

902208 - Mini ROV Operations

Week 51

1. Alana Sherman
 - a. Spending out year end money
 - b. Troubleshoot an issue which seems to be a faulty video hub

Week 49

1. Johann Voigtlander
 - a. Ballasted MiniROV

Week 48

1. Johann Voigtlander
 - a. Configured a new time server for mobile rack

Week 47

1. Alana Sherman
 - a. Spent last week finishing mob then waiting for weather to improve
 - b. Once it was decided to scrub the dives due to weather we had to demob from the Fulmar and then build everything back up in the lab for the BBC video shoot during the first week of December
 - c. Ordering spares

Week 46

1. Johann Voigtlander
 - a. Mobilized MiniROV onto Fulmar

Week 45

1. Alana Sherman
 - a. We finished up two weeks of operations on the Carson, demob was Friday
 - b. Had two troubleshoot ground fault on 24V, looks like it was connection to the depth sensor
 - c. Taking apart topside and reconfiguring for upcoming days on the Fulmar
 - d. Put in po for sonardyne usbl system
2. Johann Voigtlander
 - a. Demob

Week 44

1. Johann Voigtlander
 - a. Mobilized MiniROV onto RC
 - b. 2 days at sea for Kakani
 - c. MiniROV Maintenance, issue with clump weight thruster ground fault

Week 41

1. Alana Sherman
 - a. Practiced flying the Mini and worked on my manipulator skills before tool sled change
2. Johann Voigtlander
 - a. 3D printed multiple HD camera mounts at different angles
 - b. Ordered manipulator joystick switch to add a “stop” position on the wrist
 - c. Built cable for wetwifi and 3D printed potting mold
 - d. Inspected RC SDI coax minirov connection, working with DJ to test the corroded termination to see if it needs to be reterminated.
 - e. Set up the MiniROV and control van to include ROVVR equipment
 - f. Went in the test tank with the ROVVR students from Harvey Mudd
 - g. Installed software for 2x spare NUC PCs for the MiniROV

Week 40

1. Johann Voigtlander
 - a. Writing code to solve joystick disconnection issue
 - b. Fixed some video issues in the back of the control van
 - c. Ballasted midwater sled
 - d. Designed and printed camera mounts at different angles

Week 39

1. Johann Voigtlander
 - a. MiniROV debugging in test tank
 - b. Built up cable for WetWifi - completed some tests and built a LabVIEW program based on our ‘overlay.vi’ code to grab ZMQ strings
 - c. Purchased 2x Joysticks and a button controller board
 - d. RMA on level wind motor
 - e. Obtained additional camera, laser, and multibeam data in the test tank

Week 38

1. Johann Voigtlander
 - a. Test tank operations for Giancarlo
 - b. Debugged dropout issue
 - c. Took apart EPOD, tested with Alana - repaired EPOD and remounted

- d. Fixed some network wiring in Focal box

Week 37

1. Alana Sherman
 - a. Trying to confirm days on the Fulmar, we are almost there
 - b. Found coast guard training for Arctic cruise that works with our fall ship schedule
2. Johann Voigtlander
 - a. Mounted GT hardware
 - b. Remade laser mount to clock 90 degrees
 - c.

Week 36

1. Alana Sherman
 - a. Trying to get ship scheduling finalized with the Fulmar, now that they are back online. I am waiting to hear from the Aquarium
2. Johann Voigtlander
 - a. Swapped Mink10 short to Mink10 long on benthic serial can
 - b. Rewired benthic can to support 24V input
 - c. Installed ethernet switch in benthic can
 - d. Rewired all fiber connections in the control van
 - e. Replaced broken switch in manipulator joystick
 - f. Started RMA process for winch level wind motor which had broken pins on delivery
 - g. Tested new DSP&L HD Multi SeaCam

Week 35

1. Johann Voigtlander
 - a. Rewired and fixed small issues with Focal box upgrade
 - b. Updated schematics and documentation
 - c. Created new schematics for benthic can 24V upgrade
 - d. Helped mount mapping equipment on benthic sled

Week 34

1. Alana Sherman
 - a. Helped as needed with integration of new focal boards. Mostly just trying to track down why a short list of things were not working as they are supposed to.
2. Johann Voigtlander
 - a. Solved many issues after upgrading the Focal stack. Vehicle is operational again.
 - i. Updated schematics

Week 33

1. Alana Sherman
 - a. Advising Johann as needed on EPod upgrades
2. Johann Voigtlander
 - a. EPOD Focal Upgrade:
 - i. Installed new 907+ Remote motherboard
 - ii. Installed additional CWDM yelloBrik module
 - iii. Confirmed all serial ports functional
 - iv. Confirmed aux cameras work
 - b. Purchased Focal 907 debug PCB

Week 32

1. Alana Sherman
 - a. I went over the fiber pathway/new focal stack design with Johann. The pod is open, and the bottom side stack will be changed now.
2. Johann Voigtlander
 - a. Took apart the EPOD and started the Focal motherboard upgrade.

Week 31

1. Johann Voigtlander
 - a. Assisted moving 20' container back
 - i. Reconnected control van to ROV
 - b. Mounted Oculus MD1200d to MiniROV
 - c. Re-installed all ComPas hardware into control van

Week 30

1. Johann Voigtlander
 - a. Continued on Labview VN-300 integration upgrade

Week 29

1. Johann Voigtlander
 - a. Disconnected mini, clump, and winch and set up the display for the open house

Week 28

1. Johann Voigtlander
 - a. Refurbished benthic sled interface can bulkheads

Week 27

1. Johann Voigtlander
 - a. Relocated 20' container to the end of the island

- b. Rebuilt manipulator control console
- c. Obtained a quote for the ranger 2 system
- d. Obtained a quote for Focal 907-Serial expansion
- e. Integrated the VN100 & VN300 with labview

Week 26

- 1. Alana Sherman
 - a. Wrote the proposal for 2025, working on budget now
- 2. Johann Voigtlander
 - a. Built up mapping sled and tested the system
 - b. Got a quote for Ranger Mini 2 system
 - c. Put Modbus code on Github

Week 25

- 1. Alana Sherman
 - a. Worked with Johann to troubleshoot some issues with bringing the HD video signal through the Rattler into the yellowbrik mux/demux back to the topside. Lots of swapping fibers and components. We are going to try with Todd's HD signal generator and see if that helps identify if there is a problem and where the problem is.
 - b. Met with Eric M to explore all the possibilities of adding GT's nav suite to the benthic sled for the arctic trip. I think there is a good plan forward.
- 2. Johann Voigtlander
 - a. Connected the focal 907 console + remote PCBs. Confirmed functionality of serial ports, analog cameras and GBE PCB
 - b. Sent out PO for HD camera replacement

Week 24

- 1. Alana Sherman
 - a. Met with GT and team to discuss how to pack on the elements of the navigation sled to the benthic sled for the arctic cruise
- 2. Johann Voigtlander
 - a. Met with Giancarlo to discuss Arctic trip mapping integration and logistics

Week 22

- 1. Johann Voigtlander
 - a. Conducted several ice drill tests, and managed to drill ~2.5" deep.

Week 21

- 1. Johann Voigtlander
 - a. Connected VARS to SHORE network so Lonny & Brian can download data

- b. Started ice core testing

Week 20

- 1. Johann Voigtlander
 - a. Refurbished manipulator gripper to spin concentrically for ice coring

Week 19

- 1. Alana Sherman
 - a. Troubleshooting Manip comms

Week 18

- 1. Alana Sherman
 - a. The Mini was deployed Tues-Thurs with good results and some fixable issues
 - b. Worked with DJ to get the tracking going and displayed on 4DNAV

Week 16

- 1. Alana Sherman
 - a. Prepping for next weeks dives on the Carson

Week 15

- 1. Alana Sherman
 - a. Spent a little time trying to figure out why new mod bus code did not work- luckily, Johann figured it out first
 - b. Working with Johan to have the plan for nav logging and remote desktop to sonardyne, and 4DNAV
- 2. Johann Voigtlander
 - a. Opened up core JBox & fiber JBox for maintenance.
 - b. Fixed labview Modbus code - still investigating issue connecting to core JBox

Week 14

- 1. Alana Sherman
 - a. Trying to establish dates for the Fulmar
- 2. Johann Voigtlander
 - a. Installed ROVVR on MiniROV to enable students from Harvey Mudd University to test their VR system in the test tank
 - b. Vehicle maintenance - stopped a leak on the umbilical J-box
 - c. Added a new NUC and piped it into the system to remote desktop 4DNAV
 - d. Re-terminated video BNC & ethernet cable on RC to connect to ROV control van

Week 13

1. Johann Voigtlander
 - a. Resolved ground fault issue with the port forward thruster - did maintenance on that thruster while it was open
 - b. Installed VR can on the vehicle and ballasted
 - c. Conducted tests in the tank for the new buttons on the main console
 - d. Sent over the new focal box to be built

Week 12

1. Alana Sherman
 - a. Working on updating the mod bus calls in the software, ran into an issue with libraries that Dale helped me straighten out
 - b. Worked with Johann on a ground fault in the thrusters
 - c.
2. Johann Voigtlander
 - a. Completed code and hardware changes for joystick buttons - needs testing
 - b. Troubleshooting a ground fault on the vehicle. Localized it to one of the thrusters.
 - c. Looking into MiniROV integration into RC

Week 11

1. Alana Sherman
 - a. Checked in existing code to the git hub repo (with less problems than usual)
 - b. Updating LabView and will work on modifying code to change the mod bus calls
2. Johann Voigtlander
 - a. Calibrated stereo cameras in the test tank with Paul R
 - b. Moved MiniROV logs from raid to atlas
 - c. Working with DJ to integrate 4DNAV into the control van
 - d. Solved latency issue in clump GUI

Week 10

1. Alana Sherman
 - a. Helping as needed with troubleshooting van integration including: core j-box, M3RS, and other issues
 - b. Almost have both operations on the Fulmar scheduled, submitted NOAA request for Fulmar time for Giancarlo last week
2. Johann Voigtlander
 - a. Completed 20' container topside wiring
 - b. Ballasted MiniROV with Frank
 - c. Modified Labview code to accept GPGGA NMEA sentences

Week 9

1. Alana Sherman
 - a. Helping as needed with questions for the 20 ft van
 - b. Trying to get ship days lined up on Fulmar
 - c.
2. Johann Voigtlander
 - a. Sent out broken DSP&L for RMA
 - b. Completed wiring topside racks in 20' container

Week 8

1. Johann Voigtlander
 - a. Continued installing MiniROV control electronics in 20' container racks
 - i. Debugged clump connection issue with Alana & again later with Dale
 - ii. Main, Co-pilot, Clump, Overlay, Sonar, and video multiview all working
 - b. Updated documentation

Week 7

1. Johann Voigtlander
 - a. Started installing 19" racks for the 20' container deployments

Week 6

1. Alana Sherman
 - a. Helped troubleshoot issues with clump comms
 - b. Spoke to Dale about software updates and will get started with those plans
 - c. Scheduling for both the aquarium and MBARI Pls. After some false starts, I think Ian and I have a viable plan for the spring.
2. Johann Voigtlander
 - a. Reinstalled Focal Box
 - b. Started preparing racks for 20' container
 - c. Started DSP&L RMA

Week 5

1. Alana Sherman
 - a. Working through scheduling issues for the year
2. Johann Voigtlander
 - a. Removed CoMPAS tool sled
 - b. Finalized Focal box schematic updates
 - c. Configured Labview miniROV libraries to open the main program and updated documentation

Week 4

1. Johann Voigtlander
 - a. Removed tool sled
 - b. Working on joystick upgrade

Week 3

1. Alana Sherman
 - a. Trying to figure out schedule for the year
2. Johann Voigtlander
 - a. Completed Aux Camera side mounts
 - b. Continuing building fiber optic focal box

Week 2

1. Alana Sherman
 - a. Met with vendors of WinFrog replacement software to review how new software works and could be used for the Mini
2. Johann Voigtlander
 - a. Building a backup Focal box