

Embedded Motion Capture Device

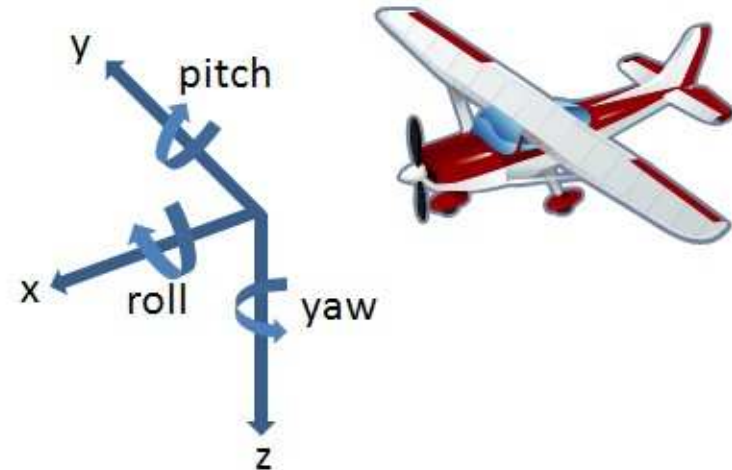
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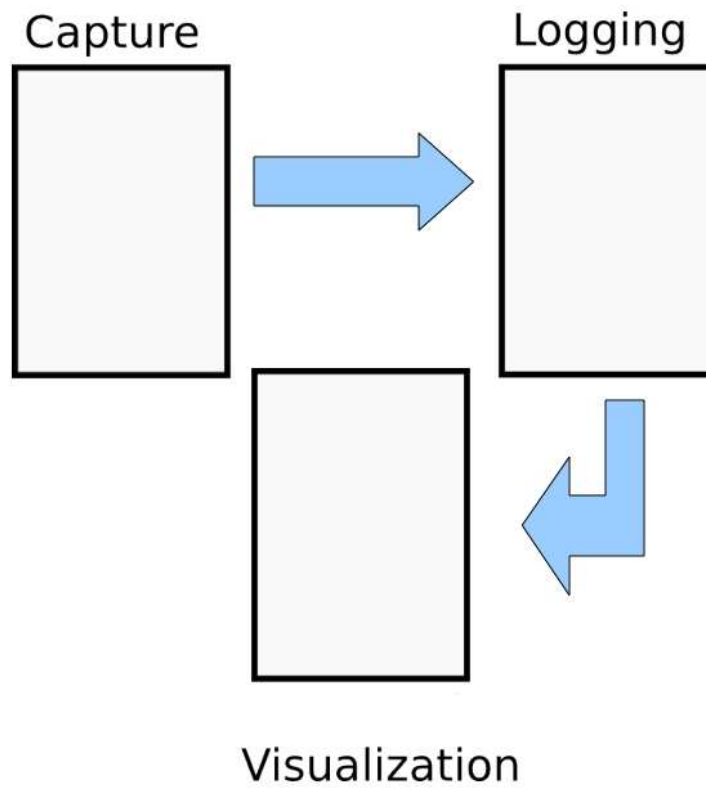


Project Goals

- Track an object in 3D space.
- Sample use case – cycling computer.
- A black box solution.
- Web Visualization Tool.



Divisions



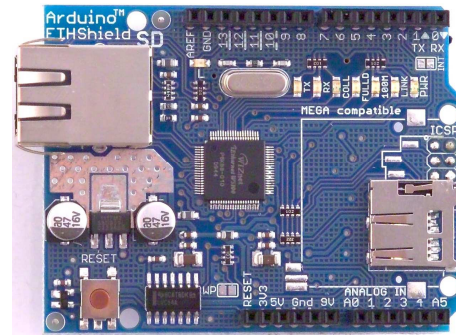
Capture

- Inertial Measurement Unit (IMU).
- ArduIMU.
- GPS.
- UART link to logging section.



Logging

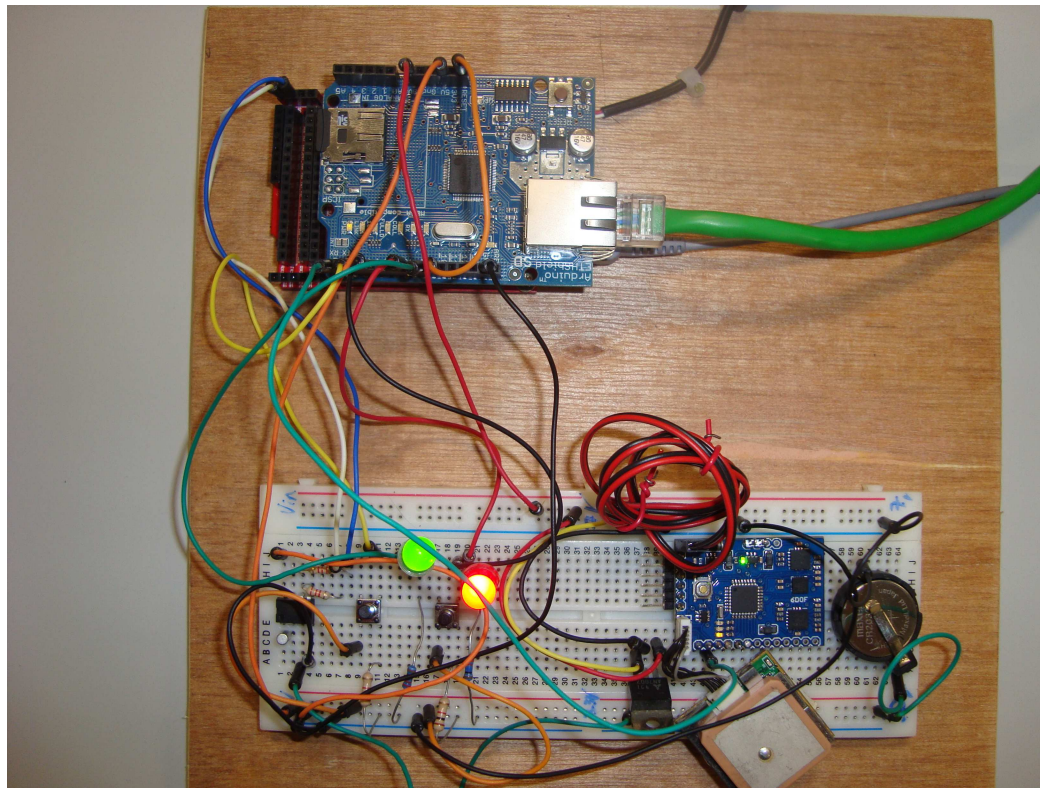
- Seeeduino Mega.
- RTC DS1307 via I2C.
- Ethernet Shield.
- User Input / Output (buttons & LEDs).
- Http to visualization section.



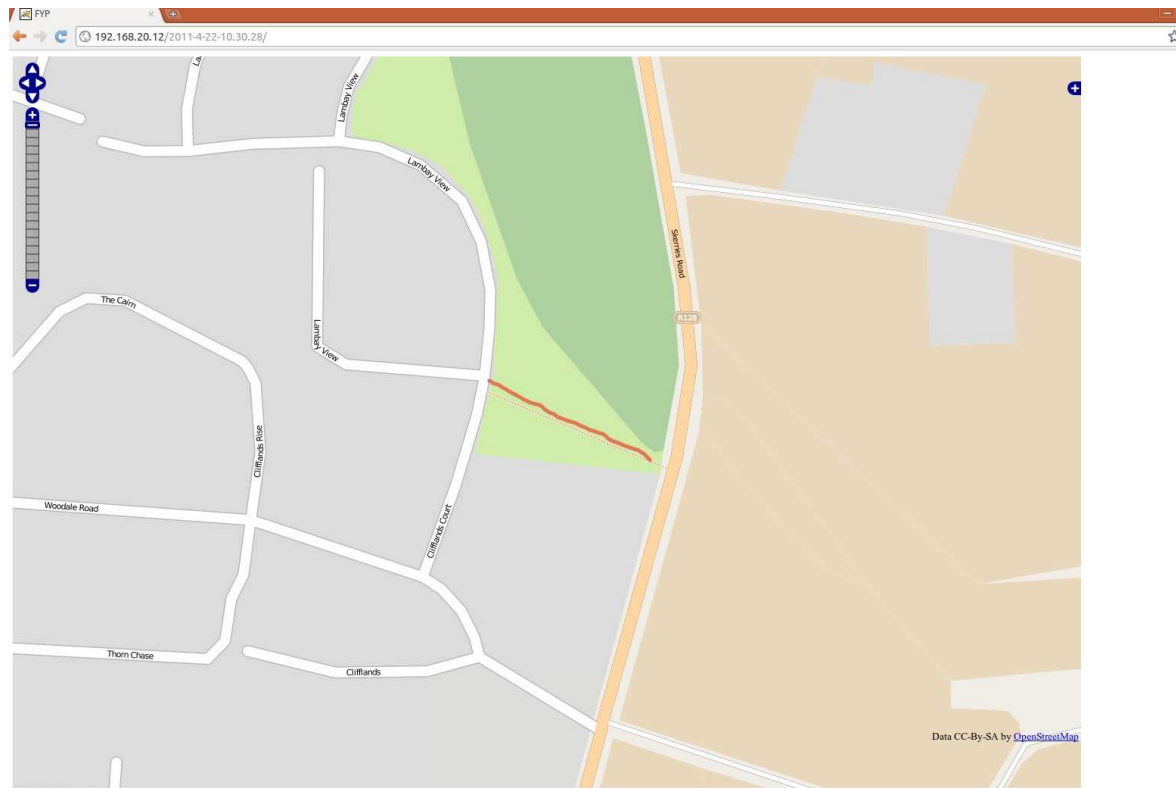
Visualization

- Tomcat Application Server.
- Microcontroller triggers a Java Servlet.
- Sensor data -> gpx/csv file format.
- Open Layers.
- Timeplot.

The Device



The Web Site – Part 1



The Web Site – Part 2



Questions ?

- Email – jefreyroe@gmail.com
- Twitter - **@leictreonaic**

- More info about IMUs - diydrones.com
- More info about Arduinos – arduino.cc

- Like 3D stuff – 3Dcamp June 11th UL - 3dcamp.barcamp.ie