Electronics/Firmware

- Camera
  - Writing driver code for Camera [camera.h, camera.c]
  - Taking photos every 2 seconds (at least 5 photos, 480x480p)
  - Storing photos

- GPS
  - Writing driver code for GPS module
  - getting longtitude and latitude information

- Data transmission
  - Writing driver code for XBEE S1 (probably)
  - Sending telemetric data each second
    - sending photos every 2 seconds

- Telemetric information
  - Battery voltage measurement IC ?
  - Driver for BMP (180 or 280)
  - Configuring Real Time Clock
  - Measuring number of cycles of propeller (?)

- Main Driver Code
  - Configuring FREERTOS
  - 3 main threads:
    - data acquisition (telemetry info)
    - data processing
    - data sending
  - additional threads:
    - satellite balance
    - camera handler

Telemetric data packet:
{
   [ID] [Uptime]
   [N of packets] [Voltage]
   [Altitude] [Velocity]
   [Latitude] [Longtitude]
   [Photo Info] [Propeller]
   [Real time for dispatch]
   [N of photos taken] [N of photos sent] (optional)
}

List of electronics

- STM32F103C8T6 (microcontroller)
- XBEE S1 (for radiotransmission)
- MPU 6050 (gyrosensor)
- BMP280 (pressure sensor for altitude measurement)
- ...