SLQ Wiki Fabrication Lab 2025/11/30 13:14

Aka: Don't look into the window with a soul?



## Intro

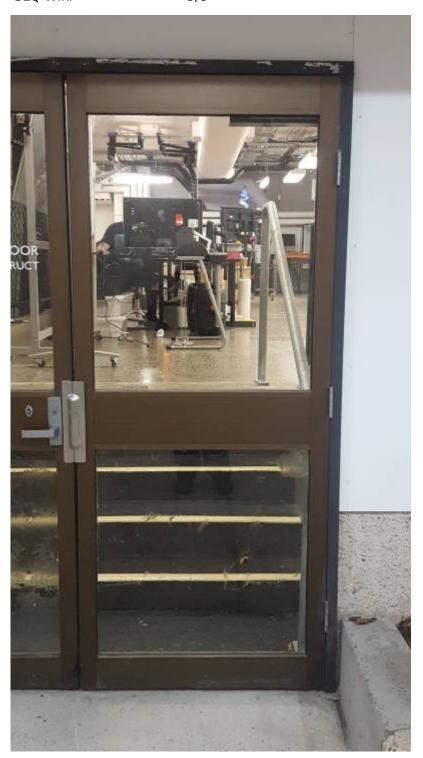
Do something pretty with these!

## **Door: Interactive display**

Touch sensors. Screen. Fun!

LCD screen with a raspberry Pi and copper foil capastive touch sensors on the inside of the window.

Better view of the door:



## First window: LED Display

We can't remove the sign, it's part of the fire safety stuff. But we can build things below it. Each big window is:  $660 \times 1585 \text{mm}$ . Sign is 1190mm from base. Small window is  $515 \times 1585 \text{mm}$ . Window will fit a  $10 \times 20$  LED 'pixel' display.

• Sheet of frosted plastic contact against the window.

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• Cardboard frame/guide.

- Neopixel style LEDs.
- Driven by an arduino either independent or off the Pi from the doorway system

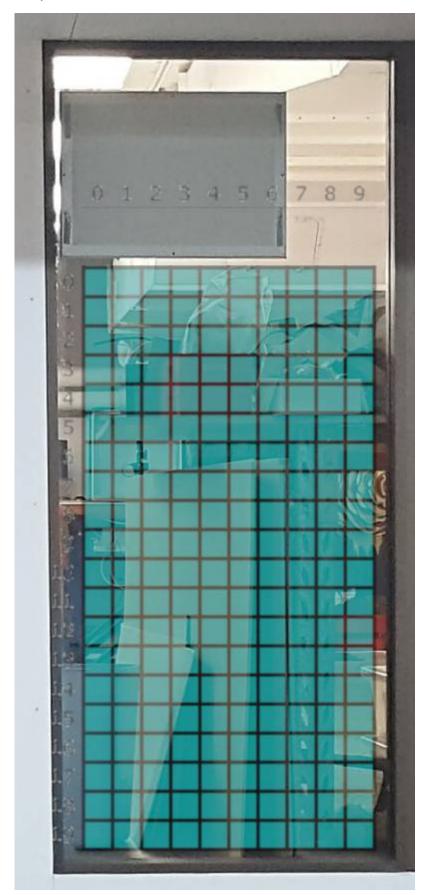
• Some kind of super robust external controls?

First game: TETRIS!

Quick mockup:

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IDEA: Interactive Window(s)



- https://camo.githubusercontent.com/09055a0086490ced5f7356780f58579f39094309/6874747 0733a2f2f692e696d6775722e636f6d2f6a7367754559452e6a7067
- https://imgur.com/a/QI25S

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#### Second window: Ants!

Some kind of ants nest. Maybe filling about half the window?

Third window: Unknown

No idea yet!

#### **Materials**

#### Detection chips:

- https://www.aliexpress.com/item/16-Keys-Capacitive-touch-TTP229-module-I2C-bus/326724961 61.html?
- https://www.aliexpress.com/item/WAVGAT-MPR121-Breakout-V12-Capacitive-Touch-Sensor-Cont roller-Module-I2C-keyboard-For-Arduino/32821362153.html?s

#### Some info:

- https://www.mouser.com/pdfdocs/semtech-capacitive-touch-sensing-layout-guidelines.pdf
- https://www.sparkfun.com/datasheets/Components/MPR121.pdf

#### LEDs:

• https://www.aliexpress.com/item/DC12V-RGBW-DMX512-UCS512-chip-5050-SMD-addressable-pixel-PCBA-3-piece-of-5050-SMD-LED/32881386437.html?

#### **Tools**

(List all the tools you used to complete the project, eg: from #1 Philips screwdrivers, to the CNC machine)

## **Instructions**

(This is where you put the step-by-step photos showing how to carry out your project, as well as an explanation in words. Rename the steps as you like, use italics or bold for emphasis.

Don't forget to include design files for CNC, laser cutting or 3D printing but remember they need to be zipped before uploading to the Wiki ( it is also useful if they are in a transferable format, .svg rather than .ai, for example ).

IDEA: Interactive Window(s)

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Step One:		
Step Two:		
Step Three:		
Step Four:		
etc		
Developm	ent notes	
( This is where y	ou can put ideas that yo	ou tried, but which did not work and why!)
Feedback		
		n users that you have not yet implemented, and mention any peration or construction )
Reference	es	
This were you p	ut external links like LEC	generator, if they have not appeared in the Instructions.
Files		
This is where yo	u put files for laser cutti	ng, Excel sheets of suppliers etc
Links		
Any External Lin	ks like 'Thingiverse' etc.	to go here

## **Project Progress**

( Use this section as a running summary of how the project is going so that others can follow. Diary type entries, with dates, would be a good format.)

IDEA: Interactive Window(s)

## Log of works

Itemize work carried out ...

• Prototype done ...

## **Project Table**

Project	Percent Complete	Project Lead	Status	Budget Req	Budget Approved	Next Major Milestone	Subsequent Milestones to complete										
Test Page	90%	Byron	Play with	\$0													