

Engineering Weekly Report 5/4/2023 - 5/11/2023

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - Out of Office
 - Fulmar 2023-04-25, 2023-04-28
 - Rachel Carson 2023-05-10,11,12
- Francois Cazenave
 - 901405 - PowerBuoy Development
 - Monitoring buot
 - 902106 - Niobicon-Based AUV Docking Development
 - Assembly of buoy
 - Project management
 - 902306 - SINKER
 - Aquarium design review with Enoch
 - Attended meeting
 - Overhead
 - Conducted 5 interviews for ME hires, and wrote reports.
 - Out of Office
 - Took ½ day off to take care of sick child
- Danelle Cline
 - Overhead
 - Summer intern overhead
- Duane Edgington
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Continued work with Danelle on active learning tools for midwater images and concepts
 - 901502 - Passive Acoustic Sensing
 - Team meeting May 10
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Continued work with Danelle on active learning tools for UAV images and concepts
 - Collaborator meeting May 8
 - Team Meeting May 10
- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Refactoring logr to utilize new single LCM type.
 - 300059 - DMO Divisional Support - David Packard
 - Reading through documentation related to cyber security
 - 300070 - DMO Divisional Support - Ventana
 - Trying to get up to speed on 4D nav and learn how we can use WMS layers (possibly from ODSS)

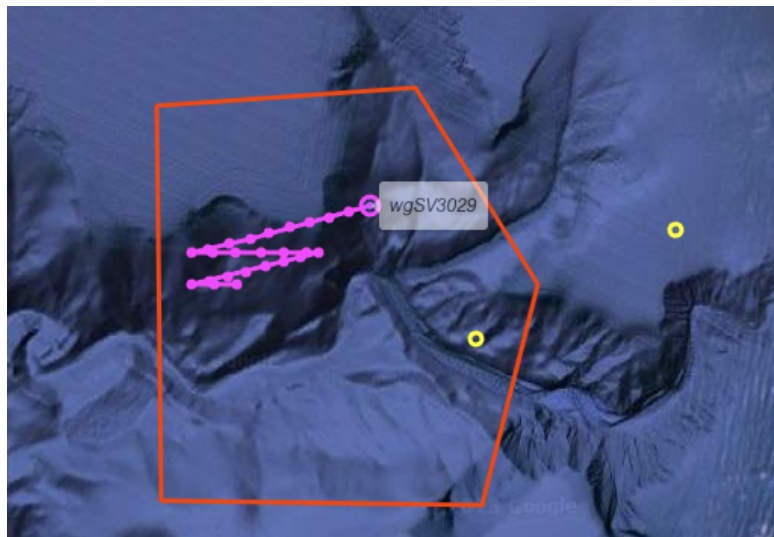
- 706008 - READI-net
 - Looking over SDI-12 protocol to see if it's something we need to support
- 901009 - CANON
 - Added new layers to the ODSS for circles centered over MARS node with N,S,E,W stations labels
 - Helping University of Hawaii troubleshoot their SSDS installation. Their server died and they moved the disk to a new machine, but SIAM not sending messages through to SSDS now.
 - The UofH server had crashed back in March and they moved the disk to a new machine, but during the crash, something must have gotten messed up in the database transactions and all the incoming JMS messages were being queued, but not written to the database. I ended up stopping the server, blowing away the cache directory where the message queues and database transactions were and then restarted the server. All is back and happy again (despite the gap in data through April).
 - Working on application to host the MARS echosounder data for the upcoming experiment. Chad setup images posting to ProjectLibrary so I can work on the application
- Overhead
 - Interview candidate for embedded engineer
 - ARG! All database XOJO apps that use ODBC/TDS stopped working under OS X Ventana and trying to troubleshoot.
 - Working on Slack business plan proposals
 - Working on Atlassian plans.
- Out of Office
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
- Rich Henthorn
 - 901405 - PowerBuoy Development
 - Minor modifications to simulation logger (timestamps and unit conversion)
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Mob for SES MARS deployment
 - SES MARS deployment
 - SES data processing
 - Overhead
 - Engineering meeting
 - DAS scoping meeting
 - Out of Office
 - May 15 and 17: appointments mornings only, onsite afternoons
 - June 1 - 9: Vacation
 - June 29 - July 10: Vacation
 - July 24 - 27: Vacation
 - July 31 - Aug 4: WFH
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Review nanofet circuit, discuss w/ Scott; some parts missing
 - Meeting to discuss updates and timelines
 - Weekly meetings
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Deployment at MARS 5/8/23
 - Overhead

- OrCAD tutorial (online + help from Scott and Jose)
 - Out of Office
 - May 25-26 reunions
- Scott Jensen
 - Out of Office
 - Vacation May 11-15
 - Vacation June 30-July 5
 - Vacation July 24-28
- Brent Jones
 - 901009 - CANON
 - Prepping CPF for canon deployment
 - 901112 - Monterey Bay Time Series
 - Preliminary design for a Wire Walker launch and recovery system from the paragon
 - Wire Walker maintenance from Paragon
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 708143 - CA Current HABS
 - Wrapped up EcoHAB. Paying bills for boat rentals, reviewing user input, etc.
 - 901009 - CANON
 - Working on fix for DAT to enable mission that tracks Waveglider and also transfers data between vehicles.
 - 901513 - Targeted Sampling by AUVs
 - Worked with Yanwu to add target threshold
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Working on dock network a bit
 - Investigating RDI issues
 - Planning to deprecate tracking behavior and stick with track_acoustic_contact
 - 706007 Great Lakes
 - Met with team to discuss deployment locations.
 - Vehicle prep on Ahi/Aku
 - Overhead
 - Interview work
 - UAV work
 - Out of Office
 - 06/09 (PDT)
 - 06/19 - 06/29 (EDT)
 - 07/03 - 07/07 (TBD)
 - 07/17 - 07/28 tentative (TBD)
 - 08/03 - 08/07 (EDT) alternate
 - 08/16/ - 08/19 (EDT)
 - 09/26 - 10/04 (EDT)
- Denis Klimov
 - 901112 - Monterey Bay Time Series
 - We are running into some issues on the IFCB operation on Power Buoy after a power outage and not sure yet if they can be rectified remotely; also, possibly, the issue came about during towing of Power Buoy out of the harbor due to silt contamination such as happening to the other IFCBs used near harbors and jetties by other users on the western seaboard this is

- Overhead
 - Looking at installation issues and laser safety aspects of a projectors demos in the Pacific Forum. Documentation provided by Sony included a warning that the projector with the lens removed emits Class 4 laser radiation. This is a serious hazard level capable of damaging eyes as well potentially damaging for the skin. Normally the lens would not be casually removed. Still, having an embedded Class 4 laser be so easily accessible is a safety concern. With a lens installed, such a projector is rated as a Class 1/ Risk Group 2 or Class 1/ Risk Group 3 which also have a number of installation and access concerns.
- Eric Martin
 - 901101 - Seafloor Mapping
 - Offshore this week with the Low Altitude Sled for both David Caress and Giancarlo Troni
 - 901206 - Coastal Profiling Float
 - Analyzed tank tests, we have periodic issues with the SD card on repeat power cyclings.
 - 901405 - PowerBuoy Development
 - A little look into issues with sensors on the top hat.
 - 901911 - ROVVR
 - Prepping for our intern this summer.
 - 902012 - Telepresence
 - Supported first use of the Starlink system on the Rachel Carson, and it performed rather admirably.
 - 902204 - Scalable Robotics
 - See 901101, along with PM responsibilities.
 - Overhead
 - SEESC hiring committee work.
 - SOVA Meeting last week was a success, thanks to all who made it possible.
 - Out of Office
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- Thom Maughan
 - 300083 - DMO Divisional Support - LRAUV
 - Working thru hardware issues affecting code download, found and fixed. LPCopen app dev for battery backplane is in progress
 - 901009 - CANON
 - Attended CANON meeting.
 - Looking into docker for edna1 and edna2 servers
 - 901805 - Coastal Biogeochemical Sensing Program
 - Review nanoFet and provided size reduction recommendations.
 - Update to CCS v12 for development on new laptop. Git integration bug looks to be fixed.
 - 902004 - Planktivore
 - Working with Araon on mooring deployment. Sent Mandy our Sanctuary permit details and have prepared notice to mariners message, thanks to Brian K for the template and to Jared for the guidelines.
 - Preparing Plantivore V1 for training Crissy Hufford in prep for use by Durkin lab on Paragon May 22,23
 - Requesting additional time for Denis to help with bench setup and strobe tuning
 - Board bullets
 - Overhead
 - Working on Planktivore abstract. Discussions with stakeholders. Many thanks to Paul for work on the abstract text
 - Out of Office
 - Vacation June 26 - July 12

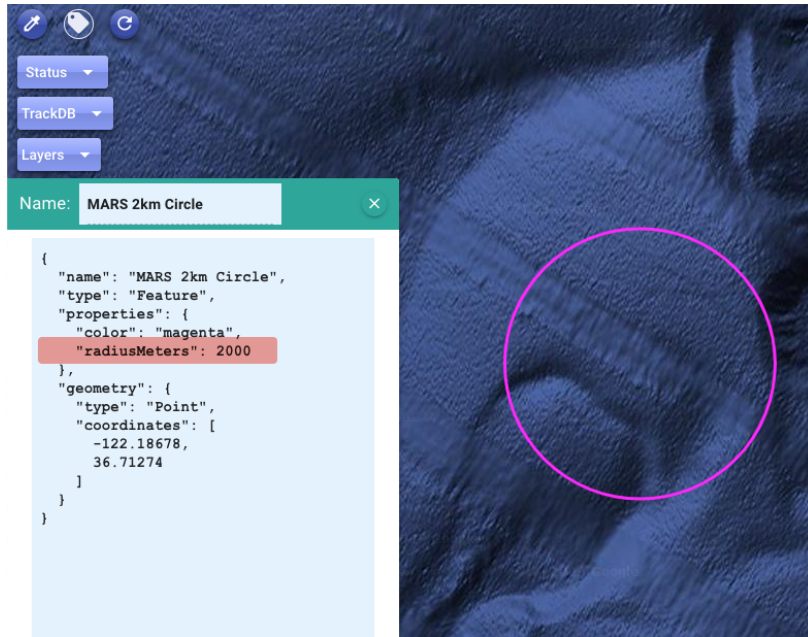
- Mike McCann
 - 901009 - CANON
 - The /pg_data partition on kraken (our internal stoqs server) got to 97% full
 - Needed to pg_dump/pg_restore several stoqs databases to recover from above problem
 - Submitted IS request to build new kraken2 server with more capacity
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Fixed sampling and plumbing lag computations for Dorado biolume data
 - Reloaded newly processed auv-python data in test stoqs_auv_compare_t database
 - Met with Monique & Michael to discuss next steps and her presentation for ASLO
 - Reprocessing entire Dorado archive with labels for which CTD is best
 - Overhead
 - Tested MB-System [pull request](#) from capstone students and advised them to submit it
 - Giving the 4 capstone students a tour of MBARI on Friday afternoon (thanks in advance to the Video Lab and the AUV teams :-)
 - Out of Office
 - 23 May: Vacation day
 - 7-11 August: SIGGRAPH in LA
- Rob McEwen
 - 300078 - DMO Divisional Support - AUV
 - Worked with Kent to roll GMT back to version 5 to get around the grdcut -N bug introduced in V6. This required doing a CMAKE build from source.
 - Developed tileMaker.m that incorporates createbo script and has configurable tile sizes.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Working with QS on lineCaptureHoming.xml to remove premature dock attempts.
 - Working on docking test plan. Getting a better idea of which knobs to turn.
- Paul McGill
 - 300059 - DMO Divisional Support - David Packard
 - Helped Bryan T-S with current sensor mystery in Doc Rickett's power system.
 - 901700 - Acoustical Ocean Ecology
 - Worked on xducer attitude sensor code. Stuck on vexing problem.
 - 901904 - Deep-Sea Coral Community Observatory
 - Attended meeting to plan recovery of cameras from Sur Ridge.
 - 902304 - Piscivore Cam
 - Designing and building new controller I/O board to better control GoFish camera.
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Deployed the SES on MARS on Monday. It works!
 - Overhead
 - Attended Engineering meeting
 - Attended Aaron Micallef's Geo-Sense proposal meeting
- Enoch Nicholson
 - 706008 - READI-net
 - Produced and submitted machined part drawings for fab.
 - Fit checked printed parts and ordered full prototype components.
 - 771131 - Great Lakes PCM/HAB
 - Mocked up mounting arrangement for phase separator, pump, and control / power housing.
- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6

- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Infosheets and EyeRIS data wrangling
 - 901904.99 - Corral Camera System
 - Brainstorming meeting for multispectral lab and ROV camera
 - 902001 - Ventata 4k camera
 - retrofit of new chassis parts for corrector
 - In-water testing of new corrector optics
 - 902004 - Planktivore
 - Abstract preparation
 - 902306 - SINKER
 - Updating solid models with latest camera/lens/illumination design
- Brent Roman
 - Out of Office
 - May 26 - June 6
- Carlos Rueda
 - 901513 - Targeted Sampling by AUVs
 - Starting real front detection and tracking exercises offshore with programs running on the wave glider (SV3029). So far so good! (but the frequent broken connection becomes a real hassle especially now during testing and necessary tuning).



- 902101 - LRAUV Technology Development and Fleet Operations
 - Renewed TethysDash API Keys for the odss2dash service.
 - Dash4: users can now define circles for the map using the “stations” feature. 99% of the needed support was already there; just needed to introduce some special property (radiusMeters) to

display a regular Circle, and not a marker as with a more standard “station”.



- 902204 - Scalable Robotics
 - For base images, now also processing the associated “world file” (.tfw) for auto-positioning on the map. (Direct geotiff ingestion is still proving tricky.)
- Overhead
 - SE-EAD interviews and input to Kent.
 - ACM TechTalk: LLM and the end of programming (really serious stuff)
- Out of Office
 - Possibly ~2 days working from home this or next week due to office layout upgrades
- Karen Salamy
 - 300057 - Mooring Maintenance
 - Weekly maintenance and observation
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Working to upgrade requested map components for the team
 - Spoke with Jim Jeffers. He has some time left and is going to try and help with more critical Front End issues and bugs as he is most familiar with those components.
 - Overhead
 - Added R/V Packard to ship lists in Precruise. I will need to test these changes prior to making them “live” for users.
 - Out of Office
 - Now in the office 3 days/week M, T, Th..
- Brian Schlining
 - 901618 - Pelagic-Benthic Coupling
 - Continuing work on the new image annotation application, [Mondrian](#).
 - 902002 - FathomNet
 - Addressing some FathomNet issues.
 - With Kevin B, we’ve laid out an accelerated road map to complete [Beta 2.3](#) in June
 - Out of Office
 - May 8 - 16 - Out of office
 - Jul 28 - Aug 6 - Vacation
- Alana Sherman
- George Stern

