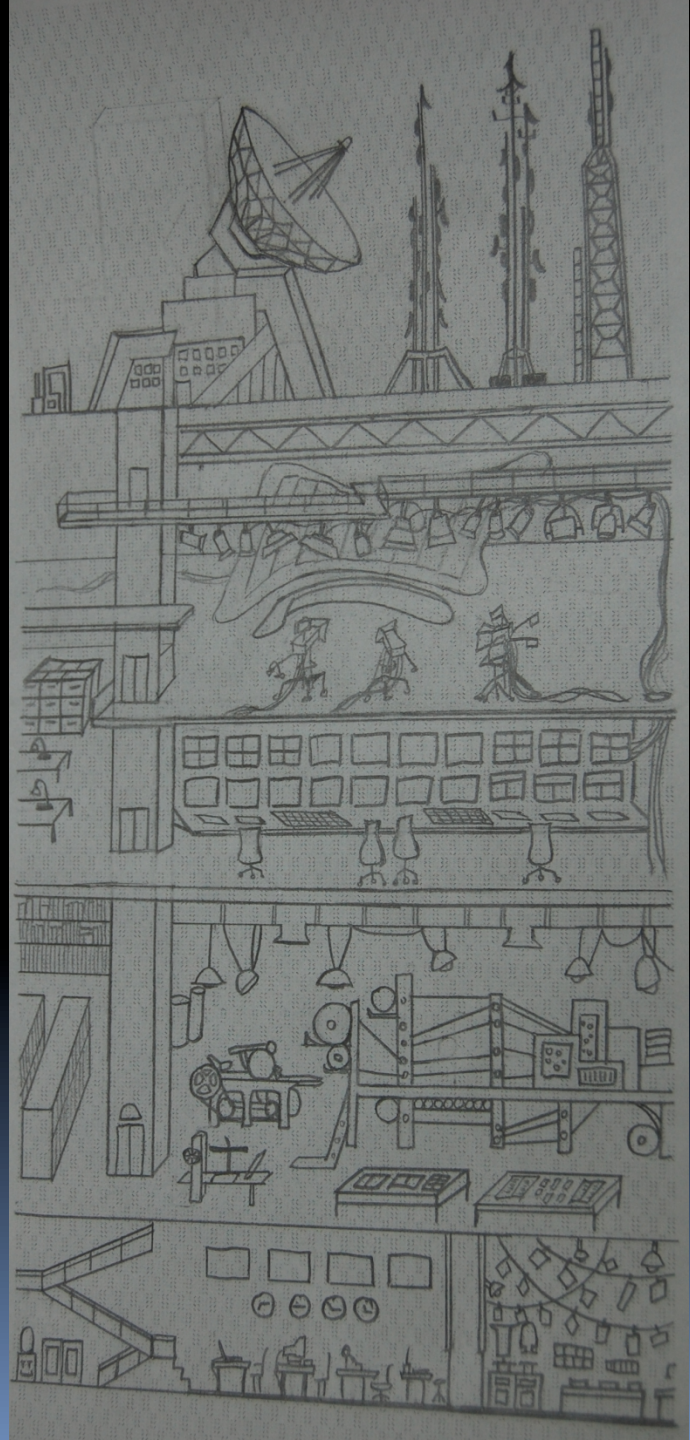




Press Badge

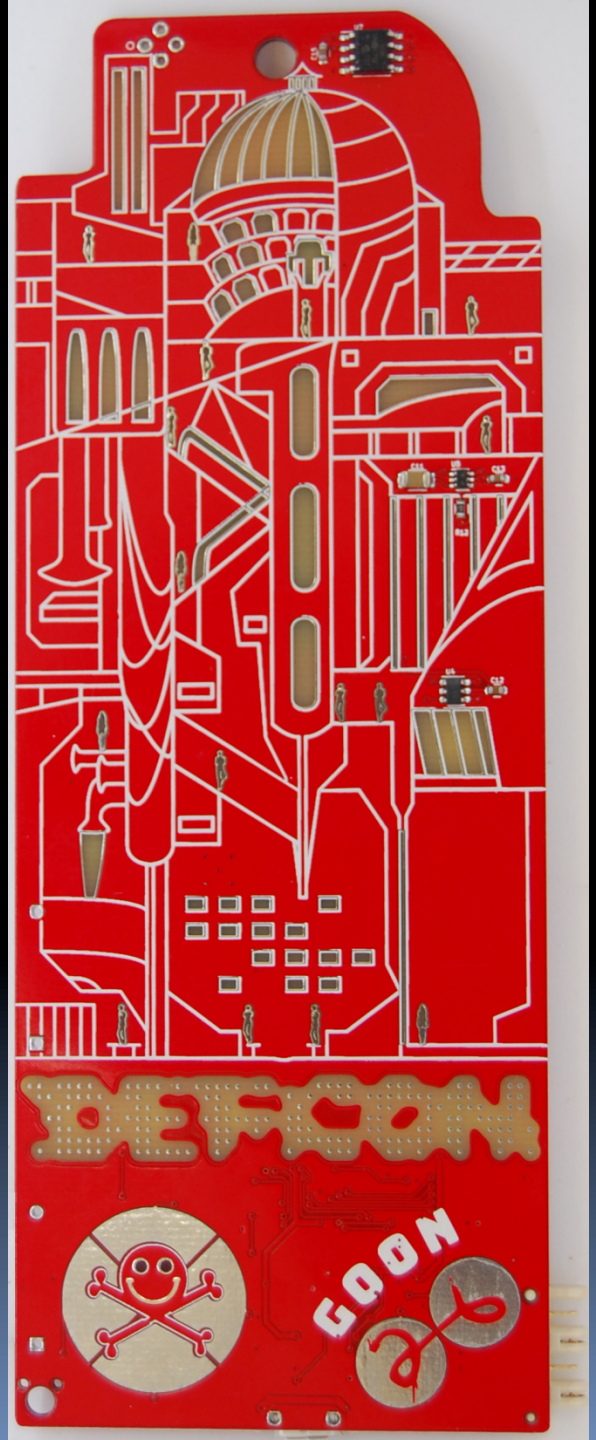
Broadcast Station

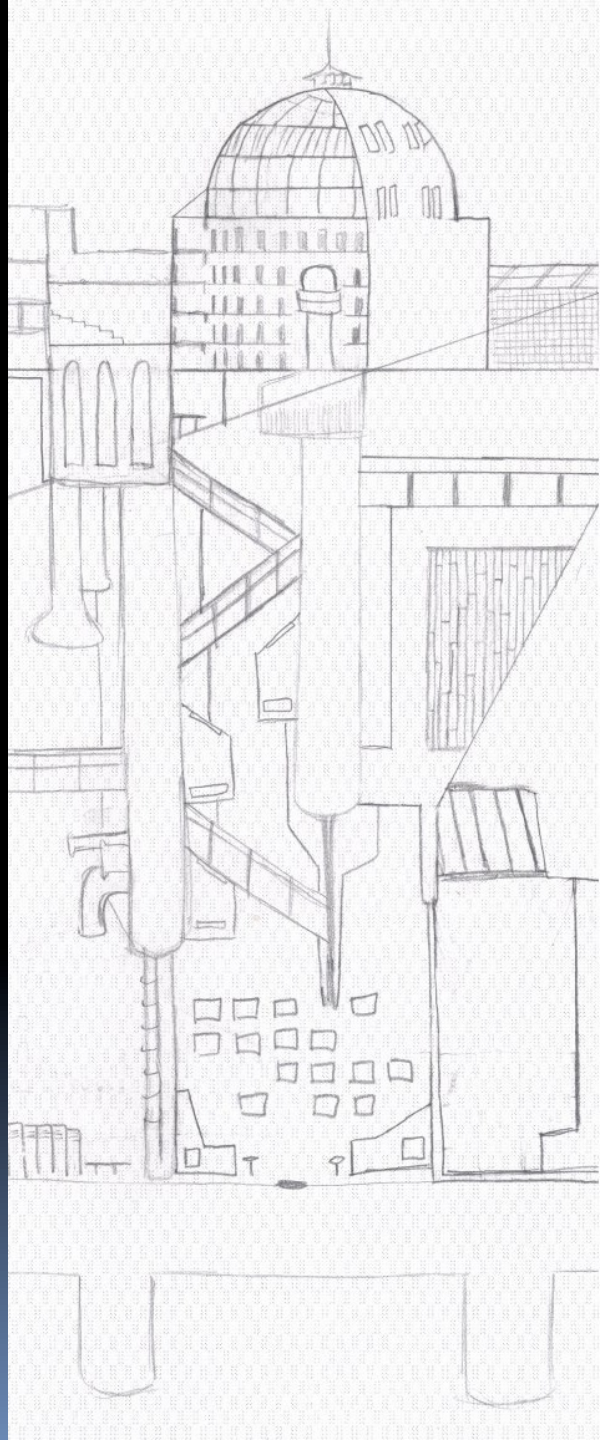




Goon Badge

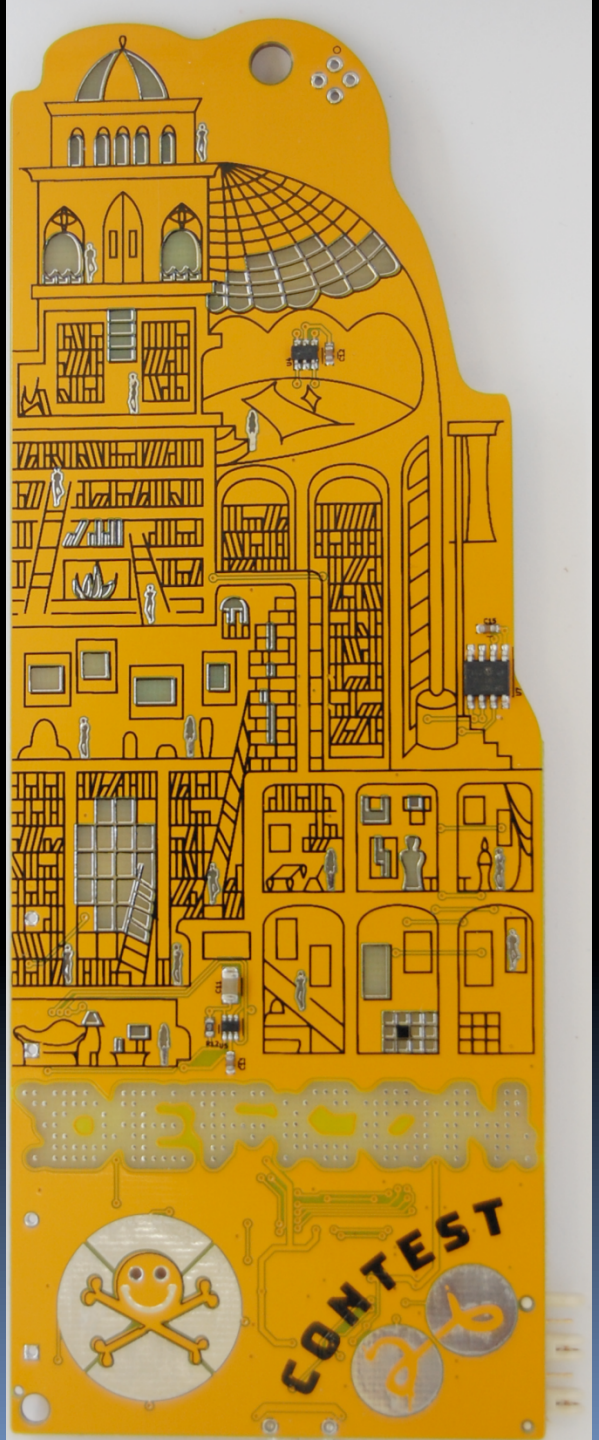
Panopticon

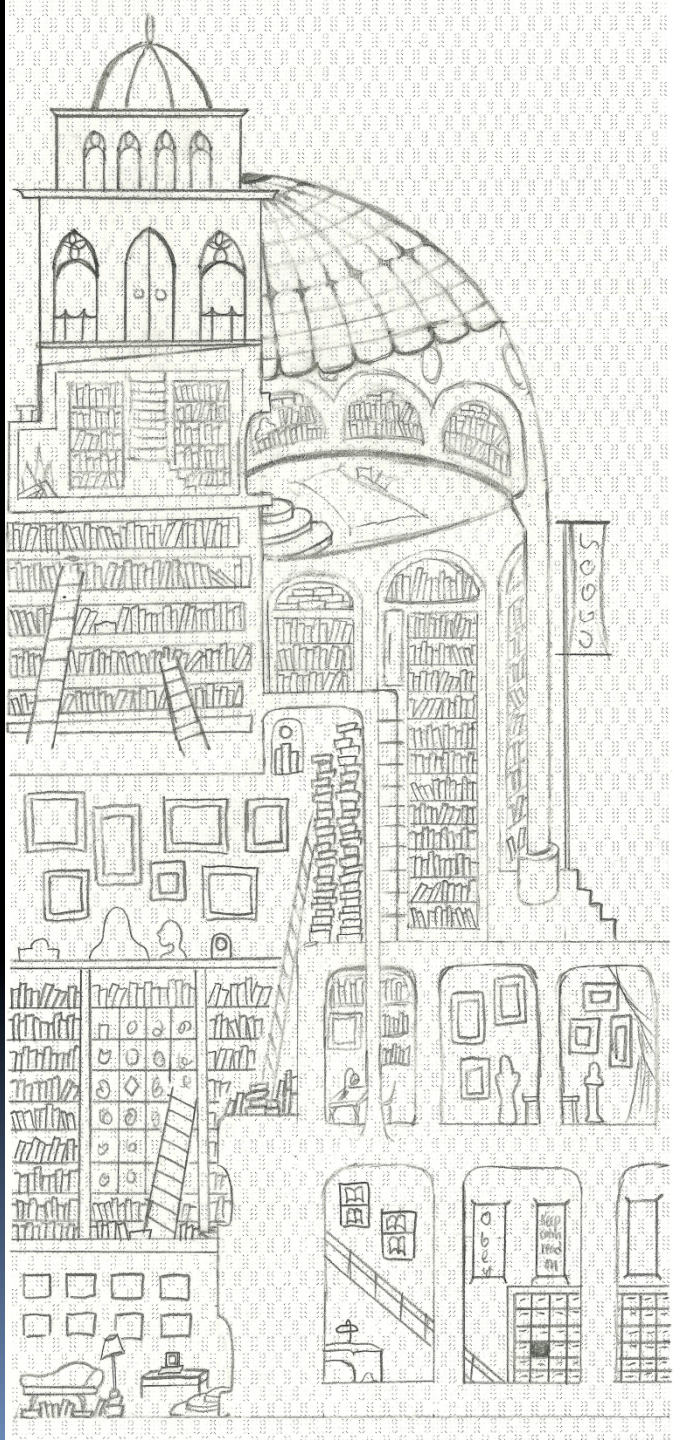




Contest Badge

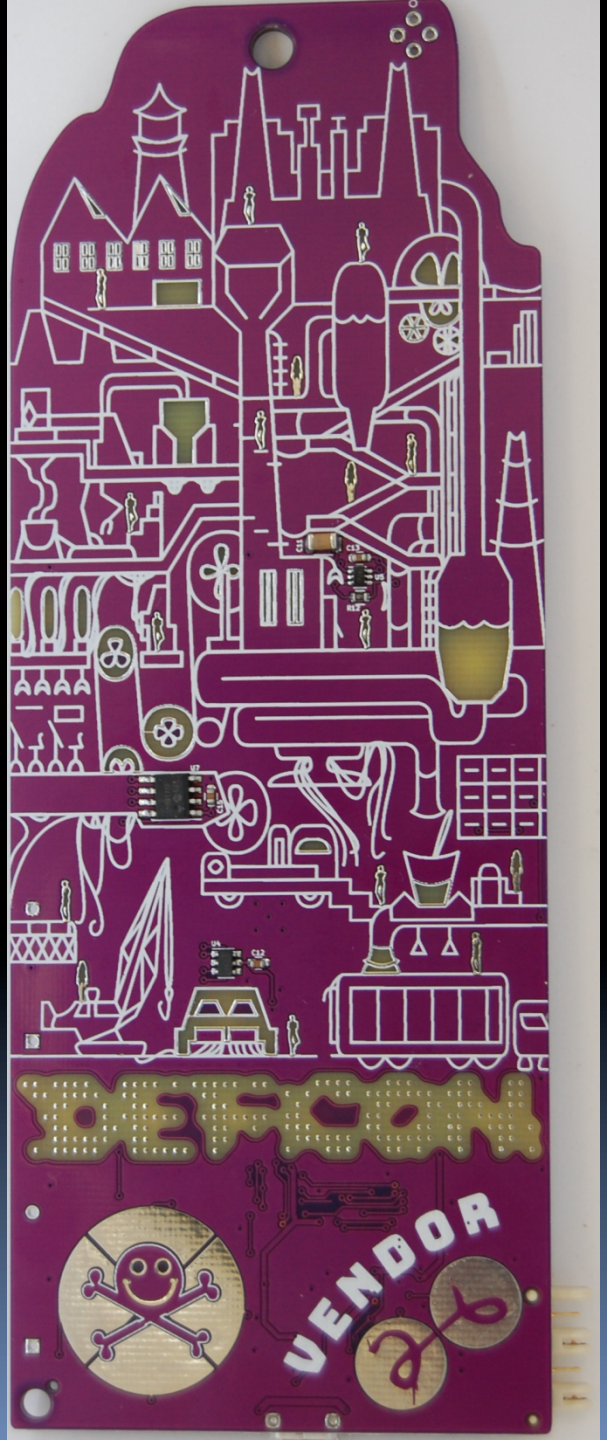
Library

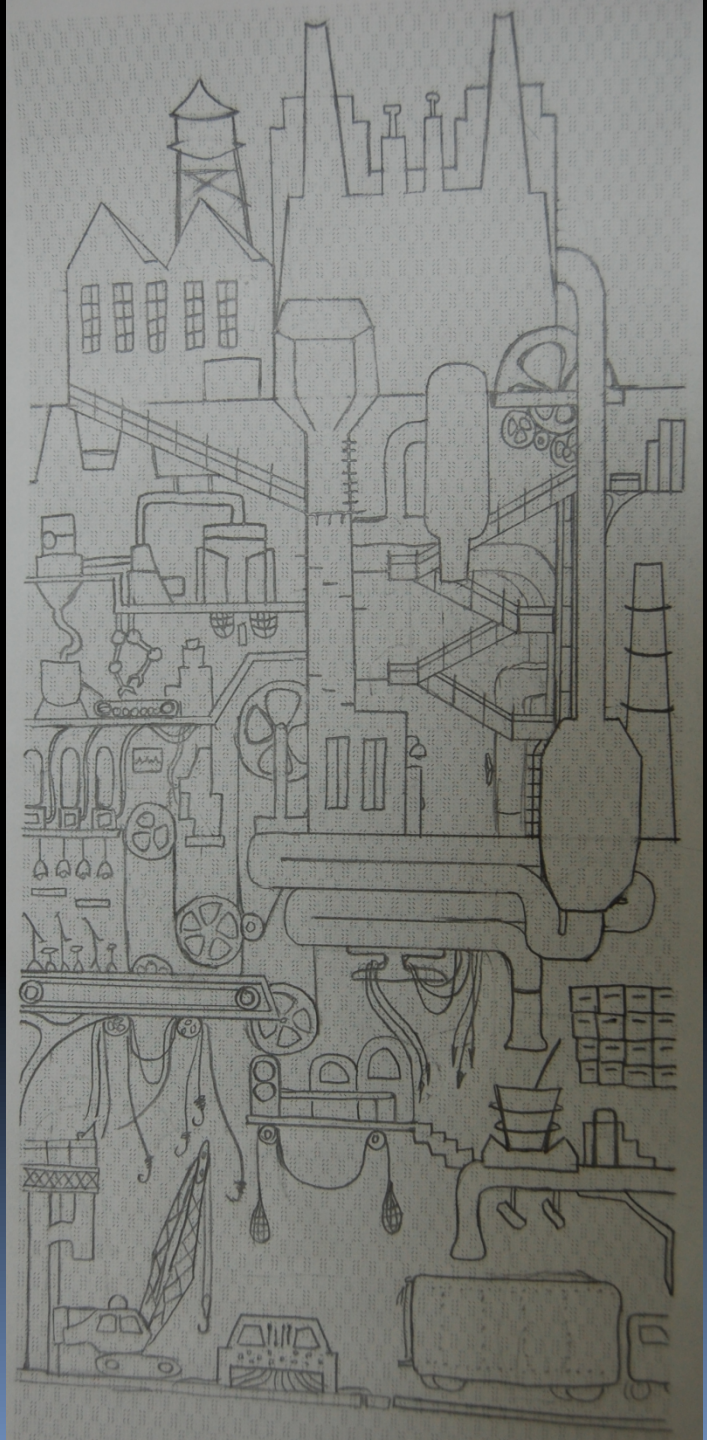




Vendor Badge

Factory

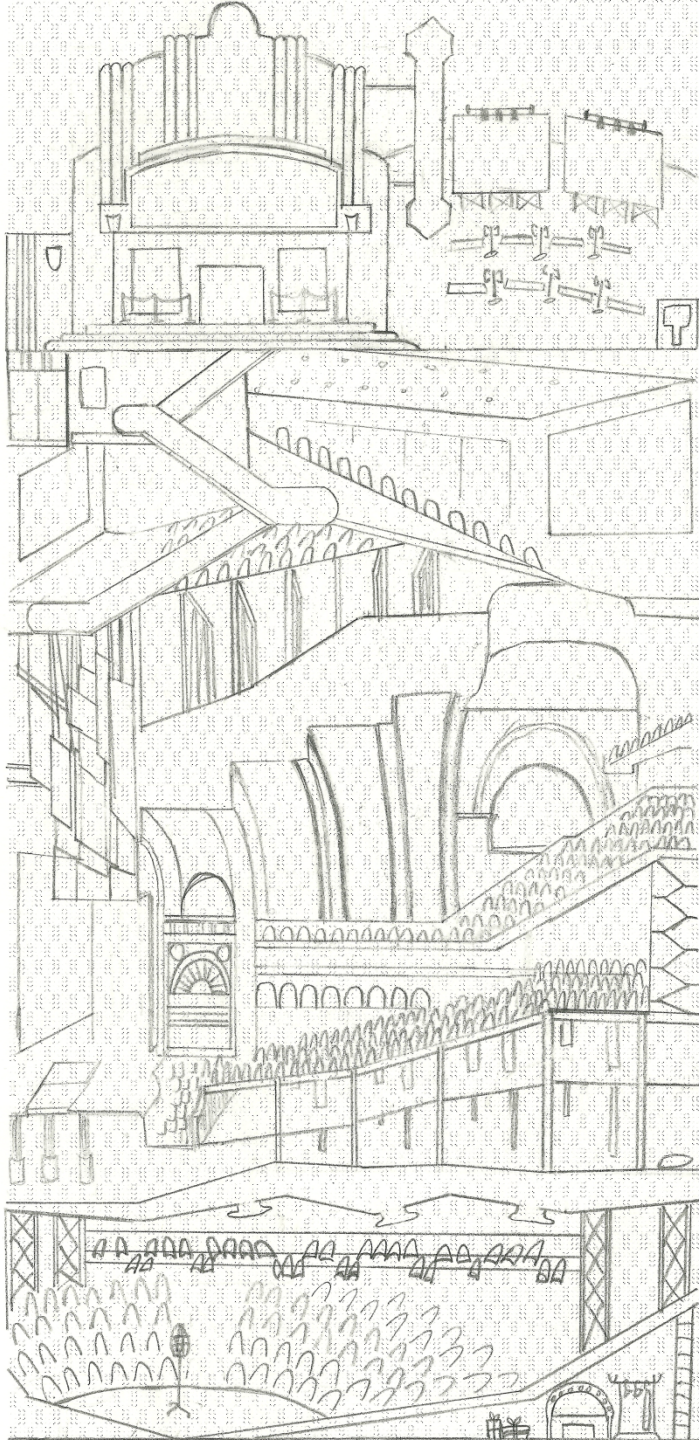




Speaker Badge

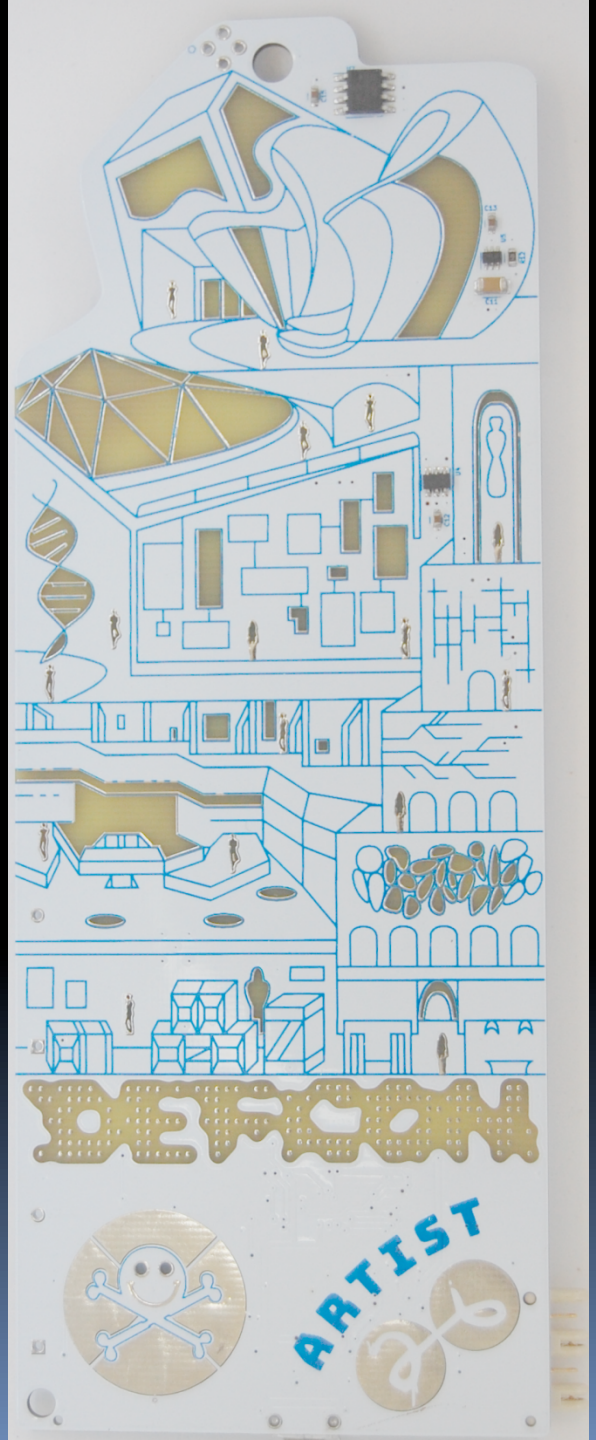
Theater

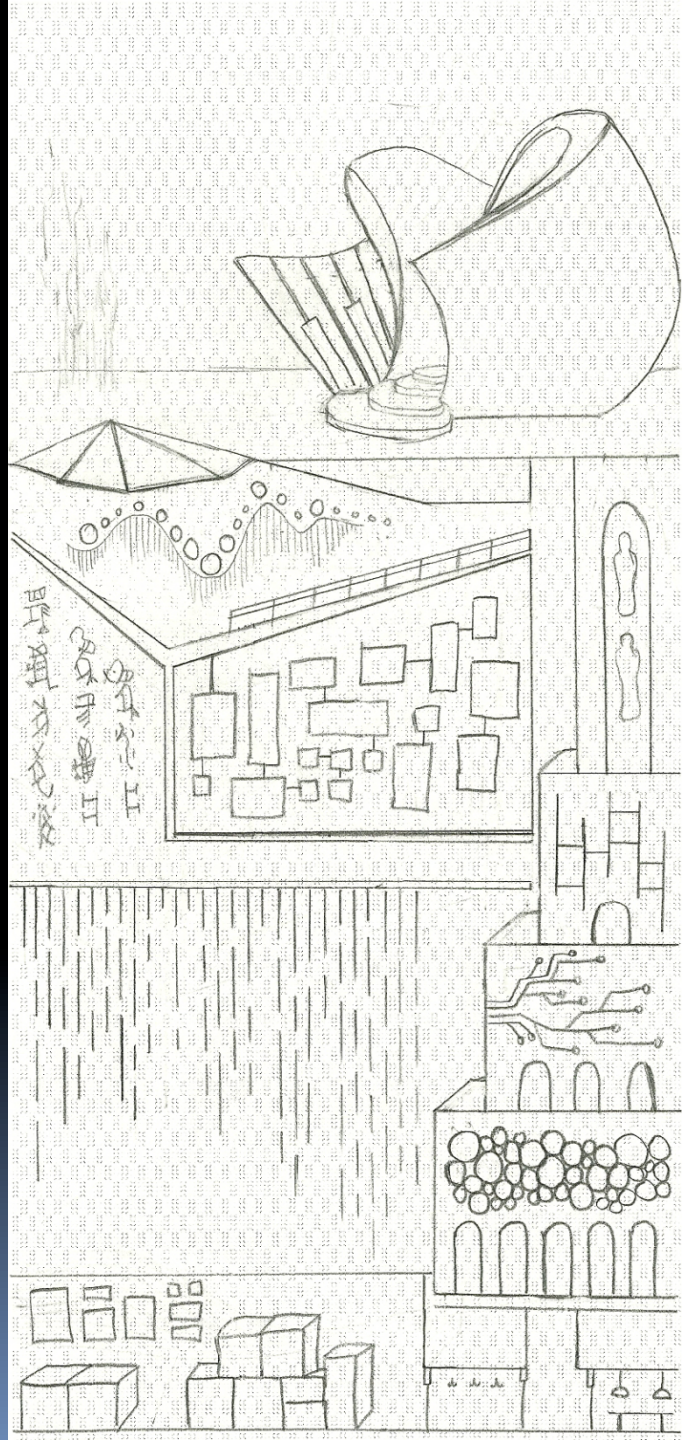




Artist Badge

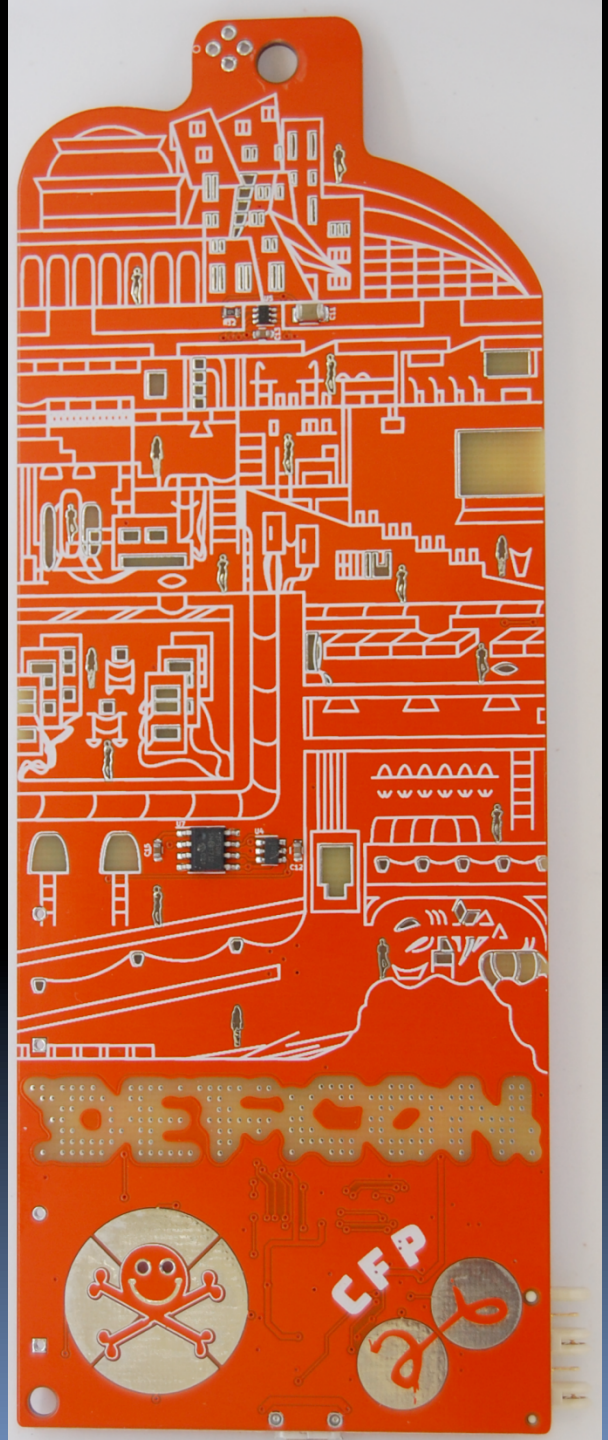
Gallery

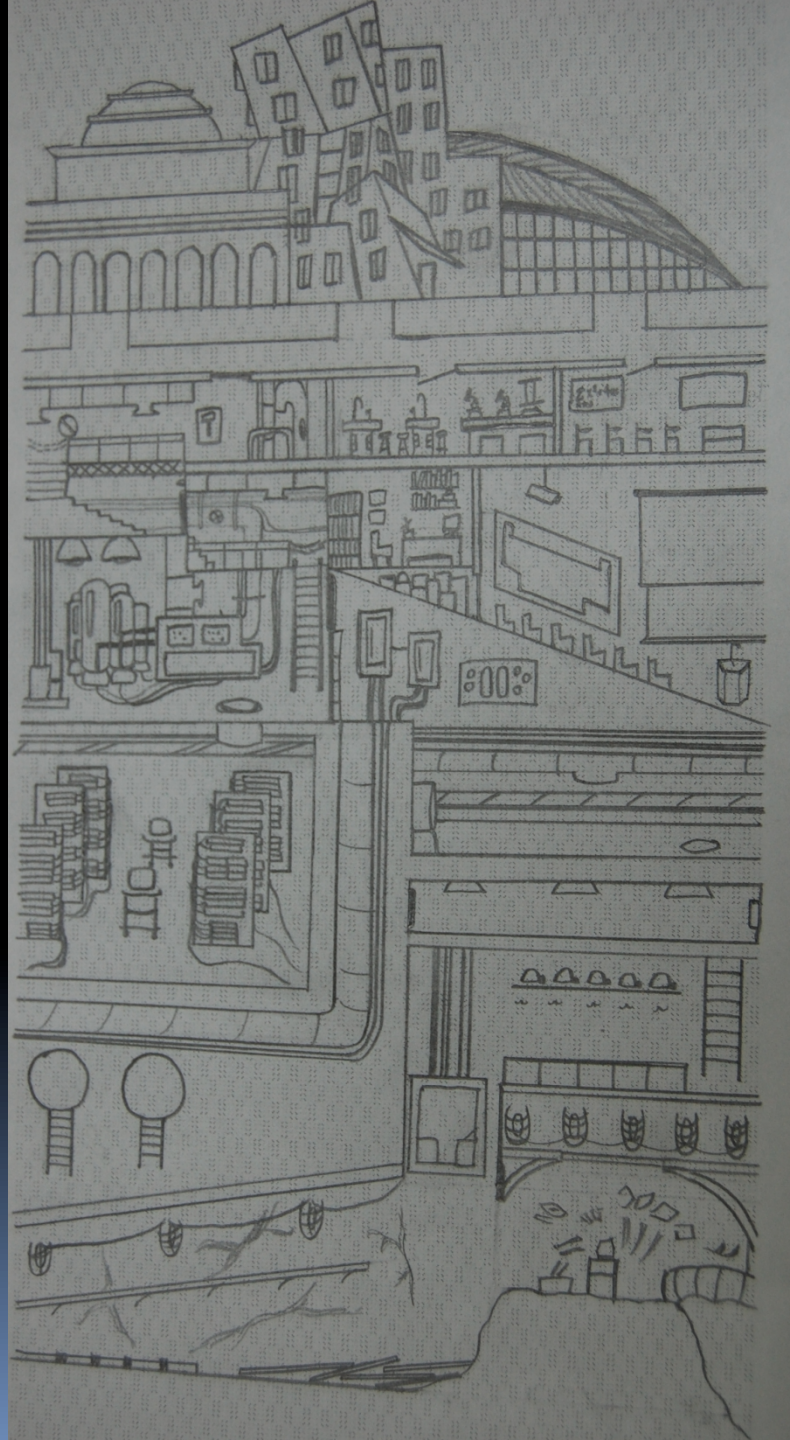




CFP Badge

School





Our Thanks!

- E-TekNet + Temp Workers
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- Mar Williams
- Joe Grand
- YOU!