

901800 - LRAUV Payload & Support

Week 52

1. Brian Kieft
 - a. Engineering tests offshore for docking and quick GPS.
 - b. Supported tank docking tests.

Week 51

1. Rich Henthorn
 - a. Obstacle Avoidance application development
 - b. TRN mission analysis
2. Brian Kieft
 - a. Testing on Pontus offshore and working on Tethys for a docking run
3. Denis Klimov
 - a. PAR sensor 8454 had some tiny leakage of the water to the inside which deteriorated the internals somewhat, requiring reconditioning. Housing had been pressure tested and is ready for assembling
4. Mike McCann
 - a. Reloaded the stoqs_mbts database, which took a few days
5. Rob McEwen
 - a. Assisting Rich H in LCM implementation in the OA app.
6. Carlos Rueda
 - a. A number of Dash adjustments specially during WHOI vehicle deployment. As part of this, implemented preliminary version of the async notifications using our own websocket endpoint (only for cell connection ping results at this point) so WHOI wouldn't hit the Pusher limit. Thanks much to Ryan Govostes for setting up a websocket proxy on his nginx server. Good testing!
 - b. Motivated by this I decided to make more progress and I'm close to having a complete system (both backend and frontend) using this new websocket endpoint.

Week 50

1. Rich Henthorn
 - a. Obstacle Avoidance application
 - b. TRN mission support
2. Brian Kieft
 - a. Testing on Pontus offshore and working on Tethys for a docking run
3. Denis Klimov
 - a. PAR sensor 8454 had some tiny leakage of the water to the inside which deteriorated the internals somewhat, requiring reconditioning.
4. Rob McEwen
 - a. Assisting Rich H in LCM implementation in the OA app.
5. Carlos Rueda
 - a. Dash is now [4.2.1](#). Already installed by WHOI as well. Incorporating some fixes and adjustments for a next version.
 - b. Captured "[proposal](#)" by operators in issue tracker and will wait until consensus before any further action.
 - c. TethysDash backend: making more progress on setting up a proper websocket server.

Week 49

1. Rich Henthorn
 - a. TRN server deployed and configured on both Tethys and Pontus
 - b. Obstacle Avoidance app
2. Brian Kieft
 - a. Testing quick GPS fix mission
 - b. Working on USBL mode integration
3. Rob McEwen
 - a. Adjusted Dorado simulation to better model a single Imagenex in the LR vehicle.
 - b. Ran the simulated data through the standalone OA code. It appears to work correctly.
 - c. Beginning to work on the LCM interface.
4. Carlos Rueda
 - a. Replying to IS's inquiries about Disaster Recovery procedures for LRAUV vehicles, and along the way involving LRAUV experts in the discussion so everyone is on the same page toward determining specific actions moving forward.

Week 48

1. Rich Henthorn
 - a. Obstacle Avoidance work
 - b. TRN server prep
2. Brian Kieft
 - a. Working on integration of USBL mode for Benthos DAT component. Initial lab testing was favorable.

Week 47

1. Jon Erickson
 - a. Version 2 ESP-LRAUV control fins.
 - b. New Bent Axis port adapters for SubConn Connectors (more wires).
2. Rich Henthorn
 - a. Discussed obstacle avoidance testing and development plans with Rob McEwen
 - b. Adding DeltaT LCM channel
3. Brian Kieft
 - a. Working on USBL high speed implementation
4. Mike McCann
 - a. Reloaded Lake Erie STOQS databases with Chl count data for NOAA collaborators
5. Rob McEwen
 - a. Will resume testing LR-OA code with Dorado simulation.
 - b. Discussing docking with LR team.

Week 46

1. Rich Henthorn
 - a. Obstacle Avoidance code merge
2. Mike McCann
 - a. Implemented a outlier removal algorithm for LRAUV GPS data processing for STOQS
3. Rob McEwen
 - a. Finished porting Dorado OA code to LR standalone app. Now the debugging starts.
 - b. Ran a Dorado sim with a single Imagenex mounted at 45 degrees. We have a unit test that will play this data back through the stand-alone app to test it.

Week 45

1. Brian Kieft
 - a. Engineering deployment to test DAT line capture homing
2. Rob McEwen
 - a. Porting obstacle-avoidance code from Dorado to stand-alone app for LR backseat computer.
3. Carlos Rueda
 - a. TethysDash backend: Implemented solution in the backend to handle improper URL encoding of commands caused by browsers.
 - b. Did config adjustments for proper handling of incoming SBD emails, something not previously tested in the lab as part of the ongoing migration to tethysdash2.
 - c. [Documentation](#) updates.

Week 44

1. Jon Erickson
 - a. Bits and pieces of design modifications.
2. Rich Henthorn
 - a. Obstacle avoidance progress with Rob.
3. Brian Kieft
 - a. Preparing for deployment in Monterey Bay on Monday
4. Denis Klimov
 - a. Testing PAR sensor boards and modifying two PAR sensors into amplified version
5. Rob McEwen
 - a. Continuing with port of OA code from Dorado to stand-alone application for LR “backseat” computer.
 - b. Working on an OA test program that reads in simulated Imagenex and Kearfott data from the Dorado simulator, and flows it through the new OA code.
6. Ed Mellinger
 - a. Evaluating strobe-voltage buffer battery option for EyeRIS
7. Carlos Rueda
 - a. Email exchanges triggered by IS re Tethysdash dependencies and mechanisms to prepare for Disaster Recovery. This will need coordination with the LRAUV team especially in terms of the use of the LRAUV Atlas share from tethysdash2 and other tethys* machines.

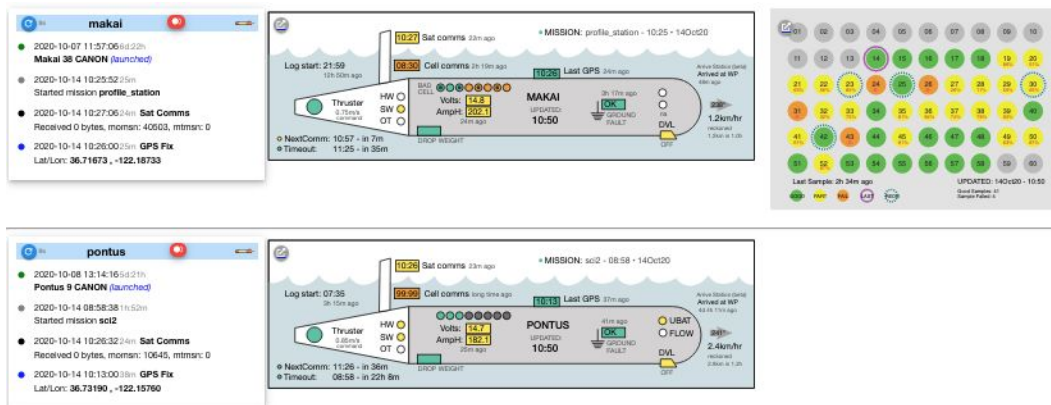
Week 43

1. Rich Henthorn
 - a. Obstacle Avoidance
2. Brian Kieft
 - a. Working on reverse thrust (again). Seemed to be going well but hit a snag with dead spots that pop up every so often. Working with the vendor as well to solve and set up a test rig for diagnostics.
3. Carlos Rueda
 - a. TethysDash: Some more experimentation toward a proper websocket server.

Week 42

1. Mike McCann
 - a. Monique reported a problem with LRAUV section plots in the STOQS UI
 - b. Rolled out temporary fix where only temperature and chlorophyll are loaded
2. Rob McEwen
 - a. Transferring obstacle avoidance code from Dorado to LR backseat.
 - b. Exploring the feasibility of linking Octree code into Matlab.
3. Carlos Rueda

- a. Dash4, now [4.1.4](#), with various adjustments, now including Steve's ESP status widget. Also some fixes as operators provide feedback during ongoing CANON.



- b. TethysDash backend (both regular and dockerized) now running on Tomcat 8.5.58.
- c. Doing some preparations for a proper WebSocket server in TethysDash and corresponding connection from Dash4 clients. Good preliminary results. General idea is to lessen, and even eventually remove, dependency on the external service for asynchronous notifications.
- d. WHOI Dash upgraded to 4.1.1.

Week 41

1. Rob McEwen
 - a. Refining power estimates from Portuguese Ledge run.
 - b. Beginning to transfer obstacle-avoidance code from Dorado. The objective is to retain the existing algorithm, and only change code where necessary to work with the LR architecture.
2. Carlos Rueda
 - a. Dash version 4 officially released! Now, [4.0.1](#).
 - b. TethysDash: Upgrading Tomcat to latest 8.5 version from version 7, which is fast approaching [EOL, March'21](#). This requires revision/adjustment of some config files related with URL encoding and directory listing. Good preliminary testing (both regular and dockerized).
 - c. Some minor config adjustments in preparation for CANON.
 - d. Reviewing general documentation and applying several updates already.
 - e. Dash4: further UI adjustments; code cleanup; quasar/app smoothly [upgraded to 2.0.0](#).
 - f. WHOI has already upgraded to TethysDash 4.0.1.

Week 40

1. Denis Klimov
 - a. Ordered and organising 1/4-20 hardware for the optical bench (biolum low light test chamber); mounting cable penetrators.
2. Carlos Rueda
 - a. Satisfactory non-simulated testing with Pontus and ESP of recent adjustments in ESPComponent for [TETHYS-612](#). Thanks Brian for your assistance and Brent R. for checking the resulting logs. Hopefully, relevant PRs will be merged soon.
 - b. Assistance during WHOI's vehicle deployment related to issues involving SBD receipt email handling, a bug I inadvertently introduced back in July but only noted today even though it was also there in our own MBARI instance with nobody complaining since then. I fixed the issue, updated our instance, made a hotfix release for WHOI, which was applied and apparently all seems to be working great there as well.
 - c. Doing further adjustments in various code repos for a proper version 4 release of the Dash UI (user/admin webapp; dash itself; tethysdash-docker...)

Week 39

1. Rich Henthorn
 - a. Integrating TRN into LRAUV using the updated Irauv-lcmTypes
 - b. Obstacle avoidance updates
2. Brian Kieft
 - a. Deployed Tethys yesterday following multiple harbor tests addressing acomm issues
 - b. Testing DEIMOS camera and ESP sampling missions with waveglider Tiny. Then on to Portuguese ledge for dual vehicle relative position TRN runs.
3. Mike McCann
 - a. Monitoring ongoing data flow into https://tethysviz.shore.mbari.org/stoqs_irauv_sep2020
4. Rob McEwen
 - a. Did some power analysis on LRAUV data to determine the hotel and propulsion loads.
 - b. Beginning to transfer obstacle avoidance algorithms and code from Dorado.
5. Ed Mellinger
 - a. Evaluating DC-DC options in support of upcoming EyeRIS review
6. Carlos Rueda
 - a. TethysDash [docker image 3.9.982](#) released and announced to WHOI. Various adjustments applied while preparing and testing the release.
 - b. Continuing with code cleanup and adjustments, both backend and Dash frontend, especially as the recent enhancements are exercised in real operations (today, for example, with some fixes in the Docs handling).
 - c. Upgraded the OpenAPI spec (to v3.0.1) for the TethysDash API as well as the underlying SwaggerUI tool that powers <https://docs.mbari.org/tethysdash/apidocs/>.
 - d. TethysDash backend: Upon some close inspection of this legacy handling, adjusted some logging related with "emaillogs," which is the typical major "culprit" when we get those occasional alerts from the system about less the 85% space becoming available on the machine. With just avoiding the thousands of repeated, almost-uninformative lines, we are now going to save more than 100Mb of unnecessary log stuff per year, as measured by grepping for the mentioned lines in what's currently captured for 2020.

Week 38

1. Rich Henthorn
 - a. Delta T logging updates
 - b. TRN for LRAUV
 - c. Rebooted the TRN application for the updated LCM types
2. Brian Kieft
 - a. Preparing for deployment Monday 9/21 to test multi vehicle TRN, DEIMOS live depth adjustment for camera capture of layers, and possible homing tests with DAT.
3. Denis Klimov
 - a. Mounting cable penetrator on the biolum setup, and working on biolum light emulator
4. Rob McEwen
 - a. Evaluating Irauv simulator code for possible inclusion of octree-based Dvl and Imagenex models.
 - b. Investigating how to port Dorado OA code to Irauv.
5. Carlos Rueda
 - a. Dash is now [3.9.981](#) with various adjustments and enhancements especially in the "smart waypoint editor" (distance/depth information, direct waypoint dragging on the map, etc.). [Mission](#) and [Map Markers](#) documentation pages updated. Have gotten very good reactions from a few users already especially in terms of suggestions (most of them already addressed), but not yet in terms of actual testing, which needless to say is critical moving forward with the full enabling of the new Command and Mission tab implementations.

- b. Will soon be preparing a new docker release with the latest and greatest to WHOI, even with the ongoing transition features. Their own testing will be most welcome as well.

Week 37

1. Rich Henthorn
 - a. Multibeam obstacle avoidance test runs
2. Brian Kieft
 - a. Large engineering deployment for Tethys/Pontus that ran 8/31 until we recovered yesterday. Testing included new behaviors for current estimation, new components for altitude, the backseat sonar computer, an obstacle avoidance test, multi-vehicle TRN testing, a shark bite, and many bug fixes.
3. Denis Klimov
 - a. Working of cable entry to Biolum test chamber
4. Mike McCann
 - a. Checking that https://tethysviz.shore.mbari.org/stogs_lrauv_sep2020 continues to update
5. Carlos Rueda
 - a. Dash: Approaching our v4.0 target!. Focusing on the new [Mission](#) tab, Dash is now [3.9.970](#). This tab and the also new Command tab are already pretty functional but still in "pre-release" form. Some operators have been kindly asked to test and provide feedback. Working now on a smart waypoint editor to greatly facilitate mission preparation before submission.
Related open tracker entries: td#59, td#61, dash#23, dash#45

Week 36

1. Jon Erickson
 - a. New larger fins for MAKAI.
2. Rich Henthorn
 - a. Supporting pontus obstacle avoidance mission
3. Brian Kieft
 - a. Currently involved in an engineering deployment with Pontus and Tethys to test a large merge and some acommms fixes.
4. Denis Klimov
 - a. Working on wire entry into light-tight box for biolum setup
5. Mike McCann
 - a. Monitoring https://tethysviz.shore.mbari.org/stogs_lrauv_sep2020 for successful updates
6. Carlos Rueda
 - a. Dash: new [Command tab](#) interface implementation completed and enabled. Should be fully functional already but, as a next step of course, testing by operators is needed.
Starting to look into the Mission tab, where some pieces from the Command tab implementation as well as from the MXM frontend will be leveraged.

Week 35

1. Rich Henthorn
 - a. Trying out the DeltaT logging application
 - b. Developing beamformer external control for enhanced configuration options
2. Denis Klimov
 - a. Working on cable entry into light-tight enclosure for low light testing
3. Carlos Rueda
 - a. Advancing 'Command' tab re-implementation in Dash3, one of the pending items toward usability improvements in [version 4](#).

Week 34

1. Rich Henthorn
 - a. Some small touches to DeltaT data logger
 - b. Deployment soon after some integration with lab CPU
2. Brett Hobson
 - a. Working on the integration of an obstacle avoidance sonar, which for me includes sonar mounting, processing computer mounting and the electrical integration of the wet cables, bulkhead and internal wiring modifications. I've also been working on the Wave Glider Towout design, LCB testing, antenna construction, packed and shipped a palletainer to WHOI
3. Brian Kieft
 - a. Worked a bit on sonar/backseat integration
4. Denis Klimov
 - a. PAR sensor for LRAUV Galene is completed and tested. Working on low-light source for biolum detector testing.
5. Carlos Rueda
 - a. Working on second part of adjustments to address [TETHYS-612](#).

Week 33

1. Jon Erickson
 - a. The Airmar altimeter is going into test with Erik
2. Rich Henthorn
 - a. Obstacle Avoidance DeltaT data logger
3. Brent Jones
 - a. Initial bench test of payload power and comms to LRAUV. SUCCESS FIRST TIME!!!
4. Brian Kieft
 - a. Working on current estimator derived from DVL measurements while underway
5. Denis Klimov
 - a. PAR sensor boards: 3 boards tested, and 2 boards need IC replacement due to too high voltage offset.
6. Mike McCann
 - a. Reloaded the monthly databases between 2012 & 2019 to pick up more data following some upstream data processing code improvements
 - b. Pat added 200 GB to the postgresql data partition on <http://tethysviz.shore.mbari.org>
7. Carlos Rueda
 - a. Re-set up test environments on tethyscode and bufflehead with LRAUV/ESP simulators while preparing for [TETHYS-612](#) (a complete fresh 2-sample ESP exercise [here](#)). Reproducing and addressing the issues. Thanks Ben and Brent for your input.
 - b. Regular LRAUV meetings resumed.

Week 32

1. Rich Henthorn
 - a. Obstacle Avoidance (oahu) updates
 - b. Data logging and syslogging
 - c. Tested Delta T client app with Imagenex Windows beamformer
2. Carlos Rueda
 - a. Some (opportunistic) look at a couple of missions that fail schema validation.
 - b. Per Ben, checking with Brent R and Chris P about missed ESP samples during CANON.
 - c. Some additional functionality in the waypoint popup in Dash3 while doing some code cleanup.

Week 31

1. Rich Henthorn
 - a. Imagenex Delta T driver ported from Dorado codebase to target Ubuntu system
 - b. Ready for testing on target CPU with updated Linux beamformer
 - c. Researching logging and configuration options
 - d. Prototyping Obstacle Avoidance app
2. Carlos Rueda
 - a. Lots of work on Dash3/TethysDash as CANON progressed, with some fixes and various significant additions and improvements, see <https://docs.mbari.org/tethysdash/dash/changes/> and related new/updated pages. Also, more review and PR related with mission validation.

Week 30

1. Rich Henthorn
 - a. Met with Brett and Rob to discuss obstacle avoidance project
 - b. Created source code structure and repo
 - c. Working on Delta T parser module
2. Denis Klimov
 - a. Inventorying parts for PAR sensors assembly. There are 5 amplifier boards need to be tested. Also revising board specs for old PAR sensor that came from Chavez group and it has quite a bit lower sensitivity.
3. Carlos Rueda
 - a. TethysDash: Various other adjustments in API for event data and vehicle configuration requests. (3.6.6) Diagnosing strange issue regarding password reset email that is sent out but never delivered (thanks Katie for reporting and help). Other addresses work just fine. Added copy of such emails in the "Sent" folder, which also confirms the emails are being dispatched.
 - b. Dash3: Completed reimplementing of Config tab with improved UX features. Besides the display of the recently added 2020 CANON vector features via tile layers, there's now also an experimental option to select them via the source KML files directly (ODSS Atlas share enabled on the VM for this purpose). Various other adjustments (3.9.941).
 - c. Put together a specific documentation page about [how Dash3 visualizes waypoints](#).
 - d. LRAUV: Have spent some time reviewing (routinely used) mission files that are not conformant to the schemas in an attempt to diagnose some of the concrete issues and possible measures for fixing. Most immediate motivation is the successful parsing of waypoint information for visualization in the dash, but also for the processing that Steve uses in his status widget (as well as preparation for future TethysL work). Submitted [PR](#) for this purpose, including some text to the CONTRIBUTING.md file to encourage mission authors to strive for compliance with consideration for some aspects.

Week 29

1. Rich Henthorn
 - a. TRN LCM comms
2. Rob McEwen
 - a. Proposal discussions
 - b. Improving LR power analysis plots.
3. Carlos Rueda
 - a. TethysDash backend now directly "pushes" LRAUV GPS fix positions to the tracking DB/ODSS. This replaces the external "microservice" (in place on pismo for a couple of years) as a way to make this functionality more robust and reliable.
 - b. TethysDash and Dash3's overhauled document handling now has the ability to directly attach vehicles to documents: <https://docs.mbari.org/tethysdash/dash/changes/>.

- c. Reimplementing the “Config” tab in Dash3 to replace the corresponding one in traditional TethysDash UI. After this, I plan to start addressing the “Mission” tab where work on MXM will be leveraged regarding editing of mission parameters.

Week 28

1. Carlos Rueda
 - a. Quick fix to issue in document saving and other improvements in Dash3 (now [3.9.89](#)).
 - b. A productive reattempt at an [LSP](#) implementation as preparation to enable this protocol for TethysL, hopefully next year. With some better resources out there, put together a repo with complete simple exercise https://github.com/carueda/hello_lsp
 - c. Restarted broken service that relays LRAUV GPS positions to the trackingDB/ODSS.

Week 26

1. Brian Kieft
 - a. Acomms testing
 - b. Reviewed deployment data
2. Rob McEwen
 - a. Analyzing data to breakdown power usage between components. Hampered by each variable having its own time axis, which requires interpolation to do any computation involving more than one variable.
 - b. Will refine thruster drag estimates tomorrow when I have access to my office library.
3. Tom O'Reilly
 - a. Conducted cpu load balance tests of latest “backseat driver” middleware/messaging software on LRAUV vehicle in test tank; discussed results with team
4. Carlos Rueda
 - a. Dash3: First phase of an overhauled document handling implementation is almost complete. The new Dash3 version is [v3.9.87](#). Along with various general UX improvements, this should also fix some of the issues with the traditional UI, and provide a much better basis for other possible enhancements: <https://bitbucket.org/mbari/lrauv-dash/issues/62>

Week 25

1. Brent Jones
 - a. Assembled electronics
2. Brian Kieft
 - a.
3. Mike McCann
 - a. Reloading all tethysviz databases with consistent Activity naming – now including platform names
 - b. Helping Reiko retrieve Sampling information (Sippers and ESP) for loading into BOG
 - c. Confirm automatic flow into https://tethysviz.shore.mbari.org/stoqs_lrauv_jun2020
4. Rob McEwen
 - a. Working on range estimates with proposed hovering thrusters.
 - b. Will start plotting data to quantify hotel load.
 - c. Also starting on the Trn interface.
5. Carlos Rueda
 - a. Starting [new handling of documents](#) (one of the pending modernization aspects wrt the traditional TethysDash UI) including API support from backend. Along with this, considering possible database schema changes.

Week 24

1. Rich Henthorn

- a. Working with McEwen on LRAUV TRN modules (LR-TRN)
 - b. Mapping LRAUV data to TRN inputs
 - c. Requirements/Design/Notes/Task document in Team Drive
- 2. Brian Kieft
 - a. Prepared Brizo for first sea trial test, ESP test, and acomms test
 - b. Deployed Brizo yesterday and daphne today for joint testing. Some minor issues so far but generally a good first sea trial.
- 3. Mike McCann
 - a. Re-loading <https://tethysviz.shore.mbari.org/> databases following fixed loading problems
 - b. Checking up on automated data loads into the [jun 2020 database](#)
- 4. Rob McEwen
 - a. Will start working with Rich H on LCM interface to LR-Trn computer.
- 5. Tom O'Reilly
 - a. Working with team to refine LCM "back seat driver" software interface
 - b. Running tests of LCM onboard the vehicle in the tank, assessing cpu load incurred by publishing data with realistic sensor payload, data frequency

Week 23

- 1. Rich Henthorn
 - a. LRAUV TRN with McEwen
- 2. Brian Kieft
 - a. Prepped ESP/Brizo for launch
 - b. Tested new ESP scripts for OTH ESP configuration
 - c. Configuring DATs for installation
- 3. Denis Klimov
 - a. Inventoring PAR sensor board and parts for PAR sensor assembly
- 4. Rob McEwen
 - a. Doing a quick drag estimate for lateral motion with proposed thrusters.
- 5. Tom O'Reilly
 - a. Reviewed latest "back seat driver" middleware API with team, provided suggestions. Ran preliminary test of API on LRAUV cpu to estimate cpu load.

Week 22

- 1. Brian Kieft
 - a. LCM architecture meeting
 - b. Worked with Mike G on coordination of acoustics fixes
 - c. Tested power variable that's now being written
 - d. Tested acomms from topside to vehicle and noted bugs existing in inner-vehicle acomms for the Benthos subsystem specifically.
- 2. Ben Raanan
 - a. Integrating Tethys backseat API with the LRAUV app

Week 21

- 1. Rich Henthorn
 - a. Data structure discussions
- 2. Brian Kieft
 - a. Further work on SLCD for LCM architecture
 - b. Cleaned out some bugs in JIRA
 - c. Testing some feature branches on makai/brizo
 - d. Assessing issues with Benthos modem and DAT data transfer

3. Denis Klimov
 - a. Gathering parts to test Teensy board software on Windows 10 machine
4. Tom O'Reilly
 - a. Working with team to refine middleware for “back seat driver” applications

Week 20

1. Tom O'Reilly
 - a. Working with team to refine onboard network middleware architecture
2. Carlos Rueda
 - a. Various enhancements in TethysDash configuration and better handling in Dash3 for edge cases where the backend is not properly configured. New docker image 3.9.82.

Week 19

1. Rich Henthorn
 - a. Design/implementation review of the IrvuLcmType (fka DataMatrices)
 - b. Part of the overall LRAUV interfacing strategy
 - c. Good work, looking forward to using it on LRAUV TRN
2. Brian Kieft
 - a. Added automation of ballast and trim and tested in tank
 - b. Fixed issue with old SSL version on new okeanids dash front end
3. Denis Klimov
 - a. Checking Teensy/Arduino environment configuration on Windows 10 machine
4. Tom O'Reilly
 - a. Working with team to refine “back seat driver” middleware architecture, helping to prepare documentation for non-MBARI users (JPL, WHOI...)
5. Ben Raanan
 - a. Additional work on LRAUV-BSD interface:
 - i. Completed updates to lcm types and design of new writer/handler class.
 - ii. Generated documentation materials.
 - iii. Met with the dev team to present progress.
6. Carlos Rueda
 - a. Dash3: General dependency upgrade (this time triggered by a broken dependency). Enabled CI builds at bitbucket. Initial integration of Erik's cell phone coverage map and planning on allowing leaflet layers from configuration in general.
 - b. LRAUV Sim: As possible workaround to [Docker Hub issue](#), adjusted rule for the automated build triggered by tag push but to no avail yet (pushes to master are handled just fine). Also had to re-assign ssh keys to all repos under lrauv-application as the previous one stopped working unexpectedly at Docker Hub for some reason.

Week 18

1. Jon Erickson
 - a. Through Brett, I'm intermittently helping with the WHOI DHS vehicle.
2. Rich Henthorn
 - a. Discussing LCM interfacing with team members
3. Brian Kieft
 - a. Automated B&T value acceptance and tested in sim
4. Carlos Rueda
 - a. Automated LRAUV docker image build at Docker Hub enabled for the lrauv-application repo directly. Will be exercised next time a git tag with the usual YYYY-MM-DD pattern is pushed.

- b. Some exchange with Brett about TethysL work for 2021, including time allocation for Mike Godin so we can ensure correct translation and execution semantics.

Week 17

1. Jon Erickson
 - a. Putting six parts in the shop queue to mount the Airmar altimeter in the LRAUV Sipper nose.
2. Brian Kieft
 - a. Build environment work on tethyscode2
3. Ben Raanan
 - a. Continued work on LCM backseat interface
4. Carlos Rueda
 - a. After deeming the pre-release testing satisfactory, went ahead and completed the [3.9.8](#) release of Dash3. Not much different in the external user interface, but this is a significant release due to [major changes in the underlying web framework, Quasar](#).
 - b. Built, tested and published [mbari/tethysdash:3.9.8](#) docker image. Already deployed at <http://tethysdash2.shore.mbari.org/> as part of preparations for tethysdash vm migration.

Week 16

1. Rich Henthorn
 - a. Planning for auv-qnx CVS to git migration
 - b. TRN LCM comms
2. Brian Kieft
 - a. Working on SLCD for backseat architecture
3. Tom O'Reilly
 - a. Met with team to discuss further steps to integrate LcmSlateWriter functionality into LRAUV software component with minimum effort. Working with team to formalize requirements.
4. Ben Raanan
 - a. Working on LRAUV LCM back-seat interface
5. Carlos Rueda
 - a. LRAUV: Per Ben's request, [fixed a compiler warning](#) in ESPComponent, exposed with the use of more recent gcc versions wrt the one currently used on tethyscode.

Week 15

1. Brian Kieft
 - a. Refactoring test architecture and attempting to add coverage and static analysis
 - b. Working on BSD architecture with the team

Week 14

1. Jon Erickson
 - a. Working with Brett to get an altimeter into the nose of LRAUV that both works and fits. Latest candidate is Airmar. I'm detailing brackets so we can go to sea and play test.
2. Tom O'Reilly
 - a. Refining LCM Slate Writer design to minimize LRAUV CPU load in response to team comments.
3. Ben Raanan
 - a. Working on back seat component and LRAUV-LCM architecture

Week 13

1. Brian Kieft

- a. Test architecture updates
- 2. Mike McCann
 - a. Databases on tethysviz now contain all logs belonging to a .dlist across month boundaries
- 3. Tom O'Reilly
 - a. Working with team on further testing and refinement of onboard LCM-Slate "middleware"
- 4. Ben Raanan
 - a. Additional work on LCM back-seat interface
 - b. Completed migrating new LRAUV docking capability to independent module and devised configuration management strategy.
 - c. Deprecating unused parts of LRAUV application source.
- 5. Carlos Rueda
 - a. Completing a major upgrade of the underlying web framework in Dash3. This involves [non-trivial changes](#) due to several incompatibilities. This task was planned for much later in the year. However, given the current circumstances, I decided it was a good task to address now. Pre-releases available for testing at <https://oceanids.mbari.org/dash3yz/>. More details [here](#).
 - b. Downgraded Pusher plan to the free "Sandbox" given current circumstances.

Week 12

- 1. Mike McCann
 - a. Working on better automation of data processing workflows
 - b. Identified a problem with .dlist files spanning a month boundary that aren't being loaded
- 2. Tom O'Reilly
 - a. Running tests, cleaning up code style in preparation to merge new LcmSlateWriter code with our 'master' branch
- 3. Ben Raanan
 - a. Migrating new docking capability to independent module (app code, build, missions, configs)
 - b. Updating LRAUV BackSeatDriver component to new LCM API
- 4. Carlos Rueda
 - a. New TethysDash docker release 3.9.77 incorporating recent backend and frontend changes. Tested on our staging server [tethysdocker](#) as well as on [tethysdash2](#) (the one being prepared as the production server as part of the migration to CentOS7).

Week 11

- 1. Denis Klimov
 - a. Checking and sorting parts inventory for PAR sensors
- 2. Mike McCann
 - a. Reloaded [stoqs_lrauv_dec2019](#) for a clean load of all the ESP samples
- 3. Tom O'Reilly
 - a. Assessing performance of LCM-Slate middleware on Tethys LRAUV while in test tank
- 4. Ben Raanan
 - a. Resolved a mission level issue in the ESP/CANON sampling insert.
 - b. Resolved DVL micro data configuration issue in the driver code.
 - c. Started deprecating unused software components.
 - d. Support for LCM back-seat API development.
- 5. Carlos Rueda
 - a. Dash3 now v.[3.9.77](#) with initial integration of Steve's status widget. We've been discussing possible next steps. Thanks Steve!

Week 10

- 1. Jon Erickson

- a. Installing the single point lift for MAKAI.
 - b. Working on a new altimeter mounting arrangement 20 deg. Look down.
- 2. Rich Henthorn
 - a. Meeting to discuss updated LCM data vectors/matrices type
- 3. Mike McCann
 - a. Loaded last missing Cartridges into stoqs_erie2019, now working on last December's runs
- 4. Ben Raanan
 - a. Developing UBAT on/off interface for LRAUV
- 5. Carlos Rueda
 - a. More additions to Dash3 (auto-refresh also in the Data tab and other internal adjustments and lots of code cleanup), Now [3.9.76](#).
 - b. TethysDash backend: Improved git request handing (via re-attempts) that deals with the occasional issues (still happening!) when connecting to Bitbucket to fetch all updates for the config and mission repositories. TethysDash backend is now [3.4.8](#).
 - c. TethysDash REST API: Besides ISO 8601, also Unix time is now accepted for date-time parameters in relevant request operations. (Thanks Steve for the suggestion.)
 - d. Some discussion triggered by recent Erik's email regarding possible ways to overhaul the document handling in TethysDash.

Week 9

- 1. Jon Erickson
 - a. Bracketry for a new TriTech altimeter.
- 2. Mike McCann
 - a. On a journey to find and fix all the causes for missing ESP Cartridges from STOQS:
 - i. With Ben and Brent's help loaded new ones from a missing .dlist
 - ii. Writing parser for syslogs vice using TethysDash to get ESP metadata
 - iii. Expecting additional issues that will need resolution
- 3. Rob McEwen
 - a. Developing an OI Deltat simulation model for obstacle avoidance
- 4. Carlos Rueda
 - a. Couple of additions for Dash3, now [3.9.74](#).

Week 8

- 1. Brian Kieft
 - a. Setting up test bed on Brizo for Tom's LCM tests
- 2. Tom O'Reilly
 - a. Running tests of Irauv-application with LcmSlateWriter; verifying message passing, assessing cpu loading
- 3. Carlos Rueda
 - a. Reviewed TethysDash and LRAUV code regarding TCP communication wrt to emails via Iridium (when TCP is available, the comms are initiated by the vehicle). Added some related text to <https://docs.mbari.org/tethysdash/#irauf-tethysdash-communication>.

Week 7

- 1. Denis Klimov
 - a. Organizing parts for PAR sensor project
- 2. Tom O'Reilly
 - a. Completed preliminary performance tests of LCM-Slate onboard middleware
- 3. Carlos Rueda

- a. TethysDash: For Argos email handling, per Brian's request, now target vehicle can be determined based solely on the platform number when no Argo program is provided in the received email.
- b. Dash3: Improved handling of webapp page load when backend server is not available.

Week 6

1. Denis Klimov
 - a. Testing 2 more PAR sensor boards
2. Mike McCann
 - a. Turned on backend data processing for February 2020
3. Tom O'Reilly
 - a. Testing functionality and measuring performance of LCM/Slate software, which enables easy communication between applications running on main LRAUV cpu and other applications running on other onboard cpus, e.g. for Terrain Relative Navigation (TRN).
4. Carlos Rueda
 - a. Some monitoring of the recent Daphne deployment. Very glad to see the mbts_sci2 mission in action and performing well. Thanks Brent and Brian for putting it to work. Would be great to reflect the recent changes in the TethysL version. (Riley Rettig, our summer intern last year, helped write the first version of this mission in TethysL.)

Week 5

1. Carlos Rueda
 - a. TethysDash/Dash3: New buttons to send command/mission to [alternative address destination](#) (other than the usual SBD Iridium address). This required both backend and frontend changes.