

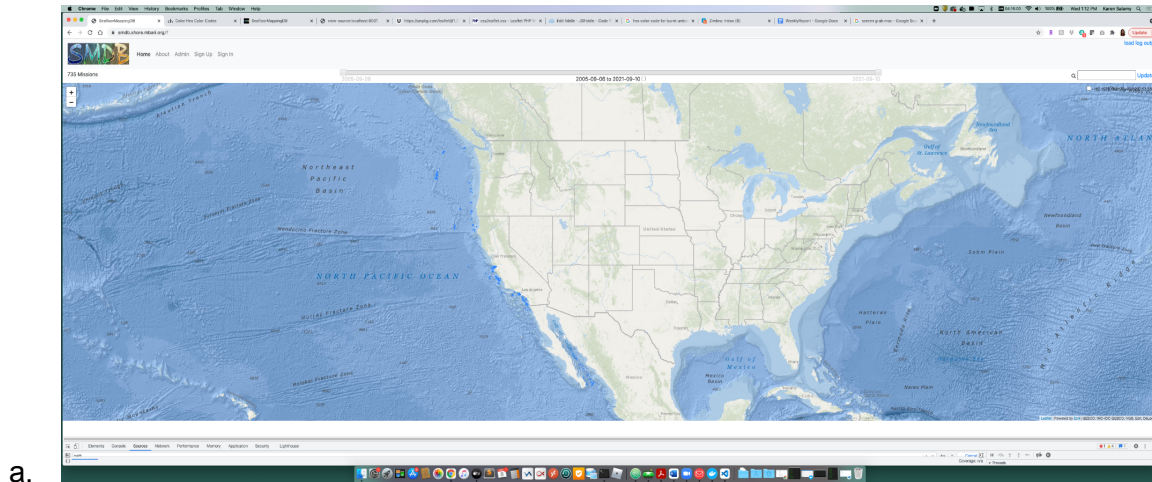
901101 - Seafloor Mapping

Week 51

1. Eric Martin
 - a. Planning for 2021 given new ship schedule.
 - b. Bi-weekly meeting with Dave and Giancarlo, discussing a new field report publication.
2. Mike McCann
 - a. Wrote code to scan datalist*.mb-1 files for potential missions that comprise a Compilation
 - b. Worked with Jenny on a “soft opening” announcement of <https://smdb.shore.mbari.org/>
 - c. Looking into Draco compression for making smaller 3D terrain .glb files

Week 50

1. Mike McCann
 - a. Fixed Notes.txt file lookup logic and reloading database following Jenny’s fixes
2. Karen Salamy



Week 49

1. Mike McCann
 - a. Will be reloading database following changes contributed by Jenny & Karen
2. Karen Salamy
 - a. Added ESRI World Ocean Bathymetric map to the SMDB map view at <https://smdb.shore.mbari.org/> (image below).
 - b. Met with Mike and Jenny about proper git push protocols between branches and the main.
 - c. I will start looking into the ability to zoom in further into the ESRI maps. The Vector BaseLayerMap is not as high resolution as the TileLayers.
 - d. I will also check to see if the leaflet data points (path) can be adjusted from blue (which now clashes with the Ocean bathymetric map colors) to a dark orange.

Week 48

1. Tom O'Reilly
 - a. Working with Dave Caress and Kent Headley to refine MB-System ‘cmake’ build scripts and procedures. cmake builds are significantly easier to specify and maintain than the older ‘auto-tools’ approach currently used by MB-System

2. Karen Salamy
 - a. Finalizing the addition of the new SMDB image logo that I created for the project (Jenny and David C. both appear to like it).
 - b. Working to get a ESRI bathymetric Ocean map onto the Data Base map page. Testing out some layer overlay issues.

Week 46

1. Kent Headley
 - a. Meeting w Tom, Dave re status and upcoming licensing issues and development related to use of non-open source CHRT library developed by U of New Hampshire. It may require use of a different more permissive license for MB-System
 - b. Investigating
2. Mike McCann
 - a. Reloaded [smdb](#) with latest exclude.list that Jenny contributed through a pull request
3. Tom O'Reilly
 - a. Gave status update to Dave Caress and Jenny Paduan.

Week 45

1. Mike McCann
 - a. Reloading with longer list of excluded directories that Jenny provided
2. Rob McEwen
 - a. Helping Erik T. with simulation.

Week 44

1. Mike McCann
 - a. Refined <https://smdb.shore.mbari.org/> loader to look for .png thumbnails if .jpgs not found
 - b. Meeting with Jenny and Karen to go over any development system glitches
2. Karen Salamy
 - a. Working with Jenny and Mike on the builds and operation of the SMDB. We are now meeting once a week and going over any bugs or questions. Going over meeting videos to make sure I understand the build process.

Week 43

1. Eric Martin
 - a. INS shipping meetings and planning with Mandy.
2. Mike McCann
 - a. Had Zoom session with Jenny and Karen to go over the smdb contributing process
 - b. Reloaded <https://smdb.shore.mbari.org/> with additional excluded directories
3. Karen Salamy
 - a. Continue to have Wednesday AM meetings with Mike M. and Jenny P. I have now also created a drive.google.docs directory for our ZOOM video files name SMDB_Project_ZOOM_Meetings.

Week 42

1. Karen Salamy
 - a. Spent some time working on an image for the Seafloor Mapping Data Base (SMDB) for Jenny and Mike. There will be doubtless changes and discussion until the final is decided upon but this is the winning option so far. The background is of a high resolution bathymetric scan supplied by Jenny P.



- b.
- c. ZOOM Meeting with Jenny and Mike this AM to go over Mike's progress on the SMDB, his instructions for installing and running the DB code and what's next for me to do on the project while he moves on to other tasks.

Week 41

- 1. Mike McCann
 - a. [Added range slider](#) above the map at <https://smdb.shore.mbari.org/> to constrain the nav track display by time. (I tried to make the slider step in regular time intervals, but it was becoming too complicated for my weak JavaScript skills.)
 - b. Added ability to update the map with a database query using constraints in the current view
 - c. Looking for an off ramp so that I can switch over to the Plankton Proxies project
- 2. Tom O'Reilly
 - a. Refining bathymetry display prototype app, utilizes up-to-date software tools and libraries. This application and others will eventually replace MB-System applications that are based on no-longer-supported libraries.
- 3. Karen Salamy
 - a. Playing around and testing updates and changes with the SMDB builds. In addition, I still do not have access to Adobe Photoshop since the MBARI group on Creative Cloud was created. I need this software to continue developing an icon for the website and project.

Week 40

- 1. Mike McCann
 - a. Got [navigation track \(instead of grid bounds\) display working](#), and it's not too slow
 - b. Built rudimentary Expedition and Mission List and Detail views with links between them
 - c. Transcribed work items from the Requirements_UseCases.docx to GitHub Issues
 - d. Beginning to work on time bounds to query for Missions on overview home page
- 2. Karen Salamy
 - a. Began new downloads and testing of the SMDB code.

Week 39

- 1. Kent Headley
 - a. Checked in updates related to libtrnav repo restructure
 - b. Chat w/ Dave re possible TRN on ROV imaging surveys
- 2. Mike McCann
 - a. Got AWS S3 working for thumbnail image display on production server
 - b. Revamping Expedition, Mission, and Note database relationships
 - c. Updated loader, test, and view software following above schema changes
 - d. Added more [GitHub issues](#) and starting to review Jenny's use cases

Week 38

- 1. Kent Headley

- a. Update trndev branch w/ libtrnav updates
- 2. Eric Martin
 - a. Cleaned up the lab, helped Dave & Jenny pack for the Falkor
 - b. Biweekly meeting with Giancarlo Troni
 - c.
- 3. Mike McCann
 - a. Continuing to buff out data load by parsing Notes and sonar file start and end times
 - b. Added mb-system container for running mbinfo commands (thanks Carlos for the image!)
 - c. Looking at using AWS S3 for serving thumbnail images from media storage
- 4. Tom O'Reilly
 - a. Continuing to refine bathymetry visualization prototype
- 5. Mike Risi
 - a. Participated in last leg of PACNW expedition
- 6. Karen Salamy
 - a. Will begin testing Mike's project builds again starting tomorrow now that the NavDORISS CCD camera driver issue has been resolved.

Week 37

- 1. Kent Headley
 - a. Resolved a communications issue that prevented TRN from working with the T50 sonars. The communications protocol included some device-specific IDs that were device dependent.
- 2. Eric Martin
 - a. We have just completed a very successful dive series collecting some of the highest detailed maps of venting areas through the Axial Volcano area. Dave wrote a nice set of comments in last week's EC notes.
 - b. The system performed without any complications aside from issue with the strobe lamps, that were field repairable.
 - c. Credit for this success extends to the entire team at sea, David Caress Jenny Paduan, Mike Risi and Chad Keczy. Special thanks to Mike, Chad, Larry Bird and Mike Conway for their aid in preparation at MBARI that led to an extremely smooth integration in Newport, Oregon.
- 3. Mike McCann
 - a. Tracking progress in population smdb from Notes information in [Issue 50](#)
 - b. Added bathymetry image to click event for overview web page
 - c. Had a good sit down with Jenny on where to collect more information

Week 36

- 1. Kent Headley
 - a. Resolved issue with TRN hanging when using T50 sonar. With help from Erik and Teledyne tech support, we found that it was due to incorrect device ID fields in message subscription request data structures.
- 2. Eric Martin
 - a. Offshore with David Caress, Jenny Paduan, Mike Risi, Chad Keczy in the Pacific Northwest supporting low altitude survey operations. The system is working well, despite some damage and wear and tear to the strobe systems, we have had excellent dives so far.
- 3. Mike McCann
 - a. Wrapping up graphql endpoint implementation with 100% test coverage on all model classes

Week 35

- 1. Kent Headley

- a. Attempted debug of communications issue between TRN and new sonars - no joy, will resolve post-cruise.
2. Mike McCann
 - a. Continue developing the graphql api – about a third of the way through the model classes
 - b. Working on serialization/deserialization of datetime & geospatial fields

Week 34

1. Mike McCann
 - a. Got CRUD testing working for smdb REST, but projecting a 2,000 line testing script!
 - b. Exploring GraphQL for smdb in [Issue 43](#)
2. Tom O'Reilly
 - a. Refining C++ gridded map visualizer, adding capability to select points

Week 33

1. Mike McCann
 - a. Developer experience is pretty good now in VS Code – closed [Issue 21](#)
 - b. Still trying to understand REST APIs – tracking development of api/v1 in [Issue 41](#)
2. Mike Risi
 - a. Working on sled prep and checkout for PACNW cruise in September

Week 32

1. Eric Martin
 - a. Assembling parts for sled prep next week.
2. Mike McCann
 - a. Got [pytest unit tests working in VS Code](#)
 - b. Got GitHub Actions working – nice to see those green checkmarks on the Pull Requests!
 - c. Spending time learning Django REST Framework while adding tests
 - d. Working on getting GitHub version control to work in VS Code: [Issue 33](#)
3. Karen Salamy
 - a. Spent some time looking at and familiarizing myself with Visual Studio Code for the project after speaking with Mike last week.

Week 31

1. Mike McCann
 - a. Reloaded just the Mission files that match yyyyymmdd naming to <https://smdb.shore.mbari.org>
 - b. Doing most editing and debugging now in VS Code! 😊
 - c. Creating unit tests using the Django REST framework to give good test coverage: [Issue 25](#)
2. Mike Risi
 - a. Starting cruise prep for PACNW
 - b. Working on user interface and new control system commands
3. Karen Salamy
 - a. Have been trying to schedule a meeting with Mike M. to discuss the SMDB project.

Week 30

1. Kent Headley
 - a. Monitoring Cascadia/Axial cruise
 - b. Hoping for service window to do TRN updates for Axial survey leg
2. Mike McCann

- a. Implemented the ability to debug server side code in VS Code, about to close [Issue 21](#)
 - b. Modifying load code to do a better job of loading just the missions we want – in VS Code
- 3. Karen Salamy
 - a. Spent a little time with the logo for the SMDB based on requests from Jenny P. Using a local development system to test web-base changes to the current project.

Week 29

- 1. Kent Headley
 - a. Added some doc for TRN field test/validation
 - b. There are some pending steps to enable TRN for axial, which will be completed remotely prior to the associated leg if network access is adequate.
- 2. Mike McCann
 - a. Trying to get debugging to work in VS Code – tracking progress in [Issue 21](#)
- 3. Karen Salamy
 - a. Installed a local SMDB development system using Docker last week and have been familiarized with the HTML and CSS code aspects of the server. Made a few aesthetics to the home page as some quick tests.
 - b. Spent some time developing a Project Icon for the SMDB and ran several by Jenny P. as well.

Week 28

- 1. Kent Headley
 - a. Updating and testing dorado MVC TRN code for axial cruise
 - b. Installing MB-System (for TRN) on mapper1,2 resons
- 2. Eric Martin
 - a. Proposal review
- 3. Mike McCann
 - a. Added clunky search function for leaflet map
 - b. Using locate/updatedb to perform faster searches for files in /mbari/SeafloorMapping
 - c. Added a way to exclude Missions from the load and reloaded <https://smdb.shore.mbari.org/>

Week 27

- 1. Kent Headley
 - a. Preparing for July 20 departure: installing and testing MB-System/TRN on Reson T50, updating doc
- 2. Eric Martin
 - a. Scoping labor and scoping effort for proposals
 - b. Falkor group meeting
- 3. Mike McCann
 - a. Implementing Leaflet map display of survey mission grid_bounds data

Week 26

- 1. Eric Martin
 - a. Calls for Falkor cruise.
 - b. Looking at heatflow probe again.
- 2. Mike McCann
 - a. Finally got <https://smdb.shore.mbari.org> working with Traefik
 - b. Configuring development environment so that VS Code can be used on the backend
 - c. Considering how to efficiently walk the 21.7 million files in SeafloorMapping – with many of the large ones migrated to offline storage

Week 25

1. Eric Martin
 - a. Assessing outstanding tasks for Falkor LASS integration.
 - b. Testing DeltaT driver with Mike Risi
2. Mike McCann
 - a. Working on getting production deployment to work on smdb.shore.mbari.org
3. Mike Risi
 - a. Tested DeltaT code against instrument in the tank

Week 24

1. Eric Martin
 - a. Met with 3D at Depth regarding proposed work for 2022.
2. Mike Risi
 - a. Working on DeltaT integration

Week 23

1. Rich Henthorn
 - a. Dorado heading oscillation
2. Chad Keczy
 - a. Incorporating some changes Eric requested from their last cruise (parts on order)

Week 22

1. Rich Henthorn
 - a. Merging Dorado code bases

Week 21

1. Rich Henthorn
 - a. Dorado code merge
2. Eric Martin
 - a. Meeting with Jon Marcus at Norbit Multibeam
3. Mike McCann
 - a. Implemented model classes (database schema) - still working on many-to-many relationships
 - b. Testing Django's Admin interface for adding/editing model instances
 - c. Beginning to write loader script which will walk titan's SeafloorMapping share
4. Karen Salamy
 - a. Began brief conversations with Jenny and Mike about the project this week.

Week 20

1. Rich Henthorn
 - a. Merging code from mapping vehicles into central repo
2. Eric Martin
 - a. Lidar data analysis shows that errors are still happening, engaging 3D@depth soon.
 - b. Shipping requirements for GOC and NW Expedition passed onto Teresa.
3. Mike McCann
 - a. Exploring Django integration of front-end frameworks such as Vue and Vite
 - b. Code repository set up at <https://github.com/mbari-org/SeafloorMappingDB>
4. Mike Risi
 - a. Starting DeltaT integration work

- b. Working on way-point processor improvements
- 5. Karen Salamy
 - a. Received new message from Mike M. and Jenny P. regarding initial names for the database we will be building. It is currently called SeafloorMappingDB (or smdb).

Week 19

- 1. Rich Henthorn
 - a. Merge and restore Dorado codebases
- 2. Mike McCann
 - a. Connected with Jenny & Karen and agreed on names: SeafloorMappingDB & smdb
 - b. I'm liking about 70% of what [cookiecutter-django](#) gives for a new Django project

Week 18

- 1. Rich Henthorn
 - a. Merging software versions from mapping vehicles
- 2. Eric Martin
 - a. Offshore last week on the Western Flyer, conducted 4 surveys at Extrovert Cliff, and Octopus Garden. Dive time lost only to weather and ship issues.
 - b. Equipment ran successfully, new TCU was a great help in mob/demob and reliability. Lighting improvements have generated the best photography to date.

Week 17

- 1. Mike McCann
 - a. Exploring using cookiecutter-django for creating framework for the database project
- 2. Mike Risi
 - a. Setting up up on Western Flyer for Ocean Imaging cruise

Week 16

- 1. Eric Martin
 - a. Prepping for the cruise next week. Lots to do.
- 2. Mike McCann
 - a. Using Docker with current versions of Postgis and Django to for a development platform

Week 15

- 1. Chad Kecz
 - a. Helping Eric and folks get ready for the upcoming cruise.
 - b. Working with Paul C and Jim M to get the TCU wired up for test tank testing
- 2. Eric Martin
 - a. Sled checkout and prep for new TCU
 - b. Found a bad CTD, investigating.
- 3. Mike McCann
 - a. Beginning to look at how modern Django projects are currently structured
- 4. Mike Risi
 - a. Preparing OI sled for deployment at the end of the month

Week 14

- 1. Eric Martin
 - a. Sled moved to tank, testing tomorrow and next week.

- b. Helping Chad with TCU issues as they arise.
- 2. Karen Salamy
 - a. Will begin work on this project once Mike M. sets a work list for me.

Week 13

- 1. Eric Martin
 - a. Training on AUV3 Multibeam System with Hans
 - b. Rotator cable submitted to shop
 - c. Prepping for tank tests
 - d. Reviewing final TCU design
- 2. Carlos Rueda
 - a. Some quick review of the dockerized set-up on mbscentos7, and graphical access via VNC.

Week 12

- 1. Kent Headley
 - a. Checked in UDP multicast server and client feature for Terrain Relative Nav. This feature provides simple pub/sub TRN updates with subscriber list management or heartbeat schemes to detect broken/abandoned subscriber connections.
 - b. The client for TRN server was updated to expose the full TRN API; together with UDP multicast, this provides a two-part solution for integrators: use a UDP multicast subscriber for data and add a TRN client for applications that need to control the TRN engine or read status.
- 2. Eric Martin
 - a. Prepping for WF cruise
 - b. Submitting cable assemblies for fab.
- 3. Mike Risi
 - a. Continuing work with Chad and Eric on LASS TCU design

Week 11

- 1. Kent Headley
 - a. Developing multicast TRN client (testing)
 - b. Updating TRN client component
- 2. Rich Henthorn
 - a. Dorado Operations meeting - how best to support 2021 operations

Week 10

- 1. Chad Keczy
 - a. Making final changes to TCU block diagram (based on meetings with Eric M and Mike R)
- 2. Eric Martin
 - a. Reaching out to Hans to discuss knowledge transition on Sonar components.

Week 9

- 1. Eric Martin
 - a. Deep dive into Lidar data after irregularities in Head A were discovered from October Data
- 2. Mike Risi
 - a. Working with Chad and Eric on LASS TCU design

Week 8

- 1. Chad Keczy

- a. Meeting with Eric tomorrow on TCU block diagram.
- 2. Eric Martin
 - a. Call last friday regarding new heatflow probes to be made by WHOI. They have some manufacturing roadblocks we'll try to navigate.
 - b. Checked out old sensor, seems to be working, we'll need to order a new bulkhead and cabling.
- 3. Tom O'Reilly
 - a. Integrating existing MB-System 'C' libraries with C++ prototype bathymetry editor - reuse of well-tested MB-System code is a key goal of our upgrade effort
- 4. Carlos Rueda
 - a. Work session with Dave. Granted him more privileges on our MBARI space at Docker Hub. Hopefully he should now be able to link his Github account to then enable automatic builds for MB-System.

Week 7

- 1. Eric Martin
 - a. Lots of calls last week for Falkor
 - b. Digging into the old heat flow probe
- 2. Carlos Rueda
 - a. Resynced mbari-org/MB-System fork to trigger [docker image build](#) at Docker Hub. All good. Coordinating with Dave toward enabling similar setup for his primary repository.

Week 6

- 1. Eric Martin
 - a. Meetings regarding the Falkor Cruise in October.
 - b. The hunt for the test cable has failed, tearing it apart.
- 2. Tom O'Reilly
 - a. Developing prototype bathymetry editor using C++ and VTK/Qt graphical toolkits for MB-System, intended to upgrade existing 'mbeditviz' tool which is based on end-of-life Motif/X11. The new editor makes use of existing MB-System libraries which read and write sonar data files in a very wide variety of manufacturer formats.
 - b. Developed cmake scripts to build MB-System libraries and executables, which will replace the "auto-tools" currently used. Our experience is that software such as MB-System that runs on multiple platforms and operating systems is more easily built and installed with cmake than auto-tools..

Week 5

- 1. Eric Martin
 - a. Falkor integration of the LASS underway
 - b. Met with Giancarlo regarding next steps in stereo camera improvements.

Week 4

- 1. Chad Kech
 - a. Worked on a block diagram for a new shipside TCU
- 2. Eric Martin
 - a. Processed Focal Repair
 - b. Ordered Camera for Prosilica upgrade
- 3. Tom O'Reilly
 - a. Improving MB-System installation process by moving away from antiquated 'autotools' approach to CMake

Week 3

1. Eric Martin
 - a. Bi-weekly collaborator meeting with Giancarlo Troni.
 - b. Discussion of new task to refurbish the old heat flow sensor.
 - c. Ongoing discussions with Chad Kecz about the TCU.
 - d. Meeting and advisement on a potential post-doc application.

Week 2

1. Chad Kecz
 - a. Met (virtual) with Eric M about requirements for TCU
 - b. Reviewing existing documents to prep for shipside TCU design
2. Eric Martin
 - a. Edited drawing sets
 - b. Finalized cable wiring schematic for vendors

Week 1

1. Eric Martin
 - a. Met with Chad Kecz to discuss his efforts for 2021.