

Engineering Weekly Report 5/25/2023 - 6/1/2023

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Discussed ML/DSG priorities
 - Scoped features for vars-gridview to aid in ML workflow
 - 902002 - FathomNet
 - Implemented several features for v1.0 launch
 - Audit bounding box history by several keys
 - Follow concepts/marine regions/users
 - Comment on bounding boxes
 - NSF reporting
 - 902204 - Scalable Robotics
 - RTAB-Map development support
 - DQ2209 - Ocean AI 2
 - QSCP support, documentation
 - Out of Office
 - Sick 5/30-6/1
- Francois Cazenave
 - 901221 - Midwater Time Series
 - Attended meeting and prepared hardware for test on Paragon
 - 901405 - PowerBuoy Development
 - Monitoring Buoy
 - 902106 - Niobicon-Based AUV Docking Development
 - Preparing mooring, charge rod, anchor etc.
 - Project management
 - Overhead
 - Dove in test tank to clean windows
- Danelle Cline
- Duane Edgington
 - 901103 - Biodiversity and Biooptics of Zooplankton
 - Continued work with Danelle on clustering and active learning tools for midwater images and concepts
 - Arranged office space & Ubuntu workstation for incoming intern Tarun Sharma June 5 - Aug 11.
 - Setting up Vision Transformer for Small-Size Datasets for training against midwater images. Successfully trained against CIFAR-100 as a test run on AWS SageMaker Studio.
 - Set up AWS sagemaker studio for 901103 work.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Team meeting May 31.
- Jon Erickson

- Kevin Gomes
 - 706008 - READI-net
 - Met to discuss possible replacement of the linux controller with COTS alternative
 - Overhead
 - Interview process
 - Took part in a cybersecurity incident response tabletop exercise with IS group and cybersecurity contractor.
 - Out of Office
 - Aug 28-Sep 12: Vacation
- Andy Hamilton
- Kent Headley
 - 300057 - Mooring Maintenance
 - Wrapped up changes to metsys and gps clock
 - Checked in updates to CVS and git
 - Added sonic wind sensor firmware source to repo
 - Migrated O3 build environment to windows 10
 - 300078 - DMO Divisional Support - AUV
 - Working on Dorado linux port
 - 600034 - Precision Control Technologies for ROVs and AUVs
 - Working with Rob to sync mbtrn sim work with dorado repo updates
 - 902204 - Scalable Robotics
 - Working on some libgemini data issues with Bastian
 - Overhead
 - Hiring: Held meeting to discuss candidates;
 - did not have quorum due to travel and other absences, working off line
 - Working w/ Erik, Alana on AOSE hire
- Rich Henthorn
 - 300078 - DMO Divisional Support - AUV
 - Build and test a mission using updated repos
 - 901405 - PowerBuoy Development
 - Checked on the buoy currently deployed in Monterey Bay
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - SES data pulling during MARS deployment
 - Data being synced to shore after each measurement
 - 902306 - SINKER
 - Weekly meeting
 - Dev kit
 - Out of Office
 - June 1 - 9: Vacation: available on email, Zoom, Slack, VPN, MDT timezone
 - 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
 - Fixed broken Nanofet2 (replaced microprocessor + reprogrammed)
 - Continued testing of HIB solution for buffer shutdown: Nano2 submitted to replace ADC
 - 901904 - Deep-Sea Coral Community Observatory
 - Setting up “streaming” version of camera as controlled by trigger pin on LED ring

- Read through camera manuals for timing information, will try FrameTriggerWait for controlling frame rate
 - Code written and tested for LED ring
- Scott Jensen
 - 706008 - READI-net
 - More attention (many meetings and discussions) to a possible off the shelf solution for control and communications.
 - Support getting hardware to consultant and hard parts checked out
 - Prepared pin assignments for the prototype to be reviewed
 - 771131 - Great Lakes PCM/HAB
 - The electronics that need to be added to Seatrac have been checked out
 - Wiring for Honu fabricated and tested.
 - Out of Office
 - Vacation June 30-July 5
 - Vacation July 24-28
- Brent Jones
- Chad Key
 - Out of Office
 - Out of office on Fridays
- Brian Kieft
 - 901009 - CANON
 - Wrapped up CANON deployment last week following a successful mission for Brizo/Tiny.
 - Makai was recovered early due to an ESP failure.
 - 902102 - Multi-LRAUV Simulation Environment
 - Working on water currents and docking sim with Rob
 - 706007 Great Lakes
 - Prep continues. Shipping 6/12
 - Bringing up Ahi
 - 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
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- Thom Maughan
 - Out of Office
 - Vacation June 26 - July 12
- Mike McCann

- 901009 - CANON
 - The new internal stoqs server (kraken2) is performing well with Postgres15 and more space
- 901910 - Plankton Taxonomic Groups from AUVs
 - Loaded stoqs_all_dorado on kraken2 with legacy and new auv-python processed data
 - Identifying some missions that need better quality control in the auv-python software
- Overhead
 - Expd database modernization project discussions following go ahead from MT
 - Exploring kerchunck, fsspec, zarr, xarray, and datashader to visualize MARS DAS data
 - Advising 2 CSUMB CS Capstone teams
- Out of Office
 - 7-11 August: SIGGRAPH in LA
- Rob McEwen
- Paul McGill
- Enoch Nicholson
 - 706008 - READI-net
 - Continued DOEST prototype assembly.
 - 771131 - Great Lakes PCM/HAB
 - Mounted phase separator & pump on SEATRC with bracket.
 - Finished machining control housing. Handed it off for wiring.
 - 902306 - SINKER
 - First pass at SINKER mass properties.
 - Began discussing deployment with ROV pilots.
 - PCB mechanical layout.
 - Overhead
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- Tom O'Reilly
- Mike Risi
 - Out of Office
 - Out of office on Fridays
 - May 30 - June 6
- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - Chiton data ingest from CANON experiment
 - 902001 - Ventata 4k camera
 - Final testing of new optics and lens control updates
 - 902004 - Planktivore
 - 2024 proposal planning
 - 902204 - Scalable Robotics
 - wide angle laser optics
 - camera interface concept
 - 902306 - SINKER
 - Pressure housing weight reduction
 - Electrical design review
 - Ordering sediment camera lens
 - Overhead
 - A few slides on Chiton/CANON for DOEST
 - Out of Office
 - June 6 - June13
 - June 26 - July 4 (tentative)
- Brent Roman

- Out of Office
 - May 26 - June 6
- Carlos Rueda
 - 901502 - Passive Acoustic Sensing
 - Enhancements/adjustments to PyPAM based processing software continue.
 - Meetings (metadata discussion; Happywhale/AI brainstorming, etc.)
 - 901513 - Targeted Sampling by AUVs
 - Group meeting scheduled to discuss next steps for front tracking on the wave glider.
 - 902101 - LRAUV Technology Development and Fleet Operations
 - WHOI has installed the new [separate-image-per-component](#) release scheme of the TethysDash system! This is great as we now have a single release scheme to maintain moving forward.
 - TethysL: lots of work here culminating in a significant [2.9.1 release](#). Coordinating with Quinn toward resuming migrations, reviewing documentation, delineating assistance to users, etc.
 - Overhead
 - SE-EAD hiring discussion.
 - Out of Office
 - June 5: vacation (important family related business)
 - June 9: vacation
 - July 4–17 (still tentative): vacation
- Karen Salamy
 - Out of Office
 - VACATION: May 30, June 19-23, 2023
 - Now in the office 3 days/week M, T, Th..
- Brian Schlining
 - 901618 - Pelagic-Benthic Coupling
 - Released windows builds of [Mondrian](#) and [VARs Annotation](#)
 - [Added automated image analysis](#) (using machine learning via [Pythia](#)) to Mondrian
 - DQ2209 - Ocean AI 2
 - There were a [number of FathomNet releases last week](#). Added community features to the back end server allowing users to follow topics of interest (concepts, people, and geographic regions) and to retrieve an activity stream of those topics. Working on [email notifications](#) summarizing the topics a user follows. See [#54](#), [#65](#), and [#111](#)
 - Out of Office
 - Jun 16 - 20 - Out of office
 - Jul 28 - Aug 6 - Vacation
- Alana Sherman
 - 902208 - MiniROV Support
 - Delved into tracking down logs. Found logs were recorded but dates on files were erroneous.
 - 902306 - SINKER
 - Attended design review for main controller board
 - Overhead
 - Working on MiniROV hire.
 - Reviewed applications
 - Met with hiring committee
 - Jessica conducting phone screenings
 - Worked with Battery Safety Committee to come up with charter
 - Working on learning more about CSEM and DAS for work with Aaron Micallef
- George Stern

