

Engineering Weekly Report 2/27 - 3/4

Executive Council Notes

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Individual Activities

- Francois Cazenave
 - 300079 - DMO Support-RC
 - Designed and built a new base for the transducer frame.
 - 901405 - PowerBuoy Development
 - Testing laser distance sensor
 - Helping with PTO wiring
 - Assembled and tested compensator
 - Tested niobium
 - 902000 - Multi-Spectral StealthCam
 - Working on the design of the camera housing
- Mark Chaffey
- Danelle Cline
 - 901502 - Passive Acoustic Sensing
 - Working on streamable PCEN implementation notebook
 - Retraining blue whale call classifiers with improved PCEN parameters
 - Reviewing summer intern applications
 - 902005 - VARS Annotation Assistance
 - Working on Sagemaker notebook to demo fast video processing workflow
 - Added unit test to [tfrecord](#)
 - Reviewing summer intern applications
 - Out of Office
 - Vacation day Monday 3/2.
- Duane Edgington
 - 901618 - Pelagic-Benthic Coupling
 - Evaluated captured calibration images for DiSCO Coral Observatory Camera deploying this week using trial MathWorks Computer Vision Toolbox App. In water calibration ran smoothly; results to be presented to Jim Barry this week.
 - 902004 - Planktivore
 - Built clone of github repository for Taxonify application; successfully built backend system (celery, mongodb, rabbitmq, swagger editor and ui, unicorn,...). Next step is to hook it up to Taxonify UI and populate with some test images.
 - 902005 - VARS Annotation Assistance
 - Reviewing summer intern applicants.
 - Overhead
 - Lunch-time training: Kafka overview.
- Jon Erickson
 - 300070 - DMO Support- Ventana
 - Working with Frank to have the Brackets for Ventana ready.
 - 901217 - Chemical Sensor Program

- ISUS-APEX assembly: Packaging all new electronics to make ISUS work on gliders for Youi, and the APEX floats. Completely new hardware, except for the probe head. ~ 14 new parts.
 - 901800 - LRAUV Payload & Support
 - Installing the single point lift for MAKAI.
 - Working on a new altimeter mounting arrangement 20 deg. Look down.
 - 901809 - Deep Sea Bioinspiration
 - Finalizing prints for the Version 7 right angle remote laser head. (7 parts)
- Kevin Gomes
 - 901009 - CANON
 - Overhauling the WaveGlider data extraction to get Jupyter foundation locations in the ODSS. The overhaul is so that I can add in data extraction at the same time since their data interfaces are in flux and the old SOAP interface to WGMS seems to be pretty stable. (sigh)
 - 901205 - ESP SURF Center
 - Working on code to work with native CNV files that come from the CTDs
 - Supporting ESP deployment in Gulf of Mexico
 - Overhead
 - Worked with Rich on documenting shipboard systems
 - Some IS related tasks like machine clean up and server reboots
 - Facilitating lunch time learning on Kafka and CQRS
 - Starting work on aircraft engine presentation and reports
 - Staring coordination of the annual MAOS tour group from Monterey High School
 - Still work on review related stuff
 - Out of Office
 - Mar 16, 17, 20: Vacation
 - May 6-7: Vacation
- Andy Hamilton
- Kent Headley
 - 901803 - Carbon Wave Glider Development
 - Test, debug and documentation for changes to sampling and logging
 - Overhead
 - Misc admin
- Rich Henthorn
 - 600034 - Control Tech - Rock
 - Repaired the TRN replay build
 - Fixed a intermittent error (unrelated) in TRN replay
 - 901101 - Ocean Imaging
 - OI-Sim
 - 901405 - PowerBuoy Development
 - Creating a data server for the Crossbow AHRS
 - 901800 - LRAUV Payload & Support
 - Meeting to discuss updated LCM data vectors/matrices type
 - 901807 - Next Gen Acoustic Dorado
 - Prep for offboard light switching
 - CTD power issue
 - Overhead
 - Watched some ERC proceedings
 - Out of Office
 - Mon Mar 9 - Thu Mar 12: Vacation, VPN access, PST
- Brett Hobson
- Scott Jensen

- 901205 - ESP SURF Center
 - Work with a Mechanical technician to identify the required elements for the ESP 2g terrestrial housing.
- 901405 - PowerBuoy Development
 - Battery Contactor Control needed a design change to make it more robust and reliable. State diagram for the operation has been developed.
 - Required parts were identified, and ordered.
- Brent Jones
 - Out of Office
 - Vacation - feb 18-21
- Chad Key
 - 901704.99 - 8 Camera Obs Lander
 - Reterminated the main tether and took care of some minor maintenance issues
 - Assisted with post-cruise calibration
 - Meeting with Elena on Thur
 - 901713 - Nearshore FOCE
 - Submitted a few more fab jobs (cables) for test setup
 - 902000 - Multi-Spectral StealthCam
 - Continuing to gather parts for system integration
 - Reviewed initial housing design with Francois
- 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
- Eric Martin
 - 901101 - Ocean Imaging
 - Following up on the cruise, we have installed the critical components to ride along on the Barry cruise and see if we've resolved the issues we saw at sea.
 - Reviewing intern applications
 - 901206 - Coastal Profiling Float
 - Bringing a new system online.
 - 901405 - PowerBuoy Development
 - Helping finish the spring controller software checkout
 - Top hat wiring underway
 - Buoy controller rewire complete, testing
 - Laser range finder drawings
 - 901807 - Next Gen Acoustic Dorado
 - Investigating CTD issues
 - Most of the noise is gone, one more source remains.
 - Had a meeting and discussed improvements to AUV mission timing accomplishments.
 - 901911 - ROVVR
 - Met with Leila Takayama, spinning up some student projects for collaboration on ROV tasks and historical data presentation.
 - Heading to Oregon next week to get training on the new camera.
 - DQ1942 - Buoy Power Generation
 - Once the buoy controller checks out, we'll have the radar running.
- Thom Maughan
 - 300083 - DMO Support - LRAUV

- Small progress on hardware
- 901009 - CANON
 - Working with Nate to get a benchmark fasta file that takes about an hour to process on the VM cluster with BLAST with the full genome database.
 - In progress getting BLAST and cross compile setup.
 - Working on project kickoff slides.
- 901805 - Coastal Biogeochemical Sensing
 - Configurable status protocol
- 902000 - Multi-Spectral StealthCam
 - pwm board bringup code. Simple protocol definition.
 - Sensor node pin assignment
- 902004 - Planktivore
 - Working with Bridget
 - Duane Edgington gave an update on Taxonify eval
- 901713 - Nearshore FOCE
 - Added a delimiter to aid Labview message parsing. Scoped making a m2m protocol, but that's too much work for the near term. Dale is fine with what has been delivered
 - Getting Bridget setup with CCS and source code so she can get experience with MFET and Aanderaa optode and conductivity
 - Comp=2.
- Out of Office
 - Mar 11 - Mar 25 Vacation (St. Helena with Georgia Aquarium) (Updated)
- Mike McCann
 - 500055 - Video Annotation DM
 - Revising vfcbydive to deal with images from M3_ANNOTATIONS
 - 901009 - CANON
 - Met with capstone students who are working on 3D Points visualization
 - Wrote code to process new format for DEIMOS acoustic data
 - 901800 - LRAUV Payload & Support
 - Loaded last missing Cartridges into stoqs_erie2019, now working on last December's runs
- Rob McEwen
 - Out of Office
 - 27 Feb.
- Paul McGill
- Ed Mellinger
- Tom O'Reilly
- Craig Okuda
 - 300079 - DMO Support-RC
 - Paragon wireless network
 - 901007 - Benthic Biology & Ecology
 - ADCP/Camera mount frame
 - 901220 - Midwater Ecology
 - Flush Valve redesign
- Doug Pargett
- Ben Raanan
 - 300083 - DMO Support - LRAUV
 - Daphne MBTS run
 - Pontus Biolum diamond run
 - 708158 - DHS Y6
 - Working with the folks at WHOI to get the TethysDash clone up and running.

- 901800 - LRAUV Payload & Support
 - Developing UBAT on/off interface for LRAUV
- 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
 - Working with Doug Pargett to bring up 2 3G ESPs
 - Working with Chris Preston to improve accuracy of 3G puck heating
 - Participating in meeting with Function (mech design consulting firm)
 - DQ1865 - Bryde Whale
 - Two weeks in without incident (touch wood)
 - Confirm sampling flow rates were reasonable by using another ESP in lab
 - Increased sample volume from 2 to 2.5L
 - Out of Office
 - First week of April (college prospecting)
- Carlos Rueda
 - 708158 - DHS Y6
 - General revision to address configurability of the external Pusher service for async notifications to the UI clients. Released dockerized TethysDash system 3.9.76. Already tested at WHOI. Good progress in general. Thanks WHOI for the feedback.
 - 901800 - LRAUV Payload & Support
 - More additions to Dash3 (auto-refresh also in the Data tab and other internal adjustments and lots of code cleanup), Now [3.9.76](#).
 - TethysDash backend: Improved git request handing (via re-attempts) that deals with the occasional issues (still happening!) when connecting to Bitbucket to fetch all updates for the config and mission repositories. TethysDash backend is now [3.4.8](#).
 - TethysDash REST API: Besides ISO 8601, also Unix time is now accepted for date-time parameters in relevant request operations. (Thanks Steve for the suggestion.)
 - Some discussion triggered by recent Erik's email regarding possible ways to overhaul the document handling in TethysDash.
 - Overhead
 - Brown bag: Kafka (IE meeting)
 - ESIP COR: Good progress on preparations for migration of the COR and the sweetonology.org support to a new Amazon instance. Now deciding with the ESIP [Lab director](#) on cutover date to proceed with final database transfer and tests.
 - Out of Office
 - Mar 11-12, Apr 9: Vacation
- Karen Salamy
 - 704109 - NavDORISS
 - Working with Eric M. and Jim M. to build a SATA power cable that will run from the Falcon Fanout Board to the new Solid State Drive. I cannot move forward with formatting the drive and testing the stack functions until the cable is ready. Several cable pigtailed have been ordered (one arrives today) so I am hopeful that I will be able to test the NavDORISS software soon.
 - 901915 - Improving MBARI Data Impa
 - Sat in on the Data at MBARI talk for the External Review last week.
 - Overhead

- The next three days are miniROV dives on the Rachel Carson. These dives may prove to be the final quality checks for the updated MBARI Postcruise Web Form which is currently up and running. Part of the redesign was to include the miniROV and ships of opportunity in the postcruise list. I will be working closely with Lonny L. to verify that the miniROV updates were successful.
 - Out of Office
 - March 30 - Apr 2: Vacation
- Brian Schlining
 - 500055 - Video Annotation DM
 - Met with CSUMB capstone students to continue work on an integrated dive page.
 - 902002 - Fathomnet Detect and Classify
 - Presented user stories to FathomNet team, continues work on data modeling for search/archive/retrieval.
 - Modifying annotation service ([annosaurus](#)) to provide real-time notifications when associations are added or updated.
 - 902005 - VARS Annotation Assistance
 - Running tests on the video player cthulu, which can provide on-the-fly bounding box localizations on video. Integrates with VARS
 - Started integration of localization communication library into VARS in prep for cthulu delivery.
 - Out of Office
 - Apr 3 - 13: Vacation
- Rich Schramm
 - 200105 - Core Nav - MDUC
 - Navproc work continues
 - Out of Office
 - Mar 20: Vacation
 - Mar 23 - 27: XOJO Developers Conference
- Alana Sherman
 - 901904.99 - Coral Camera System
 - Finished tank tests of the system
 - Packed for cruise to Sur Ridge
 - Loaded ship and prepped Camera for deployment
 - Going to sea Friday to plug it in and set up for 9 month run
 - Overhead
 - Finished external review!!!
 - Out of Office
 - Out sick 3/4