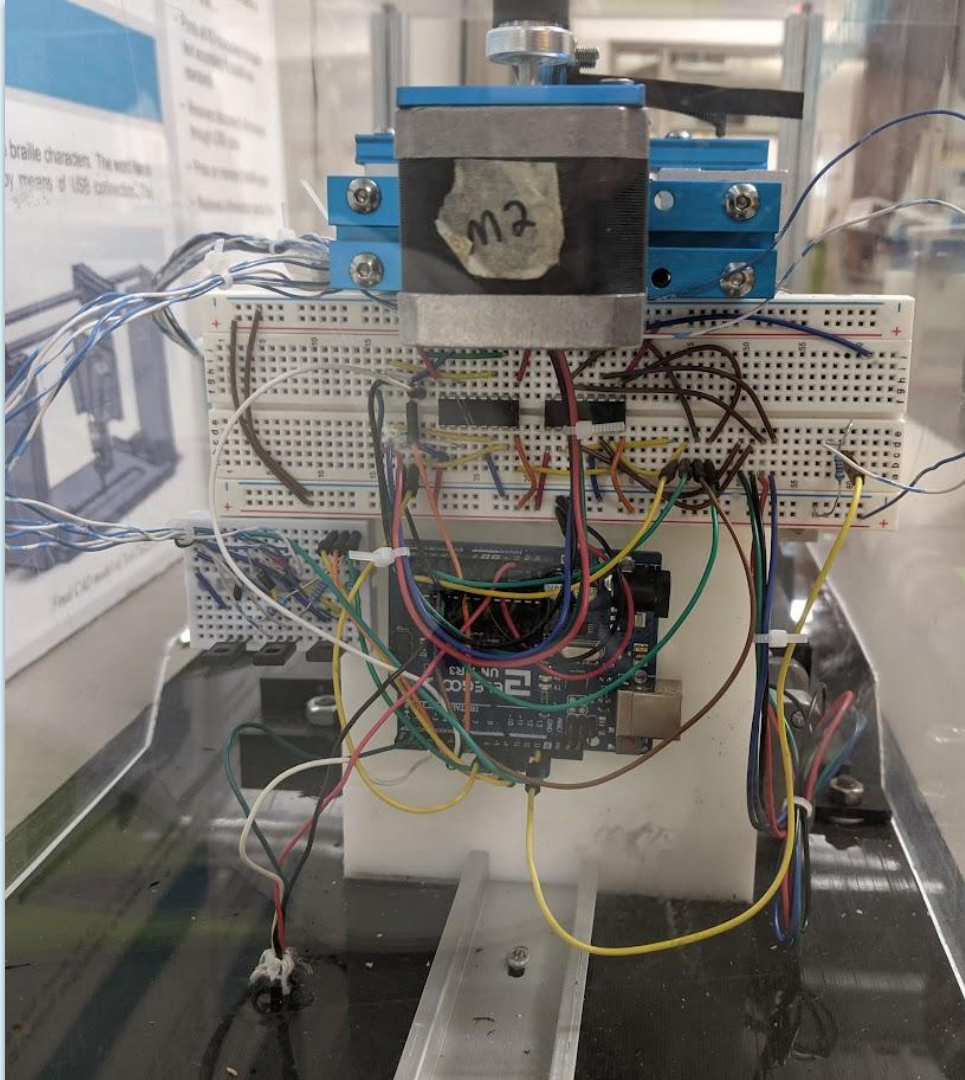
,braille ,printer

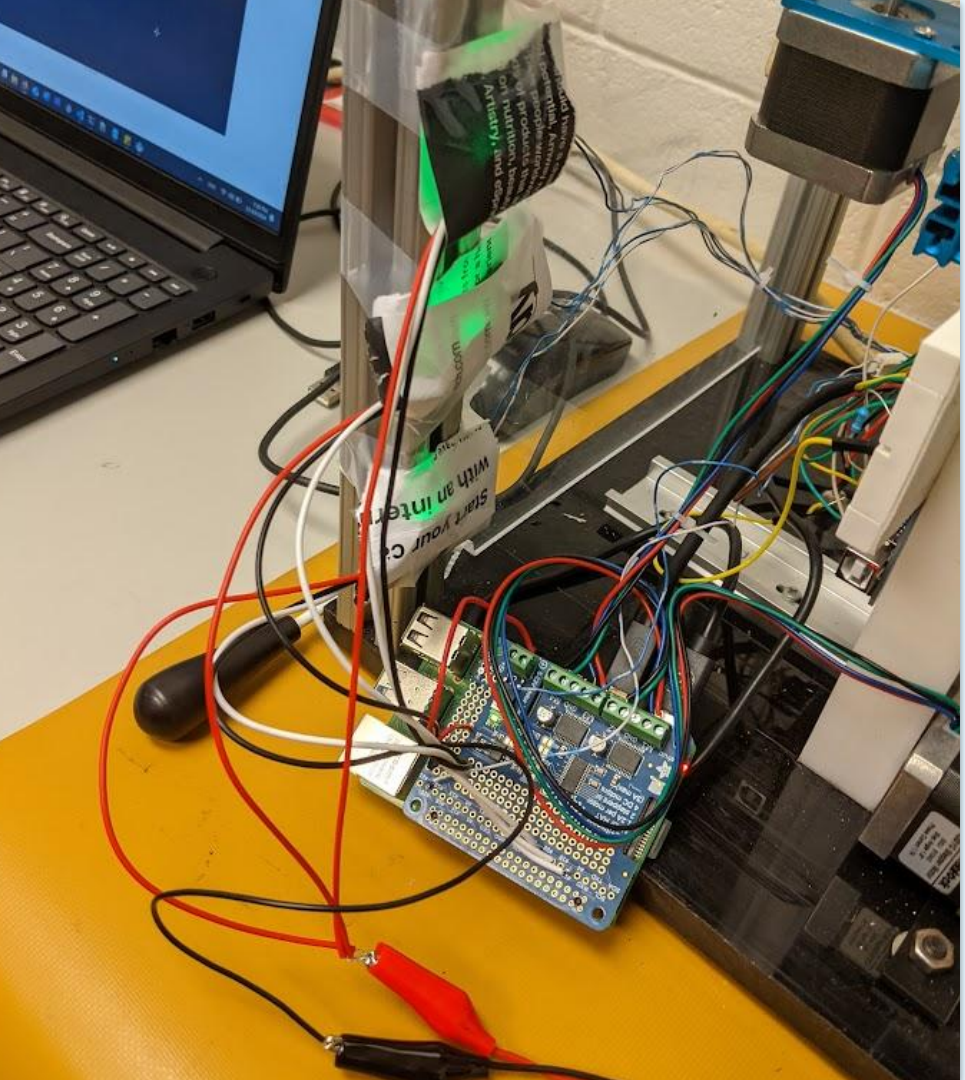
Kenny Howes, Emma Wang, Ebun Aluko

Advisors: Derek Schuurman, Chris Sorensen

where we started

- Semi-working machinery
  - Slippage
  - Inaccurate motors
  - Too-slow arduino
  - etc. etc.
- No TCP/IP stack
- No user interface

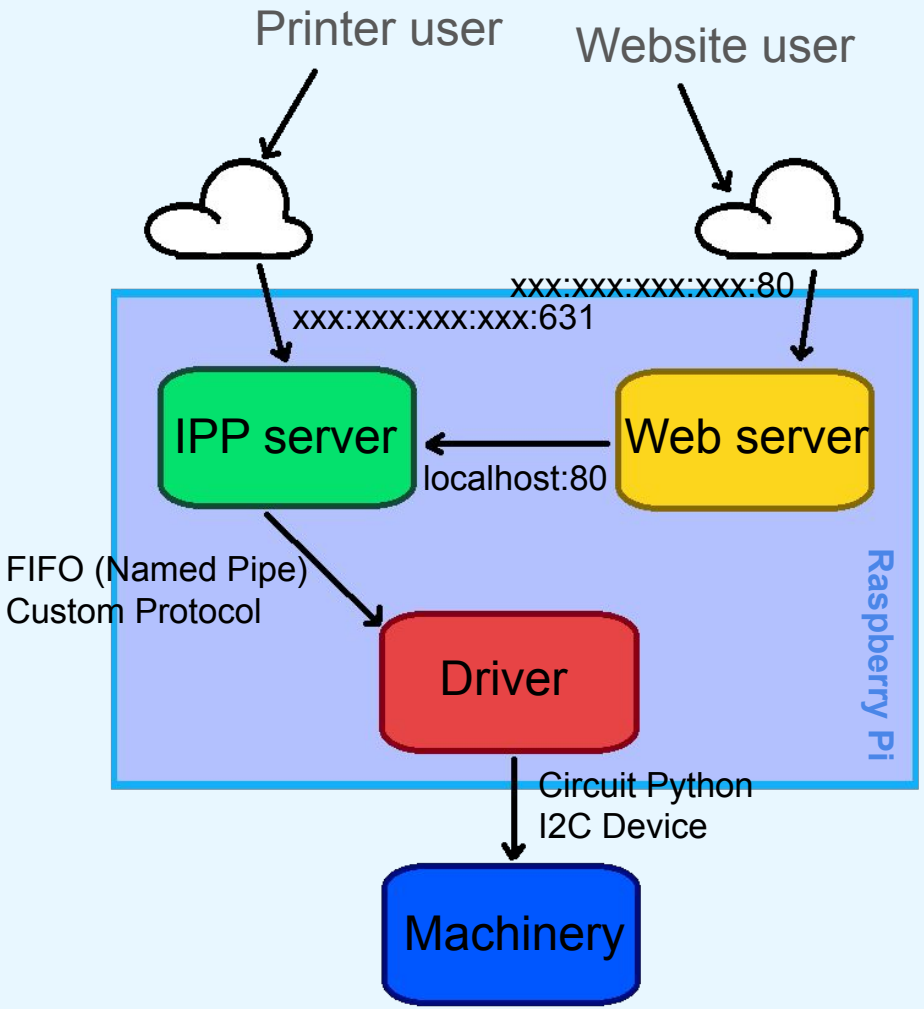




what we've done

- Replace parts
  - add Raspberry Pi w/ Raspbian OS
- Write driver for running machinery
  - print head movement (<0.3% error)
  - slow down steppers
- Add software interfaces
  - IPP server/printer
  - Flask website

demo

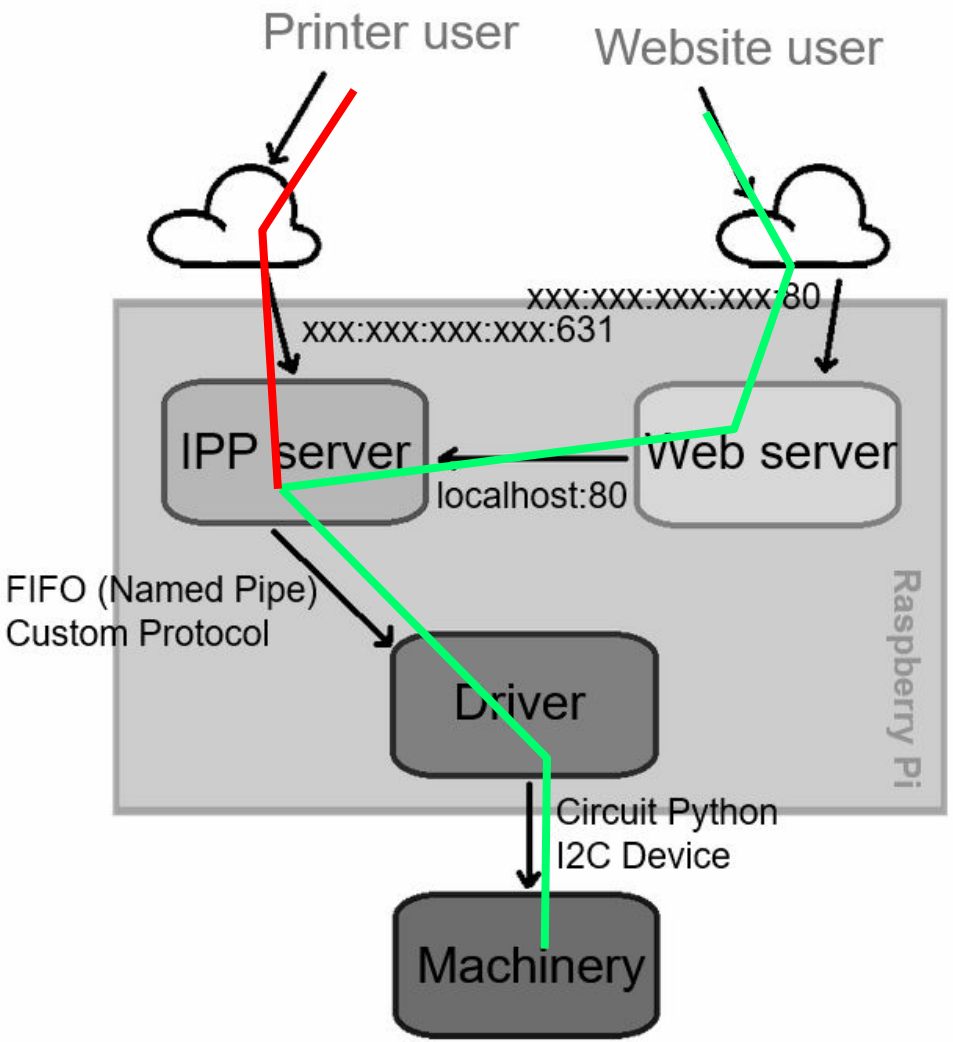

Printer user
Website user
xxx:xxx:xxx:xxx:80
xxx:xxx:xxx:xxx:631
IPP server
Web server
localhost:80
FIFO (Named Pipe)
Custom Protocol
Driver
Raspberry Pi
Circuit Python
I2C Device
Machinery

infrastructure plan

current progress

& next steps

- IPP server
  - advertise on the net
  - grab print job data
- Develop IPP to driver protocol
- Fix machinery stuttering
  - Look into writing C library
- Enhance website, add document support



caring

made to help the those who need braille

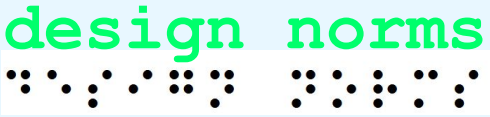
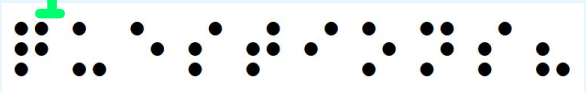
transparency

interfaces usable by any web/printer user

stewardship

pi hat to handle efficiently using electricity

design norms



questions?