

Engineering Weekly Report 1/26/2023 - 2/2/2023

Executive Council Notes

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Individual Activities

- Michael Anderson
- Kevin Barnard
 - 500055 - VARS, M3/RS, DSG
 - Chatted with Brian to figure out BoxJelly & Cthulhu upgrades for new video player (Sharktopoda 2)
 - Worked on Cthulhu upgrade for new remote protocol
 - 901809 - Deep Sea Bioinspiration
 - Started to rework ML-Tracking paper per feedback
 - 902002 - FathomNet
 - Met to plan February FathomNet workshop
 - Wrote steps to publicly host images via Firebase/Google Cloud Storage for contributors
 - 902204 - Scalable Robotics
 - Deployed Mola in test tank to collect SLAM dataset for GIM
 - Calibrated Mola FLIR stereo cameras
- Francois Cazenave
 - 901405 - PowerBuoy Development
 - Working on new tether guide design
 - Making various preparations for deployment
 - 902106 - Niobicon-Based AUV Docking Development
 - Supervising mooring and buoy fabrication
 - Making design changes to buoy and mooring
 - Project management
- Danelle Cline
 - Out of Office
 - Few sick days
 - Tentative out of office vacation Jan 25, 26, 27
- Duane Edgington
 - 500055 - VARS, M3/RS, DSG
 - Monitored Lonny's Paull dive series run on AWS. ECS runs were successful, over several days.
 - Removed Lonny's SageMaker Studio App per his approval.
 - 901009 - CANON
 - No meeting this week.
 - 901502 - Passive Acoustic Sensing
 - Shoutcast / Alexa Skill monitoring. Live stream is down.
 - Team meeting Feb 1.
 - 902004 - Planktivore
 - Meeting postponed
 - Overhead
 - Attended webinar "Efficient AI for Wildlife Conservation", Professor Sara Beery

- Continued work exploring EFS on AWS. Trying to attach to an EC2 instance.
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- Jon Erickson
- Kevin Gomes
 - 200105 - Core Navigation Data - MDUC
 - Digging through code to try to see downstream usage of 'status' items and how single LCM type impacts logging.
 - More detailed docs to work on possible simulator build
 - Purchased new, cheap rack for my office to expand current rack mounts to make room for more equipment.
 - Since we lost power, I took the opportunity to move all the equipment from the old rack to the new and also installed the simulator NUC there too. All in one nice roll around unit now.
 - Overhead
 - Performance reviews
 - MiniROV Hiring Committee
 - Out of Office
 - Feb 1-3: Vacation
- Andy Hamilton
- Kent Headley
 - Out of Office
 - medical (1/25 afternoon)
- Rich Henthorn
 - 901405 - PowerBuoy Development
 - Using 'buoy entripoint' docs to build simulation environment
 - 901618 - Pelagic-Benthic Coupling
 - Weekly meeting
 - Testing and addressing SES issues at the test tank
 - New cable to address hall switch issue
 - Tested new Rover MF modem burn wire electronics
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Dev meetings to discuss requirements, reviews, early May deployment
 - Firing-up spare SES stack for dev
 - 902306 - SINKER
 - Dev meeting to discuss requirements and concepts
 - Overhead
 - New workstation will require a new UID
 - New UID necessitates updating other CPUs that access IS resources
 - Out of Office
 - Feb 2 and 3: I will be in and out of the office at various appointments, email access
 - Feb 13 - 16: WFH (Tu), vacation (MWTh), all-access, PDT
- Brett Hobson
- Scott Jensen
 - 901205 - ESP SURF Center
 - The SPR module is suffering from temperature wows. One inaccuracy has been traced to a wrong part installed. The temperature drift continues.
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 - 901405 - PowerBuoy Development
 - An evaluation board for the BMS cell measurement has been received and understanding is beginning. It has rather poor documentation which is slowing the progress on communications.
 - DQ2210 - READI-net

- The slide prototype is slowly progressing. The scale up from 25 to 47mm is causing some issues which might make it a dead end.
- Brent Jones
 - 901112 - Monterey Bay Time Series
 - Zooglider training at SIO
 - 901805 - Coastal Biogeochemical Sensing Program
 - Starting to integrate elevation return from Benthos USBL for better tracking
 - Moved into Spray lab at ESB
- Chad Keczy
- Brian Kieft
 - Out of Office
 - 01/30-02/03 (MST)
- Denis Klimov
- Eric Martin
 - Out of Office
 - Last Tues/Wednesday
- Thom Maughan
 - Out of Office
 - mid-Feb vacation
- Mike McCann
 - 500055 - VARS, M3/RS, DSG
 - Added point visualization in emdb web app for by_dive nav files that are being re-edited
 - 901221 - Midwater Time Series
 - Investigated short record of CTDO data for i2map's 2020.41.02 mission
 - 901910 - Plankton Taxonomic Groups from AUVs
 - Making some adjustments following review my proxy calculations with Monique
 - Code is implemented in auv-python for production proxy computation
 - Tested complete pipeline into: https://stoqs.shore.mbari.org/stoqs_mb_diamonds_t
 - Overhead
 - Provided STOQS data export instructions to our Great Lakes collaborators
 - Out of Office
 - Feb 13 Vacation
- Rob McEwen
 - 901405 - Wave Energy Buoy
 - Working on Matlab code that estimates drag and added masses for the buoy, PTO, and Heave Cone.
 - This code outputs the parameters in ASCII with embedded Latex symbols, ready for input to the .md file on Github.
- Paul McGill
 - 901618 - Pelagic-Benthic Coupling
 - Working on Rover fluorescence data to present at ASLO.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Helping with assembly and checkout of new Trinity UAV
 - 902305 - Event Detection using the Sedimentation Event Sensor
 - Got SES working again with old motor, new cable on order for new motor.
 - Finished processing SES data from past deployments to identify significant sedimentation events.
 - Overhead
 - Had annual review.

- Helping to get new EE George Stern spun up.
- Tom O'Reilly
 - 901112 - Monterey Bay Time Series
 - Attended Imaging Flow Cytobot workshop hosted by Kudela lab at UCSC, along with other West Coast IFCB users from Scripps, UCSB, and others. Learned that McLane now provides a kit to enable IFCB operation while in a horizontal orientation, which opens interesting possibilities to integrate the instrument with Wave Glider or an AUV. Learned that latest IFCB software offers more flexibility in sampling procedure and schedules, no longer assumes constant power and communications.
 - 901902 - Unoccupied Aerial Vehicles for Science, Operations, and Outreach
 - Working with team to configure new Trinity VTOL, becoming familiar with vehicle
 - 902101 - LRAUV Technology Development and Fleet Operations
 - Assisted in beach recovery of vehicle
- Mike Risi
 - 200105 - Core Navigation Data - MDUC
 - Sprint meetings and reviews
 - Developing of interfaces for Doc Ricketts telemetry system upgrade
 - 300062 - DMO Divisional Support - Doc Ricketts
 - Meeting for Ricketts telemetry system upgrade and preparing for SMD visit at end of February
 - 901101 - Seafloor Mapping
 - Trigger board 2.0 meeting
 - 902204 - Scalable Robotics
 - Updating imaging logging for flir-mola
 - Installed mola update for high rate depth measurement and tested on bench
 - Porting existing mola applications to use CoMPAS LCM types new_standard_wip
 - Working on control interface for lcm-mola using CoMPAS LCM types new_standard_wip
 - Out of Office
 - Out of office on Fridays
- Paul Roberts
 - 901809 - Deep Sea Bioinspiration
 - EyeRIS camera validation and calibration for Octopus paper
 - Completed multicamera interface can electro/optical testing
 - 902001 - Ventata 4k camera
 - Starting assembly of second MxD camera
 - 902004 - Planktivore
 - Review of system controller
 - 902204 - Scalable Robotics
 - Sprint 0 review
 - 1500 m PoE camera housing design for MiniROV
 - 902306 - SINKER
 - Wiper mechanics concept design
 - System diagrams and interfaces
- Brent Roman
 - 708165 - MERHAB19:ESP
 - Helped explain ESP 2G Fluid tracking to NOAA NorthWest Fisheries
 - 901205 - ESP SURF Center
 - Working with Preston to develop a reliable protocol for extracting Lysate from Function 3G Cartridges
 - Managed to replicate ESP serial modem failure that plagues GLERL in my lab
 - Out of Office

- March 8-15 visiting my dad in Sarasota, FL
- Carlos Rueda
 - 901502 - Passive Acoustic Sensing
 - Pypam development / productive session with lead person. Some progress testing pypam under Colab and Sagemaker notebooks; also trying to set up an EC2 instance (thanks Duane for your help!), all of this as part of preparations for massive processing in the cloud.
 - Soundscape-analysis group meeting
 - 902101 - LRAUV Technology Development and Fleet Operations
 - TethysL VScode extension now with ability to auto install its requirements, java and tethysl, if not found on the target machine. (but windows continue to be tricky, what a surprise! ;).
 - Overhead
 - HR Recruitment specialist committee / interviews
 - Out of Office
 - 1/30 sickness (not covid per rapid testing)
- Karen Salamy
 - Out of Office
 - Now in the office 3 days/week M, T, Th..
 - Feb 9-17: vacation/father's estate finalizations.
- Brian Schlining
 - 500055 - VARS, M3/RS, DSG
 - Working on the final stage of the ML pipeline ... [pushing data to VARS](#). Working though integration testing now.
 - Reviewed M3RS documentation for video lab
 - Fixed [frame advance issue in VARS](#) for the new Sharktopoda.
 - Added database indexes for the deepsea-ai database
 - Restored services that tanked after the power outage.
 - 901221 - Midwater Time Series
 - With Mike and Rob, [resolved issues](#) with the nav/ctdo data for i2MAP 20200210
 - 902002 - FathomNet
 - Met with Megan Cromwell (NOAA) to walk through data archiving at NOAA.
 - Packaged an image set for testing and developing a workflow to store images with NOAA's long term data archive.
 - Overhead
 - Discussions with Bill Kirkwood about forming an IEEE Marine Imaging Technical Committee.
 - Prepping [commons library for publication to maven central](#).
 - Out of Office
 - Feb 27 - Mar 3 - Vacation (Backpacking Haleakala so not internet)
- Alana Sherman
 - 901618 - Pelagic-Benthic Coupling
 - Digging up materials on our MF modem for Rover to help James test the new one
 - 901904 - Deep-Sea Coral Community Observatory
 - Reviewed battery capacity to determine next deployments
 - 902208 - MiniROV Support
 - Setting up zoom interviews for Mini hire
 - 902306 - SINKER
 - Team meeting to review requirements
 - Overhead
 - Finished all reviews and submitted materials
 - Out of Office

