

Engineering Weekly Report 2/27 - 3/4

Executive Council Notes

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Individual Activities

- Francois Cazenave
 - 300079 - DMO Support-RC
 - Help install new base the transducer pole frame on the Carson
 - 901405 - PowerBuoy Development
 - Still testing laser sensor
 - Assembling PTO
 - 901704.99 - 8 Camera Obs Lander
 - Helped Chad install newly terminated tether
 - Out of Office
 - I took one day of vacation (Friday)
 - I took one sick day (Tuesday)
- Mark Chaffey
- Danelle Cline
 - Out of Office
 - Vacation day Monday 3/2.
- Duane Edgington
 - 901009 - CANON
 - Project meeting March 12.
 - 901618 - Pelagic-Benthic Coupling
 - Camera calibration results presented to Jim Barry by Paul McGill. At decision point on Matlab toolbox purchase.
 - 901915 - Improving MBARI Data Impa
 - Project working session
 - 902004 - Planktivore
 - Built SPCCConvert on Windows10. Issue with testing images (from IFCBS) posted to GitHub.
 - Next step: figure out how timecodes are handled in SPCCConvert and Taxonify.
 - 902005 - VARS Annotation Assistance
 - Reviewed summer intern applicants. Prioritized list of applicants sent to George etal.
 - Successfully built an environment to do SageMaker model training locally while utilizing SageMaker infrastructure transparently. This allows easy decision of local vs cloud data, local vs cloud model training, and local vs cloud deployment without code changes or drama.
 - Overhead
 - Working through *Learn Docker in a month of lunches* book
 - Reviewed interesting paper on Automated Instrument Integration Scheme (using PUCK and other technologies!) for Ocean Observatories, for MDPI *Sensors* Journal.
- Jon Erickson
 - 300070 - DMO Support- Ventana
 - Frank has a new "T" shaped bracket that seems to fit better. Fewer mod's.
 - 701145 - Penguin Hotspots

- Waiting on chassis parts from the shop.
- 901217 - Chemical Sensor Program
 - Spending most of my time trying to fit the circuit boards into the smallest dia. possible.
- 901405 - PowerBuoy Development
 - Scott's changes seem to fit with one exception.
- Kevin Gomes
 - Out of Office
 - Mar 16, 17, 20: Vacation
 - May 6-7: Vacation
- Andy Hamilton
- Kent Headley
- Rich Henthorn
 - Out of Office
 - Mon Mar 9 - Thu Mar 12: Vacation, VPN access, PST
- Brett Hobson
- Scott Jensen
 - 901205 - ESP SURF Center
 - Continued work on terrestrial housing as parts come available
 - Attended a couple collaborator meetings
 - 901405 - PowerBuoy Development
 - Worked on code for the battery Contact controller.
 - 901805 - Coastal Biogeochemical Sensing
 - Entered pin assignments for Nano pHox
- Brent Jones
 - 901805 - Coastal Biogeochemical Sensing
 - Completed integration of pH and dissolved O2 sensor on Spray 34. This required wiring and some fancy mechanical tricks to pack it all in.
 - Piloting Spray29 24/7. Completed line 67 out and back transect and am now flying in the vicinity of the Johnson float
 - Overhead
 - Began Intro to ML class from Duke (online)
- Chad Key
 - 901704.99 - 8 Camera Obs Lander
 - Finished up cal work on BOSS and help MLML transport back
 - Working on technical section with Elena.
 - Reviewed 6-7 1st and 2nd draft chapters
 - Planning paper/talk with Rick Starr
 - 901713 - Nearshore FOCE
 - Putting together pieces in lab.
 - 902000 - Multi-Spectral StealthCam
 - 3 driver pcbs are being populated right now.
 - Overhead
 - Helped Bridget get set up to write code for the Feather M0 (stealtcam)
- Brian Kieft
 - Out of Office
 - Mar 2 - 10, Vacation, GMT -7
 - Mar 16-29 Michigan (NMU) under ice, EDT
 - July 18-31 Arctic, ADT
- Denis Klimov
 - 118000 - Safety Office - LSO activity

- We have updated procedure for Laser Lab A283 access, with addition of 'participant' level personnel access, needed for several people to work on assembling a new DORISS instrument
- 901800 - LRAUV Payload & Support
 - Checking and sorting parts inventory for PAR sensors
- 901809 - Deep Sea Bioinspiration
 - Chemical etching report on fiber optic penetrators is complete, reviewing report on assembly procedure (with Aarong Schnittger)
- Overhead
 - The Bridge Board for BEDs instrument is in layout stage and should be ordered by the end of the week
- Eric Martin
 - 901206 - Coastal Profiling Float
 - Closing up SN03, ready for tank
 - 901405 - PowerBuoy Development
 - Controller box is working, new network configured
 - Spring controllers are checked out, getting wired into the spring
 - 901911 - ROVVR
 - In Salem OR Thursday/Friday for Training/FAT
 - DQ1942 - Buoy Power Generation
 - Radar nearly integrated, protective cover installed
- Thom Maughan
 - Out of Office
 - Mar 11 - Mar 25 Vacation (St. Helena with Georgia Aquarium) (Updated)
- Mike McCann
 - 200109 - Core Mooring Data
 - Fixed the way Salinity is calculated for deep microcats without pressure sensors – simply use nominal depth as a standin for pressure, which is better than using 0 for pressure
 - 500055 - Video Annotation DM
 - Trying to fix vfcbydive to work with M3 framegrabs
 - Beginning migration of vfcbydive from seaspray (CentOS 6) to expanse (CentOS 8)
 - 901009 - CANON
 - Rolled out some STOQS changes to improve scrubbing of 3D curtain animations
 - 901111 - AUV Infrastructure Supprt
 - At Rob Sherlock's request am looking at using Gulper workflow for i2map data
 - 901800 - LRAUV Payload & Support
 - Reloaded [stoqs_lrauv_dec2019](#) for a clean load of all the ESP samples
 - 901915 - Improving MBARI Data Impa
 - Team meeting, read about modin-project
 - Overhead
 - Helping Jenny with the Django tutorial and her MB-Database project
- Rob McEwen
 - Out of Office
 - 27 Feb.
- Paul McGill
 - 300070 - DMO Support- Ventana
 - Designed protection circuitry for PC input pins on Ventana's Vicors. Parts on order and will install next week. Also doing further analysis of ground-fault system to correct problems.
 - 701145 - Penguin Hotspots
 - Did more Simrad power supply noise testing with Chad and concluded we need a quieter power supply.

- 901618 - Pelagic-Benthic Coupling
 - Finally tested larval sampling pump in pressure test chamber but pump failed. Ordered parts for one more test and working on contingency plans if that also fails.
- 901803 - Carbon Wave Glider Development
 - Had kickoff meeting for year and hope to get system running in lab again this month.
- 901904.99 - Coral Camera System
 - Participated in end of Barry's Flyer cruise on Fri/Sat w/Alana. Camera was set up during ROV dive and seemed to be working well; will recover in Dec.
- Overhead
 - Set up Web cam for Aaron S. to monitor pressure-test facility.
- Ed Mellinger
- Tom O'Reilly
 - 901101 - Ocean Imaging
 - Assessing object-oriented design approach for new MB-System, testing installation procedures
 - 901800 - LRAUV Payload & Support
 - Assessing performance of LCM-Slate middleware on Tethys LRAUV while in test tank
 - 901902 - Aerial Drones for Sci&MO
 - Refining image processing and archiving procedures in preparation for Believer fixed-wing UAV test flights later this week
 - Overhead
 - Preparing presentation "Robots in the Sea" for junior-high school students at Friends of Hue children's shelter in Hue, Vietnam. Will make presentation via Facebook Messenger.
- Craig Okuda
 - 901007 - Benthic Biology & Ecology
 - Flush valve redesign
 - 901704.99 - 8 Camera Obs Lander
 - Fiber system repair
- Doug Pargett
 - 901205 - ESP SURF Center
 - Met with Function on cartridge redesign.
 - Have a list of items MBARI needs to get ready by March 20. This is my top priority.
 - 901800.98 - Bioacoustic Payload
 - New main structure piece has been printed. Still some issues. Suggest using the ABS one for testing.
 - Circuit board mount milled from G10. Ready for build.
 - DQ1904 - NOPP Saildrone
 - Had a meeting at Saildrone on Friday. Detailed out functional requirements and MBARI action items. Design will merge well with the dock/river-side G3 ESP housing called "FlowerPot"
 - Overhead
 - Ran some FEA for Gene M. and he's modifying his design to improve pressure.
 - Have setup to run SW and FEA remotely if I need to stay home.
- Ben Raanan
 - 708158 - DHS Y6
 - Vehicle deployed to sea at WHOI.
 - Supporting the WHOI team in planning/ops.
 - 901101 - Ocean Imaging
 - Started work on OpenCV upgrade for MB-System photomosaic app.
 - 901800 - LRAUV Payload & Support
 - Resolved a mission level issue in the ESP/CANON sampling insert.
 - Resolved DVL micro data configuration issue in the driver code.

- Started deprecating unused software components.
 - Support for LCM back-seat API development.
- 901910 - Plankton Taxonomic GrpAUV
 - Meet with Monique to discuss analysis results.
- 902009 - AUV UI
 - Met with UCSC team to discuss UX experiment design and get them set up with TethysDash + LRAUVsim docker image.
- Mike Risi
 - Out of Office
 - February 19-22: Ocean Imaging Cruise
 - March 9-12: Vacation
 - September 18-29: Ocean Imaging Cruise
 - September 30 - October 2: Vacation
- Brent Roman
 - 901205 - ESP SURF Center
 - Continuing to investigate heating accuracy on the 3G ESPs
 - Delays for temperature to stabilize makes this a slow process
 - Updated software and calibration on the 3G ESPs slated for CANON
 - DQ1865 - Bryde Whale
 - Increased sample volume from 2 to 2.5L
 - Some concern about high humidity on the ESP can.
 - DQ1904 - NOPP Saildrone
 - Met Saildrone engineers in Alameda.
 - They use the same, slow Iridium links we do :-(
 - The “surveyor” vehicle we’ll be on produces 9Kw of electricity!
 - Mostly for their advanced sonar package
 - Out of Office
 - 2nd week of April (college prospecting) (6th - 10th)
- Carlos Rueda
 - 300083 - DMO Support - LRAUV
 - Assistance to Erik re the Dash “synchronization” operation to reflect updates in the config and mission repositories.
 - 708158 - DHS Y6
 - TethysDash related assistance to WHOI, including a workaround (with IS’ help) so their cell connection status check is performed against the actual server on their side. (Proper fix pending, probably involving the LRAUV side depending on input from the LRAUV team.)
 - 901502 - Passive Acoustic Sensing
 - Regular meeting (Danelle’s presentation on PCEN).
 - Applying VQ and HMM on labelled data on the 4.5hr recording file provided by John.
 - 901800 - LRAUV Payload & Support
 - Dash3 now v.[3.9.77](#) with initial integration of Steve’s status widget. We’ve been discussing possible next steps. Thanks Steve!
 - 902009 - AUV UI
 - Assistance to UCSC collaborators setting up dockerized TethysDash.
 - Overhead
 - Brown bag: ES / CQRS. Put together [some notes](#).
 - Completed migration of the ESIP COR system to a new Amazon instance.
 - Out of Office
 - Mar 12, Apr 9: Vacation
- Karen Salamy

- Out of Office
 - March 30 - Apr 2: Vacation
- Brian Schlining
 - 500055 - Video Annotation DM
 - [Fixing issues](#) resulting from failed database replication on the Western Flyer.
 - 902002 - Fathomnet Detect and Classify
 - Updated [annosaurus to publish associations](#) (i.e. details about annotations) via ZeroMQ and deployed in on the MiniROV computer.
 - 902005 - VARS Annotation Assistance
 - Testing Cthulhu, a new video player for localizing annotations
 - Overhead
 - Met with CSUMB Capstone students working on a web interface for visualizing videos and annotations from a dive.
 - Out of Office
 - Apr 3 - 13: Vacation
- Rich Schramm
 - Out of Office
 - Mar 20: Vacation
 - Mar 23 - 27: XOJO Developers Conference
- Alana Sherman
 - 901809 - Deep Sea Bioinspiration
 - Replacing water damaged labjack in DeepPIV v 4.
 - Cleaning up DeepPIV v4 software
 - 901904.99 - Coral Camera System
 - Deployed Coral Cam last Friday for a 9-month deployment, after a couple hiccups it all seemed to work great.
 - Moving on to planning a macro scale camera for close up imaging of coral.
 - Out of Office
 - Vacation day 3/10