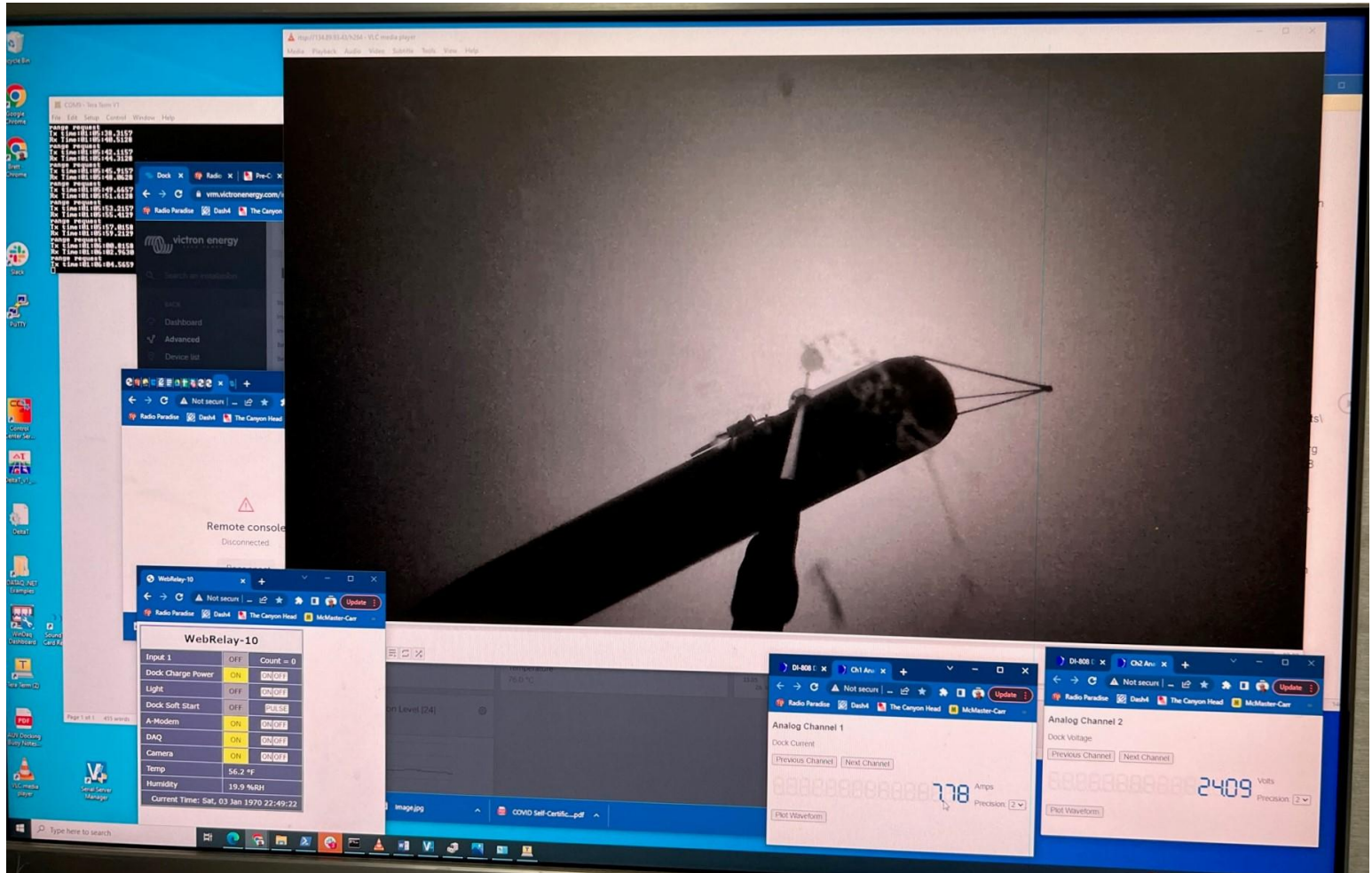


Engineering Weekly Report 5/26/2022 - 6/2/2022

Executive Council Notes

- AUV Docking (Hamilton/Hobson)- Francois and the team deployed the AUV Docking station again last week after a quick turnaround to repair a failed cable termination. The screen-shot below shows the view from the upward-looking camera showing LRAUV Tethys parked on the dock and the voltage and current of the power transfer system..



Individual Activities

- Michael Anderson
- Kevin Barnard
 - 701139 - ML Tracking
 - Working to unify detection, tracking, and vehicle LCM events
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Dove on the buoy to inspect. Found wear on the tether and other minor issues.
 - 902106 - Niobicon-Based AUV Docking Development
 - Recovered mooring, fixed flooded termination, and redeployed.
 - Preparing presentation for DOEST
- Danelle Cline

- Out of Office
 - May 27th, 28th,
- Duane Edgington
 - 901603 - Video TAG
 - Abstract submitted to Marine Imaging Workshop Oct 2022
 - 901618 - Pelagic-Benthic Coupling
 - Met with Dan Davis offsite. Received the latest release of Laser Measure. Installed and went through an extensive demo and walkthrough using our June 2021 dive data.
 - 902005 - VARS Annotation Assistance
 - Continued project work. Testing new Docker image and production workflow.
 - Team meeting 5/31
 - Meeting with Intern Manuel Gozzi to develop project plan
 - Out of Office
 - Working from home this week
- Jon Erickson
 - 701145 - Penguin Hotspots
 - Have almost all the parts on order or in hand. Still trying to acquire the foam flotation.
 - Shell parts are due the end of June. Will need to be glued up here.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Have three assembly designs, depending on the choice of sensor. No decisions yet.
 - 902010 - Mesopelagic LRAUV
 - Shop is machining the titanium end domes for the pressure hull. The castings came in slightly under size for machining allowance. Will have that discussion with Ti-Squared at some point.
 - Aaron is still gluing the strain gauges in the hull tube.
 - Still working with and advising Quest Institute. Mostly about their MARS experiment.
- Ben Erwin
 - Out of Office
 - Vacation 2/12-2/20
- Kevin Gomes
 - Out of Office
 - 5/17-18: Sick leave
 - 6/20: Vacation
 - 8/1-8/5: Vacation
 - 10/3-10/6: Vacation
- Andy Hamilton
- Kent Headley
 - 901101 - Seafloor Mapping
 - Working on MB-System build support for ROV TRN
 - Testing geometry calc updates for ROV TRN pipeline
 - Sentry TRN integration telecon and software updates
 - Overhead
 - 2023 Budget
 - Carbon Waveglider transfer (documenting, shipping)
 - DEI meeting
 - Misc admin
 - Out of Office
 - July 14-29 (tentative, vacation)
- Rich Henthorn
 - 800139 - EyeRIS (Remote Imaging System)
 - CamController serial handling

- 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Building buoy-sim for development
 - ROS2 and Gazebo
 - Build and test
- Out of Office
 - July 4 - 18, WFH and vacation time, email, phone, zoom OK
 - Aug 30 - Sep 16, vacation in Germany, email
 - Sep 22 - 29, Sta.M Cruise (final scheduled cruise of the Western Flyer)
- Brett Hobson
- Scott Jensen
 - 901205 - SURF Center
 - Preparing sampler for demonstration and eventual fluidics work
 - Flow sensor options were investigated
 - 902106 - Niobicon-Based AUV Docking Development
 - Power Line modems seems like a good candidate and will move toward integrated testing
 - DQ2113 - Tidal Turbine
 - Packing for trip to UofW/APL
 - Out of Office
 - June 9-10 for UofW/APL visit
 - June 20-22 Ohio recovery
- Brent Jones
- Chad Keczy
- Brian Kieft
 - Out of Office
 - 05/15 - 06/04 (EcoHAB PDT)
 - 07/02 - 07/09 (HST - vacation)
 - 07/13 - 07/22 (AKDT)
 - 08/01 - 09/03 (EDT)
 - 09/12 - 09/28 (GMT+2 - vacation)
- Denis Klimov
- Diana LaScala-Gruenewald
- Eric Martin
- Thom Maughan
 - 901805 - Coastal Biogeochemical Sensing Program
 - Support for Spray pH and OCR-504 integration
 - 902004 - Planktivore
 - Planktivore has been removed from Spray.
 - Working on assembly and test of Noot housings.
 - Brackets for mounting Planktivore to Noot.
 - Replace failed (due to bad cable) harddrive in DeepRip. Paul ran an eyris processing job that pegged all 128 threads on 64 cpus. Processor temp was getting close to 70 C, fans remained quiet.
 - Out of Office
 - May 27 - 31 Camping at Caswell Memorial Park by Stanislaus river
 - Jun 12 - 22? TBD. Remote work from Colorado for elder care.
 - Jul 6 - 19 Camping, Bear Lake Monster Swim
- Mike McCann
 - 901101 - Seafloor Mapping
 - Fixing the Continuous Integration that broke with a couple of underlying module updates
 - Evaluating Jenny & Karen's pull requests

- 901221 - Midwater Time Series
 - Checking with Rob on the proper oxygen calibrations to use for i2map data
- Out of Office
 - 23-31 May: Sick leave
 - 27 June - 29 July: Vacation
- Rob McEwen
- Paul McGill
- Tom O'Reilly
- Craig Okuda
- Doug Pargett
 - 708146 - Saildrone
 - Replaced the intake tube on the Saildrone
 - Preparing the MV3 instrument for deployment
 - 901205 - SURF Center
 - Ordering parts and making drawings for CNC fabrication of the 10m housing end caps.
- Ben Raanan
- Mike Risi
 - Out of Office
 - May 5 - vacation
 - May 9-10 - vacation
 - June 2-8 - OI cruise
 - June 10-14 - vacation
 - June 20-22 - vacation
 - August 8-9 - out of office
- Paul Roberts
 - Out of Office
 - 4/2 - 4/9 (spring break san diego)
- Brent Roman
 - Out of Office
 - Thanked and Excuses from Jury Duty last Friday afternoon.
- Carlos Rueda
 - 901502 - Soundscape Research and Education
 - Running transformation of additional months of 2016 data toward application of BLED based sperm whale click detection.
 - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Resuming some work here to facilitate use of the core software on the wave glider.
 - 902009 - AUV User Experience Design
 - Brief chat with Jeff re TethysDash API, whose [swagger-based documentation](#) I'm now trying to update after a long time. He says he'll "use the actual responses from the server in most cases"
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Dash is now [4.10.7](#) (several releases during the last couple weeks as the system is exercised during active deployments in MB and SB). In summary, main enhancements include a few that

are exposed on the Map tab, as well as in the underlying asynchronous message handling.



- TethysL: Put together one other C++ based prototype toward direct translation of TethysL to XML as a possible mechanism in the future: <https://bitbucket.org/mbari/tl2xml/> .
- Overhead
 - IE mtg; DEI mtg
 - More technology explorations ([kalix](#), [caliban](#), [pg_graphql](#).)
- Out of Office
 - June 10: vacation
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Working with Jared F. to complete the new M1 Mooring (July 15, 2022 deployment date).
 - Data is flowing on coredata8 and Jared is working on some instrument issues.
 - Kevin, have you set up the SSDS instrument list for the new deployment yet?
 - 901101 - Seafloor Mapping
 - Worked a lot on the SMDB Dash UI the last few weeks. I have submitted several pull requests to update the master branch with changes.
 - Still having some issues with determining the active layer ID with groupedLayers in Leaflet.
 - Mike has been out sick the last week but I hope he will be able to test and integrate the changes this week.
 - 902009 - AUV UI
 - Meeting up with Jim Jeffers this Thursday on ZOOM..
 - I have already built the Github MBARI UI code using the notes from Sumo Creations.
 - Jim and I will be discussing accuracy of the build notes and where I can begin to help with the project.
 - Overhead
 - Looking into various dive numbers in the EXPD that are not being used for IS purposes. Trying to determine why Rich would have blocked them from loading. Just started investigating some of these.
 - Planning to checkout Ansible. I watched the video online - just need to implement.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - [VARS Annotation 1.2.1](#) was released. This release adds [features to help minimize clutter](#) in the UI for machine learning generated annotations.

- Working on client/server implementation to test [new video player comm spec](#). Once those are written, we will be contracting out for an update to integrate [Cthulhu](#) functions into [Sharktopoda](#).
- 902002 - FathomNet
 - Updated the [fathomnet REST service](#) to address database deadlocks that can occur when large updates are pushed while the site is under heavy usage.
 - Pushed 16K localizations from VARS into FathomNet. This push is mostly midwater localizations. Example data set is [here](#).
 - Working on merging localizations from a staging database into the main VARS database. The work on VARS Annotation and discussions with the video lab on how to accommodate this have been done. The merge will result in some annotations being double counted. These new localizations will be put in a different group than the ROV annotations so that can be id'd as potentially non-quantitative annotations.
- Out of Office
 - Jul 7-8 Vacation
 - Jul 25-28 Vacation
- Alana Sherman
 - Out of Office
 - Out sick all week