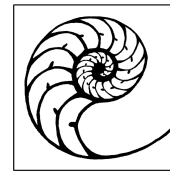


WebCAT Tools & Data Management

Dave Foster

Axiom Data Science

dave@axiomdatascience.com



Axiom
DATA SCIENCE



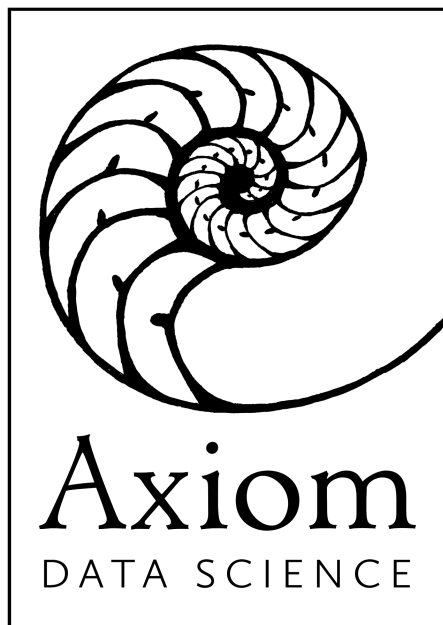
November 14 - 15, 2018



Charleston, SC

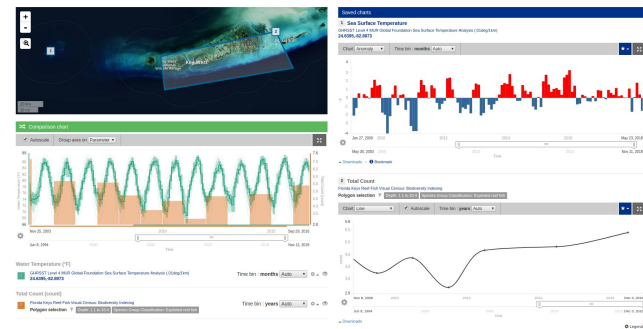
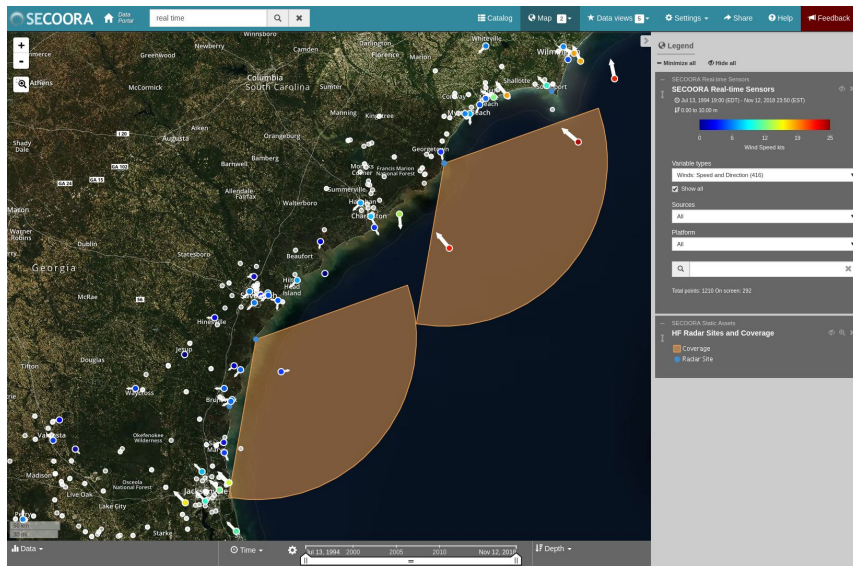


Company Background



- Founded in 2006
- 20 employees
- Offices in AK, OR and RI
- Mission driven: Build capabilities which accelerate the synthesis and re-use of earth science data
- Federal Partners: NSF, NOAA, USGS, BOEM, NASA, FWS, DARPA, ONR
- Other Partners: MBARI, Shell, UAF, UAA, Carnival

Our Work



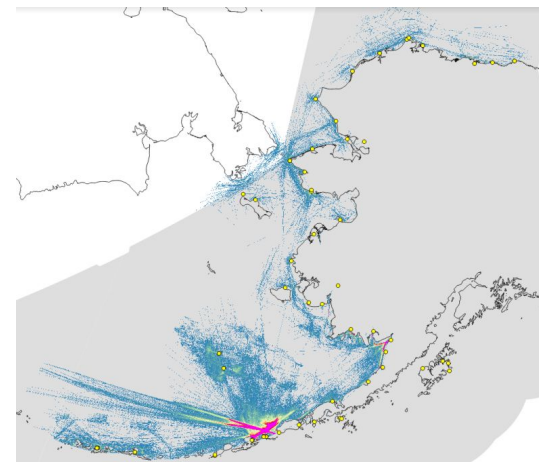
RESEARCH WORKSPACE

SECOORA Glider Group

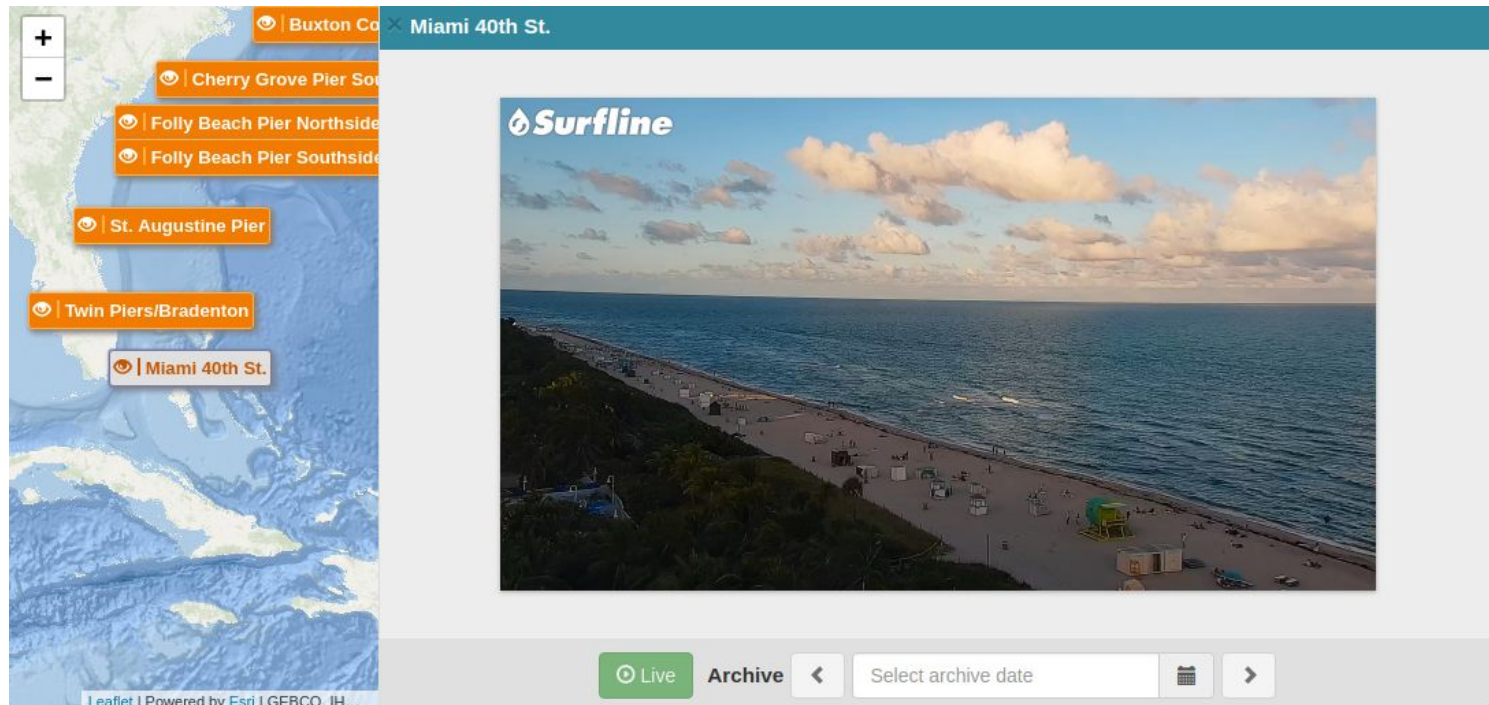
Files Settings

Add files Metadata New file Actions

Name	Size	Uploaded By
acoustic_data_796_181651_24485762_-83.119530.log.wav	199.7 kB	Laurent Cherubin
acoustic_data_797_105912_24480629_-83.114212.log.wav	199.8 kB	Laurent Cherubin
acoustic_data_797_105840_24480665_-83.114349.log.wav	199.7 kB	Laurent Cherubin
acoustic_data_797_105808_24480694_-83.114471.log.wav	199.6 kB	Laurent Cherubin
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WebCAT Interface

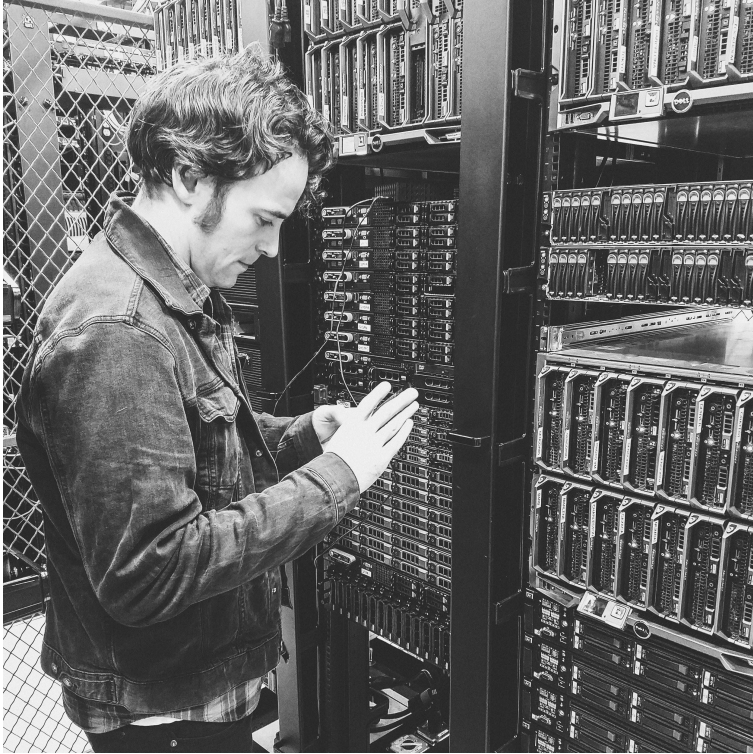


secoora.org/webcat

Data Infrastructure



Data Infrastructure



~5,000 processor cores
~1.5 petabytes of functional storage/5 petabytes of actual storage (~1,500 hard drives)
Level 2 Fat Tree Infiniband Network, 40 Gb/Sec node to node). 240 Gb/Sec cluster to cluster

Software Infrastructure

System for ingesting and standardizing remote data to Axiom infrastructure



- ~100 gridded products
 - forecasts, satellite, etc
- ~900 moving platforms
 - gliders, animals, cruises
- 8 video cameras
- Sensors:
 - 10 sources, 44 stations (& growing!)

WebCAT:

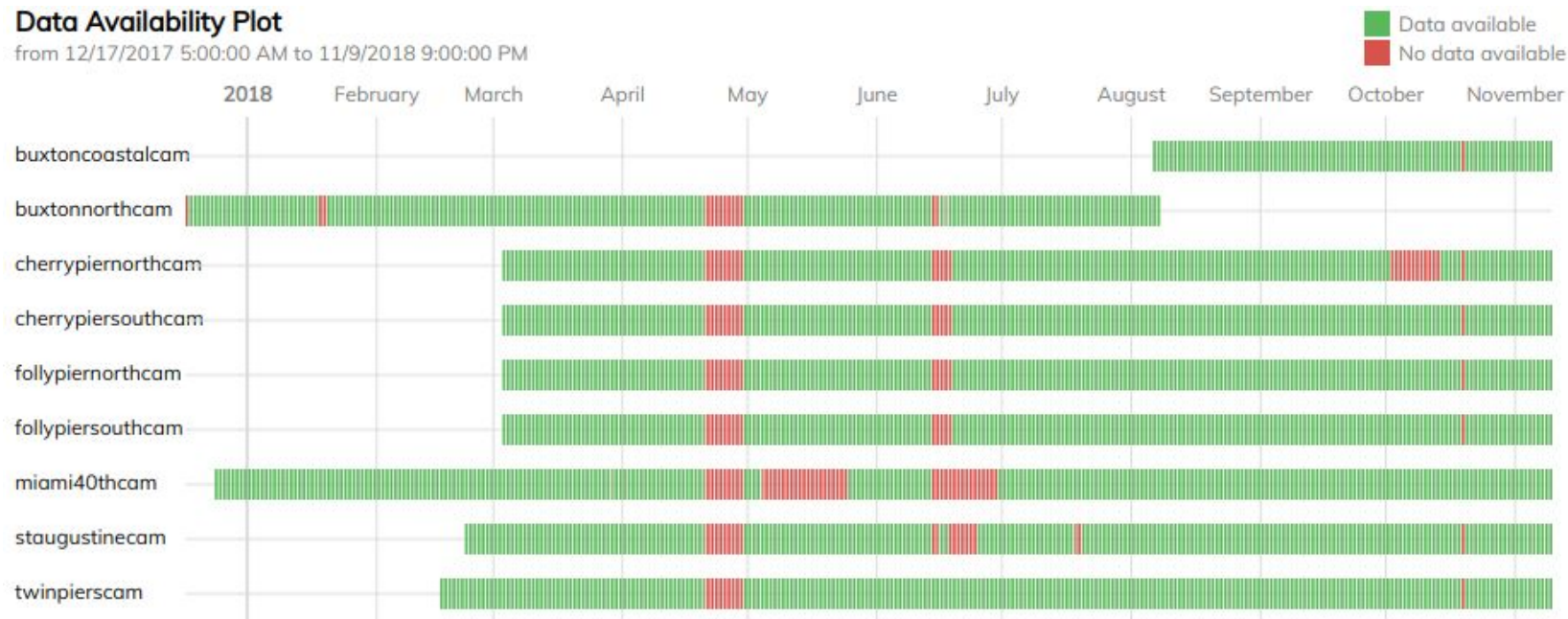
Daily, two days back for a full day

Weekly, backfill the previous week

Temporal Coverage

Data Availability Plot

from 12/17/2017 5:00:00 AM to 11/9/2018 9:00:00 PM



webcat-video.axds.co/status