

Dear SSHA

Hello folks at SSHA, nice to meet you!

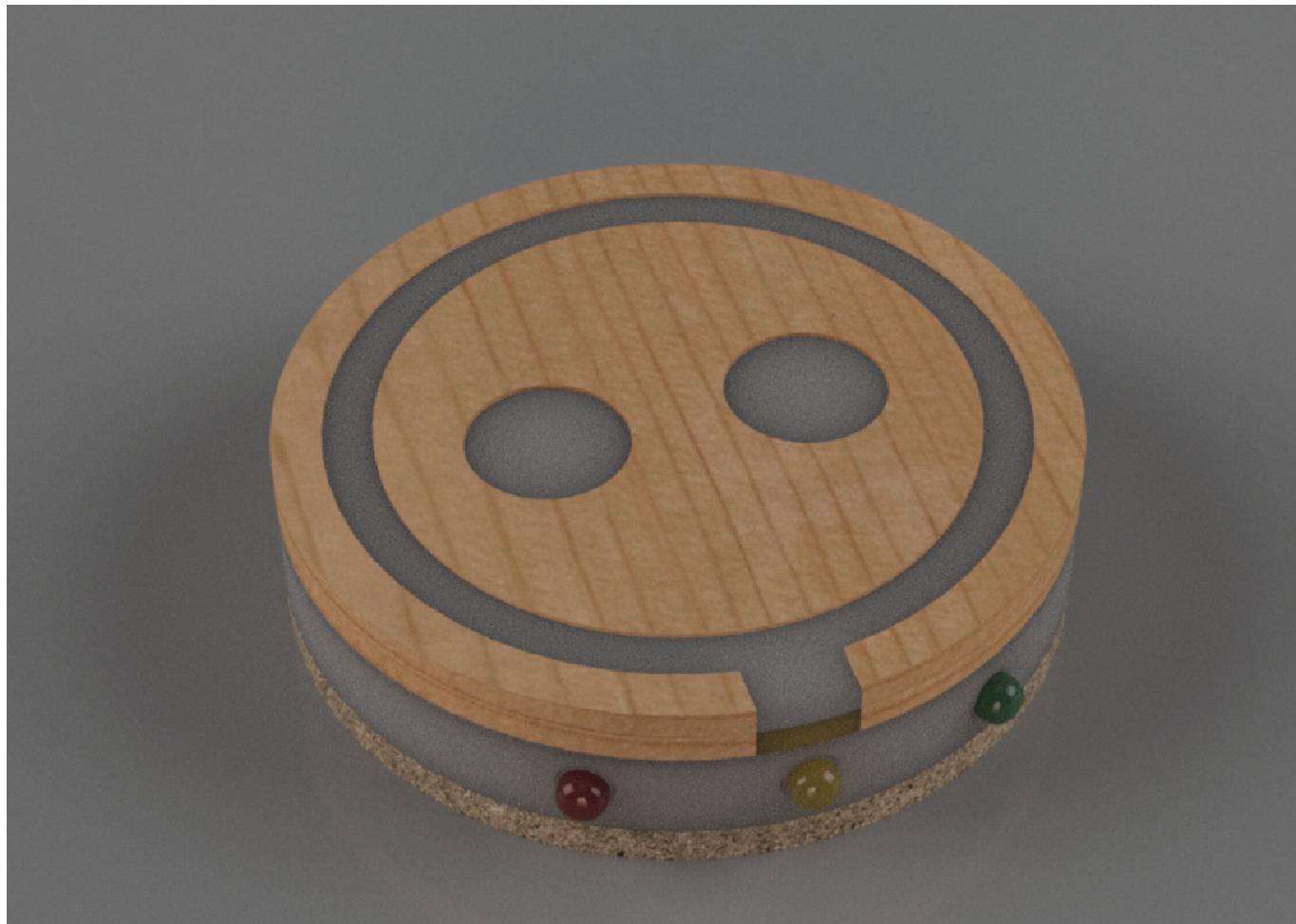
I've been working on a way to provide live shelter capacity data!



I've been experimenting with internet buttons. Here is an image of the internet button at St. Felix that sends me an email when they run out of [chalmers cards](#). It works well too! The shelter staff tell me they get a kick out of pressing a button to have me show up a few hours later.

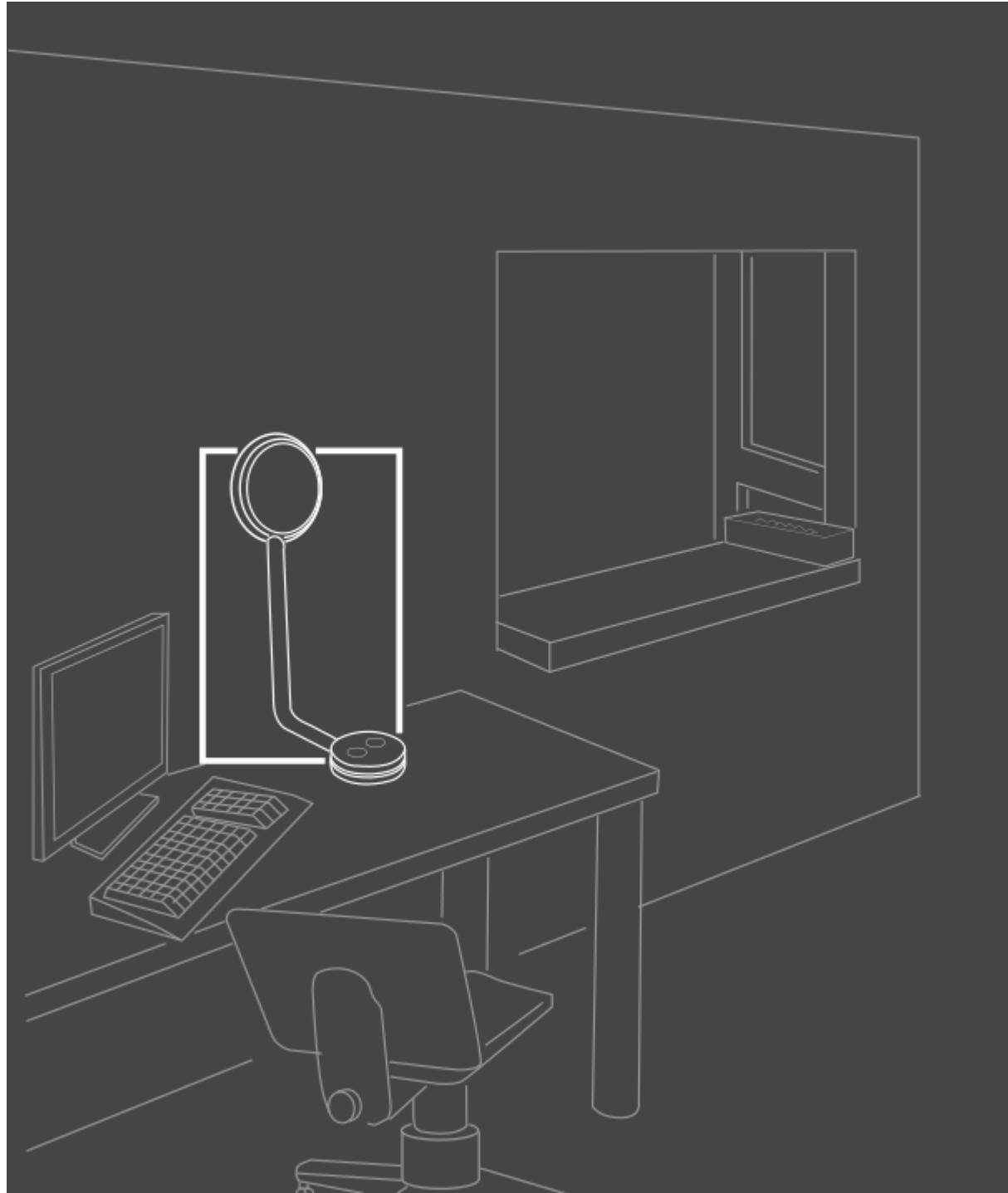


Here's a rendering of what a button responsible for reporting shelter capacity might look like:



The button is a rotating switch. The green light means space available, the yellow means nearly full, and red means full. An LED lights up when the switch's selector aligns with it.

The switch could live behind a reception desk of a main office, like the one pictured below (modeled after the desk at St. Felix):



The rotating selector switch rests on a desk, connected to power. A more visible signal-light is hung from the wall. The wall mounted light is so that everyone in the office has line of sight to whatever status they're broadcasting.

Finally, the switch would push it's status to a database and website frontend based on Filip Stepien's open source [Shelter Watch](#). Parts of the frontend might also be borrowed from Civic Tech Toronto's [BaseCount](#).

Cost

The switch's design is intended to be inexpensive and to be assembled in a makerspace with a lasercutter and an electronics bench (e.g. [HackLab.TO](#) -- I am a member). I expect the material cost of each switch to be ~\$20:

- NodeMCU: \$12,

- Wood: \$1,
- Acrylic \$2,
- 3 position rotary switch: \$3,
- power cable: \$2
- maybe a battery?: \$2

These prices are based off of Amazon, Creatron, and Plastic World prices. So the material cost of each switch can be lowered by buying from suppliers with longer shipping times.

Time

A rough estimate of how long building these switches will take:

Task	Time (hrs)
Design a first prototype of the 3 phase switch	7
Laser cut and assemble prototype with case (rendered above)	10
Laser cut and assemble wall mounted light	5
Deploy website frontend and database	10
Make switches and lights for each OOTC location	14
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Total	46

I understand that contracting with city departments can be complicated and slow. In the interest of avoiding delays, I am willing to volunteer my time to prepare these switches. I plan to apply for a community & events grant to cover material costs.

So...

I'm curious about whether SSHA plans to roll out their updates to SMIS to OOTC shelters for this winter. If that seems unlikely, or if you think what I've described sounds worthwhile...

I would like to deploy prototypes of this kind of internet button to the 16 Out of The Cold shelters around Toronto.

I'd like to ask for the permission of the staff at SSHA (and the staff of Dixon Hall, who I also plan to contact soon).

I'd be thrilled if I could talk to you folks at SSHA in person. Do you guys have any availability this week? [Here is a "When is good" calendar](#), if you guys are up for that. The results (code: g392g97) are viewable [here](#).

Thanks! Zach Donsky [Email](#) , [Website](#)