

Engineering Weekly Report 6/8/2023 - 6/15/2023

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Several upgrades to vars-gridview
 - Wrote sharktopoda-client-py for Sharktopoda 2 UDP controls
 - Added group and activity filtering capabilities to m3-download
 - Investigated reported issue of vars-gridview changing observation fields
 - Out of Office
 - CVPR (Vancouver) June 17-25
 - Vacation June 30-July 9
- Francois Cazenave
 - Out of Office
 - 1 sick due to sick child
- Danelle Cline
 - Out of Office
 - Generative AI Immersion Days, June 13-15, San Francisco
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Met with project manager NancyJ to go over my roles and responsibilities on project 2023. Added to biweekly project team meetings.
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Continued work with Danelle on clustering and active learning tools for midwater images and concepts
 - Sessions with intern Tarun Sharma, who will be working on semi-supervised learning applied to midwater video (learning classes using few labels).
 - Running Vision Transformer for Small-Size Datasets for training against midwater images. Debugging with Danelle midwater image dataset conversion to CIFAR100 format.
 - Running colab and AWS sagemaker studio for 901103 work.
 - Tests on gpu box OLIVIA to Ubuntu 22.04 LTS with cuda drivers from Lambda Stack. Working fine for accelerated pytorch; debugging accelerated tensorflow.
 - Out of Office
 - Virtual [CVPR 2023](#) June 18 - 22.
- Jon Erickson
 - 901217 - Chemical Sensor Program
 - Pressure/leak testing APEX-ISUS composite housings. Prints for production (end caps).
 - 901805 - Coastal Biogeochemical Sensing Program
 - Received the new version electronics. Requires dimension changes to pressure case.
 - 902010 - Mesopelagic LRAUV
 - Part prints for resized drop weight. Twelve prints?

- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Finally got through the detailed deep dive on data pathways for status items and clarified their usage and necessity so we can decide how to implement same functionality in single LCM type
 - 300057 - Mooring Maintenance
 - Preparation underway for mooring turn coming up soon
 - 300059 - DMO Divisional Support - David Packard
 - Reviewing cybersecurity and network architecture changes
 - 300079 - DMO Divisional Support - Rachel Carson
 - Reviewing 4DNav to try to plan for ODSS integration
 - 706008 - READI-net
 - Meeting
 - Overhead
 - Interview for OVAI PM
 - Interview for EE/MiniROV
 - Reviewing cybersecurity documents for internal MBARI policy development
 - Out of Office
 - Jun 9,12: Vacation
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 300057 - Mooring Maintenance
 - working with Jared to understand download failures for 2023M1 (now in test on the dock)
 - 901101 - Seafloor Mapping
 - preparing for Dorado TRN test day 6/20; this is a test run for Axial in Aug/Sep
 - Overhead
 - 2024 budget, resources, proposals
 - hiring: AOSE reference check call, SE-EAD
 - misc admin
 - Out of Office
 - 6/20 Rachel Carson
- Rich Henthorn
 - Out of Office
 - June 29 - July 7: Vacation/WFH: available on email, Zoom, Slack, VPN, PDT timezone
 - July 24 - 27: Vacation: available on email, Slack, EDT timezone
 - July 31 - Aug 4: WFH: available on email, Zoom, Slack, VPN, PDT timezone
- Brett Hobson
- Irene Hu
 - 901805 - Coastal Biogeochemical Sensing Program
 - Troubleshoot Nano4 (solder blob)
 - Nano3 modified to tie buffer shdn to RES; seems to work. ~40 uA parasitic draw thru relay when HIB doesn't properly go low is still a problem, but tabled for now
 - Final mods to nanofet revB and discussed w/ Jose for layout
 - 901904 - Deep-Sea Coral Community Observatory
 - Arbitrary pauses in camera's "continuous" mode traced to using synchronous instead of asynchronous capture; rewrote all code to use asynchronous
 - Toggle between streaming (need to resize) and saving images from 8 LEDs - works (w/ workaround for crash when try to close streaming window)
 - Out of Office
 - June 19-23: Vacation

- Scott Jensen
 - Out of Office
 - Vacation June 30-July 5
 - Vacation July 24-28
- Brent Jones
- Chad Keczy
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - Out of Office
 - 05/15 (PDT)
 - 06/09-14 (PDT)
 - 06/19 - 06/29 (EDT)
 - 07/03 - 07/07 (TBD)
 - 07/17 - 07/28 tentative (TBD)
 - 08/03 - 08/07 (EDT)
 - 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
- Mike McCann
 - 300083 - DMO Divisional Support - LRAUV
 - Submitted help ticket to configure new tethysviz2 STOQS server to host PostgreSQL 15 DBs
 - 901009 - CANON
 - Used wgTiny positions for LRAUVs during ESP filtering in [stogs_canon_may2023](#)
 - Fixed functional testing using SeleniumHub containers in STOQS postgres15 branch
 - Able now to upgrade to Django 4.2.2 in postgres15 branch with planned tethysviz migration
 - Overhead
 - Getting IS help next week to change my UID so that MacOS XQuartz works properly
 - Thinking about writing Expedition Database Modernization proposal
 - Out of Office
 - 26-30 June: Vacation
 - 7-11 August: SIGGRAPH in LA
- Rob McEwen
- Paul McGill
 - 701147 - MARS O&M IV
 - Met with Knute, Danielle, Andy, and Kelly to prepare for Zoom meeting with Tim McGinnis at UW tomorrow about their funding supplement request.
 - 901618 - Pelagic-Benthic Coupling
 - Just returned from ASLO in Mallorca, Spain. Poster presentation went fine.

- Overhead
 - Did yearly Hazard Communications training.
 - Watched Director's Dialog from Tue.
- Out of Office
 - Took day of vacation on Tue to recover from international travel.
- Enoch Nicholson
 - 706008 - READI-net
 - Fixed design issues with clamp to make it usable for fluidic testing.
 - Ordered pucks for testing.
 - Started conceptual layout for October Prototype.
 - 902306 - SINKER
 - Completed conceptual layout of System controller.
 - Began assembling the wiper test aquarium.
 - Rachel Carson ride along to observe ROV / MARS operations.
- Tom O'Reilly
- Mike Risi
 - 200105 - Core Navigation Data - MDUC
 - Continuing work on data acquisition for the R/V David Packard and Doc Ricketts.
 - Working on porting the Doc Ricketts interface code to use the new framework.
 - 300062 - DMO Divisional Support - Doc Ricketts
 - Tested the Doc Ricketts interface code with John E. from SMD. After resolving a few small bugs everything is working and all of the changes have been committed to bitbucket.
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Meetings with Steve Rock on 2024 proposal.
 - 901101 - Seafloor Mapping
 - Reviewed final schematics of the LASS trigger board 2.0 before layout.
 - Implemented test code for all of the new hardware on the trigger test board.
 - Started developing LASS trigger board 2.0 firmware.
 - Participated in a successful three day cruise series of the LASS using Ventana.
 - 902204 - Scalable Robotics
 - Small changes to LCM serial bridge to accommodate message timeouts.
 - Meetings to discuss CoMPAS control system development.
 - Overhead
 - Participated in multiple interviews for the Software EAD position.
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
- Paul Roberts
 - Out of Office
 - June 6 - June 13
 - June 26 - July 4 (tentative)
- Brent Roman
 - Out of Office
 - May 26 - June 6
- Carlos Rueda
 - 901502 - Passive Acoustic Sensing
 - PyPAM-based data processing continues
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Work sessions with Rob M. and Quinn regarding assistance for new elements in the lineCaptureHoming mission.

- TethysL: With Quinn, delineated a next set of migrations, which will be basically in a bottom-up fashion: migrate common “inserts” (eg, Insert/Science.xml, etc.), then other missions.
 - Provided assistance/guidance regarding Dash4’s use of Google APIs.
- Overhead
 - Director’s dialog.
- Out of Office
 - July 5–7, 15: vacation
 - August 9–28: vacation
- Karen Salamy
 - 200103 - Core CTD Data - MDUC
 - Updating ROV CTD data in the EXPD today
 - 300057 - Mooring Maintenance
 - Working with Jared F. to get the system downloading data properly prior to the deployment, currently scheduled for June 23, 2023. Currently we are having some serious issues with the radio for the new deployment. We are actively working to find out what the main problem with data downloading is.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Working with Jim Jeffers at Sumo Creations to get various Dash5 map requests working for the LRAUV team including elevation, scaling, and split panes.
 - Out of Office
 - VACATION: May 30, June 19-23, 2023
 - Now in the office 3 days/week M, T, Th..
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Tweaked the M3 NGINX proxy server to display README files in directory listings. Added README’s to all top level directories. This was needed as some scientists were unknowingly recalling many, many ProRes files from LTO by browsing to them through the web. See <http://m3.shore.mbari.org/videos/M3/master/>.
 - 901221 - Midwater Time Series
 - Debugged an issue with some i2MAP annotations failing to merge with ancillary data. Root cause was i2MAP dives were ~~mismatched~~ creatively named on M3. [Added logic](#) to skip creative i2MAP names.
 - 901618 - Pelagic-Benthic Coupling
 - Working on adding an association editor to [Mondrian](#) so users can add descriptive details to individual annotations.
 - DQ2209 - Ocean AI 2
 - Worked with Erin Butler at CVisionAI to enable FathomNet users to subscribe to topics of interest (such as types of animals, people or geographic regions) and view the activity stream for those topics.
 - Overhead
 - For Jim Barry’s lab, wrote [a small app to register images](#) in VARS from the Coral Observatory
 - Meet with Vineeth Balasubramanian to give an overview of how we are using machine learning to analyze video and images.
 - Out of Office
 - Jun 16 - 20 - Out of office
 - Jul 28 - Aug 6 - Vacation
- Alana Sherman
 - 706008 - READI-net
 - Working on Sampler board, made parts for STM32 processor and the motor drive section
 - 901904 - Deep-Sea Coral Community Observatory

- Macro coral cam coming back this week
- 902208 - MiniROV Support
 - Working on hiring
- 902312 - Seafloor Processes
 - Working on first steps in permitting process
- Out of Office
 - Out weds am for dentist
- George Stern