

902002 - Fathomnet Detect and Classify

Week 51

1. Brian Schlining
 - a. Started work on spinning up tooling for staff looking for tasks during the shutdown. There will be an opportunity to correct localizations in VARS. See <https://mbari.slack.com/archives/C01GU8N0ZKN>
 - b. Continuing work on the fathomnet website and REST services. We're getting closer!
 - c. Working on support services required by FathomNet (e.g. automated image validation and metadata extraction)

Week 50

1. Brian Schlining
 - a. Continuing work on the fathomnet website and REST services. We're getting close!

Week 49

1. Brian Schlining
 - a. [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 ;-)

Week 48

1. Brian Schlining
 - a. Continuing development of <http://fathomnet.org>. See <https://bitbucket.org/mbari/fathomnet>
 - b. Added support for inter-app messaging using <https://nats.io/>
 - c. Started work on app that listens for new image registration(via nats) and validates the images (e.g. verifies the URL is correct, extracts dimensions and checksum).
<https://bitbucket.org/mbari/fathomnet-validator>

Week 47

1. Brian Schlining
 - a. Continuing work on [FathomNet web interface](#).
 - b. [Investigated issues](#) with wrong time zones for videos/annotations for a few dives. [Created a quick reporting tool](#) to help investigate issues in the future

Week 46

1. Brian Schlining
 - a. Continuing development of fathomnet web interface.
 - b. The evolving web interface is at <http://fathomnet.org>

Week 45

1. Brian Schlining
 - a. Fathomnet public API is up and running for development. Latest docs at <http://fathomnet.org:8080/swagger-ui>
 - b. Working on Fathomnet web interface with <http://makemodel.co> <https://bitbucket.org/mbari/fathomnet>

Week 44

1. Brian Schlining
 - a. Created code for exporting data from VARS into FathomNet.
 - b. VARS images have had copyright info added and are now staged on atlas:/FathomNet and service via <https://fathomnet.org>. A subsample of VARS annotations have been loaded into the fathomnet database for testing and development purposes.
 - c. Still working through podman/SSL/CORS issues on the external server
 - d. Continue to work on REST API.
 - e. Continue to work with <http://makemodel.co> on user interface

Week 43

1. Brian Schlining
 - a. External Fathomnet Server is now running at <https://fathomnet.org>. It's configured with SSL, and set up to proxy the fathomnet microservice. A prototype web UI for testing is deployed, but that is NOT the official UI we're working on.
 - b. Fathomnet API docs at <http://fathomnet.org:8080/swagger-ui>, <http://fathomnet.org:8080/rapidoc>, <http://fathomnet.org:8080/redoc>
 - c. <https://nats.io/> is running as a message system for fathomnet.
 - d. Working with [make and model](#) on [UI design](#)
 - e. [Developing application to sync image localizations from VARS to Fathomnet](#).
 - f. [Adding API endpoints to support UI use cases](#).

Week 41

1. Danelle Cline
 - a. Tested code to remove black borders and deinterlace
 - b. Noticing some duplicate annotations
 - c. Need a way to filter out equipment and transect versus close-ups
2. Brian Schlining
 - a. Continue to work on [data model and REST services](#)
 - b. Continue to work with <https://www.makemodel.co/> on fathomnet web UI
 - c. Setting up external web server for FathomNet (<https://fathomnet.mbari.org>), database (on [dione.mbari.org](#), and [nats server](#)

Week 39

1. Danelle Cline
 - a. Interview scheduled 2pm 9/24 to speak to web designers
2. Brian Schlining
 - a. Working with [Make&Model](#) to develop fathomnet web UI
 - b. Expanding database model to accommodate [growing use case list](#).
 - c. Implemented security using Firebase and JWT. Example project and docs are [here](#).

Week 38

1. Brian Schlining
 - a. Added the following features:
 - i. [Fast geo-located image search endpoints](#)
 - ii. Uploads of bounding-box data now archives the original source files.
 - iii. Working on [nats](#) integration for inter-app messaging.
 - b. Working on docker-compose stack

- c. Still working on security. Current approach is [firebase](#) for authentication. Some user data, such as roles and expertise-rank, is stored in FathomNet. [Also adding API keys](#) to allow authentication without firebase so that users with API keys can access protected REST endpoints.

Week 37

1. Danelle Cline
 - a. Started compiling notes about improvements and nice-to-have features
2. Brian Schlining
 - a. Continue to work on figuring out security for web interface and API endpoints

Week 36

1. Danelle Cline
 - a. Tested a few of the APIs. Had some difficulty fetching images. Tar of the archive would probably be easier.
2. Brian Schlining
 - a. Added authentication via Google's firebase
 - b. Created a web interface for FathomNet.
 - c. Working on supporting services for FathomNet (validating images submitted, archiving original uploads of bounding boxes, user management, additional download formats)

Week 35

1. Brian Schlining
 - a. [Deep dive into OAuth 2.0](#). Working out how to implement authentication and security for FathomNet. Wrote some prototypes against [Okta](#) and [Firebase Authentication](#).
 - b. Started work on a minimal UI to enable authentication.
 - c. FathomNet supports different taxa providers, currently [MBAR's VARS knowledgebase](#) and [WoRMs](#). Had discussions with WoRMs developers about adding additional REST API features to better support FathomNet's needs.

Week 34

1. Brian Schlining
 - a. Researching OAuth and OpenID Connect
 - b. Migrated code for applying embargoes and image watermarks from the older VARS to M3/VARS.
 - c. Created executables for windows/linux/macOS for a VARS public query.

Week 33

1. Brian Schlining
 - a. Studying up on OAuth 2.0 and OpenID Connect (... zzzzzzzz).
 - b. Investigating Okta, Auth0, Firebase, and <https://www.keycloak.org/>

Week 32

1. Brian Schlining
 - a. Cranking away of [FathomNet development](#)
 - b. Deploying development snapshots. API docs at <http://quasar.shore.mbari.org:8888/swagger-ui> and <http://quasar.shore.mbari.org:8888/rapidoc>

Week 31

1. Brian Schlining
 - a. [FathomNet API](#) is now being written using [Micronaut](#).
 - i. API for CSV uploads and archiving of boundingbox/images is implemented
 - ii. Swagger docs/ui are implemented
 - iii. Testing using Docker/SQL Server container implemented
 - iv. Docker compose stack (SQL Server/Kafka/Zookeeper) is implemented
 - v. Exploring authentication/user id management. ([Otk](#), [Auth0](#), [Firebase](#))
 - vi. API access logging is implemented

Week 30

1. Brian Schlining
 - a. Working on read-view implementation of database. <https://bitbucket.org/mbari/fathomnet>

Week 28

1. Brian Schlining
 - a. Working on REST API for ingesting bounding box information
 - b. Cleaned up externally loaded annotations. We've created a new `activity` in VARS named `localize` for annotations that are specifically for machine learning.

Week 26

1. Brian Schlining
 - a. Weekly meetings
 - b. Started some courses on implementing CQRS, which could be used to track change history in FathomNet.

Week 23

1. Brian Schlining
 - a. Reviewing teams's submission to NeurIPS 2020

Week 21

1. Brian Schlining
 - a. [Added ingest of CSV files to fathomnet](#)
 - b. We have a requirement to track changes/change history of images and bounding boxes, so I'm working through that in the database design. <https://bitbucket.org/mbari/fathomnet>
 - c. Verified DeepPIV videos, 2015 videos are now integrated with M3
 - d. [Converted user stories to JIRA issues to allow progress tracking](#).

Week 19

1. Brian Schlining
 - a. Working on an API for bounding box ingest and archiving <https://bitbucket.org/mbari/fathomnet>

Week 18

1. Brian Schlining
 - a. Assisting Joost with migrating DeepPIV videos to M3
 - b. Ran tests on Kevin Barnards code that loads building boxes from RectLabel into VARS to verify that it's copacetic. <https://mbari1.atlassian.net/browse/VAA-30>

Week 16

1. Brian Schlining
 - a. Thinking through [data server design](#) and [user stories](#)

Week 14

1. Brian Schlining
 - a. Worked on drafts of UI design for a FathomNet web interface.

Week 11

1. Brian Schlining
 - a. Updated [annosaurus to publish associations](#) (i.e. details about annotations) via ZeroMQ and deployed in on the MiniROV computer.

Week 10

1. Brian Schlining
 - a. Presented user stories to FathomNet team, continues work on data modeling for search/archive/retrieval.
 - b. Modifying annotation service ([annosaurus](#)) to provide real-time notifications when associations are added or updated.

Week 9

1. Brian Schlining
 - a. Updated [FathomNet external repo doc](#) with User stories.
 - b. Started roughing out a data schema to meet user stories requirements.
<https://bitbucket.org/mbari/fathomnet>

Week 7

1. Brian Schlining
 - a. Completed integration of [ZeroMQ notifications when a new annotation is created](#) in support of Kakani's research.
 - b. Deployed updated [M3/VARS software](#) stack for the MiniROV

Week 6

1. Brian Schlining
 - a. Investigated methods to integrate localized labels of parts of organisms into existing annotations.
[M3-87](#)
 - b. FathomNet kick off meeting