File organization

* 0 and 1 are just kept for reference. NOTE: rib in 0 seems ok, 14 inch was a tad too small for wing chord but probs won’t need the larger wing area for this UAV
* **modelParts** are 3d models created for jaguar.SLDASM of real life objects that do not require printing or design
* **partsToPrint** contains parts of the model’s wing
  + **3DPrinterCrap** contains STL and split file parts
  + **wingProfile** contains coord files for wing profile
* Other files have data in them based on their name

Two main rib styles will exist. First prototype will have a simple rectangle wing and I’ll have to assess the efficiency downsides of this later. At this point, my primary goal is to get something in the air so I can really get the ball rolling. The two rib styles are a simple rib and a servo rib which will be used to mount servos. The ribs are to be placed 6 inches apart since the wing covering will be somewhat rigid foam.

Basic specs/notes

* Wingspan around 100 inch 🡪 2540mm
* Going for an aspect ratio of roughly 7 with a wing chord of 14 inches
* Primary edge thickness (thickness of outermost surface on wing rib) was meant to be 3/16 but I settled for .15 since it’s a nice number and since 3/16 is too much
* Wing rib thickness is ¼ inch
* Spar thickness is roughly 22mm so that translates to .866141732 inches, but I’ve rounded this to .87 for the model
  + Spars are 3.64 inches apart since revised design of wing rib forced them to be closer. I changed the way that the two parts connect to each other, so the design is more stable though I’ve lost some twist resistance provided by the spars which were initially 5 inches apart. Twist shouldn’t be an issue for an aircraft this small so I am not concerned.

**SElectrical considerations (wire count)**

**Tail**

* LEDs (5V and single data pin)
* GPS/Compass (5V, UART and I2C)
* 4 servos (5V and at least 2 data, ideally 4 for independent control)
* Tail camera (5V and 1 data (since analog and non-critical component))
* **TOTAL:** 5V (2 + 2 (redundancy)), LED\_DAT (1), UART (2), I2C (2), SERVO\_DAT (4), VIDEO (1) 🡪 14

**Right wing**

* LEDs (5V and single data pin)
* 1 servo (5V and 1 data)
* Backup Rx (5V and UART)
* **TOTAL:** 5V (2 + 2), LED\_DAT (1), SERVO\_DAT (1), UART (2) 🡪 8

**Left wing**

* LEDs (5V and 1 data)
* 1 servo (5V and 1 data)
* Backup VTx (12V and 2 data (using 2 for better signal transfer since analog))
* **TOTAL**: 5V (2+2), LED\_DAT (1), SERVO\_DAT (1), 12V (2 (use big pins)), VIDEO\_DAT (2) 🡪 10