

Engineering Weekly Report 11/26/2020 - 12/3/2020

Executive Council Notes

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Individual Activities

- Francois Cazenave
 - 300058 - DMO Support-WF
 - Helping with Crane repair
 - 901405 - PowerBuoy Development
 - Working on docking prototype
 - Out of Office
 - I took Monday and Wednesday off due to my children's school being closed.
- Mark Chaffey
- Danelle Cline
- Duane Edgington
 - 901603 - Video TAG: Vis Ocean Chng
 - AWS CEO Andy Jassy presented new SageMaker features in his AWS re:Invent keynote presentation Tuesday Dec 1.
 - options for data preparation, building ML pipelines, and a feature store.
 - AWS re:invent sessions on EC2, DynamoDB, Amplify, serverless, Airflow DataPipelines Dec 2.
 - Nvidia DGX Station A100 AI appliance presentation Dec 2. Very cool, very expensive.
 - 901618 - Pelagic-Benthic Coupling
 - Returning to analysis of calibration images and benthic transect images
 - Overhead
 - Participated in "jury" of capstone presentations from University of Victoria ECE399 course projects. Of the 3 competing projects, one was MBARI proposed ROV LiDAR project. Dec 1.
 - Out of Office
 - AWS re:invent virtual conference Nov 30 - Dec 18
 - Neurips 2020 virtual conference Dec 6 - 12
 - Vacation Fri Nov 20, Nov 23 - 25
- Jon Erickson
- Kevin Gomes
 - 901009 - CANON
 - Working on the ODSS upgrades off CentOS 6 which have been a nightmare, but finally having some breakthroughs with lots of help from IS
 - Overhead
 - Group lead overhead
 - Out of Office
 - Nov 23-25: Vacation
- Andy Hamilton
 - Out of Office
 - On vacation until October 26
- Kent Headley
 - 901803 - Carbon Wave Glider Development

- Working on Python GUI to simplify some operational tasks and learn a bit about Python
- Overhead
 - Following Apple ARM and virtualization roadmap
 - Purchasing
 - Planning for potential site closure (and hoping it won't be necessary)
 - Starting prep for reviews
- Out of Office
 - Nov 30, Jan 19 : personal
- Rich Henthorn
 - 901618 - Pelagic-Benthic Coupling
 - Attempting to recreate the BLISS failure experienced at Sta.M here on shore
 - 901800 - LRAUV Payload & Support
 - TRN server deployed and configured on both Tethys and Pontus
 - Obstacle Avoidance app
- Brett Hobson
- Scott Jensen
 - Out of Office
 - Current schedule is Monday-Wednesday
 - Quarantine due to travel until November 30. Working at home.
- Brent Jones
 - 901112 - Change in MB & CA Current
 - Helping prep then driving Daphne LRAUV in support of MBTS mission
 - 901805 - Coastal Biogeochemical Sensing
 - Prepping Spray 29 for deployment later this week
 - Overhead
 - Meetings
 - Continued mentoring of Cal Poly senior class project
 - Out of Office
 - Wed - Fri, vacation + holiday
- Chad Keczy
 - Out of Office
 - Will be gone week of Turkey day.
- Brian Kieft
 - 708158 - DHS Y7
 - Weekly meeting.
 - 901009 - CANON
 - Supporting MBTS deployment for Daphne and Pontus
 - 901800 - LRAUV Payload & Support
 - Testing quick GPS fix mission
 - Working on USBL mode integration
 - 901800.98 - Bioacoustic Payload
 - Met briefly to discuss data dissemination
 - 902009 - AUV UI
 - Followup meeting to discuss command and schedule queues. Design decision meeting tomorrow.
 - Out of Office
 - 12/3 - Thur (kids)
 - 12/7-8 (travel)
- Denis Klimov
- Eric Martin

- 901101 - Ocean Imaging
 - Finalizing drawings and fielding quotes
- 901206 - Coastal Profiling Float
 - Cal program certified, qualifying CPF unit 2 for hydraulic buildout
- 901911 - ROVVR
 - SCOPE meeting
 - Writing software to convert navproc messages to lcm types
- DQ1942 - Buoy Power Generation
 - Analyzing radar packet structure
- 901200 - Telepresence
 - Supporting Jim Barry Cruise 12/1-12/7
- Thom Maughan
 - 901009 - CANON
 - Assembly of Truelove-M shipbox portable eDNA analyzer into Black Friday Harbor Freight pelican case knockoffs.
 - Tina at JHU is running into software package porting challenges for packages compiled for ARMv8 used in the classification step. She is exploring other options, attempted to assist with the recompile. Other software is hitting memory limits. The classification step may need some development for embedded ARM.
 - 901805 - Coastal Biogeochemical Sensing
 - CCSv10 compile and test on MFET for v3.3.1
 - Working v3.4 to add support for nphox and mphox boards
 - Discussed requirements for a point release v3.3.2
 - 902000 - Multi-Spectral StealthCam
 - I have the PWM boards here at my remote office.
 - 902004 - Planktivore
 - DeepRip (AMD3990x 64 core + 256 GB RAM + 2x RTX8000 +2x 48GB DDR6 + 8 TB SSD + 32TB RAID disk + case + cooling + power supply) purchasing and expensing. Many thanks to Cindy. Scheduling build by Jose.
 - Project management
 - Larry is shifting from housing design to fabrication for other projects as he can work housing design from home.
 - Telecentric lens order had greatly reduced tariff.
 - 901713 - Nearshore FOCE
 - I have cables and sensors here at my home office
 - Overhead
 - I have wago stack at my home office and will be offloading some Xojo work from Rich Schramm
 - Out of Office
 - Vacation Dec 10 to 15
 - Quarantine from visiting Cal Poly Pier ends on Dec.3
 - Working remote with regular access as needed at MBARI Tues,Wed,Thurs
- Mike McCann
 - 500055 - Video Annotation DM
 - Completed migration of vfcbysdive from seaspray to expanse
 - 901111 - AUV Infrastructure Supprt
 - Added Dorado's new PAR sensor data to Gulper ODV and netCDF files
 - Processed Dorado mission 2020.335.00
 - 901910 - Plankton Taxonomic GrpAUV
 - Reloading fall 2020 surveys into stoqs_all_dorado so as to get PAR and proxy parameters

- Overhead
 - Advising capstone students to look at PDAL for writing point cloud meshes in glTF format
- Rob McEwen
 - 901800 - LRAUV Payload & Support
 - Adjusted Dorado simulation to better model a single Imagenex in the LR vehicle.
 - Ran the simulated data through the standalone OA code. It appears to work correctly.
 - Beginning to work on the LCM interface.
 - Out of Office
 - WFH on Thursday and Friday.
- Paul McGill
 - 901803 - Carbon Wave Glider Development
 - Ordered the last of the parts for the DIC analyzer build.
 - 901904.99 - Coral Camera System
 - Participated in Wed's ROV dive through virtual presence.
 - Overhead
 - Had a major laptop computer crash and had to restore from a ten-day old backup, which took a whole day.
 - Out Monday for family medical reasons
 - Have resumed OrCAD online training classes
- Ed Mellinger
 - Out of Office
 - Scheduled in-office days Tuesday, Friday
 - Minor family medical issues will affect my availability for the next 2-3 weeks.
- Tom O'Reilly
 - 901009 - CANON
 - Investigating standards for commanding and coordinating autonomous vehicles, for potential use in our Mission Execution Service (MXS). Use of standards could simplify integration of third-party planning software and vehicles into MBARI's autonomous fleet. In particular looking at [Open Geospatial Consortium's SensorThings standard](#), designed to connect "Internet of things".
 - 901101 - Ocean Imaging
 - Continuing tests of improved cross-platform installation and build of MB-System software, using 'cmake', which is easier to refine and maintain than the more antiquated "autoconfig" system currently used by MB-System. This is important, as MB-System is used on diverse operating systems by many users; we have to make the software easy to distribute and install
 - 901902 - Aerial Drones for Sci&MO
 - Discussing best practices and data standards for processing aerial drone data with members of the Open Geospatial Consortium's [Unoccupied Systems domain working group](#).
 - Overhead
 - Invited by Christoph Waldmann (MARUM at University of Bremen) to participate in [IEEE OES Standards Committee](#), to help promote use of appropriate standards in the oceanographic community.
 - Out of Office
 - Was on vacation last week
- Craig Okuda
 - Out of Office
 - Vacation days
- Doug Pargett
 - 901205 - ESP SURF Center
 - Meetings, phone calls, answering questions.

- Solidworks, setting up models to FEA some ideas that might better manage heating of the new cartridges.
- Overhead
 - Solidworks license transfer headaches. Thanks to Hawkridge it's fixed now.
- Out of Office
 - A few days of Vacation/Holiday
- 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 7 - September 11: Vacation
 - October 12-17: Ocean Imaging Cruise
 - October 19-23: Vacation
- Brent Roman
 - 901205 - ESP SURF Center
 - Continuing support of WHOI
 - DQ1904 - NOPP Saildrone
 - Test fit ESPkoa onto Saildrone's 60ft long "Surveyor"
- Carlos Rueda
 - 901009 - CANON
 - MXM: With Tom, looking into perhaps starting to incorporate OGC SensorThings or SPS sooner than later in the design and implementation of MXM interfaces/protocols.
 - 901502 - Passive Acoustic Sensing
 - Finalizing ASA poster. Many thanks John for the productive discussions.
 - 901800 - LRAUV Payload & Support
 - Replying to IS's inquiries about Disaster Recovery procedures for LRAUV vehicles, and along the way involving LRAUV experts in the discussion so everyone is on the same page toward determining specific actions moving forward.
 - 902009 - AUV UI
 - Meeting
 - Overhead
 - Moved "odss2dash" service from normandy to tethysdash2.
 - Some email exchanges, and configuration adjustments are being done upon the shutdown of some machines due to CentOS6 EOL. Nothing critical.
 - Out of Office
 - Dec 8: [OGC member mtg](#) (tentative)
 - Dec 9: [ASA Conference](#)
- Karen Salamy
 - Out of Office
 - Out of Office this whole week due to a Family Medical Emergency. I may have to extend this through next week as well.
 - Will be working on MBARI campus ONLY on Tuesdays until further notice.
- Brian Schlining
 - 902002 - Fathomnet Detect and Classify
 - [FathomNet development](#) is still in [full swing](#). We hope to have it working and deployed by Dec 21st. We anticipate completing a paper on the same date. Wish us luck ;-)
 - Out of Office

- 12/21-1/1 Vacation
- Rich Schramm
 - 200103 - Core CTD Data -MDUC
 - Reprocess DocRickets rovctd for new calibrations - August to current and set flags
 - Overhead
 - Document what-is-what in my CVS, SVN and bitbucket repositories
- Alana Sherman
 - Out of Office
 - Vacation day 11/24