

800139 - EyeRIS

Week 50

1. Kevin Barnard
 - a. Investigated Postgraphile for automatic Postgres schema -> GraphQL API generation
 - b. Started designing DB schema to help centralize LCM log data from deployments
2. Brian Kieft
 - a. Not to be confused with "Eyeris", wrote an "Ayreris" mission for testing the transfer of real images via the acoustic link to the waveglider. Will test today if we can get out before the weather.
 - b. Lab tested image transfer to Hotspot via acomms
 - c. Merged DAT changes following some bug fixes

Week 49

1. Brian Kieft
 - a. Working with Tom/Ivan on SBD image transfer to the waveglider
 - b. Added delay for acomms ack to accommodate longer packet sizes.

Week 47

1. Rich Henthorn
 - a. Moore Foundation EyeRIS project update

Week 46

1. Kevin Barnard
 - a. Wrote documentation of 3D surface reconstruction workflow from point cloud exports
2. Brian Kieft
 - a. Working with Tom/Ivan on image transfer from LRAUV to hotspot

Week 45

1. Rich Henthorn
 - a. Project meeting
2. Brian Kieft
 - a. Deployed yesterday for camera system test

Week 44

1. Brian Kieft
 - a. Assisted with prep for Galene

Week 40

1. Jon Erickson
 - a. Bits and pieces for the EyeRis nose assembly for LRAUV.

Week 39

1. Brian Kieft

- a. Met with Ivan to discuss acoustic messaging options
- b. Met with team to form test plan

Week 38

- 1. Rich Henthorn
 - a. Proceeding with EyeRIS LRAUV Interface (ELI) development
 - b. Working towards a deployment later this month

Week 36

- 1. Rich Henthorn
 - a. Making modifications in prep for LRAUV deployment

Week 34

- 1. Jon Erickson
 - a. Paul R. is doing assembly on the strobes for the LRAUV version.

Week 30

- 1. Jon Erickson
 - a. Design of 1500m camera case is finished
 - b. Design of 6,000m camera case is finished

Week 28

- 1. Jon Erickson
 - a. Working on design for 1,500 meter and 6,000 meter, EyeRis Camera pressure case.

Week 24

- 1. Jon Erickson
 - a. Waiting on parts for LRAUV assembly
- 2. Rich Henthorn
 - a. Weekly meeting

Week 23

- 1. Jon Erickson
 - a. CJ Machine is re-making the strobe ring.

Week 22

- 1. Rich Henthorn
 - a. Weekly meeting
 - b. EyeRIS-LRAUV Interface
- 2. Denis Klimov
 - a. Second controller board is configured; performing optical testing with 5 LED strobes

Week 20

- 1. Rich Henthorn
 - a. Weekly meeting
- 2. Denis Klimov

- a. Updating second controller board, and optimizing strobe pulse length

Week 19

1. Jon Erickson
 - a. Parts are coming in for the LRAUV assembly. The camera case is in pressure test.
2. Rich Henthorn
 - a. Weekly meeting

Week 18

1. Jon Erickson
 - a. Camera pressure case assembly - Pressure test

Week 17

1. Jon Erickson
 - a. Finally solved the strobe fit issues and have a polycarbonate dome design.
 - b. Have not pressure tested the camera case. Waiting on parts.
2. Denis Klimov
 - a. Figuring out how to add heat sinking from MOSFETs in switching regulators on existing board, and retesting controller

Week 16

1. Jon Erickson
 - a. Assembling the camera case. Will pressure test as soon as the handle/guard is done.
2. Rich Henthorn
 - a. Weekly meeting
 - b. ELI refinement

Week 15

1. Jon Erickson
 - a. Solids and prints for EyeRis on LRAUV.
 - b. Solids design for a 6000m version.
2. Rich Henthorn
 - a. Weekly meeting
 - b. EyeRIS LRAUV Interface app

Week 14

1. Rich Henthorn
 - a. Updating ELI application
2. Denis Klimov
 - a. Testing and qualifying LED strobes, thermal protection, and optical performance

Week 13

1. Jon Erickson
 - a. Assembling the LRAUV pressure case.
2. Denis Klimov
 - a. We started testing optical performance of LED strobes. So far so good, but the non-linearity of the Thorlabs detector was found, so test setup needs some corrections.

Week 12

1. Jon Erickson
 - a. Assembling the camera can
2. Denis Klimov
 - a. Working on the setup for optical tuning of LED clusters: detector attachment base; and mounting of the cluster to the optical table. Also 1 EyeRIS controller set is ready for testing.

Week 11

1. Jon Erickson
 - a. We'll start assembly on the LRAUV camera case
2. Rich Henthorn
 - a. Installed ELI on target TX2 CPU board
 - b. Building up ELI functionality adding commands and logging

Week 10

1. Rich Henthorn
 - a. ELI implementation basics
 - i. LCM message intake
 - ii. Data logging
 - iii. Load config file
 - iv. Prepping target
 - b. Weekly meeting
2. Denis Klimov
 - a. Working on the setup for optical tuning of LED clusters: detector attachment base

Week 9

1. Jon Erickson
 - a. Waiting on LRAUV camera parts from the shop.
2. Rich Henthorn
 - a. Design docs for EyeRIS-LRAUV-Interface (ELI)
 - b. Prototype state machine implementation for ELI
 - c. Reviewed docs for camera focus motor control
 - d. Weekly meeting
3. Denis Klimov
 - a. Parts for power meter attachment for IRIS strobe are complete, assembling 3 units.

Week 8

1. Jon Erickson
 - a. Parts are still in the machine shop
2. Rich Henthorn
 - a. Weekly meeting
3. Denis Klimov
 - a. Cross braces for power meter attachment for IRIS strobe are complete, working on finalizing drawing for the aluminum tube

Week 7

1. Rich Henthorn
 - a. Weekly meeting

- b. Created EyeRIS LRAUV Interface (ELI) for command and control of EyeRIS on LRAUV
 - c. ELI will run on a Jetson TX2 backseat-computer specific to EyeRIS
- 2. Denis Klimov
 - a. 3D printed several parts laser power meter attachment for IRIS strobe, working on cross brace for temperature probe.
- 3. Alana Sherman
 - a. Attended weekly meeting

Week 6

- 1. Rich Henthorn
 - a. Weekly meeting
 - b. Moetino platformio project code
 - c. EyeRIS LRAUV Interface app

Week 5

- 1. Jon Erickson
 - a. The sop has started on the camera case parts.
- 2. Rich Henthorn
 - a. Weekly meeting
 - b. Review reusable Moteino modules
- 3. Denis Klimov
 - a. Working on drawings for laser power meter attachment for IRIS strobe
- 4. Ed Mellinger
 - a. Reviewed Paul's control board design, some back-and-forth regarding fusing and flash capacitor safety
- 5. Alana Sherman
 - a. Attended weekly meeting

Week 4

- 1. Jon Erickson
 - a. Ray's back in the shop so we'll get some headway on the camera case parts.
- 2. Denis Klimov
 - a. Looking into design of the optical power meter attachment for LED strobe

Week 3

- 1. Jon Erickson
 - a. Paul is deciding if he wants to pull the EyeRis pressure case from the shop queue, since they are still closed. This means farming it out to SIO, GoProto, or some other shop and paying for it.
- 2. Rich Henthorn
 - a. Project kickoff meeting
- 3. Denis Klimov
 - a. Review of optical power meter attachment for EyeRIS LED strobe

Week 1

- 1. Rich Henthorn
 - a. Moteino and platform.io