

Engineering Weekly Report 9/23/2021 - 9/30/2021

Executive Council Notes

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Individual Activities

- Francois Cazenave
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring buoy. Cleaning lab.
 - 901700 - Acoustical Ocean Ecology
 - Modified frame design to reduce weight
 - 902106 - Niobicon-Based AUV Docking Development
 - Designing buoy, electronics housing, ordering components.
- Mark Chaffey
 - 902001.99 - 4K ROV Camera Development
 - Camera is complete with the exception of a planned firmware update in a few weeks.
 - Tank testing showed excellent optical performance.
 - Dry tested on Ventana and the video plant (displays, VARS, M3RS) all worked as expected.
 - Diving on Ventana next week, then migrating to the Ricketts in late October for permanent installation.



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- Danelle Cline
- Duane Edgington
 - Out of Office
 - Friday Sept 10. Vacation
 - Thursday Sept 9. Medical.
- Jon Erickson
 - 901405 - Wave-Energy Conversion for Oceanographic Applications

- Ben Erwin
- Kevin Gomes
 - Overhead
 - Hiring process
 - AWS Grant Proposal Writing
 - Working on preparation for testing of new servers on the Carson for the Greensea upgrade
 - Starting work to add temperature logging and tests in Data Probe to prepare for 4K camera deployment.
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Working on proposed development branch to add TRN filter reinit with location and window bounds
 - Libtrnav repo restructure
 - Meet w/ Steve Rock re status, code updates
 - 901101 - Seafloor Mapping
 - Checked in updates related to libtrnav repo restructure
 - Chat w/ Dave re possible TRN on ROV imaging surveys
 - Overhead
 - Hiring related
 - Misc admin/help
 - Waveglider loop and cross pre-deployment software checks
- Rich Henthorn
 - Out of Office
 - Sept 24 - Oct 1, vacation
 - Oct 6 - Oct 15, Sta.M cruise
- Brett Hobson
- Scott Jensen
 - 901205 - ESP SURF Center
 - Return from Wyoming recovery
 - 902106 - Niobicon-Based AUV Docking Development
 - Received solar panels and power items, checking out
 - Searching for an insulation monitor
 - Overhead
 - Solidworks training
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Recovered and diagnosed Wire Walker telemetry system. Found leak
 - Monitoring and processing data from deployed wire walker
 - 901800.98 - Bioacoustic Payload
 - Prepping LRAUV Triton for next deployment. Testing modified gimbal
 - 901805 - Coastal Biogeochemical Sensing
 - Flying Spray34 in support of Yui's experiments
- Chad Keczy
- Brian Kieft
 - 300082 - DMO Support - Wave Glider
 - Testing to confirm good MF/LF acoustics prior to station M trip
 - 708168 - DHS Y8
 - Testing internal sim environment with Burger oil field data overlaid in Monterey Bay. Still can't get it to run on the target.

- 800139 - EyeRIS
 - Met with Ivan to discuss acoustic messaging options
 - Met with team to form test plan
- 901009 - CANON
 - Salinity QC questions from past CTD data
- 901800.98 - Bioacoustic Payload
 - LCB test on bioacoustic payload to confirm 5A operation
 - Tested new current limit resistor and the payload works. Tank testing to follow
- 902101 - LRAUV Technology Development and Fleet Operations
 - Various CM merges to grab Yanwu's changes
 - Assisted EE shop in setting up LCB programming station
- 902106 - Niobicon AUV dock dev
 - Added in delay for latch closure and other config variables we learned about during tank testing with the stiffer dock.
- Overhead
 - Trip receipts
 - BIOSWAT proposal work
 - Candidate interview
- Out of Office
 - 9/20-9/22 (phoenix)
 - 9/29-10/1 (phoenix tbd)
 - 10/4-10/5 (phoenix)
 - March/April TBD LRAUV ops
- Denis Klimov
- Diana LaScala-Gruenewald
- Eric Martin
 - Out of Office
 - October 11-15th
- Thom Maughan
 - 901805 - Coastal Biogeochemical Sensing
 - Committed first draft of updated serial driver to bitbucket for Irene, working thru git challenges.
 - Started software management document to aid the long term voyage to using git.
 - Git integration in Code Composer Studio has presented challenges, along with being git newbies. Thanks to Kent for his steady support and knowledge transfer.
 - 902000 - Multi-Spectral StealthCam
 - PWM board checkout. Plan is to work with James Mc once a basic firmware is running.
 - 902004 - Planktivore
 - Mechanical integration meeting on Monday
 - Submitted 2022 implementation plan to Mandy
 - Project planning. Who, what, when.
 - Overhead
 - Moved all mbari equipment and supplies from home office back to mbari, which touched off a need to organize and clean.
 - Out of Office
 - Working from home on Wednesdays
 - Nov. 10,11,12 Vacation in Dallas, TX
- Mike McCann
 - 901101 - Seafloor Mapping
 - Got AWS S3 working for thumbnail image display on production server
 - Revamping Expedition, Mission, and Note database relationships

- Updated loader, test, and view software following above schema changes
 - Added more [GitHub issues](#) and starting to review Jenny's use cases
 - Overhead
 - Open position meetings
- Rob McEwen
 - Out of Office
 - Nov22-24
- Paul McGill
 - 901618 - Pelagic-Benthic Coupling
 - Pressure tested new Squirty pump with John F., all is good.
 - Got pumps wired and tested for deployment next week.
 - Packing for Flyer cruise next Wed.
 - Met with Teledyne/Benthos reps to discuss Rover and SES modems.
 - 901700 - Acoustical Ocean Ecology
 - Finished schematics for MARS Echosounder and identified suitable 375 V connector.
 - 901904 - Deep-Sea Coral-Sponge Community Observatory
 - Tested Coral Macro Camera in Test Tank with Alana et al.
 - Loaded ship for Carson cruise on Thu.
 - Overhead
 - Attended UAV workshop led by Bryan T-S.
- Ed Mellinger
- Tom O'Reilly
- Craig Okuda
 - 901007 - Benthic Biology and Ecology
 - Assemble new valves and system reassembly
 - Planning and prep for GOC cruise
 - 901220 - Midwater Ecology
 - Misc project clean up
 - Out of Office
 - Vacation days
 - Overhead
 - Begin lab and office clean up
- Doug Pargett
 - 881135 - 3G ESP Cartridge Redesign
 - Testing cartridges and spring
 - 901205 - ESP SURF Center
 - Rebuilding pumps and repairing ESP instruments
- Ben Raanan
 - Out of Office
 - June 8-22
- Mike Risi
 - 701127 - MARS O&M III
 - Modified nodedaq_reader to output ADC values to serial port.
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Met with Stevee to go over KCF based tracker integration and compiled data for testing.
 - 902001.99 - 4K ROV Camera Development
 - Finished up process for 4K camera integration onto Rachel Carson navproc and tested. Deployment rescheduled to Monday October 4th.

- Meeting with Kevin to discuss Doc Ricketts integration starting October 18th.
- Out of Office
 - April 26-30: Ocean Imaging Cruise
 - May 3-7: Vacation
 - June 4-11: Vacation
 - June 28-July 2: Vacation
 - August 30-September 14: Ocean Imaging Cruise
 - September 14-17: Vacation
 - Vacation on alternate Fridays
- Brent Roman
 - 708165 - NOAA-MERHAB
 - ESPeddie recovered after what appears to have been a perfect 6wk deployment of La Push, WA
 - 901205 - ESP SURF Center
 - Scrambling to update all remote ESPs to comply with IT's request to terminate PPTP services
 1. ESPs now use WireGuard instead. IT considers IOT to be 'niche'.
 - Considering how to protect against stepper motor overheating so we can safely overdrive them occasionally.
 - Fixed bug in motor config. Need to revisit this to allow motor and unrelated pressure sensor to share the same hardware channel.
 - 901913 - Demonstrating high-speed communication with a submerged AUV
 - Got word from OceanComm that the H150 modem will not be ITAR (great news!)
- Carlos Rueda
 - 708168 - DHS Y7
 - WHOI has installed Dash 4.6.7.
 - 901502 - Passive Acoustic Sensing
 - Refined code and currently running batches of NOAA/Google model scoring on our humpback whale audio files. With current gizo resources, it takes about 44 hours to score 2 years of data.
 - 901513 - Targeted Sampling by AUVs
 - Refining the front tracking code, now in a separate repo, with CI workflow including build and tests for python 3.6 (the version available on the new SMC board).
 - Productive discussion with the team about the status of things and the next steps.
 - Overhead
 - SE Hire Wrap Up Discussion
 - Out of Office
 - Oct 1, 4: vacation
- Karen Salamy
 - Out of Office
 - Took Monday off for vacation.
- Brian Schlining
 - 902002 - Fathomnet Detect and Classify
 - Working on loading [WoRMS](#) into a [vars-kb-server](#). This is to support global taxonomies in FathomNet. Repo at <https://github.com/fathomnet/fathomnet-worms>
 - Testing and running code from Kevin Barnard to crop off the black letterboxing found in some images in M3/VARS. [Modified the sync tools](#) between M3/VARS and FathomNet to choose annotations on the cropped images over the letterboxed images.
 - Prepping for FathomNet's release on Sep 30th. Working on notifications to users (e.g. send welcome email, successful contribution, etc). Fixing a million final nits.

- Setup model hosting on fathoment website. You can put models in `smb://atlas.shore.mbari.org/FathomNet/web/models` which will be publicly available at <http://fathomnet.org/static/models/>.
- Dropped all data in FathomNet and reloaded localizations from M3/VARS
- Overhead
 - Begun port of legacy VARS application from Java 8 to more current JVMs. It currently compiles and runs on Java 11. This is prep for University of Hawaii's update. [Other groups were requesting this too.](#)
- Rich Schramm
- Alana Sherman