

Mike McCann Sorted By Project

200109 - Core Mooring Data

- Needed to regenerate the hourlyM1.nc file because the file from the last microcat deployment had some issues – Fred quickly repaired it and now John is able to use it (Week 8)
- 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 (Week 11)
- Submitted proposal for 2021 (Week 29)
- Submitted Phase 2 response (Week 36)
- Copied recovered M1 deployment data to OceanSITES folder - as is done following a mooring turn (Week 38)
- Tracked down a bad depth value for M1's SWR instrument (Week 41)

300070 - DMO Support- Ventana

500055 - Video Annotation DM

- Revising vfcbydive to deal with images from M3_ANNOTATIONS (Week 10)
- Trying to fix vfcbydive to work with M3 framegrabs (Week 11)
- Beginning migration of vfcbydive from seaspray (CentOS 6) to expanse (CentOS 8) (Week 11)
- Continuing work on vfcbydive to work with new M3 file naming conventions (Week 12)
- Changed vfcbydive to copy original .png rather than symlink as it updates EXIF metadata (Week 13)
- Fixed a vfcbydive problem reported by Lonny: elapsed millis image file names not captured (Week 14)
- Trying to fix vfcbydive for tibr 150 (Week 15)
- Moving the vfcbydive code from seaspray to expanse – getting help from Pat on installing the required Perl modules (Week 33)
- Chipping away at the changes needed in vfcbydive for it to work using GraphicsMagick (Week 45)
- Continuing to migrate vfcbydive to work with GraphicsMagick on expanse (CentOS 8) (Week 46)
- Getting lots of help from Pat on finding the right version of ImageMagick that works on expanse (Week 47)
- Writing Python script to replace what is broken in GraphicsMagick for vfcbydive (Week 48)
- Completed migration of vfcbydive from seaspray to expanse (Week 49)

901009 - CANON

- Looking at using a binary search tree to improve the performance of the JavaScript that executes the 3D curtain playback visualization (Week 5)
- Continuing to implement and test improvements for performance of the 3D curtain playback (Week 6)
- Tested using watchtower for Continuous Delivery – need to think about scenarios where automated service restarts might interrupt long-running load processes that may be using the same container (Week 6)
- Binary search for image slices really improves performance – profiling in Chrome now indicates most time is spent in rendering rather than in the dumb JavaScript function I used to have. (Week 7)
- Continuing to test and squash bugs in the UI for controlling 3D Curtain animations (Week 7)
- Added a step time for the 3D animated curtain generation – things are starting to look better (Week 8)
- Discovered that the newest release of X3DOM no longer supports the SRC mesh representation of terrain data I've been using – I'll need to transition to glTF bundles (Week 8)
- Unable to build my Docker images due to a "404 Not Found [IP: 91.189.88.31 80]" error (Week 8)
- Fixed "404 Not Found [IP: 91.189.88.31 80]" Docker error by upgrading to ubuntu:19.10 (Week 9)
- Deployed 3D Curtain animation capability on 3 production STOQS servers (Week 9)
- Met with capstone students who are working on 3D Points visualization (Week 10)

- Wrote code to process new format for DEIMOS acoustic data (Week 10)
- Rolled out some STOQS changes to improve scrubbing of 3D curtain animations (Week 11)
- Mentoring capstone students on their first Pull Request implementing Point rendering (Week 12)
- Provided feedback to instructor of Capstone students – they're doing a good job (Week 13)
- Met with capstone students on Zoom to clarify some requests I made on their pull request (Week 14)
- Added functional tests for Points feature added by Capstone students (Week 20)
- Attending via Zoom their live presentation during the Capstone Festival on Friday (Week 20)
- Deployed the points, lines, polygons 3D data visualization feature on the stoqs servers (Week 20)
- Fixed some date boundary test issues for loading LRAUV data (Week 22)
- Fixed functional test execution on Travis-CI and dockerhub (Week 22)
- Fixed a provisioning issue with a new postgresql dependency (Week 22)
- Fixed Docker mount issue with /dev/shm: lesson learned, don't mount over it (Week 24)
- Tracking down more edge cases in parsing LRAUV syslogs for ESP Cartridge numbers (Week 28)
- Reloaded stoqs_canon_may2019 to capture more ESP samples and to provide a better report in the stoqs load log regarding the disposition of each cartridge (Week 29)
- Put into production decoding of Dorado's new Warriar format Iridium beacon for ODSS (Week 29)
- Monitoring automated LRAUV data processing and flow into tethysviz databases (Week 29)
- Created stoqs_canon_july2020 database and monitoring its loads (Week 30)
- Had to back out a Matplotlib update as it broke the colormaps for plotting balanced variables, ones like northward_sea_water_velocity_HR and pitch. (Week 30)
- Fixed some issues with Waveglider data processing (Week 30)
- Learning about shaders in order to improve visualization of point data (Week 30)
- Improvements to automated data loading into STOQS (Week 31)
- Created 3D animation of Brizo's shark bite and shared on Slack (Week 31)
- Fixed fragment shader to more accurately represent color for the point visualization in the Spatial 3D view – still need to figure out the vertex shader to provide better depth perception (Week 33)
- Upgraded the STOQS VM provision.sh script to install the latest versions of GMT and MB-System so that the capstone students can use mbgrd2obj for Issue 1093 (Week 39)
- Dealt with a very full glidermail inbox – full of a bunch of waveglider position reports (Week 40)
- Rolled out updates (some correcting security problems) to production STOQS servers (Week 41)
- Seeing that current campaign data are flowing into stoqs_canon_october2020 (Week 41)
- Seeing that data continue to flow into stoqs_canon_october2020 (Week 42)
- Writing Jupyter Notebook to plot LRAUV ESP Sample details from STOQS and the ESP log (Week 44)
- Reloading CANON Campaigns from 2017 onward that have LRAUV ESP Samples – the names now include the name of the ESP device, as parsed from the syslog file (Week 45)
- Several Glider data sources have been moved requiring updates to the load scripts (Week 45)
- Continuing to reload last 3 years of CANON databases with newer LRAUV ESP processing (Week 46)
- Continuing to iterate with Katie on assigning proper names to the LRAUV ESP Samples (Week 47)
- Working with Pat on configuring a CentOS 8 kraken2 system for stoqs.shore.mbari.org (Week 51)
- Learning all about podman: (Week 51)
 - An NFS mounted atlas home directory does not work well (Week 51)
 - I'm hopeful that podman-compose will be able to use my existing docker-compose.yml (Week 51)
- Helped with testing the new ODSS (Week 51)

901111 - AUV Infrastructure Supprt

- Processed survey Dorado389_2020_035_00_035_00 (Week 6)
- At Rob Sherlock's request am looking at using Gulper workflow for i2map data (Week 11)
- Participated in i2map sensor data processing meeting held by Rob S on Zoom (Week 13)
- Started auv-python repo in BitBucket and started an Issue to discuss my proposal (Week 14)
- Still trying to get access to i2MAP log files (Week 16)
- Outlined a plan for the next steps in the Python-based AUV data processing pipeline (Week 16)

- With Karen's help migrated auv_ctd CVS repo from moonjelly to an MBARI bibucket git repo (Week 17)
- Working on calibrate.py in the AUV Support auv-python project for i2MAP data (Week 17)
- Fiddled more with the quick look plot Jupyter Notebook in the auv-python project (Week 17)
- Going all in on learning to use VS Code – using it on the auv-python project (Week 18)
- Exploring why MBTS missions after Jan 2018 don't have Sipper samples (Week 21)
- Reloaded the stoqs_mbts database to pick up missing Sipper samples (Week 22)
- Added platform name to Activity name to improve UI mouse over experience (Week 24)
- Simplifying the LRAUV data processing cron jobs with --current_month option (Week 24)
- Working with Hans on parsing data from a new Iridium beacon (Week 24)
- Still trying to figure out binary format for SBDs from new Warrior Iridium beacons (Week 25)
- Improved UI operation for 3D rendering of points, lines, and polygons in STOQS (Week 25)
- Conferred with Hans on “creating” Navigation data from Dorado run (Week 31)
- Processed Dorado mission 220.218.03 (Week 33)
- Processed data for mission 2020.231.01 (Week 34)
- Attempted to track down missing sensor data for the last 4 Gulpers on 2016.307.00 (Week 36)
- Wrote script to correct system clock for 2017.284.00 to create 2020.297.00 (Week 36)
- Processed missions 2020.245.00 and 2020.246.01 separately in order to properly match up data to the Gulper firings (Week 36)
- Looking at writing processing for new PAR sensor on CTD2 and new ecopuck instrument (Week 36)
- Looking at writing processing for the PAR sensor on CTD2 on Dorado (Week 37)
- Looking at writing processing for the new eco puck (FLBB2K) instrument on Dorado (Week 37)
- Writing HS2 processing in the auv-python project (Week 38)
- Writing unit tests for the auv-python data processing functions (Week 38)
- Trying to speed up progress so that I can implement PAR and Ecopuck processing in auv-python rather than in the Matlab code base (Week 38)
- With Brian's help configured auv-rawdata-server on public server stoqs.mbari.org (Week 40)
- Running Bitbucket Pipeline CI in auv-python using the public auv-rawdata-server (Week 40)
- Finally fixed pytest running in Pipelines – this I learned: MacOS file systems are case insensitive when accessing files, Linux file systems are not (spent a day chasing this). (Week 41)
- Processed Dorado missions 2020.282.01 and 2020.286.00 (Week 42)
- Processed mission 2020.301.03 (Week 44)
- Processed Dorado missions 2020.308.01 and 2020.314.01 (Week 46)
- Processed Dorado mission 2020.323.01 (Week 48)
- Added PAR sensor data to the routine legacy data processing to ODV files for Margeurite (Week 48)
- Updated Dorado AUV routine data processing email to contain: (Week 48)
 - A remark about relevant details about the mission (Week 48)
 - A link to a 3D visualization of the survey from stoqs_all_dorado (Week 48)
- Added Dorado's new PAR sensor data to Gulper ODV and netCDF files (Week 49)
- Processed Dorado mission 2020.335.00 (Week 49)

901221 - Midwater Time Series

- Implementing the calibrate and align steps in the auv-python project (Week 18)
- Exploring using xarray for all data read, processing, and write functions (Week 18)
- Looking at using streamlit.io to build a dashboard for AUV data visualization (Week 18)
- Spinning back up on auv-python project – using it to explore dataframe viz technologies (Week 20)
- Continuing work on auv-python – trying to use xarray for all netCDF operations (Week 21)
- Picking up work on auv-python project (Week 25)
- Working on auv-python, which intersects with Plankton Proxy work (Week 33)
- Continuing to implement calibrate_align.py in the auv-python project (Week 36)
- Continuing with the auv-python project as this is likely where the PAR and FLBB2K processing will be implemented (Week 37)

- Helping Rob with plotting DVL measured water velocity data from i2Map using auv-python (Week 39)
- Helped Rob get auv-python running on his system (Week 41)

901602 - Data TAG: Addrss Eng Chng

- 2021 proposal review (Week 29)

901800 - LRAUV Payload & Support

- Turned on backend data processing for February 2020 (Week 6)
- On a journey to find and fix all the causes for missing ESP Cartridges from STOQS: (Week 9)
 - With Ben and Brent's help loaded new ones from a missing .dlist (Week 9)
 - Writing parser for syslogs vice using TethysDash to get ESP metadata (Week 9)
 - Expecting additional issues that will need resolution (Week 9)
- Loaded last missing Cartridges into stoqs_erie2019, now working on last December's runs (Week 10)
- Reloaded stoqs_lrauv_dec2019 for a clean load of all the ESP samples (Week 11)
- Working on better automation of data processing workflows (Week 12)
- Identified a problem with .dlist files spanning a month boundary that aren't being loaded (Week 12)
- Databases on tethysviz now contain all logs belonging to a .dlist across month boundaries (Week 13)
- Re-loading <https://tethysviz.shore.mbari.org/> databases following fixed loading problems (Week 24)
- Checking up on automated data loads into the jun_2020 database (Week 24)
- Reloading all tethysviz databases with consistent Activity naming – now including platform names (Week 25)
- Helping Reiko retrieve Sampling information (Sippers and ESP) for loading into BOG (Week 25)
- Confirm automatic flow into https://tethysviz.shore.mbari.org/stoqs_lrauv_jun2020 (Week 25)
- Reloaded the monthly databases between 2012 & 2019 to pick up more data following some upstream data processing code improvements (Week 33)
- Pat added 200 GB to the postgresql data partition on <http://tethysviz.shore.mbari.org> (Week 33)
- Monitoring https://tethysviz.shore.mbari.org/stoqs_lrauv_sep2020 for successful updates (Week 36)
- Checking that https://tethysviz.shore.mbari.org/stoqs_lrauv_sep2020 continues to update (Week 37)
- Monitoring ongoing data flow into https://tethysviz.shore.mbari.org/stoqs_lrauv_sep2020 (Week 39)
- Monique reported a problem with LRAUV section plots in the STOQS UI (Week 42)
- Rolled out temporary fix where only temperature and chlorophyll are loaded (Week 42)
- Implemented a outlier removal algorithm for LRAUV GPS data processing for STOQS (Week 46)
- Reloaded Lake Erie STOQS databases with Chl count data for NOAA collaborators (Week 47)
- Reloaded the stoqs_mbts database, which took a few days (Week 51)

901807 - Next Gen Acoustic Dorado

901910 - Plankton Taxonomic GrpAUV

- Installed Docker-based stoqs on new Mac Pro with the stoqs_all_dorado database (Week 5)
- Trying to understand why the new Mac Pro is killing the postgresql process – this is not happening on any other deployment, so I suspect it's something unique to Catalina (Week 5)
- Solved postgresql killing problem on Catalina – added 'oom_kill_disable: true' directive to my docker-compose.yml file (Week 6)
- Trying to find mutual time to meet with Monique (Week 6)
- Met with Monique and agreed on path to producing "Dataframe" structured data from STOQS (Week 7)
- Beginning to look at ways to generate these Dataframe "reports" (Week 7)
- As part of auv-python project doing a careful analysis of interpolation schemes (Week 25)
- Configured automated weekly loading of the stoqs_all_dorado database (Week 28)
- Loaded Monique's proxy data to the last diamond survey in stoqs_all_dorado (Week 33)
- Planning with Monique and ops how to get config info to deal with sensor offsets and lag (Week 33)

- Elicited a few more Issues on the auv-python project and inching forward on implementation (Week 34)
- Getting around to correcting times for mission 2017.284.00 (Week 34)
- Continuing to implement `calibrate_align.py` in auv-python, making sure it gives the same results as the legacy auv_ctd Matlab processing (Week 39)
- Using pytest framework in the auv-python project and liking it (Week 40)
- Successfully processing HS2 data with pytests against the legacy Matlab results (Week 40)
- Reloading fall 2020 surveys into `stoqs_all_dorado` so as to get PAR and proxy parameters (Week 49)
- Implementing navigation adjustment in auv-python (Week 50)
- Implementing the navigation adjustment code in auv-python (Week 51)

901915 - Improving MBARI Data Impa

- Team meeting, read about modin-project (Week 11)
- Shared slide set created for i2map meeting on #se-ie Slack channel (Week 13)
- Group meeting (Week 16)
- 2021 proposal review (Week 29)

Out of Office

- Took a vacation day last week
- Taking a vacation day this week to catch up on grading for CSUMB class
- Some vacation days while waiting for new laptop
- Vacation days Monday & Tuesday 17-18 August 2020
- Vacation days 8 September 2020 and 14 September 2020
- Vacation days: 18 September 2020, 2 October 2020
- Vacation day: 2 October 2020
- Vacation: 19-23 October 2020
- 21-31 December 2020

Overhead

- Setting up new Mac Pro computer with necessary software (Week 5)
- Meeting with CSUMB Capstone students on Wednesday afternoon (Week 6)
- Meeting with other Engineering staff in preparation for External Review Committee (Week 6)
- Participated in some External Review Committee activities (Week 9)
- Helping Jenny with the Django tutorial and her MB-Database project (Week 11)
- Web3D Consortium conference call (Week 12)
- Wrote a test framework for Jenny's MB-Mapping Django project (Week 14)
- Group & dept. meetings (Week 15)
- My laptop decided to start randomly rebooting, so I asked Norm's permission to get my backup laptop (a 2011 MacBook Pro) and now I'm busy installing my development tools on it (Week 16)
- Figuring out what dongles I'll need for the new MacBook Pro when it arrives (Week 17)
- Working with Jenny on a mapping database task in the Ocean Imaging project (Week 18)
- Struggling with using 10-year old laptop, new laptop should arrive next week (Week 18)
- Starting to migrate Time Machine backup files to new laptop (Week 19)
- Configuring applications on new laptop (Week 20)
- Examined issue of `Expd's nav-data.asp` query not returning all records (Week 21)
- Provided milestones, time estimates, and edits for MB-Mapping proposal (Week 22)
- Provided details on BEDs data visualization for Roberto's paper (Week 22)
- Internal calendar Zimbra merge fixes to deal with changes during the shutdown (Week 25)
- ESIP Federation Summer Meeting (Week 29)
- Fix problem with ROT Axis not appearing for BEDs visualization in `stoqs_cce2015` database (Week 30)
- Attending (remotely) ESIP Federation summer meeting (Week 30)

- ESIP Federation summer meeting (Week 31)
- Helped with some project labor resource leveling (Week 31)
- Requested a Windows VM (strawbexpd) to test the Expd web app with Strawberry Perl (Week 33)
- Attended via Zoom the SIGGRAPH Pioneers reception talk by Douglas Trumbull (Week 33)
- Beginning to work with Joe in testing Expd on strawbexpd with ActiveState Perl (Week 34)
- Working with Pat to get git working w/ ssdsadmin's ssh keys on an atlas home directory share (Week 36)
- Meeting with Capstone students who will be working on this Issue (Week 38)
- Attending virtual OceanSITES meetings early in the morning this week (Week 38)
- Rolled out module updates (fixing a Django insecurity) to our STOQS servers (Week 39)
- With Pat & Joe's help moving WordPress server for stoqs.org to a new CentOS 8 VM (Week 39)
- Moved stoqs.org to a new CentOS 8 VM (actually Joe and Pat did most of the work) (Week 40)
- Met with Steve Ruberg from NOAA for STOQS instruction to access Lake Erie LRAUV data (Week 44)
- Attending virtually the Web3D Conference and chairing the demo session at 5 am Thursday (Week 46)
- Advising capstone students to look at PDAL for writing point cloud meshes in glTF format (Week 49)
- "Attenginding" OGC meeting this (Week 50)
- Provided evaluation to their professor of the capstone students (Week 51)