

Engineering Weekly Report 7/6/2023 - 7/13/2023

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Investigated timestamp difference between Sharktopoda 2 and Beholder
 - Added query filters for observation activity and group
 - Implemented multiple sort
 - DQ2209 - Ocean AI 2
 - Coordinated OVAI PWG meeting
- Francois Cazenave
 - 901405 - PowerBuoy Development
 - Buoy Frame extension fabrication
 - 902106 - Niobicon-Based AUV Docking Development
 - Wrote and submitted the proposal
- Danelle Cline
 - Out of Office
 - Generative AI Immersion Days, June 13-15, San Francisco
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Proposal work
 - Team meetings
 - 901009 - CANON
 - Read 2024 proposal
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Proposal work.
 - 901502 - Passive Acoustic Sensing
 - Proposal work
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Proposal work
 - Team meeting
 - 902004 - Planktivore
 - Proposal work
 - Overhead
 - Proposal work 902111, others
 - Out of Office
 - July 23-July 29 2023. ICML (virtual). HST (UTC-10)
 - Oct 16-18 2023. Pytorch conference. SFO (in person). PDT (UTC-7)
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC

- Proposals
- 300059 - DMO Divisional Support - David Packard
 - Meetings for networking
- 300070 - DMO Divisional Support - Ventana
 - Working on GSS documentation for changes to UI
- Overhead
 - Proposals
 - Budgets
 - Interviews for OVAI PM and MiniROV/EE
 - Met with CyberSecurity consultant to walk through changes/suggestions
- Out of Office
 - July 5-7: Vacation
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 300057 - Mooring Maintenance
 - Checked data and noted metsys wind errors; turns out sonic is not currently installed.
 - Met w/ Jared re options for changing time on metsys cr10x data logger
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Working out some QNX build issues in the context of integrating multibeam filtering w/ TRN into the dorado simulator
 - 902204 - Scalable Robotics
 - Updated metadata features and fixed timestamp bug in app for converting multibeam data into LCM stream/log for SLAM. Generated some data sets for Sebastian to share with GIM (Finnish SLAM contractor/collaborator). Help Sebastian set up his processing pipeline as needed.
 - Overhead
 - Proposal process: prep, pre-review, labor spreadsheet
 - Hiring - candidate negotiation
 - Out of Office
 - 6/29 Rachel Carson
- Rich Henthorn
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Dorado simulation with mbtrnpp
 - Proposal discussions
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Refining data-processing scripts
 - Proposal discussion
 - Overhead
 - Rec-Com
 - Engineering meeting
 - Out of Office
 - July 12: WFH, available on all, PDT timezone
 - July 24 - 27: Vacation: available on email, EDT timezone
 - July 31 - Aug 4: WFH: available on all, PDT timezone
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Continuing to build up EC instrument, modified some parts as necessary

- For nanofet, lots of reading on guard rings, low current measurements, reference electrodes; looked at a bunch of op amps and decided to continue with current selection for now (minor modifications to help with routing)
 - Reorganized nanofet schematic and fixed references
 - Li-SW first contact
- 901904 - Deep-Sea Coral Community Observatory
 - Ordered some parts and began finishing Paul's build
- Scott Jensen
 - 771131 - Great Lakes PCM/HAB
 - Thermal testing setup
 - 901205 - ESP SURF Center
 - Build up of filtering test equipment
 - Out of Office
 - Vacation June 30-July 7
 - Vacation July 24-28
- Brent Jones
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 300083 - DMO Divisional Support - LRAUV
 - Emergency recovery of Daphne S of M1 due to failed thruster
 - Supporting MBTS and Pontus deployments
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Met with BioAcc team to discuss plans. Working on reviewing data from great lakes.
 - Supporting WHOI deployment for scallop survey and CDOM work
 - 706007 Great Lakes
 - Pulling data and working with Mike to get a STOQS campaign set up.
 - Overhead
 - Proposals!
 - Out of Office
 - 07/18 - 07/21 tentative (MST)
 - 08/03 - 08/07 (EDT)
 - 08/14 - 08/18 (PDT)
 - 08/16 - 08/19 (EDT) alternate
 - 09/26 - 10/04 (EDT)
- Denis Klimov
 - Out of Office
 - 6/12/2023-6/15/2023
 - 7/3/2023-7/6/2023
 - 7/11/2023-7/14/2023
- Eric Martin
 - Out of Office
 - on vacation 6/8-6/15
- Thom Maughan
 - Out of Office
 - Vacation June 26 - July 12 Vacation / Elder care
 - Vacation Sep 24 - Oct 2 Vacation / Wife care
- Mike McCann

- 200105 - Core Navigation Data - MDUC
 - Diagnosed a duplicate record problem preventing some data loading problems in emdb
- 200109 - Core Mooring Data - MDUC
 - Submitted 2024 proposal
- 300083 - DMO Divisional Support - LRAUV
 - Creating a stoqs_greatlakes2023 database for triton and makai deployments there
- 901009 - CANON
 - Tested STOQS development system modernization capstone student work
- 901910 - Plankton Taxonomic Groups from AUVs
 - Contributed to 2024 proposal submission
- Overhead
 - Submitted Expedition Database Modernization proposal
- Out of Office
 - 7-11 August: SIGGRAPH in LA
 - 12-20 September: Vacation
 - 9-11 October: Web3D 2023 Conference
- Rob McEwen
- Paul McGill
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Searched the lab for parts for UAV ground station antenna pointer with Bryan, and discussed how to get system up and running.
 - Overhead
 - Worked on proposals most of the day Tue
 - Out of Office
 - Returned from vacation on Tue
- Enoch Nicholson
 - 706008 - READI-net
 - Selected actuators for October prototype, and started to finalize layout of some subsystems.
 - Drive: Combined with base plate and simplified belt / tensioning system.
 - Clamp: Switched back to C-Frame design, but made of plates.
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation Data - MDUC
 - Finished conversion of Octans and serial interface processes to Navproc Framework.
 - Continuing conversion of Doc Ricketts interface code to Navproc Framework.
 - Worked on input for the 2024 proposal.
 - Looking into <https://github.com/OceanDataTools/openrvdas> for full speed data logging on the R/V David Packard.
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Meeting to discuss the development of Real-time 3D topography model for obstacle avoidance and path planning of autonomous vehicles.
 - Worked on input for the 2024 proposal.
 - 901101 - Seafloor Mapping
 - Continuing development of LASS Trigger Board 2.0 firmware when time permits.
 - Overhead
 - Participated in proposal related activities and meetings.
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6

- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Chiton software and data management
 - 902001 - Ventata 4k camera
 - Supporting installation on Ventana and RC control room setup
 - 902004 - Planktivore
 - Proposal submission
 - 902306 - SINKER
 - Proposal submission
 - Overhead
 - Intern support
 - Out of Office
 - July 14
- Brent Roman
 - 708165 - MERHAB19:ESP
 - ESPfriday deployed since May off La Push had a stuck hand.
 - Managed to recover and continue mission
 - 901205 - ESP SURF Center
 - Prepared laptop and WiFi hotspot for away team headed to GLERL
 - Provided lots of support to ESP intern Samarth so he could analyze filter rate data from old logs
 - Determined that much of the 3G's pump oscillation is self excited
 - Intend to improve control law in firmware
 - Added first cut a non-volatile command history storage
 - Complicated by fact that there are multiple simultaneous espclients on a given server
 - 901913 - Wet Wifi
 - Submitted Phase I proposal for 2024
 - Out of Office
 - May 26 - June 6
- Carlos Rueda
 - Out of Office
 - July 5–7, 15: vacation
 - August 9–28: vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Restarted rovtcdqcplot scripts on coredata today
 - 300057 - Mooring Maintenance
 - Check daily downloads
 - Updated various emails with Francisco's help for the special1_process_hourly scripts. Several recipients have recently changed institutions.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Focused on building various map components for Dash5 with Jim Jeffers (@Sumo) including elevation with coordinates, splitpane control and scaleControl. Still battling GoogleAPIkey error issues.
 - Overhead
 - ZOOMED in on Andrew M. presentation yesterday.
 - Spent time working with Doug C. on new computer upgrade options.
 - Out of Office
 - On-campus 3 days/week (**M, T, Th**).
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG

- Updated framecapture software on the Rachel Carson for the newly installed 4k Camera.
- Upgraded VARS and all services on the Rachel Carson to better support the [large 4k framegrabs](#) which can be slow to capture.
- Started working on spec for web services to be used to apply ML to individual video files.
- Putting together [code](#) to probe [this issue \(#56\)](#) where different methods of framecapture return slightly different frames from the video. This is causing issues with ML bounding boxes being misaligned on images.
- 901618 - Pelagic-Benthic Coupling
 - [Mondrian 1.1.2](#) was released. This is a bug fix release.
 - Fixed [Coral Observatory image sets](#) that were registered in [vampire-squid](#) (video asset manager) with incorrect params.
- 902002 - FathomNet
 - Reviewed Eric Orenstein's medium article on [FathomNet 1.0](#).
- Overhead
 - Proposals
 - Current stats on video asset data volume for the VARS proposal. Current estimate is 29,961 hours of video managed by the video lab. By platform:
 - Doc Ricketts: 8,619 hours
 - i2MAP: 200
 - Mini ROV: 519
 - Tiburon: 6,938
 - Ventana: 13,684
 - Tour for ROV summer camp group
- Out of Office
 - Jul 28 - Aug 6 - Vacation
 - Aug 14 - 17 - Vacation
 - Aug 21 - 22 - Vacation
- Alana Sherman
 - Out of Office
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- George Stern