U.S. Animal Telemetry Network
Steering Group Meeting SG-12
May 6, 2022
1:00-5:00pm Eastern Daylight Time
MEETING MINUTES
https://meet.goto.com/IOOC
Optional Phone Line:
United States: +1 (646) 749-3129
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Co-Chairs: Bill Woodward & Sean Hayes

Participants: Bill Woodward, Sean Hayes, Merra Howe, Megan McKinzie, Bob Houtman, Greg Skomal, Randy Wells, Jim Price, Erin LaBrecque, Mike Weise, Joy Young, Derrick Snowden, Woody Turner, Matt Ogburn, Kim Holland, Gabrielle Canonico.

1:00 Welcome   [B. Woodward & S. Hayes]

B. Woodward welcomed everyone to the meeting and introduced the new MMC representatives: Merra Howe (replacing Sam) and Erin LaBrecque (alternate for Merra). S. Hayes welcomed everyone and mentioned how energizing these meetings are in person but will continue to move forward virtually for now, but the continued engagement is appreciated.

E. LaBrecque work focuses on surveys of marine mammal research and stock assessment reports, serves as a lead for biologically important areas for east coast and Gulf of Mexico regions and using telemetry data to inform decision making.

Merra Howe worked as a policy analyst at University of Hawaii with dolphin movement patterns and worked with S. Simmons who thought it was a good fit. (*update- Merra notified us on June 22 that she is leaving MMC and Erin will be our primary contact*)

1:05 IOOS Marine Life Program

ML Program vision   [G. Canonico]

Funding did not materialize for MarineLife 2030; however, IOOS still considers it an important issue and will continue to look at the future through a marine life lens. G. Canonico provided a summary of IOOS vision on the marine life program. Though funding did not materialize from the president's budget, IOOS still wants to work with the communities on how to implement a program within IOOS for marine life and ATN has been helping to achieve that vision. Future decisions need to be made to determine how we continue to unify ATN and MBON as well as the work regional associations are doing, and user requirement needs. Additionally, efforts must consider how to bring together animal movement and biodiversity (BioTrack), data assembly, maintaining and expanding ATN DAC for integrated analyses.

Update on funding   [Derrick Snowden]

D. Snowden provided a brief funding update mentioning that NOAA still does not have permission for spend plans for FY22 and FY23. If the proposed spend plan passes, NOAA will be able to support data management functions ATN has come to rely on with central DAC function and coordination. Unfortunately, expanding beyond that cannot be committed too at this time, so for now DAC will be a firm resource you can rely on.

IOOS vision for leadership of the ATN post-Bill Woodward   [Derrick Snowden]

Current efforts for B. Woodward's replacement are still ongoing and NOAA is exploring the idea of rotation assignments that might allow coverage without a fulltime employee due to funding constraints. For the foreseeable future, a central coordination is needed but will not have a single person that will serve all the responsibilities such as administrative duties.

B. Houtman mentioned they have the same issue as NOAA for funding and has not been approved but heard earlier in the week that more information should be available within the next 2 weeks and NOAA might get 70% of FY22 allocation. However, they do not know the final FY22 final allocation of funding and are up against FY closeout action which is very frustrating.

S. Hayes mentioned NMFS has come through with their full share and is amazed that happened. Currently, NMFS is partly on hold with spending funds. S. Hayes mentioned his detail ends in June and he will have flexibility to step into some additional coordination responsibilities.

B. Woodward mention NMFS is funding DAC and it made it through and is seeing value of ATN.

M. Weise mention ONR are facing budget challenges and are awaiting guidance on spending. Funding for MarineLife 2030 is still a big picture idea and ONR is behind that and maintain fundamental function of the DAC. M. Weise mentioned the leadership from a central coordinator is needed but is happy to lend services when necessary. He continued those other options may need to be explored and if/how to consider that multiple agencies are ready to fund the grant system and better coordinate funding for a data assembly center.

W. Turner received less funding, and the agency is scrambling to fill the gap. W. Turner also emphasized the importance of the DAC and encourage IOOS to double down on the MarineLife 2030 proposal. The signals are good and encourages NOAA to propose it again next fiscal year. W. Turner also mentioned another opportunity for funding with the MBON and ATN grant proposals; however, there may not be enough funding for more than two proposals. W. Turner encouraged the group to be prepared for when funding becomes available.

D. Snowden mentioned the president's budget has been referenced and, within NOAA, had the support of multiple programs within NOS. That is the model we need to follow across

line offices and program offices. G. Canonico does great work to keep MarineLife alive but if participants can suggest other partnerships- that would be helpful.

J. Price mentioned he has been able to support co-funding two projects from the proposals at $2 million level but BOEM is still in the tail end of internal review of funding requests. It is high on the list but does not guarantee it. Renewable energy is also a big target for FY23 and offshore wind and fits right into priorities of DOE, which makes him optimistic of 1 or 2 of proposals. The final decision should be made in a few months.

1:20 Updates

ATN (Bill, 20 minutes)
B. Woodward provided a brief summary of updates detailed below:
- *Total amount of funds provided to ATN from FY16-FY21 (6 years)*
  - ONR = $2.9M (41%)
  - BOEM = $1.98M (28%)
  - IOOS = $1.645M (23%)
  - NMFS = $0.60M (8%)
  - Totaling = $7.125M
- *Past two Years ATN funding:*
  - FY-20 = $1.38M
  - FY-21 = $1.435M
  - Uncertain for FY-22
- *ARGOS Satellite Data Collection Fees Program*
  - ONR Funded and supporting 59 satellite tagging programs and 2,688 tags
  - Funding anticipated through mid-FY 2024
- *International AniBOS Network*
  - ATN is leading the development and implementation of the AniBOS real-time data management strategy and approach and assisting with non real-time data management
  - ATN real time ocean profile data pipeline to the WMO Global Telecommunications System is a three-year collaborative effort and on April 15, 2022 has begun operationally inserting QC'd animal-borne ocean profiles in properly formatted BUFR messages onto the GTS via NDBC. The Navy and NOAA operational centers are successfully capturing and decoding the profiles.
  - Upcoming efforts include assessing the quality of the profile data is sufficient into the global operational models and to explore how/if this capability might be replicated into other national AniBOS programs.
- *BIOTrack*
  - Create methods for integrating the analysis and visualization of biodiversity and marine animal tracking data and use them to generate the information products needed by conservation and natural resource mangers and other stakeholders as required.
  - Current updates include:
    - PhD candidate Chelsea Black at University of Miami on satellite tag data.

- A post-doc at the University of Miami Dr Thiago Couto working on acoustic tag data.
        - Integrating satellite and acoustic marine animal tracking data with biodiversity and co-varying environmental datasets to generate habitat suitability models by species with the goal to ultimately predict multi-species aggregation areas.
        - Data is access from FACT, ACT, OTN, and the ATN DAC.
        - DAC is supporting data organization, ingestion, aggregation, management, and access and portal display of the digital models.
    - *ATN DAC Data Policy Paper*
        - Is available at: https://ioos.noaa.gov/project/atn/
        - Provides U.S. ATN DAC Data Management Policy Guidance
        - Proposed question: is embargoed data FOIA-ble?
    - *ATN Implementation Plan's one-year extension approved*
    - *California Acoustic Telemetry Network (CaAT)*
        - Implementation of a California wide acoustic telemetry network is bring proposed by a partnership of ATN & MBON, CeNCOOS, SCCOOS, NOS National Marine Sanctuaries, and CSU Long Beach Shark Lab
        - Building on the success and utility of acoustic telemetry networks in other regions (ACT, FACT, and PIRAT)
    - *Data Management Services available from the ATN DAC*
        - ATN is seeking to implement a program that would provide data management services via the ATN DAC to telemetry researchers funded by federal agencies that are represented on the ATN SG.

Operational DAC (Megan McKinzie)

McKinzie provided a brief overview of DAC work in which the past is where we were at during last SG meeting (SG-11) and green is where we are currently:
- DAC continues to grow:
    - added 18 projects
    - 320 deployments
    - 7 new species
    - Totaling 124 projects with 63 PIs and 69 species of data.
    - Additional expanding efforts are up in the air with funding availability.
    - More researchers are deploying now that summer and spring field seasons are upon us with 15 projects, 100 active deployments, across 12 species and 74,000 active positions are near real time.
        - Some are part of our Argos fees program
        - Supporting 59 programs
- *Recent trainings and workshops:*
    - 5 events in NE, SE, AFFC MML, SW,
    - PIFSC has not hosted one since May 2021
    - Virtual workshops are not as successful as in person events and should discuss next steps

- Trainings in acoustics node manager training from ACT, FACT, PIRAT, and PATH with UC Davis, CaCT, and outside of the US.
  - Training day one was a basic overview followed by several days of in depth training of ONT procedures, how to incorporate it, how to qaqc, and report out to data contributing members.
- Future would like to get back to Pacific NW more targeted workshop to regionally based nodes in pacific northwest and other regions
- *Need for a national meeting for ATN within FY22.*
- *REG App*
  - Present– update project registration, archival project option, add contributor link and updated satellite deployment metadata, editable table view, report.
  - Future - satellite project review and maintenance, test acoustic deployment metadata ingestion pathway, metadata submission via API.
  - Data ingestion and Secure access for data auto ingested into our system
  - Updated the pathway for secure access for registration app
  - New file types raw, QC, Foie Gras as .NC and CSV
  - Secure access link all auto-ingested data into reg app across all projects
  - Future- secure access, new WC API call, open up pipelines to more satellite tag manufacturers, apply GPS algorithms to CLS data, improve CLS data handling, finalize and test acoustic data ingestion pathways, ATN nodes
- *Data portal*
  - improve foie gras: tracks available in portal and individual deployment pages and all layers. Work on code to be species specific
  - Present- modify foie gras code and improve model output, animation tool, add download tab to portal catalog
  - Future- incorporate foie gras into project pages and near real time layers, add descriptive text to deployment project pages explaining foie gras, acoustic and DTAG project page/ catalog mock-ups, DaViT and BioTrack products, Integration of ATN and MBON layers -marine life program portal
- *DataONE, NCEI, OBIS-USA*
  - DataONE- 26 satellite datasets archived and available and project white shark data descriptor manuscript
  - Present- finalize NCEI .NC satellite data templates trajectory and profile near real time data, finalize metadata links/ harvesting pathways for near real time satellite data.NC files, send examples files to NCEI for review both trajectory and profile, DTAG .NC NCEI template with sensor data both tag frame and animal frame
  - Future- finalize OBIS-USA template and develop cross-walk, start working on modeled and delayed mode data NCEI templates, acoustic data archival

Open floor to questions about Meghan or Bill's updates. No questions.

2:00 SG Members' Time

FACT Network Update (Joy Young)

- FACT is a grassroots collaboration of scientists with 280 members and multidisciplinary stakeholders for a wide variety of acoustic telemetry data
- Mooring of Opportunity project- 3 were deployed and provided detection in difficult areas
- There is a student section and provided travel awards and apparel
- Equipment Loaner program in partnership with OTN and applications are rolling must need a node
- Loans approved to 4 students and a new open call is out now to everyone in the network
- Grants (2) SECOORA for data sharing and Amberjack and large grant and our role is small, but first time FACT has been included and hoping it will be continued
- FACT Node data assembly center has 158 projects, from 55 institutions, with 225 million detections, and 108 species tagged to date
- 1100 active stations and 2500+ active tags
- Valued at over $4.7 million
- Nodes are compatible with OTN ACT and MIGRAMAR
- Crossover with other networks has some issues and could lead to false detections, In addition, datasets are messier, there are false detections from OTN, and it lacks a process to identify uncertainty
- DaViT – all data is in one place and provide information to the public and how the data is summarized. Bridge the gap with a web map and was built for public and fisheries managers. You can discover projects and species of interest and it will quickly summarize information
- Done through data summarization methods and then output to a web map
- There are a few hurdles to consider about data sharing and its ability to protect animals and scientists.
- Who gets to check the box to say yes and that all PIs must check you can opt in our out and going forward will be part of the project metatdata form?
- Grant to fund DaVit is coming to an end in June 2022.
- Launch party is a few days away at the FACT Meeting
- Currently a wish List and seeking funding to improve DaVit visuals, accuracy, and useability
- Currently accepting feedback
- Future- working with manufacturer about equipment, expand projects and programs, continued collaboration with ATN, MBON, OTN, SECOORA, and secure funding for more data management and infrastructure.

Sarasota Dolphin Research Program (Randy Wells)
- The program had major COVID impacts but enabled a lot of publishing with 45 published or in development.
- 90 grad students, 8 doctoral, and 3 masters students
- Photo ID continued and 22 new calves born last year and identified mean annual population growth rate of 2.1%
- Limited to collaborators and provided tags for recused dolphins
- NOAA Prescott grant provided sat tags to monitor 4 bottlenose dolphins
- Trying to make up for backlog of projects which include health assessment projects

- o Active set of researchers and applying tags to bull sharks and spotted eagle rays and the Sarasota acoustic network
- o Trying to develop a tool to attach tags to dolphins who are bow riding and this will greatly increase our research efforts

Cape Cod R/T Receiver Buoys (Greg Skomal)
- o Number of white sharks are increasing as well as negative interactions
- o ANOVAsea receivers and fine scale arrays are being used to look at how behaviors have changed.
- o 5 live receivers have been purchased but are expensive
- o Receivers are providing NRT data to lifeguards at Newcomb Hollow beach which have been helpful to determine how many sharks are present and how long they stay in the area
- o Almost 300 sharks are tagged
- o Issues with receivers are that they are not built for near shore coastal hydrographic conditions and intense storms.
    - ▪ Almost all receivers have damage to equipment.
    - ▪ Efforts underway to improve the design of this instrument and are currently being made tougher
    - ▪ All the receiver components have been shipped back to G. Skomal who needs to reassemble and test functionality.
- o B. Woodward asked when these receivers will be redeployed to which G. Skomal answered within May or June when the white sharks appear.

ACT Network Update (Matt Ogburn)
- o Expands from North Carolina to Maine
- o Several on-going projects:
    - ▪ 97 projects, 163 members, 47 species, 2550 active tags and 11 million matched detections with 21 million total
- o Project focus areas:
    - ▪ migration (50%),
    - ▪ fisheries management (18%),
    - ▪ network projects that are receiver projects to help build network and collect data and don't have tags out in the water -array specific (17%)
    - ▪ wind (10-15%)
- o 3 array projects in Chesapeake Bay
    - ▪ Chesapeake Bay backbone array with NOAA
    - ▪ replace Navy array that will serve some of the same purpose and
    - ▪ Mid-bay receiver line was designed for answering fisheries management questions
- o Started a student conference travel award fund and was awarded the full amount to American fisheries society meeting this summer
- o Network updates:
    - ▪ FY22 funding received for coordination and data management
    - ▪ updated a social media account @ACTtelemetry twitter
    - ▪ coordinated groups to develop strategy for addressing offshore wind

- planning for an in person fall meeting
- scoping design and cost of website update
- NCBO hosting satellite data training

Hawaiian Motes (Kim Holland)
- Exploring efforts to use land-based receivers at the same frequency as the at-sea receivers to enhance areas where ARGOS data is sparse and motes are very important additions to pick up satellite signals.
- 3 more motes on the big island
  - was difficult with paperwork/permits and covid restrictions, but permits have finally been issued
- May 17 and 18 K. Holland will be going to the big island to active two motes
- By end of May all receivers will be in place and will give data for 30 miles offshore
- This will be in addition to the two on Maui and three on Oahu
- A private donor has offered to pay for and install motes on Kuai
- Now there is mote coverage over almost all the Hawaiian Islands
- Currently, 10 days from establishing the network
- A manuscript is drafted
- Now collecting NRT temperature profiles that is compatible with oceanographic models and shark derived data are exactly appropriate for these oceanographic models
- B. Woodward asked if direct signal will be captured from profiling tags and K. Holland answered yes.

Habitat Use and Movements of T & E Sea Turtles [Kristen] – currently OUT

3:05 <u>Break</u> (10 minutes)

3:15 <u>Review of Actions (</u>20 minutes)

#	Action Item	Responsible Party	Due Date	Comments/Updates
1	Consider potential candidates for the position of ATN Coordinator	All SG Members	On-going	On-going – did not know about temporary detail in place. Actively reaching out to colleagues about position and if they have anyone in mind.
2	Keep ATN SG members updated as plans for ATN Coordinator succession develop	B. Woodward	On-going	Updates to include key attributes of the successor, in addition to developments regarding the position structure (FTE vs. contractor)—NFMS and David Huff possibility (Toby Curtis has been assigned)
3	Reach out to new BOEM director to inform her of the ATN and its capabilities; reach	J. Price	On-going	Working through division chief and updated director and NOPP proposal and is fully on board and main

	out to managers about potential opportunities for BOEM to fund			motivation to see can use leverage from her office to the GOM office about MBON and ATN and priorities for research projects have drifted away. Reality of politics and regions have a lot of autonomy and get to send the priority for research projects and used to have strong interests. Alaska and Pacific region and renewable energy region is interested and same level of support at HQ and every year will compete for funding to renew same level of support which is ongoing and FY22 proposal in for funding of NOPP proposals and positive result. Will continually do it every year
4	Convene group of federal employees to create an ATN FY23 BOEM Study Plan proposal	J. Price	On-going	Move to strike this action item
5	ATN DAC Data Management Services (formerly "User Fees")	B. Woodward, M. Weise, J. Young, J. Price, B. Houtman, W. Turner	On-going	B. Woodward will lead an effort to draft a 1-4 page document that describes how an ATN DAC Data Management Services Program would work and steps needed to implement it. Will be completed by SG-13 meeting.
6	Arrange for a demo to highlight the environmental layers recently added to the ATN Portal, get input on usefulness/utility and additional layers SG feels should be included	M. McKinzie	SG-12 be done by SG 13	M. McKinzie to lead and send doodle poll to gauge interest from all SG members. Reach out to MBON and others Still needs to be done and was on hold with mairnelife program unification efforts. M. McKinzie is happy arrange for demo for those who are interested = Erin, Randy, Greg, Merra, Joy, Gabrielle, John, Kim, Bob, and Mike
7	ATN Equipment Loan Program language	M. McKinzie, R. Wells	SG-12	SG to provide comments on program description, language and application Not a ton of progress has been made on this action item. Equipment has been purchased and received to Randy at Mote and the only piece loaned is in Portugal with Heidi Pearson. M. McKinzie to send around draft documents and solicit feedback on language to "request" that data is provided instead of requiring it. Next steps are to determine what are we recommending/ requiring-metatdata and data or report out of array and frequency of reporting, draft

				loan agreement document looking at OTN document for language Send around application form, example load agreement form, choose a time to upload documents.
8	Draft a statement extending the current implementation plan by a year	B. Woodward	ASAP	**Finished**

Action Items to add:
- Sean Hayes to reach out to Nick Farmer at NMFS and circle back with him about loan equipment
- Woody, Mike, Bob to give language on determining the costs of providing ATN DAC Data Management Services to researchers.
- FOIA situation:
  - G. Skomal mentioned several public records requests as interest peaks with sharks and people. Based on information given by internal council in all cases they hand over the data whatever is requested and its mostly being asked by nonscientific people but at mercy of state legislation.
  - That is not a sufficient reason to deny request because scientists are worried about getting scoop
  - S. Hayes mentioned range of strategies to take
    - If it the FOIA request it is more than a certain dollar amount of labor you can send them a bill to let them know you agree to pay this sum for labor costs and technology server to receive data.
    - As NMFS is changing to electronic monitoring (EM) there is a loop hole that EM data will all be handled by a third party provider and NMFS can access that data but not take possession of the data which will prevent FOIAs.
    - Is Axiom, a third-party provider and not possession of the data. M. McKinsie said she doesn't know since the data is sitting at Axiom. This is something to discuss with counsel.
    - Ownership of the data is the PI until it is released into the public sphere with a DOI.

3:30 Team Activity Updates (30 minutes)

ATN Equipment Loan Program (10 minutes)
- M. McKinzie and R. Wells provided an update on status of program/use of equipment.
- Not a ton of progress has been made, but comments made by SG members are being incorporated into the program description, application, and language.
- Equipment has been purchased and received to Randy at Mote and the only piece loaded is in Portugal with Heidi Pearson.
- M. McKinzie will send SG draft documents to solicit feedback on language change from "require" to "request" that data is provided.

- Next steps include determining what data is recommended to provide, if metadata is needed, what reports should look like, and what is the frequency of reporting. M. McKinzie will also look at the loan agreement document language from OTN to help draft an ATN loan agreement.

ATN DAC Data Management Services (formerly "user Fees") approach for acquiring funds from Other IOOC Agencies to support ATN DAC (10 minutes) - (DMS Team members: Bill*****, Bob, Woody, Mike, Jim)
- B. Woodward will prepare a 1-4 page documents explaining the DAC, its functions, concept and progress. Emphasis will be placed on how the DAC Data services and functions would benefit PIs, how they compare to other services that exist, and what the expected costs will be.
- Needs the help of SG members to create agency specific language guidelines for PIs to use to write the description of their ATN DAC centered data management plan in their proposals. Help from B. Houtman, W. Turner, M. Weise, and J. Price to draft and look over language. W. Tuner has not done it but have seen in the proposals in review that use ATN and DAC data as a reference. On the NSF side, this has been done verbally but not in writing. When this document is finished NSF can use this to market this to other NSF programs that highlights the value of the DAC for PIs. M. Weise said the Navy has language developed which can be used and possibly adding funding levels to cost out the program. W. Tuner asked what the saturation point is if we get an influx of DAC data. M. McKinzie said it would not overwhelm her or the DAC and the burden will be more on the PIs for data management. Would be helpful to B. Woodward if the DSM team could draft a paragraph with this language.
- Determine the costs of providing ATN DAC Management Services to researchers. This could include pricing based on the amount/type of services to be provided, pricing based on the number of tags? Data volume? Include a percentage of the O&M costs for the DAC?
  - o B. Woodward needs to work with Axiom on pricing.
- Develop mechanism for agencies to pass money to ATN/Axiom.
  - o When NSF funds PIs, NSF would not send money directly to ATN or Axiom. The PI would be funded, and they would be required should be put into the DAC. The institution would have the responsibility which is the same for NASA and ONR.
  - o Infrastructure needs to be considered such as number of proposals. Axiom has been acquired by Tetra Tech and their financial operations will be different.
  - o Mechanism to receive funding through regional associations (non-federal institutions) need to be considered as well.

ATN Implementation Plan Revisions (10 minutes)
Formal statement extending the current IP through CY2022 has been prepared and approved by the SG voting members. (IP Team members: Joy*****, Sam*****, Bill, Mike, Kim, Megan, Sean/John, Masha)

4:00 <u>**Wrap up**</u> (15 minutes)

- Review action items
- Next SG meeting will occur in September
- No other business

GoTo Meeting Chat Log:

- G. Canonico: Would like more information on challenges of bringing interagency funding to support the DAC. We are coordinating funding for data management on other topics- why the special challenge here?
- Megan McKinzie: Ryan Freedman
- Michael Weise: As for DAC funding challenges, I think we have to differentiate development and operational phases. ONR has led development so able to put dedicated funds to develop DAC ($2M since 2014). For operational phase now agencies and programs are setup to fund science projects, not necessarily DAC only (or positions like NC). So, agencies and programs able and willing to include funding lines in grants/contracts to support data management via DAC, but the challenge has been how to aggregate or collect those funds. Sounds like Bill has an update.
- https://www.gulfspillrestoration.noaa.gov/project?id=231