E4E – Radio Telemetry Tracking

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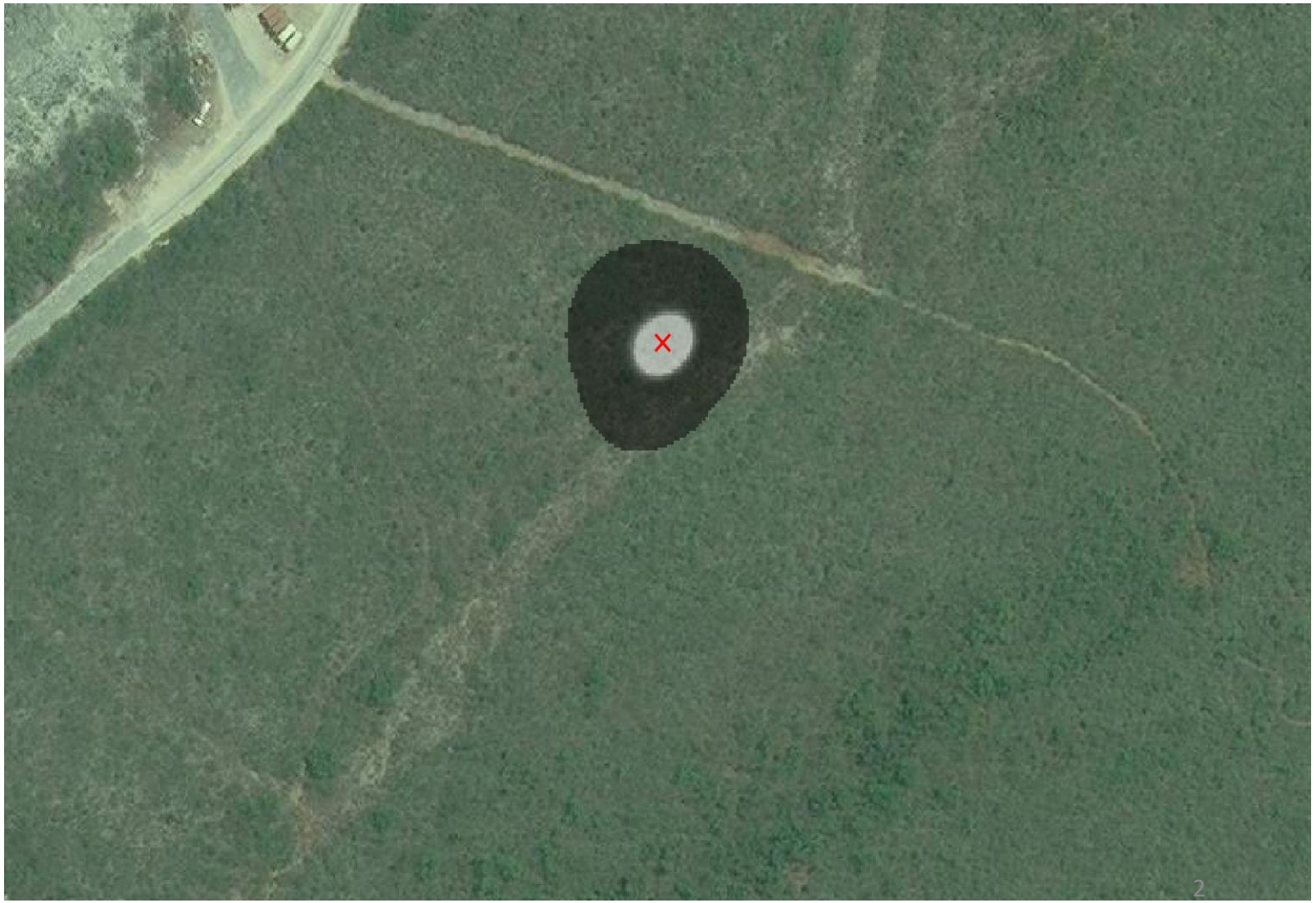
The Ideal

- Emulate Google Maps
- Given a target animal/tag, where is it?



The Reality

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The Solution – Drones

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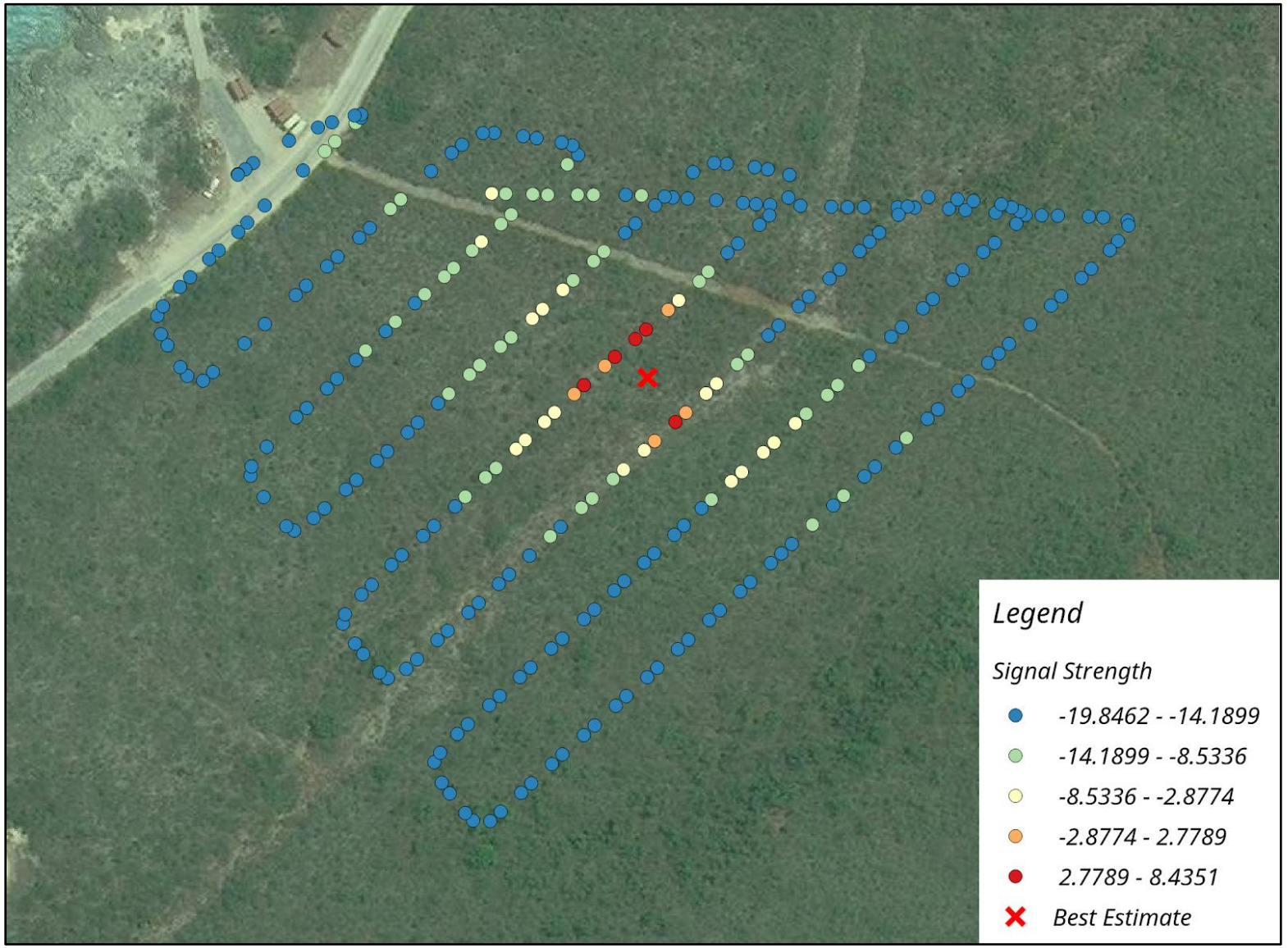
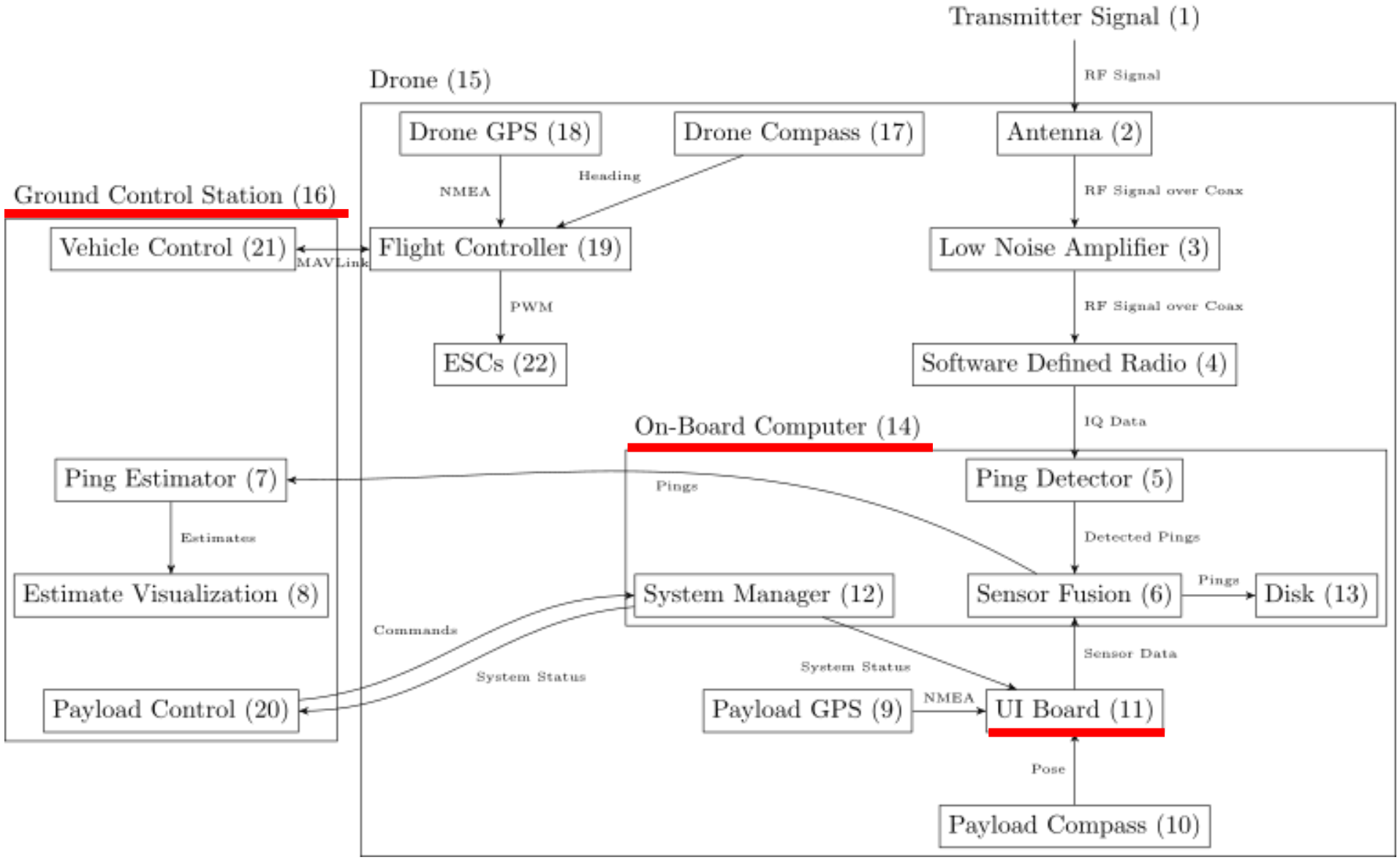


System Design



Deliverables and Milestones

Deliverables

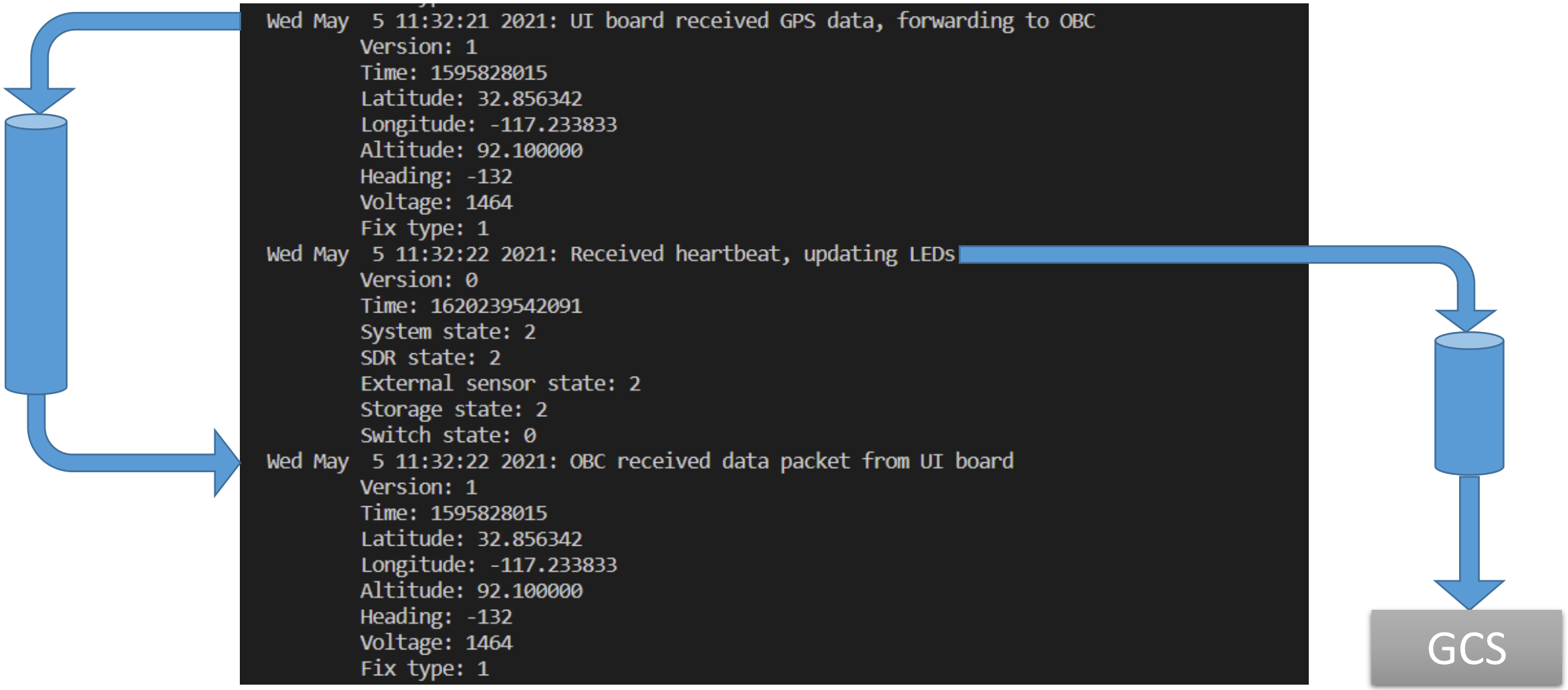
1. Update an existing UI board simulator
2. Implement communication from the OBC to the UI board

Milestones

- Week 4: functioning simulator
- Week 5 – 6: functioning communication (within the simulator)
- Week 7+: deploying the code and debugging on the physical drone

E4E team's goal: in-flight testing by the end of the summer

Current Progress - Simulator



Current Progress - Communication

OBC needs to

1. Receive data sensor data from the UI board
2. Parse the data (and send it to be processed)
3. Send heartbeats to the GCS

- Another team member is working on receiving the data
- I wrote logic to package and parse the data
- Next step: merge the two and test (group meeting is tonight)

Remaining Work

- Merging and testing the OBC communication (within the simulator)
- Test/implement firmware for sensors
  - Compass, GPS, LEDs
- Test all components on the physical drone

Summary

- Efficiently track animals using drones

- We have a working simulator
- Communication implementation is under way

- Remaining work: debugging software (and hardware?)