

Engineering Weekly Report 12/8/2022 - 12/15/2022

Executive Council Notes

-

Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Started updating Cthulhu to use new UDP-only video player remote control spec
 - 701139 - ML Tracking
 - Preparing submission to Nature Communications
 - 902204 - Scalable Marine Robotics Foundations
 - Prep work for SLAM demo cruises
 - Out of Office
 - RC cruises 12/5 and 12/6
 - RC cruises 12/19 and 12/20
- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Buoy recovery and clean up
 - 902106 - Niobicon-Based AUV Docking Development
 - Buoy and dock recovery and clean up.
 - Out of Office
 - 3 sick days
- Danelle Cline
- Duane Edgington
 - 902005 - VARS Annotation Assistance
 - Continued work on VAA testing and benchmarking
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Spinning up Ubuntu and Windows Qt installs to build applications
 - 300070 - DMO Support - Ventana
 - While working with DJ on planning for Ventana work on shore while the ship is in the yard, created a bit of a red herring on Moxa configuration. Long story, but I thought they were configured incorrectly, but the GreenSea software overrides the configuration so the Moxa web application doesn't show the operational configuration.
 - 901009 - CANON
 - More work on upgrades/changes to the docker compose for repeatable installs for ODSS
 - 901915 - Improving the Impact of MBARI's Data
 - Some web page support
 - Overhead
 - Working on Strategic Roadmap (meetings, working sessions, etc.)
 - Group end-of-year lunch
 - Out of Office

- 11/21-11/23: Vacation
 - 12/19-12/23: Vacation
- Andy Hamilton
- Kent Headley
- Rich Henthorn
 - Out of Office
 - Nov 29 - Dec 7, COVID and quarantine
 - Dec 19 - Dec 29, vacation
- Brett Hobson
- Scott Jensen
 - 901205 - SURF Center
 - Development of the vacuum actuated manipulator. A simple machined model of the concept has shown that there is significant holding force ample to remove a puck from the bottom of a stack.
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Development of the core features of the BMS are continuing. A possible COTS solution has been identified but more clarification as to customization with the manufacturer is required.
 - 902106 - Niobicon-Based AUV Docking Development
 - Supported design of the Dock version 2 buoy electronics
 - DQ2113 - Tidal Turbine
 - Received the progress approval from UofW which means detailing of the design for the remaining design details.
- Brent Jones
- Chad Kegy
- Brian Kieft
 - 300082 - DMO Support - Wave Glider
 - Recovered Tiny last Friday following wet wifi testing
 - 300083 - DMO Support - LRAUV
 - On call for daphne MBTS
 - 706007 - USGS Great Lakes Prey Fish Assessment
 - Met with USGS team to go over last year's experiment and look ahead to this summer. Current plan is July and August operations for 2 months.
 - 708168 - DHS/LRAUV Under-Ice
 - Diagnosed and fixed issue with Stella GPS. Added code change in application to prevent this configuration issue from stomping on real GPS fixes in the future.
 - Working to get pyxis config up to date.
 - 800139 - EyeRIS (Remote Imaging System)
 - Assisted with deployment prep and GF troubleshooting. Supporting current deployment
 - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Worked with Yanwu to bring up simulator. Now working and testing missions
 - 902009 - AUV User Experience Design
 - Met with team in Santa Cruz for final end of year planning
 - Rolled out link for alpha testing: <https://mbari.vercel.app/>
 - Collecting user feedback. Mission command/control planned for first of year
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Dropped a fresh MF modem off with sub Elecia for further development on the Benthos driver.
 - Need to work with her/Benthos to see if we can implement a datagram response to a range request.
 - 902102 - Multi-LRAUV Simulation Environment
 - Lots of work bringing up the lab/local machine to recent changes but they're all working now.
 - 140% over on labor currently.

- 902106 - Niobicon-Based AUV Docking Development
 - Wrapped up docking deployment and added 8 new issues to JIRA that were discovered during testing. Docking success improved significantly this fall.
- Overhead
 - Interviews
 - Ran wet wifi testing with Tethys/Tiny. While signal strengths were observed, no video was transferred.
- Out of Office
 - 12/19 - 12/28 (PST)
 - 12/29-01/03 (MST)
- Denis Klimov
- Eric Martin
- Thom Maughan
 - 901009 - CANON
 - Working with IS on getting rackspace/ups/power for the two bioinformatics servers. These are Ubuntu 22.04 machines with NVidia GPUs. Planning to meet with Doug/Peter/Joe on HiPP IS labor division. Physical space, power and security patches for sure. Would like NFS mounts if possible.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Ongoing testing of v4.1.6. Assisting setup for lab testing.
 - Experiment duty cycle feature.
 - 902004 - Planktivore
 - Working with James Mc on test of buck-boost converter efficiency and providing design overview doc.
 - Parts and docs kit for Indtec. Sent quote request.
 - Working on Camera Controller design
 - Year end project admin and budget
 - Out of Office
 - Dec 22 - 28 Vacation Colorado
 - Jan 4 - 8 CES
- Mike McCann
 - 901111 - AUV Infrastructure Support
 - Processed and added skipped over triton log file to [stogs_greatlakes2022](#)
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Reloaded [stogs_mb_diamonds](#) with ecopuck data, spent some time comparing with hs2
 - Reviewing Monique's proxy computation code to plan for incorporation into auv-python
 - Overhead
 - Helping video lab figure out why CTD data for d1449 isn't loading
 - For next year's Rov Nav editing work wrote program to generate ROV nav files by dive
 - Conferring with Matt & Peter on calendar changes needed for the R/V *David Packard*
- 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
 -
- Brent Roman
 - 708179 - Saildrone AK
 - Sampler has been working well on Surveyor, which is returning to Alameda shortly.
 - 901205 - SURF Center
 - Trouble with NOAA GLERL recent deployments appears to be due to cell comms failure
 - My current theory is that a wire in the telebuoy tether broke.
 - 901913 - WetWiFi
 - First sea trial did not go well. LRAUV's mass shifter jammed and Oceancomm modems could not transfer more than a couple pings. Waveglider did manage to track LRAUV.
 - Shipped modems back to OceanComm for analysis of internal logs
 - When modems are returned, I will test them by deploying off a pier.
 - Out of Office
 - March 8-15 visiting my dad in Sarasota, FL
- Carlos Rueda
 - 901009 - CANON
 - Some dependency upgrades for the MXM server (now using latest Quarkus 2.15.0.Final).
 - 901502 - Soundscape Research and Education
 - Continued pyPAM code revision and some development; [PR](#) merged, including new [CI](#) workflow; some additional feedback regarding unit tests that are failing.
 - 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Tom is using neptus@tsauv for rsync-based transfer of log files from the SMC-2 to shore.
 - 902005 - VARS Annotation Assistance
 - More ReID training exercises on the DiGiTS-Dev-Box-Fish.
 - 902009 - AUV User Experience Design
 - Reviewing some pending API/payload aspects per exchange with Jim.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Some exchanges with Mike G and Brian re unserialization of individual .lzma files.
 - Overhead
 - ACM Webinar: Programming Language Processing (not as interesting as I expected).
 - Some quick experimentation cross-compiling a tethysl-2-xml translator written in Rust for the LRAUV architecture, unsuccessful due to lack of support for the ARMv5 on that target.
 - Out of Office
 - Worked from home for a few days due to covid case at home.
 - Nov 11–14, 23–30, Dec 8–9, 21–29: vacation; Early January (tentative): vacation.
- Karen Salamy
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Brian continues to work with Paul Rogers to polish up our new video player for annotation work and integrate it into VARS
 - To reduce support overhead, Brian merged [m3-registrar](#) codebase, which handles all video registration into M3/VARS, into the [m3-support](#) project.

- Added support for single file registration.
 - [Investigating](#) why a few files won't register in M3/VARS
- IMES imports
- Continuing investigation/workarounds on table rendering [issues](#)
- 902002 - FathomNet
 - Meeting with Squiddle devs re: FathomNet integration
- Out of Office
 - Jan 3 - 11 - Vacation
- Alana Sherman
 - Out of Office
 - Out of the office for school field trip Wednesday morning.