

902101 - LRAUV Technology Development

Week 51

1. Brian Kieft
 - a. Working with Elecia to test DATMMP device enable re-tries and non-latching state
 - b. Pontus continues its deployment until Friday doing docking, TRN, slowYo, PAM.
2. Mike McCann
 - a. Chimed in on accessing processed LRAUV data for piscivore-support
3. Carlos Rueda
 - a. WHOI upgraded their TethysDash system to the latest version. (Keeping up with the latest is always good.)

Week 50

1. Akshay Hinduja
 - a. Looked at nc4 logs and netCDF4 library to read LRAUV data
 - b. Wrote python script to extract most pertinent information relating to vehicle state
 - c. Looking at gazebo interface with lrauv-applications to see how to feed this information to the simulator
2. Brian Kieft
 - a. Investigated oil leak on Aku
 - b. Investigated navigation issues on Ahi
 - c. Pontus deployed for Docking, TRN, PAM testing

Week 49

1. Akshay Hinduja
 - a. Go through tethys visualizer tool reading nc4 data. Will reverse engineer to work on reading nc4 data and see inroads to gazebo sim.
2. Brian Kieft
 - a. Tested os build
 - b. Tuned motor controller and tested at 1.5 m/s. 33% increase in speed now available.
 - c. Debugging oil leak on Aku
3. Mike McCann
 - a. Finally fixed up stoqs_denmark2024 so that all the ESP Samples are properly represented
 - b. Reloaded stoqs_greatlakes2024 after a missing 20-hour log set was made available

Week 48

1. Akshay Hinduja
 - a. Going through relevant repositories, particularly TethysDataViz to plan simulator replay approach
2. Mike McCann
 - a. Created publicly accessible stoqs_greatlakes2024 database at Brian Kieft's request
3. Carlos Rueda
 - a. TethysL now [4.3.1](#), a maintenance release with a significant internal change as I have "merged" the documentation repo (now removed) into the main tethysl repository itself. This, in part, in preparation for open-sourcing the project.

Week 47

1. Akshay Hinduja
 - a. Go through Irauv-application documentation and decoding log files
2. Brian Kieft
 - a. First bioacc sea trial with Aku. Recovered today following a mass shifter failure and oil leak. Diagnosing and will get back out.

Week 46

1. Akshay Hinduja
 - a. Meet with Quinn to go through LRAUV workflow. More understanding gained on where to and which repos to look at for gazebo log playback project.
2. Carlos Rueda
 - a. TethysL now [4.3.0](#).

Week 45

1. Carlos Rueda
 - a. Dash4: Minor maintenance release.

Week 44

1. Akshay Hinduja
 - a. Identified python library issue with lcm in docker image. Turning the python requirement off gives a successful build, but may have missing pieces.
2. Carlos Rueda
 - a. TethysDash backend now [4.81.2](#), Dash4 UI [4.82.0](#). Various fixes seem to have been successfully exercised in recent/ongoing vehicle deployments.

Week 43

1. Akshay Hinduja

- a. Finished setup of Irauv sim on Omega-omen, dive deeper into ros message playback
2. Karen Salamy
 - a. Continue hashing out Modals in Dash5

Week 42

1. Akshay Hinduja
 - a. Get started with Gazebo log playback on Omega Omen
2. Carlos Rueda
 - a. Dash4 is now [4.81.1](#), and TethysDash backend [4.81.0](#) – bug fixes and enhancements.
 - b. XML mission script cleanup and migration to TethysL has been [resumed](#). I've submitted PRs ([this](#) and [this](#)) toward cleaning up/removing obsolete XMLs. Yanwu has completed all his missions!

Week 41

1. Akshay Hinduja
 - a. Get started with Gazebo log playback on Omega Omen
2. Brian Kieft
 - a. A couple bugs fixes in JIRA and a couple added.
3. Karen Salamy
 - a. Continue working with modals to properly update VehiclePath information on Dash5.

Week 40

1. Brian Kieft
 - a. Loading up some new bugs in Jira
2. Karen Salamy
 - a. Spent some time this week learning about Modals in React and how to properly utilize them for the dash5 UI.

Week 39

1. Akshay Hinduja
 - a. Setup LRAUV-tools on loaner desktop
2. Brian Kieft
 - a. A couple minor bug fixes but was able to successfully deploy the DAT MMP component for the field experiment. Currently working on merging into the release following successful testing.
3. Carlos Rueda
 - a. Some occasional exchanges over slack (under MBARI and also under WHOI). (In general, no much work these days in this project, but glad to see 5 LRAUVs

deployed, with all TethysDash related components (backend, dash4, odss2dash) working ok AFAICT).

4. Karen Salamy
 - a. I continue to work on map updates for the Dash5 UI including changing the vehicle display colors and visual preferences for the uses to choose.

Week 37

1. Brian Kieft
 - a. MMP testing and canon preparation. Running Pontus/Brizo for testing.
2. Denis Klimov
 - a. Updating assembly procedure and documentation for PAR sensor.
3. Karen Salamy
 - a. I continue to work on map updates for the Dash5 UI. I am currently working on vehicle color display changes that the users can quickly adapt for viewing purposes.

Week 36

1. Akshay Hinduja
 - a. Received desktop from IS to retry docker as laptop GPU gave compatibility issues.
2. Karen Salamy
 - a. Worked this week to continue various code upgrades for the LRAUV Dash5 UI

Week 35

1. Brian Kieft
 - a. Random bug fixes including ESP dual lcb turn off
 - b. Cradlepoint configs switched back to domestic
 - c. Working with Saab to replace their developer Ilya and get some momentum rolling on tech transfer.

Week 34

1. Akshay Hinduja
 - a. Osrp docker image would not compile, got image from Michael which runs example script
 - b. Facing issue with running tethys simulation, working on bug finding
 - c. Writing reports on bugs faced and outdated packages to work around.
2. Carlos Rueda
 - a. With Quinn, troubleshooted issues affecting TethysDash's ability to handle emails (they turned out caused by MBARI email server updates).

Week 33

1. Akshay Hinduja
 - a. Working on getting Irauv simulator setup on laptop, faced some issues with broken docker image. Trying internal one
2. Mike McCann
 - a. Reprocessing stoqs_denmark2024 to properly load all ESP Samples for Chris P.
 - b. Encountered edge case in LRAUV-ESP consolidated message that Carlos is fixing
 - c. Added activity__maptrack column to the STOQS activityparameter API response for Chris P.
3. Carlos Rueda
 - a. Saab: regular meeting. Met a new person that will be replacing Ilya L. as point of contact for TethysDash aspects.
 - b. WHOI: exchanges continue regarding issues with [unserialize](#), which so far seem only involving the Irauv-application side of things.
 - c. ESPComponent: Per Mike M.'s observation, [fixed and submitted a PR](#) to handle previously uncovered edge cases involving the consolidated message about each ESP filtering sequence.
4. Karen Salamy
 - a. I have spent a lot of time adding code updates onto the okeanids dash5 server for the LRAUV UI. Despite much effort, my knowledge of React coding has not materialized fast enough for the team.

Week 32

1. Akshay Hinduja
 - a. Start familiarizing with LRAUV simulator codebase.
 - b. Plan to get everything installed, and test logs to visualize real data in simulator
2. Paul McGill
 - a. Finished pressure testing of AOS PIC24 attitude sensor, will now see about fabricating more parts
3. Carlos Rueda
 - a. Dash4 is now [4.70.5](#).
 - b. WHOI: brief exchanges with Matthew C. re unserialization issues, but nothing conclusive.
4. Karen Salamy
 - a. Updated Dash5 on okeanids server this past week with various map updates.
 - b. Have run out of time with Jim Jeffers for the summer.
 - c. Chasing a few bugs in the code before performing the next pull request to the main.

Week 31

1. Paul McGill

- a. Working with Brett to troubleshoot issues with RS-485 on LRAUV. Found an issue that may or may not be the problem but we'll fix it and do further testing at sea
2. Carlos Rueda
 - a. TethysDash backend is now [4.80.0](#).
 - b. Dash4 is now [4.70.4](#). As usual, especially during vehicle deployments, great user feedback (this time, in particular, by Monique).
 - c. Worked with Ilya L./Saab (Quinn also worked with him last week), and, upon fixing a setting related with HTTPS access, **their LRAUV simulator is now finally connecting with their TethysDash backend!** Now, the only major piece still pending is for them to have an IMAP account/server so TethysDash can handle incoming emails.
3. Karen Salamy
 - a. Pushed various map updates to the repo on Github and updated Dash5 on okeanids this week.
 - b. I also had my last ZOOM meeting with Jim Jeffers. Hopefully he has given me enough to complete the issues for the map over the next few months.

Week 30

1. Paul McGill
 - a. Ordered and received second power supply for sonar payload
2. Karen Salamy
 - a. I was able to finally implement a large Dash5 Map update earlier this week. Some bugs may remain but the system on okeanids server is now running the most recent version of the code.

Week 29

1. Carlos Rueda
 - a. Added some material to the [operator training manual](#).
2. Karen Salamy
 - a. Finally figured out the issues with my Github account and am currently working to update the Dash5 main and push the changes out to okeanids.

Week 28

1. Carlos Rueda
 - a. Dash4 is now [4.70.2](#), with refined options for sending commands.

Preview SBDs ▾

Send via: *(under testing)*

☒  Cell then Sat Cell timeout: 5 min
☐  Cell only
☐  Sat only

Submit Submit to alternative address

If the vehicle does not connect to the dash backend and fetch it within the given timeout, then the command will be sent via Sat, and a note event will be generated as notification.

The command will only be sent via email to Iridium or alternative email address

If the vehicle does not connect to the dash backend and fetch it within the given timeout, then the command will be discarded and a note event will be generated as notification.

- b.
2. Karen Salamy
 - a. Working on Dash5 code upgrades most of this week. Meeting with Jim Jeffers to go over various code aspects in our weekly meetings.

Week 27

1. Paul McGill
 - a. Helping Vartha with LRAUV sonar payload
2. Karen Salamy
 - a. Spent more time this week on updates to the LRAUV Dash5 UI working with Jim Jeffers.
 - b. Planning to check in some code updates this week.

Week 26

1. Paul McGill
 - a. Ordered new power supplies for sonar payload
2. Carlos Rueda
 - a. TethysDash/dash4 adjustments

Week 25

1. Mike McCann
 - a. Fixed parsing for ESP sample information for delayed mode data in [stoqs_denmark2024](#)
2. Carlos Rueda
 - a. Dash4 now [4.70.0](#) and TethysDash backend [4.70.8](#), both representing a significant release of the dash system. Thanks to Steve H., for the great feedback, as always.
3. Karen Salamy
 - a. Had my weekly meeting with Jim Jeffers of Sumo Creations on Tuesday. His knowledge of the existing code is greatly appreciated and of huge help and importance.

Week 24

1. Mike McCann
 - a. Setup [stogs_denmark2024](#) for consolidating all the makai and brizo realtime log files
2. Karen Salamy
 - a. Working with Jim Jeffers to complete the map updates for the Dash5

Week 22

1. Mike McCann
 - a. Reprocessed stogs_greatlakes2022 to pick up missing ESP Samples that Chris P. identified
2. Carlos Rueda
 - a. TethysDash system: Saab support. Created a special docker image release to facilitate guidance and the setup of their instance. I also put together a small zip with a basis to launch the three key containers (backend, database, dash4). This basis works OK as tested on macOS(arm) and Centos7(intel). However, their dash is still having issues with the ssh key to access bitbucket. More updated documentation along the way.

Week 21

1. Carlos Rueda
 - a. TethysDash related support to Saab Inc.
 - b. Added WMS map provided by Brian to the dash to support Denmark deployments. Thanks Kevin G. for the underlying support in ODSS.
 - c. Adjustments in TethysDash regarding waypoint information: scanning for relevant events at most to the beginning of the deployments; and implementing an interim workaround given that the **Loaded** event for direct **run** command has not been yet implemented in the LRAUV.

Week 20

1. Carlos Rueda
 - a. TethysDash related support to Saab Inc. Updating some documentation along the way.

Week 19

1. Brian Kieft
 - a. Got power numbers for Monique for planning purposes for deployment
 - b. Implemented cell only for chl back to shore
 - c. Vehicle prep for all these deployments

- d. Various minor bug fixes and added functionality of rudder angle during go to surface behavior following an incident attempting to recover a heavy vehicle caught mid water.
 - e. Fixed buoyancy neutral issue first noted at WHOI where buoyancy setting from B&T was not being set properly.
- 2. Mike McCann
 - a. Fixed ESP name and cartridge number parsing problems from latest brizo deployment
- 3. Carlos Rueda
 - a. Tethysdash backend is now [4.70.2](#).
 - b. Checking with WHOI about planning for their upgrade to the latest dash version; this time this is specially important due to the significant recent updates.
 - c. Scheduled meeting with Saab engineer about TethysDash system.
- 4. Karen Salamy
 - a. I have spent less time this week on this project due to the SMDB build issues. I do have another meeting with Jim Jeffers tomorrow morning however to continue discussion of updating and editing the Dash5 to better support the LRAUV team.

Week 18

- 1. Jon Erickson
 - a. Waiting on assembly to the vehicle for the Rev. B version of the ek-80 gimbal.
- 2. Mike McCann
 - a. At Fred's request added Seabird O2 data processing for the routine LRAUV loads into STOQS
- 3. Carlos Rueda
 - a. Dash UI is now [4.64.0](#). As always, thanks Monique for the great feedback.
 - b. TethysDash backend [4.70.1](#) continues to run flawlessly. Emailed core LRAUV folks to let me know of any issues during the ongoing deployments. When these are completed, I'll merge this significant change into main.
- 4. Karen Salamy
 - a. Held a weekly meeting with Jim Jeffers as we continue to discuss the various Github issues still needed to be addressed for the team. React has not been an easy shift from Vanilla JS.....

Week 17

- 1. Carlos Rueda
 - a. WHOI Dash worked great for Brizo operations and recovery during the outage past Friday. Many thanks to the WHOI team for helping with some required adjustments.
 - b. TethysDash backend now 4.70.1 with very significant internal updates as part of modernization efforts: now on Java17 (from java8); using Jakarta (emailing, servlet, websockets); now on Tomcat 10.1 (from 8.5); and, even more significantly, now using DataNucleus 6.0 (from 4.0). Also, now using Ubuntu as

base image (from Centos), and also using the latest `unserialize` executable from Irauv-application. All testing has been satisfactory so far, with no regressions but the upcoming vehicle deployments will provide a more definitive verification. This step takes us closer to migrating to Quarkus (where some of the mentioned components above will actually be replaced with more modern alternatives).

- c. TethysL now 3.9.87.
- 2. Karen Salamy
 - a. Large focus on Dash5 development. Had my weekly meeting with Jim Jeffers - which has been very helpful. We are trying to knock out as many map-related Github issue requests as possible for the team.

Week 16

- 1. Jon Erickson
 - a. Rev B. EK-80 Gimbal assembly is completed. Waiting on install.
- 2. Brian Kieft
 - a. Updated Thruster HE configuration on two vehicles for testing at sea with lower P term gains for turbo mode.
 - b. Diagnosed and fixing an issue with Galene's buoyancy system involving a pot change inside the vehicle. Hoping to close today.
- 3. Carlos Rueda
 - a. Preparations to use WHOI Dash during the outage this Friday.
- 4. Karen Salamy
 - a. Had several ZOOM meetings with Jim Jeffers regarding LRAUV team upgrades to Dash5. He will begin focusing on other map layer functionality while I complete the Measurement Map app.

Week 15

- 1. Carlos Rueda
 - a. Exchanges with the team (and WHOI) toward preparing for use of the WHOI dash instance during MBARI 4/19 outage.
 - b. TethysDash modernization efforts continue. While the selected framework continues to demonstrate its power, several legacy modules and old dependencies in TethysDash are proving tricky to migrate as fast as one would wish. The migration is requiring a lot of non-trivial refactorings.

Week 14

- 1. Jon Erickson
 - a. Model for a new Radio Bracket and fitment.
 - b. New gimbal parts (Rev. B) for EK-80 on LRAUV. Just out of the shop.
- 2. Brian Kieft
 - a. Finished SW headers with Quinn and opened repositories to Saab Inc.

- b. Lots of work with Saab SW dept this week getting the host sim and build environment up and rolling
- c. Met with WHOI to discuss upcoming scallop deployments and dash failover options.

Week 13

1. Michael Anderson
 - a. Fixed long-standing issue with unserializing Blob type variables in netCDF4 format (typos in bitsizes for converting data) which resulted in alternating zeros and real data in output (but missing half the data)
 - i. Reprocessed all netCDF4 Irauv logs
 - b. Added particulate-only backscattering variables for realtime and logged data. The only scattering variables in Irauv logs and slate to date were volume and combined particulate+water backscatter
 - c. Resurrected multi-vehicle simulation in gazebo sim
 - d. Added intervehicle acommms data in gazebo sim
 - e. Added / tuned mass-only control for Slow-Yo missions
 - i. Mass-only control was able to salvage a recent mission (transects at depth) unrelated to slowyo when elevator broke
2. Carlos Rueda
 - a. As usual, various exchanges during vehicle deployments.
 - b. TethysL [3.9.82](#).
 - c. TethysDash backend now [4.62.4](#), including fix to a regression that affected dash5.
 - d. Continue TethysDash backend modernization. Focusing on replacing the servlet-based API endpoints with Jakarta restful web services.
 - e. Started adding copyright headers to dash-related repos I manage.
3. Karen Salamy
 - a. Began working again with SUMO creations coder Jim Jeffers, he in more of a support role.
 - b. Have attempted to speak with Brian the last week but he is very busy preparing for the next deployments at sea.

Week 12

1. Brian Kieft
 - a. Working with Daphne/Ahi deployments. Ahi launched yesterday, Daphne was Monday.
 - b. Wet wifi work with Brent. Testing at sea tomorrow
 - c. Instrument debugging on Aku/Pontus
2. Carlos Rueda
 - a. TethysDash backend modernization is progressing nicely, but still a long way to go.
 - b. Direct `.t1` loading being exercised in ongoing Ahi deployment (thanks Quinn!).

- c. TethysL is now [3.9.8](#), including new support for nested macros. The C++ counterpart also [implemented](#).
- d. Met with Mike Godin to discuss the status of various TethysL-LRAUV aspects.
- e. TethysDash backend now [3.62.3](#).

Week 11

- 1. Brian Kieft
 - a. Did some more sim work for TRN data plumbing. Some issues came up and I'm working through it.
- 2. Carlos Rueda
 - a. Gave a brief [presentation about TethysL](#) in the engineering meeting.
 - b. With Quinn, some sleuthing regarding the effective execution of LRAUV simulators interacting with the dash backend. Some long pending LRAUV related aspects may finally be addressed.
 - c. TethysDash backend is now [4.62.2](#).
 - d. XML-to-TethysL [migrations](#) continue.

Week 10

- 1. Brian Kieft
 - a. SOW approved for UX support through mid-year
 - b. Created header text for export control and IP. Waiting on legal.
 - c. Ran forensics on tail mission failure. Issues were misconfigured DAT and issue with WPT behavior.
 - d. Lots of GZ sim work for TRN
 - e. Supported Ahi/Galene deployments for testing vertical control changes and tail mission fixes.
 - f. Flipped AHRS configs to base for all vehicles
 - g. Pushed docker sim to public repo with latest
 - h. Merged Feb release and started march
 - i. Met with battery team to discuss integration/architecture. Folded repo into LRAUV project.
- 2. Paul McGill
 - a. Got second AOS sensor wired for testing in pressure test tank.
- 3. Carlos Rueda
 - a. TethysL now [3.9.5](#).
 - b. Working with Yanwu toward [more mission conversions](#) to TethysL, and making use of macros where appropriate. As an example ([Science/smear_yoyo_sampling](#)), in terms of file size:
 - i. 136k - original XML
 - ii. 80k - once converted to TL
 - iii. 27k - using arrays/macros
 - iv. So, the resulting file is only 20% the size of the original, while being more readable and less error-prone.

Week 9

1. Denis Klimov
 - a. The PAR sensor assembly procedure had been updated to include polishing of the sensor housing inside and outside, as well as rebuilding the front-end with optics base and two O-rings, since the sensors we have already have 'some miles' on them. This also required tooling for grinding and polishing. One sensor was rebuilt using the updated procedure and currently under testing.
2. Carlos Rueda
 - a. More TethysL VSCode extension [improvements](#) to further facilitate conversions from xml. (Currently, the Irauv-mission repo has 152 xml scripts (and 111 tethysl ones).)
 - b. Merged PR by Mike Godin that incorporates `.tl` in the regression test script.
3. Karen Salamy
 - a. Made some edits to the Measurement app for Dash5.

Week 8

1. Brian Kieft
 - a. Signed SOW for 4 mo support work via Sumo Creations. Will track EV against issues for next 4 months to determine next steps.
 - b. Debugging docking runs with Rob
2. Paul McGill
 - a. Tested new BMA456 sensor board—it works! Now needs pressure test.
 - b. Finished code to store AOS offsets in EEPROM to survive power cycles. Cleaned up code in general and am almost ready to archive.
3. Carlos Rueda
 - a. TethysL is now 3.8.4.
 - b. Yanwu has converted a few of his missions from XML to TethysL. Many thanks to him!
 - c. LRAUV: Observations and exchanges related with the nightly build (which has been broken for several weeks). Hopefully the team still sees a value there.
 - d. Mike Godin to look into updating the regression test script to incorporate `.tl` as well.
4. Karen Salamy
 - a. Checked in on contract for Sliced Bread so Jim J. can begin helping me with Dash5 updates.

Week 7

1. Michael Anderson
 - a. Learning how to get multiple vehicles in gz sim
2. Paul McGill
 - a. Got Jose to build new AOS sensor boards, and will test them on Thu.
3. Carlos Rueda

- a. A big milestone was accomplished last week. The new direct parsing and execution of TethysL (.tl) missions in the LRAUV was successfully exercised during a Galene deployment, which involved missions with [TethysL array and macro extensions](#). Next phase in the integration plan is to continue exercising the new mechanism with more missions, while keeping the old mechanism as a backup, for some time. Thanks LRAUV team for your support!
 - b. TethysDash API: fixes in a couple of endpoints related with the retrieval of lrauv-mission artifacts depending on whether there's an active vehicle deployment. Thanks, Quinn, for the heads-up.
- 4. Karen Salamy
 - a. Testing a few updates following relevant course material (see Overhead).

Week 6

- 1. Brian Kieft
 - a. Lots of Gazebo simulator work. Pushed new docker images to public repo.
 - b. Testing with WHOI on gz sim
 - c. Lots of testing on Galene and Ahi following Mon/Tue deployments.
 - d. Fixed issue with goToSurface, altitude envelope, and keepstation behaviors
 - e. Fixed vertical control mode flipping issue
 - f. Did another basic MMP test in the lab
 - g. Fixed up some config issues with our tethysl default missions
 - h. Made a repo to hold our Thruster HE code
 - i. Made a release repo for our partners at WHOI to use
 - j. Fixed an issue with DAT timestamp being written with drift from DAT. Converted back to vehicle time.
 - k. Sent fuel gauge test to WHOI collaborators and helped prep for Buzzards Bay deployment.
 - l. Debugging WHOI bottoming incident during B&T. Solution sent.
 - m. Reviewed PR for onboard TethysL execution. Testing at sea today.
- 2. Carlos Rueda
 - a. LRAUV Application and TethysL: The implementation of the new direct .tl loading mechanism has been merged into the current release branch, which is being exercised at sea with Galene. In short, the usual loading mechanism via the compiled .tx files will remain the default one for the time being, but we now have a new config setting that allows to activate/deactivate the new mechanism to proceed with testing in real operations. Many many thanks to Quinn S. and Brian K. for their assistance.
- 3. Karen Salamy
 - a. On hold while I am taking my react 18 online course.

Week 5

- 1. Carlos Rueda

- a. Exchanges with WHOI and LRAUV teams regarding compilation of tethysl missions outside the lrauv-application codebase.
 - b. Exchanges with Kevin N. (WHOI) while diagnosing issues with the VSCode extension for TethysL. It turned out they had a very old version of tethysl in their PATH.
2. Karen Salamy
 - a. Making small changes this week as I am taking the React 18.2+ course.

Week 4

1. Brian Kieft
 - a. Met with dash5 team to discuss progress and next steps.
 - b. Fixed up data scripts for 2024 data
 - c. Investigating vertical mode flipping in various near bottom missions
 - d. Worked with Scott to test HE Thruster
 - e. Investigated delay in heading command for docking. Appears to be sensor clock drift.
2. Paul McGill
 - a. Sent design files off to have PIC24 AOS sensor PCBs fabbed
3. Carlos Rueda
 - a. Toward directly loading .tl missions: Added code/makefile target for TethysL-XML diffing for verification for the C++ tethysl parser. Keeping the team posted and still awaiting feedback, including review and merge of this [PR](#).
 - b. Reviewed [PR](#) by Quinn S. (thanks!) where >30 missions are migrated to TethysL.
 - c. Continuing efforts/explorations toward modernizing the TethysDash backend.

Week 3

1. Brian Kieft
 - a. Debug of vertical control issue during buoyancy controlled depth causing vehicle stall on initial dive.
 - b. Did Thruster HE component testing to attempt to provide more startup torque. Interesting issues with drawing lots of current when spinning very slow. Continuing to investigate with Scott.
 - c. Initial lab MMP testing commenced following the latest fixes. Looking good so far.
 - d. Dataviz lockfile issue solved.
 - e. Tested ingest of plankton predictor outputs on Pontus. Will test at sea next.
2. Mike McCann
 - a. Provided details for consolidating ESP Sample message in this [Jira ticket](#)
3. Carlos Rueda
 - a. Dash4 now 4.60.1, and backend 4.61.0
 - b. Resuming efforts toward modernizing the TethysDash backend. Now on the latest Quarkus version! But this modernization goal is still very challenging given the many, many pieces involved.
4. Karen Salamy

- a. Spoke with Brian K. about progress on the React-Measuring application that I will be adding to Dash 5. He indicated that he liked what I have so far and asked me to make sure I took the time to take a subversive React course this year if possible.

Week 2

1. Brian Kieft
 - a. Deployed Tethys for more docking work. Debugging some gain issues with the heading command
 - b. Worked with Brent to solve networking issue surrounding the subsea serial port server on the dock.
 - c. Met with Scott to do main thruster diagnostics
 - d. Removed a bunch of dash user accounts for added security
2. Mike McCann
 - a. Updating STOQS ESP sample parsing code to deal with messages spread across multiple logs
 - b. Testing reloading stoqs_greatlakes2023
3. Carlos Rueda
 - a. The direct loading of TethysL files for the LRAUV to execute is taking shape nicely. Thanks Quinn, Mike G., Brian K. for the help.
4. Karen Salamy
 - a. Dealing with a bug in the measure app for DASH5.

Week 1

1. Carlos Rueda
 - a. TethysL now [3.7.4](#). Provided assistance to Yanwu re use of the TethysL VSCode extension for updates to the lineCaptureHoming.tl mission. Resuming C++ implementation of parser to allow the LRAUV to directly load TethysL missions.