

Engineering Weekly Report 6/9/2022 - 6/16/2022

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 200103 - Core CTD Data - MDUC
 - Resolved missing ancillary CTD data in VARS for V3750
 - 500055 - VARS, M3/RS, DSG
 - Several BoxJelly improvements/fixes
 - Wrote documentation for BoxJelly install & usage; awaiting IS fix before deploying to docs.mbari.org
 - 701139 - ML Tracking
 - Wrapping up analysis work of May 24-25 deployments
 - Re-ran CVision AI tracker; extracted full set of tracks from LCM logs
 - Overhead
 - Moved offices, B208.07 → B208.24
- Francois Cazenave
- Danelle Cline
 - 901502 - Soundscape Research and Education
 - Finished deployment of shoutcast stream. Peak listeners at 88 simultaneous; average listening time of 5 hours, 15 minutes and 14 seconds thus far. Zen listening to help calm the mind.
 - 902005 - VARS Annotation Assistance
 - Batch processing going well. AWS elastic compute cluster is scaling and fine-tuning almost complete.
 - Added support for Job deletion and autoloading by user of processed data.
 - Added more detail to jupyter notebooks on track database use
 - (virtual) team meeting due to COVID
 - Out of Office
 - Marine Imaging workshop 3 - 7 Oct 2022 CEST Brest, France (GMT+2)
- Duane Edgington
 - 901603 - Video TAG
 - CVPR June 19 - June 24 2022 (virtual) CDT (GMT-5)
 - 901618 - Pelagic-Benthic Coupling
 - Working session with Paul McGill on latest laser measure code release. Paul has the code, and the calibration files. Code checked into bitbucket.
 - 902005 - VARS Annotation Assistance
 - Continued testing of the batch processing pipeline.
 - Continued work with intern Miguel Gozzi.
 - Team meeting via teleconf.
 - Overhead
 - Director's Dialog
 - Group meeting

- 2023 budget request
- Out of Office
 - CVPR June 19 - June 24 2022 (virtual) CDT (GMT-5)
 - Registered for Monterey Data Conference, Aug 29 - Sep 1 2022
 - Marine Imaging workshop 3 - 7 Oct 2022 CEST Brest, France (GMT+2)
 - Vacation October 21-23 (Southern California)
- Jon Erickson
 - Overhead
 - Still working with and advising Quest Institute. Mostly about their MARS experiment.
- Ben Erwin
- Kevin Gomes
 - 300057 - Mooring Maintenance
 - Working on SSDS configuration for upcoming M1 turn
 - 300062 - DMO Support - Doc Ricketts
 - Met with pilots to discuss upgrade/bug fixes for DiveLog application (scoping for proposals)
 - 300070 - DMO Support - Ventana
 - Resurrected the custom logger for creating GreenSea logs on demand and deployed on bubinga (tested on Paduk)
 - 901915 - Improving the Impact of MBARI's Data
 - Working on spreadsheet for new web site data pages
 - Refreshing my knowledge of Diana's work with TimescaleDB and ERDDAP
 - 902012 - Telepresence on MBARI Research Vessels
 - Bug fixes and feature implementation to prep for test during WF cruise (which was cancelled)
 - 902202 - MBARI Cloud Integration Exploration
 - Sync meeting with Emmett
 - Out of Office
 - 6/20: Vacation
 - 8/1-8/5: Vacation
 - 10/3-10/6: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - ROV TRN testing
 - 901101 - Seafloor Mapping
 - Making and reviewing code updates for Axial/Sentry cruise (departs 3/19)
 - 902204 - Scalable Marine Robotics Foundations
 - Set up repo for Gemini scanning sonar driver/app code
 - Overhead
 - Submitted SEE budget
 - Hiring
 - Allocation adjustments
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 - Out of Office
 - July 14-29 (tentative, vacation)
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Some TRN investigation
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Monitoring WEC deployment
 - Out of Office

- July 4 - 18, WFH and vacation, email, phone, zoom OK
 - Aug 30 - Sep 16, vacation in Germany, email only
 - Sep 22 - 29, Sta.M Cruise (final scheduled cruise of the Western Flyer)
- Brett Hobson
- Scott Jensen
 - 901205 - SURF Center
 - An iteration of the sampler electronics is being worked on to increase fidelity a little bit and possibly use a microcontroller that may actually be used.
 - Preparation for the Ohio recovery.
 - DQ2113 - Tidal Turbine
 - Visited UofW APL with power buoy electronics to perform a demonstration test of MBARI electronics operating APL's tidal turbine. Trip was successful and report is being worked on.
 - Out of Office
 - June 9-10 for UofW/APL visit
 - June 20-22 Ohio recovery
 - June 27-July 8 vacation
- Brent Jones
- Chad Keczy
- Brian Kieft
 - 708143 - Eco HAB
 - Recovered Brizo and wrapped up EcoHAB SB on Monday.
 - Brizo was deployed for 29 days and, along with WG Tiny, represented the first MBARI boat free operation. We employed joystick control to perform L&R ops from Goleta Pier. Brizo seen here making its final approach to the pier for recovery after a month at sea.



- 800139 - EyeRIS (Remote Imaging System)
 - Supported a deployment this week for acommms data transfer and tracking
- 901513 - Targeted Sampling by Autonomous Underwater Vehicles
 - Various support for ongoing missions being run offshore
- 902009 - AUV User Experience Design
 - Meeting next week with team for status update.
- 902106 - Niobicon-Based AUV Docking Development
 - Deployment last week to test new docking arm
- Overhead
 - Assisted with DOEST work
- Out of Office
 - 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
 - 708167 - WEC Dynamics and Control
 - Meeting last week, working with Rob on trying to find a good set of settings
 - 901101 - Seafloor Mapping
 - Cruise was cancelled, demobilized and discussing other options.
 - 3D@Depth is near completion on their contract to generate a feasibility study of a generation 2 wide-swath lidar, and gave a concept review to MBARI engineers on Tuesday morning. Feedback was good, and the next steps will be to produce a final proposal that we can consider inserting into the 2023 internal proposal cycle.
 - 901206 - Coastal Profiling Float Transition to Science Applications
 - Sleep on anchor development
 - 901405 - Wave-Energy Conversion for Oceanographic Applications
 - Looking into AHRS issues on my logger application.
 - 901700 - Acoustical Ocean Ecology
 - Reviewing paper on the comparative AUV/ROV transect work.
 - 901911 - ROVVR
 - Looking for Data products, brainstorming proposal concepts.
 - 902012 - Telepresence on MBARI Research Vessels
 - Looking into project update
 - 902204 - Scalable Marine Robotics Foundations
 - Lidar for paragon spec
 - Boxfish follow up
 - Gim Robotics calls
 - New intern onboarding and mentoring.
 - Overhead
 - PI selection committee meeting, provided verbal feedback on my interviews
- Thom Maughan
 - 901009 - CANON
 - eDNA lunchbox software update
 - Battery backup circuit debug.
 - 901805 - Coastal Biogeochemical Sensing Program
 - Packed the dev box for remote work.
 - 902004 - Planktivore
 - Assembled Noot with temporary bracket for mounting to Planktivore. Tested in the harbor for 10 minutes and again in the test tank. Planktivore 'imaging at depth' feature was tested, works great.
 - Out of Office
 - Jun 12 - 22? Arrived Colorado 6/15. Remote work from Colorado for elder care.
 - Jul 6 - 19 Camping, Bear Lake Monster Swim
- Mike McCann
 - 901009 - CANON
 - With brizo's recovery [stogs_ecohab_may2022](#) is being reloaded
 - 901101 - Seafloor Mapping
 - Started on writing UI functionality testing using Selenium
 - Examining Jenny's suggestions for identifying failed missions
 - 901221 - Midwater Time Series
 - Will be meeting with Rob about next steps with i2map CTD data
 - Sent Brian reference to auv-python generated netCDF files

- Overhead
 - Working with Lonny on nightly edited ROV Nav data flow through expd and emdb
- Out of Office
 - 27 June - 20 July: Vacation
 - 19-22 July: ESIP Summer Meeting, Pittsburg, PA
 - 25-29 July: Vacation
- Rob McEwen
- Paul McGill
 - 300070 - DMO Support - Ventana
 - Worked with pilots to resolve issues with servo valves
 - 701145 - Penguin Hotspots
 - Got AOS sensors tested, repaired, and molded
 - Got sonar payload #2 wired enough for Chad W. to finish
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Tested Macro Camera with Alana, resolved battery issues
 - Met with Duane E. to get walk-through of Laser Measure setup and use
 - Still working on MATLAB licensing issues to run Laser Measure
 - 901700 - Acoustical Ocean Ecology
 - Working on AOS PIC24 code—much progress but bugs remain
 - Edited first draft of Kelly's paper on robotic observer effect
- Tom O'Reilly
- Craig Okuda
- Doug Pargett
 - 708146 - Saildrone
 - Built a new copper intake for the Saildrone and prepared equipment.
 - Installed the MV3 instrument in Saildrone up at Alameda
 - 901205 - SURF Center
 - Making new drawings of housing caps for CNC machining.
 - Out of Office
 - Sick leave
- 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
- Brent Roman
 - 706005 - eDNA Grass Carp Sandusky
 - Tweaked sampling schedule again
 - 708146 - Saildrone
 - Got comms back. Reduced console baud rate to 9600. Surveyor still in port at Alameda.
 - 901205 - SURF Center
 - Working with Scott Jensen on microcontroller for new ESP sampler. Ordered a couple protoboards.
 - Evaluating various RTOS's for ESP sampler. Leaning towards RIOT
 - 901913 - WetWiFi

- Planned deployment last week canceled.
 - Finally got pricing for OceanComm's subscription model
 - Continuing to work on next year's proposal.
- Overhead
 - Finally switching my Linux development environment from 32 to 64-bits.
- Out of Office
 - June 19th
 - July 21 through roughly August 21
- Carlos Rueda
 - Out of Office
 - June 9–10: vacation
 - Just 15 afternoon (medical)
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Working with Jared and Kevin G. to test and prep the new M1 turn which is currently scheduled for July 15, 2022.
 - 901101 - Seafloor Mapping
 - Fixed some merge bugs in my code so that it now works with Mike's production env on smdb.shore.mbari.org. Mike was then able to merge many of my recent changes into the master code. I am spending a little time testing those changes to make sure that they work the way they are intended.
 - 902009 - AUV UI
 - Need to speak with Carlos regarding typing API calls from Irauv2 to the new tethys dash that Sumo Creations is currently building. Hope to meet with Carlos tomorrow.
 - Just received a notice that there will be an AUV meeting this coming Jun 21, 2022 .
 - Out of Office
 - Planning vacation: June 16, June 20-24.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Working on spec and implementation for testing a new video player that combines [Sharktopoda's](#) video playing stability and smoothness with [Cthulhu's](#) video annotation features. Completed a first draft implementation of a new remote protocol for VCR players. This includes [the video player side](#) and the [annotation/controller app side](#). The implementation needs some final tweaks before putting a new video player request out for bids.
 - 902005 - VARS Annotation Assistance
 - Working through [merge code](#) to pull ML generated bounding boxes from a staging database into VARS.
 - Out of Office
 - Brian is (still) working at home taking care of a daughter with COVID.
 - Jul 7-8 Vacation
 - Jul 25-28 Vacation
- Alana Sherman
 - 901618 - Pelagic-Benthic Coupling and the Carbon Cycle
 - Spent the week getting the Macro camera back up and running.
 - Overnight tests in the highbay were successful
 - Found potential issues with Seabattery, seems to take too long to charge, but should be okay for this brief deployment
 - 902208 - MiniROV Operations
 - Made test cable for pin puller to get system working in the tank
 - Assembled computer and other test equipment for bench testing of the niskin/pin puller pair

- Overhead
 - Seafloor Processes hiring committee