

Engineering Weekly Report 12/1/2022 - 12/8/2022

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Worked on implementation of Sharktopoda 2 Python client controller
 - 701139 - ML Tracking
 - Preparing submission to Nature Communications
 - 902002 - FathomNet
 - Conducted OVAI program manager and engagement coordinator interviews
 - 902005 - VARS Annotation Assistance
 - Working on automating Deep Sea AI track → VARS annotation load process
 - 902204 - Scalable Marine Robotics Foundations
 - Performed in-air intrinsic and extrinsic calibration of Mola AUV cameras
 - Out of Office
 - RC cruises 12/5 and 12/6
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Preparation for buoy recovery
 - Buoy recovery and clean up
 - 902106 - Niobicon-Based AUV Docking Development
 - Fabrication of 2023 buoy and mooring
 - Preparations for dock recovery
- Danelle Cline
- Duane Edgington
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Had IS wipe and reinstall the Microsoft surface using for boat support
 - Digging into the Signal Distribution Box information for Packard
 - Looking through example signal maps from previous vessel
 - Resurrected simulator and rack after some strange software/OS hangs
 - 300070 - DMO Support - Ventana
 - Reviewing docs and getting demo version of 4DNavView up and running (winfrog replacement)
 - 901009 - CANON
 - More condensing of the ODSS build and development environment. Upgrading mapserver and inserting some example files for mapserver to serve
 - Digging deep on mapserver to go ahead and upgrade the version since I am doing all this anyway.
 - 901915 - Improving the Impact of MBARI's Data
 - Lots of website requests/fixes with the launch of the new site.

- 902202 - MBARI Cloud Integration Exploration
 - Monthly meeting with AWS rep to sync up
 - Taking to VastEdge about possibly retaining their DevOps expertise on an 'as needed' basis.
- Overhead
 - End of year office clean out
 - Met briefly with Aquarium IS team to discuss overlap
- Out of Office
 - 11/21-11/23: Vacation
 - 12/19-12/23: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Demonstrated TRN sim integration w/ Rich, Rob
 - 901101 - Seafloor Mapping
 - Testing TRN updates for OI toolsled
 - Cruise plan in flux due to quarantining
 - 902204 - Scalable Marine Robotics Foundations
 - Working on fast log playback; working with Tritech on SDK support
 - Overhead
 - Interviews (2) for AOSE (one was an applicant to SEE-DA, so some progress there)
 - Interview for LRAUV tech
 - Code reviews
- Rich Henthorn
 - Out of Office
 - Nov 29 - Dec 7, COVID and quarantine
 - Dec 19 - Dec 29, vacation
- Brett Hobson
- Scott Jensen
 - 901205 - SURF Center
 - Fabricated prototype to test vacuum manipulation
 - Delivered materials to begin fabrication of wiring harness for portable instruments
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Assisted with development of BMS sampling scheme. Required some board and firmware level debugging. Net results are that the scheme has much promise.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Found a design error with the battery measurement feature of the nanoFET.
 - Overhead
 - E-Tech hiring, reviewing resumes
 - Harassment Training
- Brent Jones
- Chad Kacey
- Brian Kieft
 - 706007 - USGS Great Lakes Prey Fish Assessment
 - Met with team today to discuss plans for 2 month deployment in 2023 and review the work done in 2022.
 - 708168 - DHS/LRAUV Under-Ice
 - Assisting in troubleshooting LRAUV Stella.
 - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Working with Yanwu on a passive acoustic monitoring mission and will test next week in coordination with wet wifi testing.

- 902101 - LRAUV Technology Development and Fleet Operations
 - Prepping for wet wifi testing alongside waveglider for this weekend.
- 902106 - Niobicon-Based AUV Docking Development
 - My work focused mostly on docking. Completed 109 docking runs to test various configurations that we previously simulated.
 - Additionally work to improve the vertical control during docking or straight and level flight was accomplished.
- Overhead
 - Interviews for two candidates. One in person for 2 days and the other via zoom.
 - Met to discuss candidates for embedded position
- Out of Office
 - 11/21 - 11/25 (MST)
 - 12/28-30 (PST)
- Denis Klimov
- Eric Martin
 - 708167 - WEC Dynamics and Control
 - Assembling archival data set.
 - 901101 - Seafloor Mapping
 - Successful final integrations and dock tests of the LASS sled on Ventana.
 - 901206 - Coastal Profiling Float Transition to Science Applications
 - Vehicle is sleeping and waking up well.
 - Prepping for tank tests
 - 901911 - ROVVR
 - End of year spending, getting spare equipment.
 - 902012 - Telepresence on MBARI Research Vessels
 - Conducting Starlink tests with IS, promising early results.
 - 902204 - Scalable Marine Robotics Foundations
 - Hiring committee work
 - Fixed the Mola with help of Boxfish
 - Overhead
 - SEE Committee
 - ASUAV interview monday
 - Presented on project management to post-docs
- Thom Maughan
 - 901009 - CANON
 - The two bio-informatics HiPP machines are built and in test at the vendor. Shipment should be in a week or so
 - 901805 - Coastal Biogeochemical Sensing Program
 - Release pHFET-SOS v4.1.6 for lab testing. Support for new sensors and first release for nanoFET
 - 902004 - Planktivore
 - Working on Cam control board. Getting quotes for pcb assembly.
 - Working with Denis on Fluum
 - Out of Office
 - Dec 22 - 28 Colorado
- Mike McCann
 - 901111 - AUV Infrastructure Support
 - Creating stoqs_greatlakes2022 database for last summer's LRAUV ESP missions there
 - Changed STOQS Sipper parsing code to use the syslog files instead of tethysdash in order to pick up the missing daphne Sippers that Marguerite identified

- 901221 - Midwater Time Series
 - Upgrading auv-python to use python 3.11 and getting wrapped around the axel by poetry
- 901910 - Plankton Taxonomic Groups from AUVs
 - Writing Dorado science data processing for the ecopuck instrument
- Overhead
 - Fixed EMDB to use nginx log file serving instead of the AWS it inherited from SMDB
- Rob McEwen
- Paul McGill
 - Out of Office
 - Out on Mon for medical appointment
 - Out on Tue due to possible COVID exposure last week
- Tom O'Reilly
- 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
 - July 19-20 - vacation
 - August 8-9 - out of office
 - Out of office most Fridays
- Paul Roberts
 - Out of Office
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- Brent Roman
 - 901205 - SURF Center
 - Helped Nadia re-installed ESP into Saildrone Surveyor
 - Met with Birch, Gomes and Jensen to discuss ESP sampler project kickoff
 - Still working with NOAA GLERL to replicate their ESP comms failures
 - 901913 - WetWiFi
 - Streamed video between pair of H150 modems in Test Tank
 - Worked with Hobson and Wahl to arrange LRAUV and Waveglider
 - Test deployment scheduled for 12/9/22 – 12/12/22
- Carlos Rueda
 - 901502 - Soundscape Research and Education
 - Continued trying to set up and test pyPAM with online notebooks: On Colab, still having weird issues (for now, not insisting any more on that target). On AWS, looks more promising, but now having a different issue, this time related with plotting.
 - Reviewing pyPAM internals from development perspective
 - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - A window opened for further testing on the SMC2 with actual config for when deploying at sea later on (thanks Chris W., also Tom O.). All tests completed satisfactory, in particular regarding data access, which was pending from the previous set of tests a couple of weeks ago. Further adjustments in the code per Tom's changes on the board so commands can be issued directly on the SMC2 (not necessarily via "sudo" to the "smc" account).
 - 902005 - VARS Annotation Assistance
 - Running various ReID training exercises on the DiGiTS-Dev-Box-Fish with (subsets) of the big "315k" dataset. Interesting results but still being gathered and to be discussed with the team.
 - Out of Office

- Nov 11–14, 23–30, Dec 8–9, 21–29: vacation; Early January (tentative): vacation.
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Performed weekly script checks and data downloads.
 - 902009 - AUV UI
 - Began looking over the code again.
 - Overhead
 - Back in the office following my father's passing. Spent way too much time reading and deleting 100s of emails.....
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Fixed time-alignment issues when staff annotated a corrupted video.
 - Modified image [registration script](#) for DARC
 - 902005 - VARS Annotation Assistance
 - Most of my Brian's time this week has been running tests and integrating the new Sharktopda video player. Involved repos are:
 - [Sharktopoda](#) (private repo)
 - [vars-annotation](#) (feature/sharktopoda2 branch)
 - [vcr4j](#) (develop branch)
 - Out of Office
 - Jan 3 - 11 - Vacation
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- Alana Sherman
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Rover fuses for optodes are fixed, just awaiting final test
 - Camera tripod dismantling is about to begin
 - Overhead
 - Two in person interviews for the ASOE position
 - Organizing lab space in ESB, cleaning up e-remnants from bldg G
 - Working on the SR images for the challenges
 - Out of Office
 - Out of the office for school field trip Wednesday morning.