

500055 - Video Annotation DM

Week 50

1. Brian Schlining
 - a. Investigating issues that have been occurring with the automated registration. Bad things happen when file names have spaces (not web URL friendly) or duplicate videos are on M3 (registration tracks videos by checksum, duplicate videos put registrar in a loop where it keeps swapping video info between the two identical files)

Week 49

1. Mike McCann
 - a. Completed migration of vfcbydive from seaspray to expanse

Week 48

1. Mike McCann
 - a. Writing Python script to replace what is broken in GraphicsMagick for vfcbydive
2. Brian Schlining
 - a. In prep for upcoming 4K video, ran tests with HEVC and VP9 mezzanine video files for dives Doc Ricketts 1313 and Ventana 4313

Week 47

1. Mike McCann
 - a. Getting lots of help from Pat on finding the right version of ImageMagick that works on expanse
2. Brian Schlining
 - a. Helping video lab explore options for serving video files to public
 - b. Imported annotations from recent Mini ROV dives into the shore database. Working with Lonny and Kakani to sort out the dive number mess from them.

Week 46

1. Mike McCann
 - a. Continuing to migrate vfcbydive to work with GraphicsMagick on expanse (CentOS 8)
2. Brian Schlining
 - a. Hardware encoder support for AV1 is being released. Starting discussion on codecs for working with 4K video.

Week 45

1. Mike McCann
 - a. Chipping away at the changes needed in vfcbydive for it to work using GraphicsMagick

Week 41

1. Brian Schlining
 - a. Along with the video lab, hashing out how to manage non-core video data in VARS. (For example, benthic lander camera, bioinspiration stereo cameras)

Week 39

1. Brian Schlining
 - a. Working with video lab to handle annotations of organism parts (requested for ML-tracking project)

Week 38

1. Brian Schlining
 - a. [Added tools to generate reports](#) for all anomalies found in camera logs for dives. This tool is used to help identify problematic tapes before Iron Mountain begins the tape to video conversion of all MBARI tapes.
 - b. [Completed migration of all apps from seaspray](#) to expanse and quasar.

Week 37

1. Brian Schlining
 - a. For the tape-to-video conversion, I'm continuing work and discussions on locating and dealing with timecode resets.
 - b. Completed migration of supporting apps from Seaspray to other VMs

Week 36

1. Brian Schlining
 - a. Completed migration of all support applications off of Seaspray to Expanse and Quasar
 - b. Started prototyping a web based query app. Added additional APIs to the knowledgebase to support this.

Week 35

1. Brian Schlining
 - a. [Migrated all remaining supporting applications from](#) VARS to M3/VARS and moved them off seaspray.shore.mbari.org which is being retired in September. Docker apps were moved to expanse.shore.mbari.org. Non-docker apps were moved to quasar.shore.mbari.org.
 - b. As part of the tape-to-videofile migration, discussing with the video lab how to manage timecode resets and jumps that occur [mid-tape](#) or [during a dive](#).

Week 34

1. Brian Schlining
 - a. Completing a port of software that supports various VARS tasks such as Samples database integration, framegrab deletion reports, and video file metadata synchronization from VARS to M3/VARS.
 - b. Migrated support tasks from the server seaspray to quasar and expanse.

Week 33

1. Mike McCann
 - a. Moving the vfcbydive code from seaspray to expanse – getting help from Pat on installing the required Perl modules
2. Brian Schlining
 - a. Getting VARS public query up and running
 - b. Updating public image watermarking code from VARS to newer M3/VARS system.

Week 31

1. Brian Schlining

- a. Addressed a bottleneck (due to parallel processing of videos,checksum creation) in the video registrar.
- b. Fixed misnamed videos from recent Mini ROV cruises.

Week 26

1. Brian Schlining
 - a. Many bug fixes and feature releases this week in the microservices and vars-annotation.

Week 25

1. Brian Schlining
 - a. Continuing to add and improve features to M3/VARS needed to support ML workflows and the upcoming Iron Mountain videos from tapes.
 - b. I released the following updates this week. The user apps can be downloaded from <http://m3.shore.mbari.org/apps/>
 - i. [Cthulhu 0.0.2](#)
 - ii. vars-annotation [0.5.0](#) and [0.5.1](#)
 - iii. [Annosaurus 0.7.0](#)
 - iv. [Vampire-squid 0.3.0](#)
 - c. In preparation for the Iron Mountain tape to video project, re-working the [automated video registration](#) with the following changes:
 - i. Improved video start time resolution from seconds to milliseconds
 - ii. [Consolidating REST Client](#) code so that [I have reliable and well-tested libraries](#) for use with M3 applications.
 - d. Providing advice to CSIRO on Dockerizing their VARS application builds.

Week 24

1. Brian Schlining
 - a. Continue to work on Iron Mountain video ingest. The first test run showed we need better than second resolution for video start timestamps in order for tape annotations to align correctly with the video files. Modified the video registration to look at timestamp in filenames (up to millis resolution) then fall back to creation_date atom (second resolution) in files.
 - i. <https://bitbucket.org/mbari/tapemigration>
 - b. Ironing out a few issues with video registration so that we can get framerate and the video codecs registered correctly. I was using Tika which did not get that info. The new pipeline uses ffmpeg and falls back to Tika if needed. Modified filenames to include milliseconds in timestamps.
 - i. <https://bitbucket.org/mbari/m3-registrar>
 - c. As part of the video ingest work, I'm consolidating Java code used by various projects to make REST calls to M3 microservices. Also removing hacks and cleaning up the video asset manager REST API.
 - i. <https://github.com/mbari-media-management/vampire-squid>
 - ii. <https://github.com/mbari-media-management/vars-annotation>
 - d. Merged recent Mini ROV annotations into the main database. <https://mbari1.atlassian.net/browse/M3-127>
 - e. Adding codesigning to various applications for Macs as [Gatekeep](#) flags non-signed apps as corrupted.

Week 23

1. Brian Schlining
 - a. Completed first test run of ingesting videos ripped from MBARI tapes by Iron Mountain. <https://mbari1.atlassian.net/browse/M3-120> . Working on improving accuracy of start times for iron mountain videos.
 - b. Working on improvements and feature requests for VARS

- i. <https://mbari1.atlassian.net/browse/M3-123>
- ii. <https://mbari1.atlassian.net/browse/M3-122>
- iii. <https://mbari1.atlassian.net/browse/M3-124>
- iv. <https://mbari1.atlassian.net/browse/M3-118>
- v. <https://mbari1.atlassian.net/browse/M3-117>

Week 22

1. Brian Schlining
 - a. Iron Mountain delivered a test batch of videos converted from some of MBARI's ROV tapes. Brian is working on software to process these videos and set the correct metadata and filenames. <https://bitbucket.org/mbari/tapemigration> . Part of this process also looks for timecode resets during a dive, which can cause problems with looking up some of the metadata.
 - b. Investigating methods to extract frame rates from video files as part of video registration. <https://bitbucket.org/mbari/m3-registrar>

Week 21

1. Brian Schlining
 - a. [Deleted "test" dive annotations from M3/VARS](#)
 - b. Added a ``seek to`` keyboard shortcut to vars-annotation
 - c. [Starting work on ingesting videos](#) from Iron mountain as part of migrating all tapes to video formats.

Week 18

1. Brian Schlining
 - a. Adding docs for spinning up m3-microservice on sql-server
 - b. Working on improving support for postgresql
 - c. Responding to many internal/external support requests:
 - i. University of Hawaii - Assist their team with using VARS remotely
 - ii. CSIRO - Their team is looking at building their own deep-sea guide on their M3/VARS system.
 - iii. CVISIONAI - Assist with building and running M3/VARS
 - iv. Geomar - Requests for troubleshooting their VARS system

Week 16

1. Brian Schlining
 - a. CSUMB students presented their ROV dive portal to the video lab

Week 15

1. Mike McCann
 - a. Trying to fix vfcbydive for tibr 150

Week 14

1. Mike McCann
 - a. Fixed a vfcbydive problem reported by Lonny: elapsed millis image file names not captured
2. Brian Schlining
 - a. Packaged the applications listed below for Windows. They can be downloaded from <http://m3.shore.mbari.org/apps/>
 - i. vars-annotation
 - ii. vars-query
 - iii. jsharktopoda

Week 13

1. Mike McCann
 - a. Changed vfcbydive to copy original .png rather than symlink as it updates EXIF metadata

Week 12

1. Mike McCann
 - a. Continuing work on vfcbydive to work with new M3 file naming conventions
2. Brian Schlining
 - a. Upgrading all microservices to [Scalatra 2.7.0](#), [Scalatest 3.1.1](#), and [Scala 2.13.1](#)
 - b. Completed fix of data [sync issues on the Western Flyer](#)

Week 11

1. Mike McCann
 - a. Trying to fix vfcbydive to work with M3 framegrabs
 - b. Beginning migration of vfcbydive from seaspray (CentOS 6) to expanse (CentOS 8)
2. Brian Schlining
 - a. [Fixing issues](#) resulting from failed database replication on the Western Flyer.

Week 10

1. Mike McCann
 - a. Revising vfcbydive to deal with images from M3_ANNOTATIONS
2. Brian Schlining
 - a. Met with CSUMB capstone students to continue work on an integrated dive page.

Week 9

1. Brian Schlining
 - a. Met with CSUMB Capstone students

Week 7

1. Brian Schlining
 - a. [Tape annotation/framecapture](#) was restored and [released](#) to the video lab.
 - b. Worked on standardizing M3/VARS builds for different MBARI deployments.

Week 6

1. Brian Schlining
 - a. To support Kakani's LCM tool, added ZeroMQ notifications to annosaurus so that external tools can be notified when an annotation is created or modified. See [M3-88](#) and [annosaurus 0.6.0](#)
 - b. Addressing JVM [crash when VARS Annotation made a framecapture](#). Turns out this was due to changes in how macOS handles secure access to cameras. A fix should be out shortly.
 - c. Addressing a bug in annosaurus when resolving existing annotations with a bogus time of `1970-0101T00:00:00Z`.

Week 5

1. Brian Schlining
 - a. [Work on syncing chief scientist info from EXPD with media information in M3.](#)

- b. As part of the conversion of all tapes to digital video, the video lab needs to prioritize which tapes are to be transcoded. [Brian analyzed dives and tapes to verify that we had the correct metadata needed for all tape](#). Links: [Dive Analysis](#), [Tape Analysis](#)
- c. Investigating why [framecapture from VARS Annotation is crashing when running on Java 11](#)