

Engineering Weekly Report 6/25/2020 - 7/9/2020

Executive Council Notes

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Individual Activities

- Francois Cazenave
 - 901405 - PowerBuoy Development
 - Working of PTO assembly and test
 - Working on cable latch design
 - 901704.99 - 8 Camera Obs Lander
 - Finished documentation
 - 902000 - Multi-Spectral StealthCam
 - Supervising fabrication of housing
 - Overhead
 - Helping Kelly BB with proposal preparation
 - Out of Office
 - Took Monday Off
- Mark Chaffey
- Danelle Cline
 - 901009 - CANON
 - Meeting July 9
 - 901502 - Passive Acoustic Sensing
 - Conference with Carrie Wall, an oceanographer who leads the fisheries acoustic archives at the NOAA National Centers for Environmental Information (NCEI). Discussed our blue whale research and methods for automated analysis. Data is in hand and experiments are planned to test with our signal processing and machine learning methods.
 - Testing single day case study John identified as a high priority for decimation testing. Day has time drifts and multiple irregular drop-outs. Getting close to a robust solution to handle the messy data.
 - Started on testing Yanwu's optimized filter parameters in our decimation notebook. These should result in a speed-up in our current rate limiting step of decimating the high-frequency data.
 - Topic modeling sweeps for summer intern and ongoing discussions 3x per week about progress on coherence results. Many thanks to Ben Raanan and Carlos Rueda for helping when needed with this effort.
 - Project proposal input
 - 902005 - VARS Annotation Assistance
 - Code housekeeping to get all of the dockerized components in the workflow working with semantic versioning and automated docker builds and pushes to docker hub.
 - Project proposal input
 - Conference with USCS creative coding lab about AI/ML human-performance literature review and suggestions for improved VARS workflows using AI/ML
 - Created AWS s3 bucket for training data collections versioned with [DVC](#) and working on code for reproducible preprocessing.

- Out of Office
 - Off Fridays for summer duration
 - Vacation July 15-24th
- Duane Edgington
 - 901009 - CANON
 - Project meeting June 25, July 9. Experiment in July...
 - 901603 - Video TAG: Vis Ocean Chng
 - Proposal writing.
 - Trying out open source code for few-shot image classification from CVPR 2020 paper [DeepEMD: Few-Shot Image Classification with Differentiable Earth Mover's Distance and Structured Classifiers](#)
 - [Reading paper on controlling misclassification error rates in marine automated taxa ID](#)
 - 901618 - Pelagic-Benthic Coupling
 - Touched base with Paul McGill on 2020 plans, 2021 proposal
 - 902004 - Planktivore
 - Touched base with Thom M. on 2021 proposal.
 - 902005 - VARS Annotation Assistance
 - Validated M3 registration of MBARI2017 and SRI-Rockfish video files.
 - Informative zoom meeting with UCSC Leila Takayama, Henry Zhou on Human-HL interaction/infoviz
 - Out of Office
 - Friday June 26, July 10.
 - July 12-18. ICML. Virtual conference.
 - Aug 23 -28. ECCV. Virtual conference. Workshops, tutorials and presentations.
- Jon Erickson
 - 300070 - DMO Support- Ventana
 - I'm trying to get to the simulation for the new Ventana light bar.
 - 701145 - Penguin Hotspots
 - Finally got the ek-80 chassis parts out of the shop queue. It went together, Paul McG is putting the circuit boards on it for noise testing.
 - 800139 - EyeRIS
 - I don't know if we'll get the EyeRis light assembly parts in time for the August cruise.
 - 901217 - Chemical Sensor Program
 - Still trying to fit all the electronics in space in the tube.
 - 901809 - Deep Sea Bioinspiration
 - Version Version 4.2 hardware parts are in the shop (Cruise 8/14) as well as a new design for the remote head (Version 8).
- Kevin Gomes
 - 300057 - Mooring Maint
 - Starting to gathering information and files for M1 Mooring turn
 - 901009 - CANON
 - More work on the cleanup and overhaul of the ODSS. Way easier to work with the codebase and deployment now and this will facilitate trying to move to a continuous deployment model and with the migration of the ODSS off the old servers. Much more cleanup to do in the codebase, but making great progress
 - 901205 - ESP SURF Center
 - Migrating more data from services to esp-portal, getting close to being done
 - 901602 - Data TAG: Addrss Eng Chng
 - Proposal writing
 - 901915 - Improving MBARI Data Impa

- Proposal writing
- Overhead
 - Assisting with Telepresence proposal scoping/writing
 - Assisting with other proposals
 - Group Budget fun
 - Management overhead
 - Sat in on NOAA STEM Proposal discussion
- Out of Office
 - Jul 1-3: Vacation
 - Jul 29-31: Vacation
- Andy Hamilton
- Kent Headley
 - 600034 - Control Tech - Rock
 - Working w/ team to provide 2011 Axial data sets
 - Wrote data converter (MB88 bathymetry/navigation to CSV)
 - Overhead
 - Attending Embedded Linux Conference (virtually)
 - Working on proposals and budget
- Rich Henthorn
 - Out of Office
 - Beginning Friday!
 - June 26 - July 6, vacation
 - July 27 - July 31, vacation
- Brett Hobson
- Scott Jensen
 - 901205 - ESP SURF Center
 - Getting Scott Creek power station put away
 - 901405 - PowerBuoy Development
 - Took one step forward and two back with deployment hardware. It all mounts up nicely and ran well. Load dump needs to be tested and electrical adjustments made, if necessary.
 - 901805 - Coastal Biogeochemical Sensing
 - Sent out for a fabrication build of 38 MpHOxs.
 - Out of Office
 - Current schedule is Sunday-Tuesday
- Brent Jones
 - 901112 - Change in MB & CA Current
 - Beginning prep on CPF's for upcoming CANON deployment
 - 901800.98 - Bioacoustic Payload
 - Replaced CPU backplane with AI backplane to better sink heat. Re-assembled. Assembled complete payload and bolted on the front of LRAUV Galene. Fits!
 - 901805 - Coastal Biogeochemical Sensing
 - Continued prepping both Sprays for upcoming deployments. Deployed Spray 34. Currently flying pH mission for Yui
 - Overhead
 - Meetings
 - Intern
 - Taught the interns how to stand watch for LRAUV's
 - Out of Office
 - Took a ½ day off friday
- Chad Kecy

- Brian Kieft
 - Out of Office
 - 7/20-24 tentative
- Denis Klimov
 - 800139 - EyeRIS
 - LED cluster fatigue testing under cycling pressure
 - Overhead
 - Designing BEDS bridge board test jig
- Eric Martin
 - 901101 - Ocean Imaging
 - Brought sled to test tank, rebuilding it for testing in the tank.
 - 901206 - Coastal Profiling Float
 - Oil tested on new pump arrangement
 - Developed test tools for automation from the lab computer.
 - DQ1942 - Buoy Power Generation
 - Worked with Dale Griffith JH APL
 - Prepping for Paragon work next week.
 - Starting Testing July 8, 9, and 10th.
 - 901200 - Telepresence
 - Discretionary Funds request submitted and approved
 - Proposal discussions with Kevin Gomes and Craig Okuda
 - Out of Office
 - I am at MBARI Mon, Tues, and Friday
 - Vacation days on thursday when available.
- Thom Maughan
 - 901009 - CANON
 - Prep for meeting with John Zicker.
 - Need to figure out how to cover costs of AWS GPU server.
 - 902004 - Planktivore
 - Working on ph1 proposal, getting quote on housing design
 - Overhead
 - Setup for techfest on the road.
 - Thanks to help from Cindy, all techfest charges are coded (whew).
 - Out of Office
 - Vacation Plan is June 30 to July 21, driving to Colorado to help out family. Plan is to work for 1 to 3 days per week remote from Colorado as it is unrealistic to get Proposal materials complete before departure. Several projects are easily transportable.
- Mike McCann
 - 901009 - CANON
 - Tracking down more edge cases in parsing LRAUV syslogs for ESP Cartridge numbers
 - 901910 - Plankton Taxonomic GrpAUV
 - Configured automated weekly loading of the stoqs_all_dorado database
- Rob McEwen
- Paul McGill
- Ed Mellinger
- Tom O'Reilly
 - 901101 - Ocean Imaging

- Held preliminary design review for “MB-System+” improvements. Compared various approaches to upgrading interactive MB-System GUI apps, which allow users to view, analyze, and edit bathymetry datasets. Discussed next steps, schedule, etc.
 - 901902 - Aerial Drones for Sci&MO
 - Refining data processing pipeline design, software options, etc. Planning data processing PDR
- Craig Okuda
 - 901007 - Benthic Biology & Ecology
 - Prep drawings for shop submittal
 - Update durafet interface design
 - 901803 - Carbon Wave Glider Development
 - Review proposal
 - Update docs
 - Out of Office
 - Vacation day
- Doug Pargett
 - 901205 - ESP SURF Center
 - Repaired the MV1 instrument
 - New parts to test the next Function Cartridge testing...
 - Flowerpot housing: Thread insert test article being printed.
- Ben Raanan
- Mike Risi
 - Out of Office
 - February 19-22: Ocean Imaging Cruise
 - March 9-12: Vacation
 - May 26-29: Vacation
 - June 29 - July 1: Vacation
 - September 30 - October 2: Vacation
 - October 12-17: Ocean Imaging Cruise
- Brent Roman
 - 901205 - ESP SURF Center
 - Updated ESP Linux kernel from 2.6.33 to 3.18.140
 - Incorporated WireGuard VPN patch into the kernel (needs testing)
 - Submitted upstream patches for ARMv5 and GCC 4.1.2
 - New kernel now properly handles I2C bus and LED drivers on it.
 - Needed for Embedded Artists dev boards.
 - DQ1904 - NOPP Saildrone
 - In a conference call we decided to interface with ethernet rather than PPP in large “Surveyor” saildrone.
 - Overhead
 - Attending (virtual) Embedded Linux conference
 - Out of Office
 - At MBARI Tuesdays after 4PM
- Carlos Rueda
 - 901009 - CANON
 - MXM: code reorganization to separate server and webapp components; new docker image 0.8.2. Determining next steps, possibly continuing with Postgraphile as GraphQL-enabler, but also revisiting Prisma and looking at other options. Enabling Typescript, initially on the server side, to hopefully make development more manageable.
 - 901502 - Passive Acoustic Sensing
 - Meetings

- 901800 - LRAUV Payload & Support
 - Quick fix to issue in document saving and other improvements in Dash3 (now [3.9.89](#)).
 - A productive reattempt at an [LSP](#) implementation as preparation to enable this protocol for TethysL, hopefully next year. With some better resources out there, put together a repo with complete simple exercise https://github.com/carueda/hello_lsp
 - Restarted broken service that relays LRAUV GPS positions to the trackingDB/ODSS.
- Overhead
 - CentOS6 EOL: Advancing migration of [TethysDash stuff from tethyssim to tethystest](#), with the goal of shutting down tethyssim after that.
 - Some input to Data TAG abstract feedback.
 - ESIP: Got complimentary speaker registration for the Summer meeting (July 14-24)
 - ESIP COR monthly telecon.
 - Attended part of Tom's design review re his work on new GUIs for MB-System.
 - Attended ACM TechTalk: "Apache Arrow and the Future of Data Frames"
 - Attended two of the [Quasar.Conf](#) online conference presentations.
- Out of Office
 - Jul 14-15, 22: ESIP Summer Mtg (virtual, and not whole days)
- Karen Salamy
 - 704109 - NavDORISS
 - Was physically onsite at MBARI Tuesday testing some application code on the NavDORISS stack. Installed newer version of Holograms (4.2) onto PC104 stack system. Looking into whether I will need to create a new image for the project that does not include the older version of the laser application.
 - Overhead
 - Reviewed some online tutorials for Dashboards.
 - Worked on 2021 Budget Requests and Estimates
 - Out of Office
 - Will be working on MBARI campus ONLY on Tuesdays until further notice.
- Brian Schlining
 - 902002 - Fathomnet Detect and Classify
 - Working on REST API for ingesting bounding box information
 - Cleaned up externally loaded annotations. We've created a new `activity` in VARS named `localize` for annotations that are specifically for machine learning.
 - Overhead
 - Providing proposal input
 - Providing feedback for 2020 telepresence work.
 - Working on telepresence support for annotations for the mini-ROV for an upcoming dive.
 - Working through courses on CQRS from [lightbend academy](#)
 - Out of Office
 - ~~Jun 30 - Jul 1~~ [Vacation](#)

- Jul 13 - 17 Vacation
- Rich Schramm
 - Out of Office
 - Jun 29 - 3-Jul Vacation
 - ~~■ Jul 30 - 3-Aug Vacation - cancel~~
 - Aug-10 -21 Vacation
- Alana Sherman