Starting up in Maze Solving

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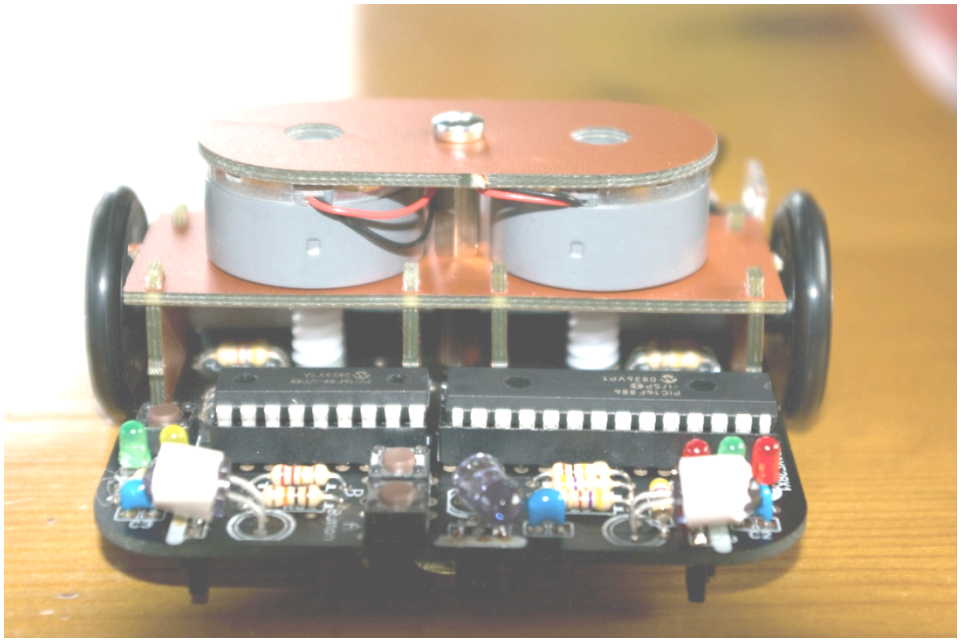
- It started with a visit to Techfest in 2012....

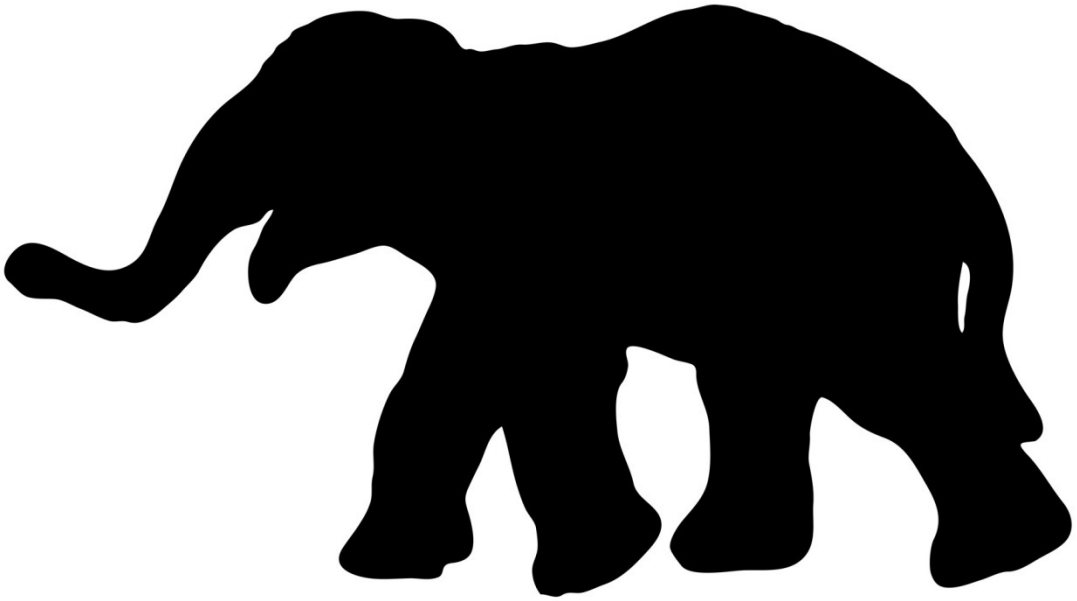


Where to Start

- Microcontroller & Software Environment
- Chassis & mechanical
- Motors & Odometery
- Sensors
- Communications &Data Logging
- Gyro

Eating the elephant

How do you eat an elephant?



Answer: A bit at a time

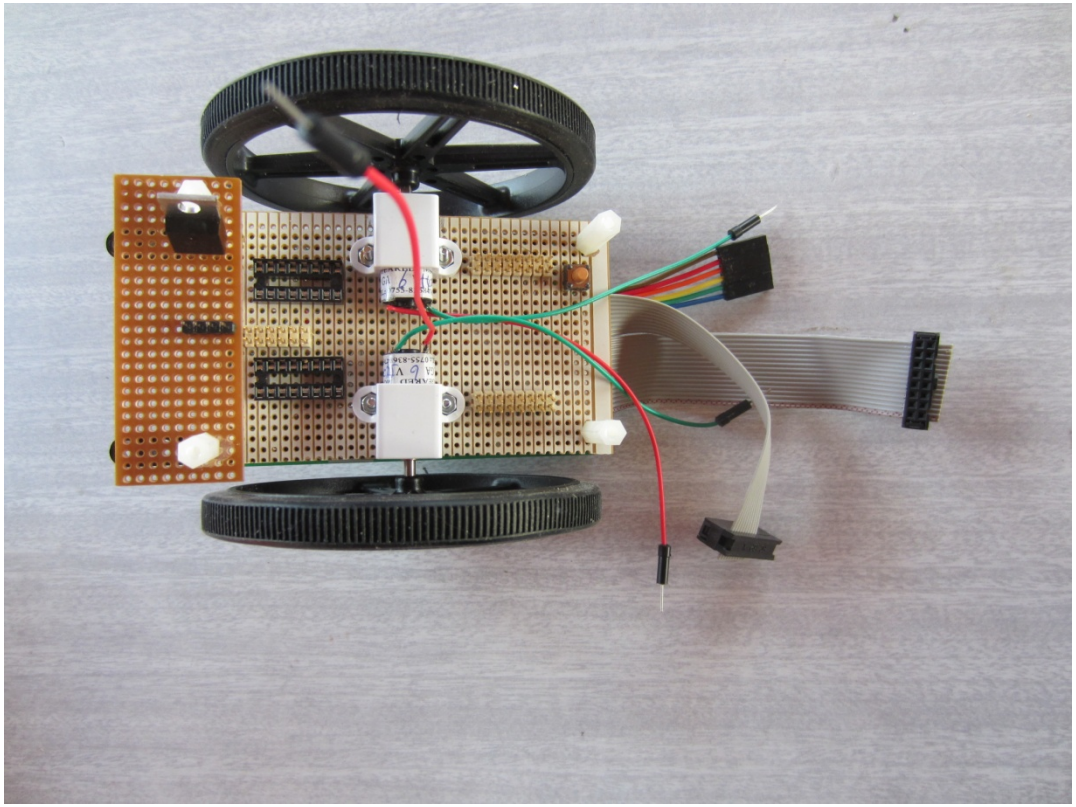
The thinking so far

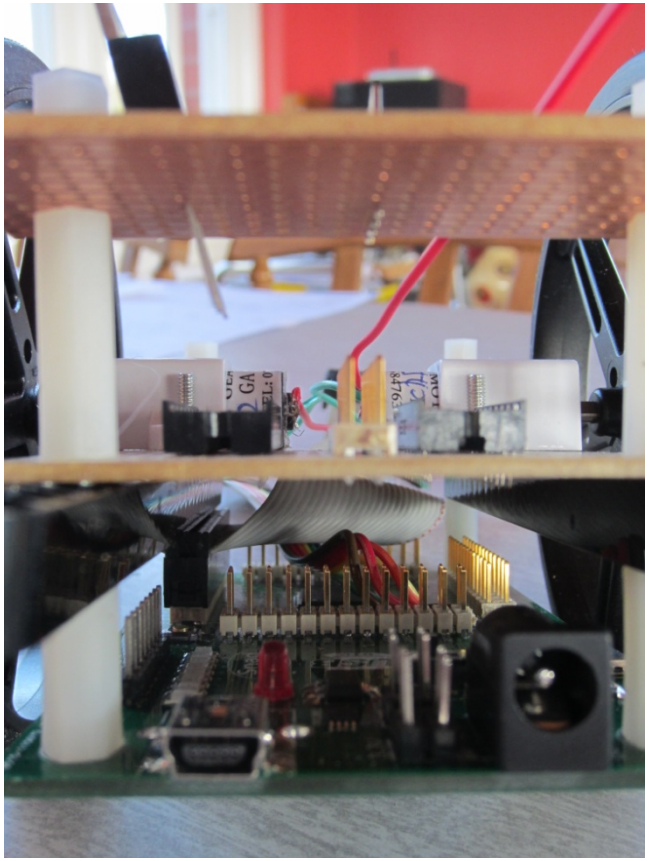
- Microcontroller & Software Environment
  - dsPIC33E MPLABX C++
- Chassis, mechanical & PCB
  - 4 wheeled centrally mounted
- Motors & Odometery
  - Quadrature encoder
  - Final drive gearing only Polulu? Faulhaber? Maxon?
- Sensors
  - IR SFH4550, BPW96B
- Communications & Data Logging
  - USB?, Bluetooth?, microSD. – What to write PC code with?
- Gyro
  - No idea

IET Spec Mouse

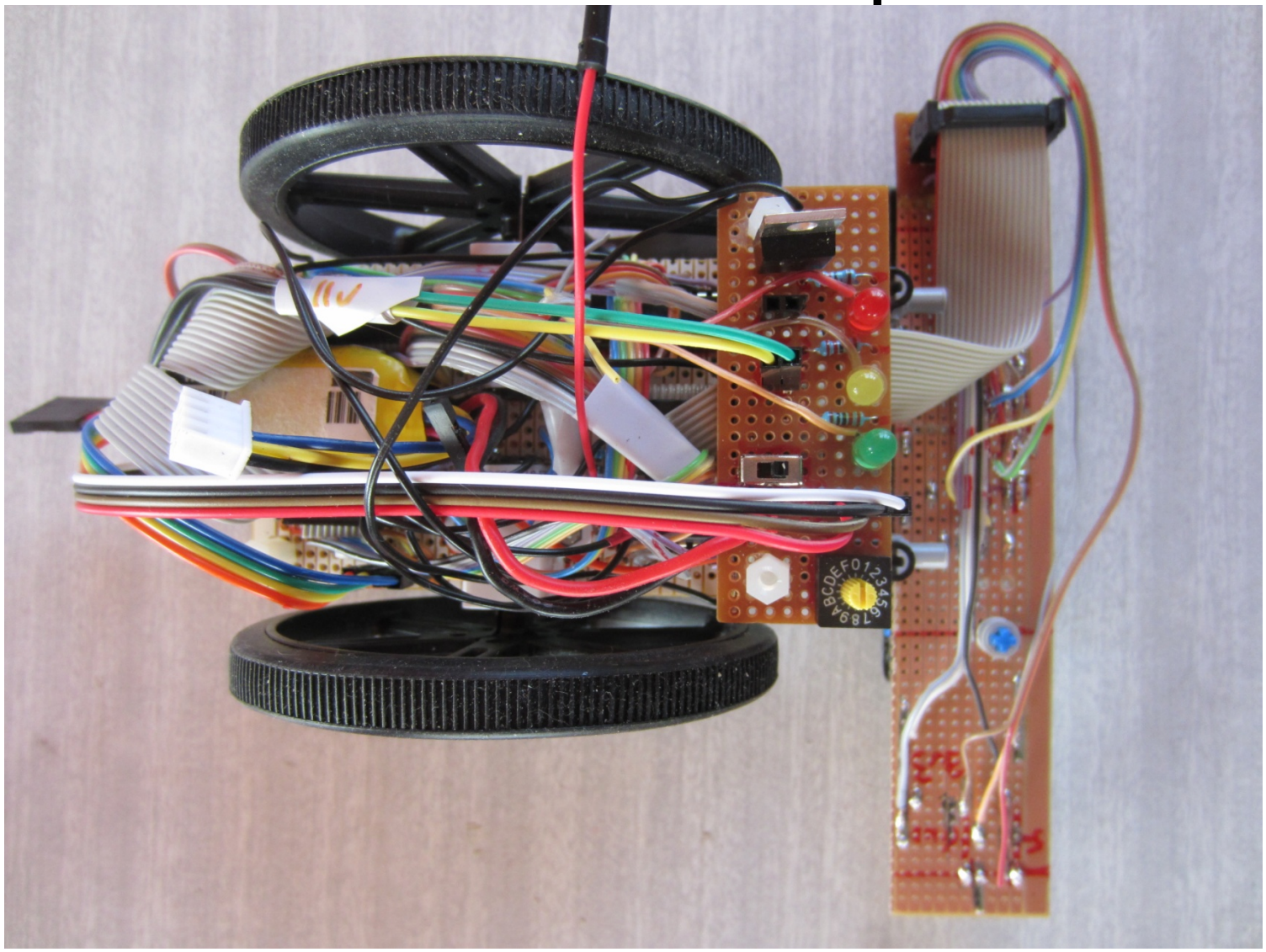
- Swappable sensors – 16 pin i/f
  - Line follower & drag race
  - Wall follower
- SNADpic development board
  - dsPIC33EP512MU810
  - USB & microsSD
  - Shield supplies 3.3v & 5v
- Standard gearmotors but no encoders
- Large Polulu wheels
- SFH4550 & BPW96B x5
- ULN2803 & L293D

It all looked so tidy ...





Until I wired it up!



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