

Brian Schlining Sorted By Project

500055 - VARS, M3/RS, DSG

- There's a new release of VARS Annotation: (Week 1)
 - Integrated with raziell, which allows VARS to be easily configured for its deployment location. Notes on setting it up are at <https://docs.mbari.org/vars-annotation/setup/> (Week 1)
 - This release is integrated with Cthulhu allowing staff to localize annotations directly on video. (Week 1)
 - Integration with Kent's libbmagic for ship framecapture. (Week 1)
 - Support for adding notes about dives and videos. (Week 1)
 - Improved startup time. (Optimized the calls to load a user's preferences from the database) (Week 1)
- Created a project to allow labs to easily spin up the entire M3/VARS software stack at <https://github.com/mbari-media-management/m3-quickstart>. This stack includes a proxy/video server, database server, as well as support scripts for managing the docker life-cycle, initializing the knowledgebase, registering media with VARS, and building supporting applications. (Week 1)
- Worked through the backlog of master (ProRes/MOV) video files that needed to be registered, which has been a challenge due to space constraints on titan. The current setup runs daily and will process up to 10TB of files. Once the new files are registered they are migrated off of spinning disk to LTO. (Week 1)
- Started work on converting some core JavaScript in the Deep sea guide to TypeScript so that it's easier to hand off to other team members. (Week 2)
- Upgraded all M3 microservices on the ships. Testing the new VARS (with raziell integration). VARS works but still sorting out framecapture with libbmagic. The (much) older VARS build is still currently being used for now. (Week 2)
- Ingested the latest Iron Mountain video drop. (Week 2)
- Wrote support scripts for changing passwords and listing videos in a dive. (Week 3)
- Testing with libbmagic as THE framecapture tool for VARS on the ships. Big shout out to Kent Headley for getting it working with BlackMagic's PCI cards on the ships!! (Week 3)
- Updated docs and instructions for (Week 4)
 - m3-quickstart (Week 4)
 - Vars-kb-server (Week 4)
- Investigating and resolving issues occurring in recent versions of VARS with large annotation sets. (Week 4)
- Dealing with IMES imports (Week 6)
- Investigation of navigation errors in some ROV dives. Met with the team to discuss how to handle them. (Week 6)
- Continued work on adding localization tools to VARS. (Week 6)
- Pumped out a few new releases of VARS Annotation addressing various issues. (Week 9)
- Working on additional issues: #128, #129 (Week 9)
- Porting public quickstart database from Apache Derby to Postgres. (Week 9)
- Installed Kent's libbmagic on the Western Flyer. Brian will be running tests on the RC and WF. (Week 10)
- Investigating new JVM crashes in vars-annotation. (Week 10)
- Investigating "jumping" behavior in the table view in vars-annotation. This may have been introduced when the underlying JavaFX library was upgraded. See issue #1 and here. (Week 10)
- Imported 5 new LTO drives of videos from Iron Mountain. (Week 10)
- Fixed a new issue in vars-annotation where user created "quick association" buttons were being unintentionally deleted. (Week 10)
- Discussions with Todd Walsh about encoding HDR2020 4k video (Week 11)
- Installed and tested libbmagic on the Western Flyer for VARS to use for framecapture. The video lab will be using this on the upcoming midwater lab's cruise. (Week 11)
- Reviewed M3/VARS system architecture for Megan (Week 11)

- Investigating new crashes in VARS Annotation (Week 12)
- Merged Kevin B's pull request into VARS and published new release 1.1.13 (Week 12)
- The new framecapture system worked well on last weeks WF cruise. Testing new framecapture system on the Rachel Carson (Week 13)
- Met with Sony rep to discuss alternatives to Softron for 4k/BT.2020/HLG video encoding. (Week 13)
- Updating m3-quickstart project to use Postgresql instead of Derby. (Week 13)
- Porting new deepseaguide from Vue 2 to Vue 3 (Week 14)
- Investigating using web components in our on-line apps. (Week 14)
- Updating the new deepseaguide development to use Vue3 and typescript. Temporary repo at <https://github.com/mbari-org/deepseaguide-exp> (Week 15)
- Created arm64/amd64 crossbuilds of docker containers for all M3 services. (Week 15)
- Brian is getting a number of external requests from groups interested in VARS. He's fixing up the m3-quickstart project to help groups get started. The latest task is finishing the port from Apache Derby to Postgres. (Week 15)
- Continuing port from Apache Derby to Postgresql for non-mbari use. Running tests using DARC's data setup imported into Postgres. Postgres handles UUIDs differently than other databases, so working through that in annosaurus and vampire-squid apps. (Week 16)
- Created apps to copy M3/VARS databases to another database. (Week 16)
- Testing framecapture on the Rachel Carson after reports of issues. tl;dr: Everything is working fine, someone was running an old version of VARS that's not compatible with the new framecapture setup. (Week 16)
- On-going imports of Iron Mountain tape-to-video files. (Week 16)
- Reviewed shortcomings of Cthulhu video player with the video lab. (Week 16)
- Investigation into service failures. Looks like they were due to network issues related to work on Mt. Toro. (Week 16)
- Finalized support for postgresql to all M3 microservices. M3 services can now run on SQL Server, Apache Derby, Oracle, and PostgreSQL. (Week 17)
- Finalized a migration path for existing VARS systems to copy a database to a new location and finalized testing ... here, here, and here. The copy can work across different databases. (e.g. copy from SQL Server to PostgreSQL) (Week 17)
- Updated the m3-quickstart project, which allows labs to easily run a VARS system, to use postgresql as the default database (Week 17)
- Updated the jsharktopoda video player's code base to the latest version of JavaFX. JavaFX 18+ is supposed to support HEVC, but it didn't work in testing. (Week 17)
- Lots of support fun related to this week's titan upgrade!! (Week 17)
- Created integration tests to quickly pin-point any issues with MBARI's M3 services. All tests can be run using `http_runner.py`. Created a parallel test set for DARC to test their services. (Week 17)
- Discussions about codecs/color spaces for 4k video. Met with Sony representatives for updates on their hardware video encoders. (Week 17)
- Ran transcoding tests for ProRes 4K to HEVC to see if it was a feasible solution in the case where we can't encode both streams on the ships. On an M1 mac (which has hardware encoder/decoders for both ProRes and HEVC), the transcode rate is about 0.77x, so a 5 minute 4K file would take 6 ½ minutes to transcode. On a system without hardware support, transcoding the same file takes about 3 ½ hours. (Week 17)
- Never-ending imports of video files from Iron Mountain ... (Week 18)
- Iron Mountain video ingest (Week 19)
- Modified code that archives ancillary metadata to improve speed. Rerunning on all staged Iron Mountain LTOs (Week 19)
- Iron Mountain video imports. (Week 20)
- VARS Annotation 1.2.1 was released. This release adds features to help minimize clutter in the UI for machine learning generated annotations. (Week 22)
- Working on client/server implementation to test new video player comm spec. Once those are written, we will be contracting out for an update to integrate Cthulhu functions into Sharktopoda. (Week 22)
- Finishing up the implementation of the new video player remote protocol. (Week 23)

- Working on spec and implementation for testing a new video player that combines Sharktopoda's video playing stability and smoothness with Cthulhu's video annotation features. Completed a first draft implementation of a new remote protocol for VCR players. This includes the video player side and the annotation/controller app side. The implementation needs some final tweaks before putting a new video player request out for bids. (Week 24)
- Generating web-friendly HD/H264 proxies for all 4K/h265 videos (Week 26)
- Iron Mountain video ingest (Week 26)
- Adding API docs to Raziel using Tapir to see if Tapir is suitable for general production use in MBARI microservices. Tracking this here. (Week 28)
- Iron mountain video ingest. (Week 29)
- Finishing up a test implementation of the new remote control protocol in vcr4j in jsharktopoda (Week 31)
- The usual Iron mountain ingest (Week 31)
- Revisiting work on the Vue 3 version of the deepsea guide (Week 32)
- On-going Iron Mountain video ingest. (Week 32)
- Updated docs for raziel. Added github actions for tests and documentation generation. (Week 33)
- Prep for VAA/VARS Meeting (Week 33)
- Investigating slow frame capture with 4k video on the ships. (Week 33)
- Finished specs for video player. Shopping for external contractor. (Week 34)
- Iron Mountain video ingest. (Week 34)
- Iron Mountain video imports. (Week 35)
- Working on talks and hands-on session presentations for the upcoming marine imaging workshop (Week 37)
- Released VARS Annotation 1.3.0. This fixes a bug that was introduced with JavaFX 16. (Week 37)
- Iron Mountain has ramped up the tape to video file process. We're now receiving 5 LTOs every two weeks. The increased data velocity has been filling up the allocated disk quota on M3. IS has updated the quota for M3 share from 320TB to 440TB for now. This gives us up to 290TB for /M3/master and a bit of breathing space. (Week 38)
- Some tapes imported from the older VARS system did not have the correct start time and duration set. Brian created a script to update those as needed. (Week 38)
- Working on talks for the Marine Imaging Workshop (Week 38)
- Work on Vue 3 version of new Deep-sea Guide (Week 38)
- IMES imports (Week 41)
- Addressed issues with VARS on postgresql. (Week 41)
- Working on the new DSG. Ran UI demos on it using Quasar and Naive-UI. Opting to use Naive-UI and Bootstrap. (Week 41)
- Modified tapemigration code to handle ingest of Mini ROV tapes. 🤖 I had no idea we even had those. (Week 42)
- Updated m3-quickstart project with initial SQL Server support and added a script to delete video sequences at the request of Geomar (Week 42)
- Squeezed in a little time to work on the new deep-sea guide. Sorting out how to best integrate the VARS Query functions into it. (Week 42)
- Iron Mountain video imports. (Week 42)
- Ongoing Iron Mountain video ingest tasks (Week 44)
- Fixed misnamed framegrab directories. (Week 44)
- Fixed time issues for a number of imported videos in VARS (Week 44)
- Working on integrating image ML endpoint into VARS (Week 44)
- Configuring a Mac Pro workstation for ML work and general video lab task support (e.g. generating video proxies). (Week 45)
- Usual support tasks (Week 46)
- Iron Mountain video import (Week 46)
- Integrating ML into VARS. (Week 46)
- Removing most disk IO for framecapture to speed up 4k framegrabs. (Week 46)

- Working on handling bounding box/localization rescaling for proxy videos with different sizes than master/mezzanine. (Week 46)
- Too much work on a weird bug in the TableView control in VARS. Started work on replacing the offending JavaFX control with a Swing version. (Week 48)
- 4 VARS Annotation releases since the last weekly report. (Week 48)
- Modified framegrab filenames so that the timestamp in the name now has millisecond resolution. Previously it was only second resolution; that prevented framegrabs from being taken very close together in time. (Week 48)
- Iron mountain video ingest (Week 48)
- Added a count by dive endpoint to Charybdis to support changes to EXPD. (Week 48)
- Integrated automated image analysis via machine learning into VARS. (Week 48)
- Fixed time-alignment issues when staff annotated a corrupted video. (Week 49)
- Modified image registration script for DARC (Week 49)
- Brian continues to work with Paul Rogers to polish up our new video player for annotation work and integrate it into VARS (Week 50)
- To reduce support overhead, Brian merged m3-registrar codebase, which handles all video registration into M3/VARS, into the m3-support project. (Week 50)
 - Added support for single file registration. (Week 50)
 - Investigating why a few files won't register in M3/VARS (Week 50)
- IMES imports (Week 50)
- Continuing investigation/workarounds on table rendering issues (Week 50)
- Iron Mountain video imports. To date, here are the statistics for the video tape to file conversion. (Week 52)

901221 - Midwater Time Series

- Investigated/resolved data issues with transect volume estimates. (Week 6)
- Updated camera parameter history for the ROVs in the transect database. (Week 6)
- Generated O2 profiles for all midwater transect dives (Week 11)
- Generated transect volume reports for all midwater transect dives (Week 44)
- Chatted with Mike McCann about accessing processed i2MAP data. Starting work on merging that AUV data with VARS annotations. (Week 44)
- Set up merge between i2MAP annotations and the processed netcdf nav/ctd data files to occur every morning at 6AM. (Week 45)

901603 - Video TAG

901618 - Pelagic-Benthic Coupling and the Carbon Cycle

- Scoping and prototyping work to port image annotation tools from the older VARS system into the new system. <https://github.com/hohonuuli/imgfx> (Week 2)
- Building JavaFX UI controls for image annotation to support porting the image annotations features from the older VARS, that Ken's lab is running, into the new system. These controls will also allow for rapid development of new annotation applications independently of VARS. Rapidly evolving source code is at <https://github.com/mbari-org/imgfx>, video demo of one of the controls at <https://youtu.be/Er3728Jh0C8>. (Week 3)
- Continuing to work on an annotation pane for desktop applications at <https://github.com/mbari-org/imgfx> (Week 4)
- Continuing work on adding image localization tools into the current VARS app. (Week 5)
- Working on request for changes on how images are registered in VARS (Week 44)
- Met with Crissy to work out changes to loading tripod images from station M into VARS. (Week 48)

902002 - FathomNet

- Discussions on NOAA's statement of work agreement to host external group's image collections for FathomNet. (Week 3)
- Discussion with MorphoCluster team about integrating it into our tools. They are also interested in using our vars-kb-server in their tools. (Week 4)
- Looking into ML image annotation as a service using <https://gitlab.com/bgwoodward/keras-model-server-fast-api> (Week 4)
- Implementing a % coverage estimator to report on images in FathomNet. It uses an ML endpoint, provided by CVisionAI, that proposes localizations on an image, and compares those results to the localizations in FathomNet. (Team private repo at <https://github.com/fathomnet/fathomnet-support>) (Week 5)
- Working on podman networking between two containers. Re-deployed FathomNet using podman pods. (Week 6)
- Meeting with BIIGLE dev about coordination with FathomNet (Week 6)
- Discussions with NOAA/NCEI on statement of work for archiving some fathomnet images as well as data/metadata archival formats. (Week 6)
- Added tag API to FathomNet to allow adding coverage estimate tags. (Week 6)
- FathomNet has purchased the domain names oceanvisionai.net and oceanvisionai.com. (Week 6)
- Working on adding annotation coverage estimates to all images in FathomNet. (Image below: Blue is human annotated, yellow is ML annotated, green is the intersection of ML with human) (Week 6)
- Preparing for upcoming workshop and project update. (Week 9)
- Working on presentations for the upcoming FathomNet workshop. (Week 10)
- Chrome's security restrictions have changed and reports a link to an external font as a phishing attack. This has been addressed. (Week 10)
- Working with the team to prep for the upcoming FathomNet workshop. Working on presentations too. (Week 11)
- Working on presentation for Monday's project update (Week 11)
- Investigating loading WoRMS into a VARS KB server. (Week 11)
- Fix to prevent very large searches that can cause a service to fail. (Week 11)
- Did some testing with capturing metrics using gtag (Week 11)
- Built a fast WoRMS taxonomic name server for FathomNet. This will also enable some other automations for other projects (e.g. notify video lab when the VARS KB and WoRMS drift apart). <https://github.com/fathomnet/worms-server> (Week 12)
- Gave part of the project update on Monday (Week 12)
- Prepping for next week's FathomNet workshop (Week 12)
- Preparing for upcoming FathomNet workshop on Thu and Fri (Week 13)
- Merged and deployed PR to include Google Analytics in FathomNet (Week 13)
- Integrated our new WoRMS name server into FathomNet's REST API. That automatically makes it available on the website. (Week 13)
- Met with the team to discuss deploying the ocean AI classification game on MBARI hardware. (Week 13)
- Presented at FathomNet workshop last Thu and Fri (Week 14)
- Discussion with NOAA over statement of work for archiving backups of FathomNet and generating DOIs for versions of FathomNet. Also discussed workflows for having NOAA serve and archive external contributions of images into FathomNet. (Week 15)
- Reviewed 2023 abstract for continuing FathomNet (Week 19)
- Deployed Ocean Vision AI game to <http://fathomnet.org/ocean-one-timer-0.1.2/#/> (Week 19)
- Deployed first iteration of Ocean Vision AI game to <http://fathomnet.org/game-prototype-v0.2.0> (Week 20)
- Meetings with Viame, Biigle developers to discuss FathomNet integration. (Week 20)
- Reviewed abstracts for marine imaging workshop (Week 20)
- Updated the fathomnet REST service to address database deadlocks that can occur when large updates are pushed while the site is under heavy usage. (Week 22)

- Pushed 16K localizations from VARS into FathomNet. This push is mostly midwater localizations. Example data set is here. (Week 22)
- Working on merging localizations from a staging database into the main VARS database. The work on VARS Annotation and discussions with the video lab on how to accommodate this have been done. The merge will result in some annotations being double counted. These new localizations will be put in a different group than the ROV annotations so that can be id'd as potentially non-quantitative annotations. (Week 22)
- Discussions with the BIGLE team about the ifdo 'standard'. (Week 23)
- Wrote a proof-of-concept ifdo to FathomNet csv converter. (Week 23)
- Podman has improved their systemd support. (It used to be essentially unusable). New docs for it are here. Deployed FathomNet using systemd/podman. (Week 29)
- Working on localization data cleanup and re-import into FathomNet and for VAA model training. (Week 29)
- Merging the fathomnet-m3-sync project into fathomnet-support to reduce redundant code and maintenance costs. (Week 29)
- Organized the next three milestones. (Week 33)
- Reviewing community feedback to add to milestones. (Week 33)
- Group meeting (Week 33)
- Writing a new Oceanvision AI game logger. (Week 34)
- Created milestones for upcoming, externally funded work. Starting work on a development plan for beta-2. (Week 34)
- Deployed a new OceanVision AI game logger. The logger is written using Quarkus. API docs at <http://fathomnet.org:8899/q/swagger-ui/>. GraphQL docs at <http://fathomnet.org:8899/q/graphql-ui/> (Week 35)
- Laid out development road map for FathomNet for remainder of 2022. (Week 35)
- Image size information is needed to correctly sync localization data from VARS to FathomNet. Added image sizes to 900K images in VARS that were missing this information. (Week 37)
- Refined milestones for the next phase of FathomNet development. (Week 37)
- Updated the OceanVision AI game logger to track changes in logging formats that the remote devs keep making. (Week 37)
- Added SSL to all FathomNet APIs as well as the main website. (Week 37)
- Reviewed proofs for the new FathomNet paper accepted to Scientific Reports. (Week 37)
- For OceanVisionAI games support. (Week 38)
 - Added endpoint for generating leaderboard scores: for example: <https://fathomnet.org/ovaigame/scores?mode=tetris&activeSpecies=fish> (Week 38)
 - Added SSL proxy to game logger. e.g. <http://fathomnet.org:8899/logs> is proxied by <https://fathomnet.org/ovaigame/logs> (Week 38)
 - The games have been deployed to: (Week 38)
 - <https://fathomnet.org/fathomnet-no-timer/tetris/production> (Week 38)
 - <https://fathomnet.org/fathomnet-no-timer/timed/production> (Week 38)
 - <https://fathomnet.org/fathomnet-no-timer/non-timed/production> (Week 38)
- New publication is out: Katija, K., Orenstein, E., Schlining, B., Lundsten, L., Barnard, K., Sainz, G., Boulais, O. Cromwell, M., Butler, E., Woodward, B. and Bell, K.C. FathomNet: A global image database for enabling artificial intelligence in the ocean. 2022. Scientific Reports 12, 15914. <https://doi.org/10.1038/s41598-022-19939-2> (Week 39)
- Working on the VARS-FathomNet sync to accommodate weird, one-off, import path used to load ML proposals into VARS (Week 41)
- Modifying the import from VARS and FathomNet to deal with the mess created by a ML generated bounding box import done by the video lab. This task is temporarily on hold due to yesterday's FathomNet press release. (We don't want to break anything while FathomNet is getting media attention) (Week 42)
- The FathomNet team met with our new web designer, Katie Parker, to discuss proposed enhancements. (Week 42)
- Investigated how to track funders for submitted data sets (Week 44)
- Run tests with yolov5 with 33k and new 315k models. (Week 44)

- For the ocean vision AI games(here, here, and here), investigated issues with logging a users game results (Week 44)
- Continuing workarounds for VARS to FathomNet sync to deal with major one-time import from ML proposals. (Week 44)
- Set up JIRA cloud (free tier) for the Ocean Vision AI project. (Week 45)
- Continuing to work on VARS to FathomNet sync. (Week 48)
- Merged a pull request for the OVAI games and redeployed them. (Week 48)
- Meeting with Squiddle devs re: FathomNet integration (Week 50)

902005 - VARS Annotation Assistance

- Investigating porting deepsea-ai database from Postgresql to SQL Server. (Week 9)
- Worked on porting the deepsea-ai-backend from postgresql to SQL server so we can run on our production database. Port is stalled as Prisma seems to require writing to the master database on the server. Looking for a workaround. (Week 10)
- Gamed out alternative database designs for deepsea-ai backend. (Week 10)
- Added a script to load Yolo output into Cthulhu to visualize localizations. (Week 10)
- Team was able to process a dive using an ML pipeline. Reviewing the output. (Week 10)
- Ported Danelle's event tracks DB schema from Postgresql to SQL Server (Week 11)
- Putting together a system diagram. (Week 11)
- Investigating issues with visualization of ML output in Cthulhu. Carlos will be picking that up. (Week 11)
- Working on Sharktopoda's communication specifications to integrate Cthulhu's localization functions and remove dependencies on ZeroMQ. We'll use this spec to contract the development of an updated Sharktopoda video player that supports localizations on video. Once the spec is done, Brian will create a test client and server for testing new development. The video lab hopes to contract out development of the new video player ASAP. (Week 17)
- Working on analysis comparing ML output with human annotations (Week 18)
- Working on analysis comparing ML annotations to human annotations (Week 19)
 - Analysis notebooks at <https://github.com/mbari-org/vaa-track-analysis> (Week 19)
 - Testing boxjelly with V4244 ML output to cleanup data for analysis. (Week 19)
 - Updated Cthulhu to run on M1 macs for testing with box jelly (Week 19)
- Working on abstract for 2022 Marine Imaging Workshop (Week 19)
- Running analysis comparing human annotations to ML annotations. <https://github.com/mbari-org/vaa-track-analysis> (Week 20)
- Working through merge code to pull ML generated bounding boxes from a staging database into VARS. (Week 24)
- Continuing to work on new vcr/localization remote protocol and reference implementation. (Week 25)
- Attempted to run a merge/sync operation between many localizations staged in a temporary database into the main VARS database. The attempt failed due to a database deadlock from a large SQL query (executed by a researcher). Follow up is waiting on the testing database on Fog to be synchronized with the production database. (It appears that the sync operation hasn't been working for a few months, IS has been notified) (Week 25)
- Still working on new vcr remote control protocol. Testing tcp vs udp. (Week 26)
- Modifying jsharktopoda to use as a test app for the new protocol. (Week 26)
- Worked on loading Benchmark videos into the video asset manager which unearthed a bug in handling a new use case (videos with the same name but different durations). Working on a fix. (Week 26)
- Merged ML generated localizations from a staging database into VARS. (Week 28)
- Created a new microservice, beholder, for capture/caching images from videos. For ML workflows, this allows viewing localizations without having to store/manage thousands of images per video. API docs are at <http://singularity.shore.mbari.org:8088/docs/> (Week 31)
- Integrated beholder with raziel. Switched Raziel from using Scalatra to Tapir so that API docs can be automatically generated. API docs are at <http://nexus.shore.mbari.org:8400/docs/> (Week 31)

- Integrated beholder into the docker stacks in both the m3-quickstart (for external users) and m3-microservices for (internal users). (Week 32)
- Completed both the client and server implementations for a new remote video control protocol. (Week 32)
 - Issue is tracked at <https://github.com/mbari-org/vcr4j/issues/9> (Week 32)
 - Updated a video player to use this protocol. (Week 32)
 - “Nearly” finalized spec has been written. (Week 32)
 - Brian is starting work on getting an external contractor to update Sharktopoda to use this protocol and to add the new localization features in the spec. (Week 32)
- Updated docs and client/server implementations based on the feedback from the team on the spec for the new video player. (Week 33)
- Brian decided that the older Cthulhu spec was not sufficient enough for the new player and has started a new UI spec. (Week 33)
- Addressed frame capture failures on a recent Rachel Carson cruise. (Week 33)
- Group meeting (Week 33)
- Starting search for developers to work on Sharktopoda 2. First developer to be interviewed will be former MBARI-an Paul Rogers! (Week 35)
- Meetings with freelance developers for work on the new Sharktopoda video player. (Week 37)
- Paul Rogers has accepted the contract to work on the new Sharktopoda/Cthulhu video player. Development has started in a the private repo at dingosky/Sharktopoda (Week 38)
- Created presentation for the Marine Imaging Workshop. (Week 39)
- Set up a public VARS server for interactive sessions at the Marine Imaging Workshop. Working on materials for the interactive session. Also created Windows builds of VARS Annotation and jsharktopoda so that researchers can try out VARS during the session. During the setup, Brian has been tracking issues to resolve as part of next year’s “VARS for the masses” project. (Week 39)
- Investigated discrepancies between the number of localizations pulled using m3-download and the number actually in the database. On the off chance that you ever need it, here’s a script to convert Pascal VOC files to a CSV. (Week 42)
- Continuing work with Paul Rogers on a new Sharktopoda video player that integrates Cthulhu localization functions. (Week 42)
- Running tests against Paul Roger’s video player project (replacement for Sharktopoda/Cthulu). #1, #2 (Week 44)
- Meets with Paul to discuss video player development (Week 44)
- Integrating image ML endpoint into VARS. (Week 45)
- Continuing to work with Paul Rogers on new video player (Week 46)
- Started testing the new Sharktopoda 2 video player. Also starting work on integrating it with VARS for integration testing. (Week 48)
- Migrating the code that ingests ML output into VARS from its own repo into m3-support to reduce duplicated code across projects. (Week 48)
- Updated m3-registrar to manage issues that occurred while registering videos for VAA Benchmarks. (Week 48)
- Most of my Brian’s time this week has been running tests and integrating the new Sharktopoda video player. Involved repos are: (Week 49)
 - Sharktopoda (private repo) (Week 49)
 - vars-annotation (feature/sharktopoda2 branch) (Week 49)
 - vcr4j (develop branch) (Week 49)
- This week has been all about testing and integrating the new Sharktopoda video player. (Week 51)
- Wrapping up development, testing and integration of the new Sharktopoda 2 video player. (Week 52)
 - First release of VARS with Sharktopoda 2 integration is 1.4.0-rc8. (Week 52)
 - Setup instructions with VARS are here. (Week 52)

902012 - Telepresence on MBARI Research Vessels

- Pointed Eric Martin at VARS endpoint for finding annotations within geospatial bounds. (Week 9)

- Group meeting (Week 33)

Out of Office

- Jan 31 - Feb 11 - Brian will be a visiting scientist at [DARC](#) to upgrade their video annotation system.
- Due to potential COVID exposure at MBARI, Brian is working at home waiting for the results of his COVID test.
- Due to the frequent COVID cases among MBARI staff, Brian is working remotely for now.
- Jan 20 - Jan 25 - Intermittently participating in the JChampions conference
- Jan 20 - Marine Imagery Annotation Standard Workshop
- Feb 14 - Feb 25 - Brian will be a visiting scientist at [DARC](#) to upgrade their video annotation system. Note that the dates were rescheduled from the original Jan 31 - Feb 11.
- Due to COVID in his family, Brian is working remotely for now.
- Feb 14 - Feb 25 - Brian will be a visiting scientist at [DARC](#) to upgrade their video annotation system.
- May 5th. Off the grid.
- Jul 7-8 Vacation
- Jul 25-28 Vacation
- Brian is working at home taking care of a daughter with COVID.
- Brian is (still) working at home taking care of a daughter with COVID.
- Jul 5-8 Vacation
- Jul 19 - out of office
- 7/25 - 7/28 - Vacation
- 10/3 - 10/7 - [Marine Imaging workshop](#), Brest, France
- 10/3 - 10/7 - [Marine Imaging workshop](#), Brest, France. Presentation is online [here](#).
- Jan 3 - 11 - Vacation
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Overhead

- Crash tutorial for Lisa Emanuelson on using bash. (Week 3)
- Coordinating with DARC in prep of next week's VARS upgrade. (Week 6)
- Brian is upgrading DARC's video annotation systems (Week 7)
- The migration of DARC's video annotations from the old VARS to the new system has been completed. (Week 8)
- Creating supporting code for DARC's video annotation workflow. (Week 8)
- Completed the set up of VARS at DARC. (Week 9)
- Started building cross-platform docker containers for M3 services. Example build script at <https://gist.github.com/hohonuuli/f94942e280819095ef1eeae2460fe097> (Week 9)
- Provided additional documentation to DARC for their VARS installation. (Week 10)
- Investigating issue with DARC's script that merges CTD/NAV with video annotations (Week 11)
- Fixed an issue with DARC's data merge of CTD with their video annotations (Week 12)
- Upgrades to titan cluster computers changed enough things that the LTO Manager web app and the automated video disk space app stopped working. Those are fixed now. (Week 13)
- Spent some time learning Vue 3's composition API and typescript. (Week 15)
- Migrated DARC's VARS system to a postgresql database (Week 17)
- Moved to new office. (Week 18)
- Working on abstracts (Week 19)
- Abstract presentation (Week 20)
- Meeting with GEOMAR to discuss a VARS deployment. (Week 20)
- Addressing some VARS issues at University of Hawaii. (Week 26)
- Proposals (Week 28)
- Meeting with Core Nav team (Week 31)

- GitHub Pages now supports building static web sites using GitHub actions. This is useful for build tools that can produce documentation sites (e.g. Maven), or if you need to generate API documentation when you commit code. (Week 32)
 - Example site: <https://mbari-org.github.io/beholder/> (Week 32)
 - Example GitHub action to generate site:
<https://github.com/mbari-org/beholder/blob/main/.github/workflows/scala.yml> (Week 32)
- Addressed some data issues for DARC in their VARS system (Week 32)
- Meet with DARC techs working on adding analysis/reporting to their VARS system. (Week 32)
- Attending intern presentations (Week 32)
- Discussion with DARC developers on how to manage security handshakes with VARS REST Services. (Week 33)
- Working on travel arrangements for Marine Imaging workshop (Week 33)
- Updated a Scala project template to include default github actions. To use the template, run `sbt new mbari-org/scala3-mbari-cli`. (Week 33)
- AWS workshop (Week 34)
- Provided DARC with code to change dates of video in VARS. (Week 35)
- Working on proposal feedback. (Week 35)
- Added a feature to M3/VARS to allow adjusting the start timestamp of a single video asset. This required changes to vampire-squid, the m3 python api, and DARC's M3 setup. (Week 37)
- Tried out Java 19's new project Loom (i.e. a preview feature of virtual threads and structured concurrency). (Week 42)
- Investigating ongoing bug that DARC is encountering in VARS (Week 44)
- Looking into venues for possibly hosting the next Marine Imaging Workshop (2024 or 2025) (Week 44)
- The Cookie break app is long dead as the tools to build it don't actually exist anymore. Started putting together a new one. (Week 44)
- On Su, M, Tu, and Wed, attending a remote imaging workshop hosted by CSIRO/Ifremer (Week 44)
- With the plethora of messaging and issue tracking services in use by various projects, Brian started using Obsidian for a daily task/general notes tracker (it can link to all the issues/messages). It's pretty slick! (Week 45)
- Continuing investigations into the University of Hawaii's annotation bug. (Week 46)