Making The IoT Go!

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For Clarity

- I’m new to Golang
- I’m not new to IoT
- I’m not new to hardware hacking
- I’m not a hardware engineer
- I learn as I go and make stuff up when I have to

Why I did this

- Wanted to access some sensors directly from Raspberry Pi
- Didn’t feel like doing any more C/C++ today
- I **really** didn’t want to do Arduino today
- I don’t want to write C, so …
  - I don’t want to write a Cgo app so …
  - I’ll just port the driver to Go! Easy!**

**If your brain works like this, see me after. We should start a support group.

What I did

- Started with the C code
  - Copy a section of it into a new Go file
  - Translate those lines to Go
  - Delete the C
  - Lather, rinse, repeat

C Code

```
// Sensor calibration data
static int calT1,calT2,calT3;
static int calP1, calP2, calP3, calP4, calP5, calP6, calP7, calP8,
calP9;
static int calH1, calH2, calH3, calH4, calH5, calH6;
```

Go Code

```
type BME280 struct {
       Dev            *i2c.Device
       tempConfig [3]int
       pressConfig    [9]int
       humidityConfig        [6]int
}

type BMEData struct {
       Temperature int
       Humidity    int
       Pressure    int
}
```

How long did it take me?

- I was on PTO
- I was avoiding my house guests
- Took me a day, in between other activities

Demo

What I learned

- A lot of Go
- It is a **lot** easier than you think
- I think more IoT stuff should be done in Go
  - I’d love to see a Go-on-the-metal runtime for embedded devices to displace Arduino!

Stick the landing

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