

# US Animal Telemetry Network

## Steering Group Meeting SG-7

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August 11th, 2020  
Meeting Minutes

### I. Voting Member Input

- B. Woodward thanked steering group members for attending the virtual meeting and thanked them for the continued support of the ATN.
- M. Weise thanked the group and remarked on the excitement of continued improvements to the DAC.
- J. Price & S. Hayes also thanked and welcomed all members for attending the meeting.

### II. ATN Updates (B. Woodward, Chair ATN Steering Group)

#### A. FY 2020 Funding Profile

- B. Woodward provided an overview of FY 2020 ATN funding and displayed a slide indicating where the funds are coming from and going to.
  - FY 2020 ATN funding totals \$1.38M
  - In FY20, BOEM had to reduce funding by about \$400K down to \$200K. The IOOS Program Office was able to provide \$480K to offset this loss and keep the ATN afloat.
  - \$150K funded by NMFS for the DAC Data Coordinator Position. B. Woodward and S. Hayes have a meeting with Cisco coming up to advocate for this funding to continue.
  - ONR contributed \$550K. It was noted that ONR funding was not passed through the IOOS program office this year as it was in previous years.
  - M. Weise was able to obtain funds through a grant process for three different pieces: DAC, R/T RCVRS, and Data Products. M. Weise remarked on the challenge of passing money from ONR to NOAA—when the money was moved through grants. The \$150K for this project was originally allocated for the ARGOS fees program, though it was realized that money was not needed for this year. The \$150K was instead allocated to buy several R/T acoustic receiver buoys, acoustic transmitters, and motes being used by G. Skomal and K. Holland.
    - G. Skomal added that acoustic receivers for sharks were purchased and deployed along the Cape Cod outer beaches and is being integrated with public safety information. While not all sharks are tagged, the tags can give towns a sense of how often sharks are in their swimming areas. G. Skomal remarked that he is happy with this technology so far.
    - B. Woodward stated that these are pilot projects for public safety and beach management efforts. As a recipient of the text messages sent whenever pings are detected from shark tags, he remarked about the frequency at which the sharks are around buoys.
    - K. Holland states that through this new funding, they are going to add 3 more units to the existing array. Motes are currently on Oahu and Maui. Motes at a high elevation improve data throughput. Any tags that are near the motes will go through the motes. Anyone using tags will benefit (not just sharks). Forestry managers in Hawaii have suggested locations for the motes to K. Holland,

which will increase capacity after the moles are established and COVID goes away.

- M. Weise highlighted efforts to engage more with the RAs, including DAC up at AOOS, Meg and Matt working with CeNCOOS. They are considering other ways to engage the RAs in increase partnerships.
- B. Woodward stated that though IOOS was able to come up with funds to support ATN this year and through FY21, this is likely not going to continue. The ATN Network Coordinator salary will be funded by IOOS through the end of calendar year 2021. This means that Bill will be supporting the ATN until the end of 2021. The group need to consider how to transition to sustainable funding after that. Ideally, the Network Coordinator position should be transitioned to a non-contract position with more sustainable funding.

**B. Making R/T Ocean Profiles from Animal Tags Available for Assimilation into Global Ocean Forecast Models**

- DAC project is underway, and progress is being made. Quality control processes are being implemented in the DAC.
- The WMO has approved a WMO BUFR template that will be made operational in November FY20.
- The NDBC has agreed to put data from the DAC onto the GTS.
- **AniBOS: The Proposed Multi-National Animal Borne Ocean Sensors Network** AniBOS has been approved as an emerging network by the GOOS-Observations Coordination Group (OCG)
- This is a significant accomplishment that takes the animal borne sensor capability to the next level—AniBOS is a global network of multi-national partners. Given the success of the ATN GTS project, it is likely the ATN DAC will be a major component of this global network.

**C. ARGOS FEES Program**

- Argos Fees Program has been very successful
- Currently supporting 38 programs and over 1500 tags

**D. U.S. Telemetry Asset Inventory Process**

- Has been temporarily suspended due to COVID because many activities have been put on hold.

**E. ATN Seeking Support via Several of the IOOS Region's Upcoming 5-Year Proposals**

- Each of the IOOS regions submits a funding proposal every 5 years. Discussions are being held with the regions to include Marine Animal Telemetry in their new 5-year Plans (2021-2025). Coordination with IOOS regions may be able to sustain funding long-term.
- B. Woodward has been in contact with a number of the regions (CeNCOOS, PacIOOS, MARACOOS, SECOORA) to help build ATN support into these proposals, though it will depend on if the regions actually include ATN in their proposals and if those proposals are actually funded. Proposal review will be completed around December.
  - M. Weise asks if there is anything the ATN SG can do to help support the effort to connect ATN with the regions.
  - B. Woodward responds that it would be helpful if SG members could simply have a conversation and express support to the regional director in their region.

- M. Weise suggests an action for SG members to reach out to Bill for further discussion on how to show support for inclusion of ATN activities in their region. B. Woodward agrees.
- S. Hayes remarks that NMFS investments benefit managers and scientists (for example the new shark tags in the Northeast and the motes in Hawaii). This is an example of the applications and ecosystem-benefits of animal telemetry that should be highlighted in the proposal for Cisco.

### III. Review of Actions from SG-6 and On-Going Actions

- **Complete spreadsheet to organize in-progress projects and send out to SG members. The spreadsheet will ask members to indicate the key funders and provide points of contact that M. McKinzie can reach out to for information on projects. (M. McKinzie)**
  - **STATUS: ON-GOING**
- **Craft strategic plan/procedure to re-evaluate funding each fiscal year, including how to use limited funds for supporting the infrastructure (B. Woodward)**
  - **STATUS: ON-GOING**
  - B. Woodward remarked that it was unclear exactly what this means.
  - S. Hayes noted that the item sounds like creation of a budget plan.
- **Review new package (ADEPTHER) for data visualization, funded by NPS—M. McKinzie and K. Hart, USGS deciding how they want to host it.**
  - **STATUS: ON-GOING**
  - K. Hart has provided M. McKinzie with access to required materials.
- **Organize and schedule 1-hour webinar to educate SG members on system tools, for example the registration app (M. McKinzie)**
  - **STATUS: COMPLETED**
- **Identify small group of SG members to develop effective approach for visual presentation and organization of national data (themes, gaps, needs) from regional workshops to lead to actionable tasks (B. Woodward, M. Weise)**
  - **STATUS: COMPLETED**
- **Determine future funding opportunities through identification of agency needs to achieve funding goals. Develop 1-2 pager defining importance and options for funding, including 1) baseline operations, and 2) ATN project/topic support (M. Weise, R. Wells, K. Hart, B. Houtman)**
  - **STATUS: ON-GOING**
  - B. Woodward notes that it is valuable to consider agency needs and what the ATN might do to support those needs.
  - K. Hart adds that this could be used as a hook to highlight the needs for observations in responding to biological hazards, and the ATN's role in that effort.
  - B. Houtman agrees that the document is valuable and is something that could be shopped around to various NSF geosciences programs. Additionally, it may of importance to SOST in connection with social issues.
  - R. Wells also notes this could be useful in discussions with philanthropy.
  - R. Wells, K. Hart, and B. Houtman volunteered to assist M. Weise.
- **Incorporate J. Young's comments into policy document and send out for final review (B. Woodward, J. Young)**
  - **STATUS: ON-GOING**
- **Document the possibilities explored for alerts to DAC users when downloaded data has been altered. Send to SG members (M. McKinzie)**

- **STATUS: ON-GOING**
  - M. McKinzie has investigated several options and notes there are challenges.
  - J. Young chimed in as the original owner of the suggestion. She noted the idea was to help researchers access the most up to date and complete data sets and be aware of mistakes.
  - B. Woodward suggests following up on this task.
- **Begin strategizing the next 5-year ATN plan, given that the current plan ends in 2021 (B. Woodward)**
  - **STATUS: COMPLETED**
- **Initiate conversations with Gulf Coast PIs to facilitate more engagement (J. Price)**
  - **STATUS: ON-GOING**
  - J. Price reports that he is in discussion with the Gulf Coast regional office.
  - AOS is also very supportive of MBON—and there is a reason for this. B. Woodward notes that the ATN should consider why AOS supports MBON and try to apply lessons to the ATN.
- **Generate a google spreadsheet of upcoming meetings to assess SG member attendance (S. Rahman, S. Murphy)**
  - **STATUS: ON HOLD**
  - 2020 Meetings cancelled due to COVID. Possibly revisit for 2021.

#### **IV. Items for Review, Feedback, Discussion, and Decision**

##### **A. Workshops & Reports (B. Woodward & S. Murphy)**

Synthesis of regional workshops reports into one national summary report was discussed:

- B. Woodward explained that the ATN workshop summary report will compile national themes, gaps, and priorities across the RA's to identify what the ATN can do to provide unity, stability & continuity to the U.S. marine animal telemetry infrastructure. The COL staff (Sheri and Stephanie) are helping to pull out this information from the regional workshop reports and come up with ideas for presenting the information.
- S. Murphy summarized the process from the COL perspective in more detail. COL has been working with Bill to go through the regional ATN workshop reports and pull out common themes, priorities, gaps, etc. in order to pull together a summary report. The idea is to display the in an informational yet compelling way. The current thinking is a report with a series tables of that would display a national compilation by IOOS Region. COL has generated a few table options to arrange the information—by priority, theme, challenge, etc. This would also include some more explanatory text and graphics as in a traditional report. S. Murphy welcomes feedback on how to organize the information.
- S. Murphy displayed the ATN summary for policy makers one-pager draft. The one-pager is designed to fit into the report but also may function as a stand-alone document to provide to policy makers. The goal of the one-pager is visually appealing, high-level explanation of the ATN and its major needs.
- M. Weise offered support for the one-pager idea, noting the need for easily digestible information that can be shared about the ATN in order to help generate support.

##### **B. Creation of Teams to Address three ATN Activities (B. Woodward)**

B. Woodward proposed teams to work together during August- November to draft an outline of the concepts and recommended approaches/mechanisms for how the ATN could execute each of the three activities. \* denotes team lead.

## **1. Tags for Researchers (funds are at CeNCOOS) – What to purchase & how to distribute**

(Randy\*, Matt, Greg, Megan, Jonathan)

- R. Wells agreed to help lead the group and M. Ogburn, G. Skomal, and M. McKinzie agreed to join the team. J. Blythe volunteered to also assist the group given his interest in the subject.
- J. Blythe suggested looking into mirroring G. Skomal’s acoustic work on the East Coast on the West Coast.
- M. McKinzie remarked that CeNCOOS is purchasing transmitters to monitor white shark activity—so there are some related acoustic projects in the works.
- M. McKinzie suggested considering how to get real-time acoustic data into the portal.
- M. Weise asked if the receivers for Barb Block are real-time. M. McKinzie confirmed that they are real-time.
- G. Skomal remarked that the real-time receivers cost generally \$13-14K.

## **2. User Fees Approach for acquiring funds from Other IOOC Agencies – Concept & Mechanisms**

(Bill\*, Bob, Woody, Mike, Jim)

- B. Woodward recalled B. Houtman’s comments from the SG-6 that the agencies are unlikely to be willing to give money to the ATN, but there’s a possibility of them adopting a user fees approach. B. Woodward thinks this approach makes sense. This idea is that a PI would include a data management component in their agency proposal—this money would find its way to the DAC. Agencies will need to buy into the idea. It will require demonstrating value of data management services to agencies/researchers (who often would prefer to fund their research over data management). So, it is important to demonstrate the value of the DAC. The team for this task would be responsible for thinking through the concept and mechanisms needed to make it happen. B. Woodward is happy to lead the team.
- B. Houtman agreed to join the team and noted that it is a tough sell for NSF, but it is possible, and the options should be explored. Philanthropy and other organizations should be considered as funders in addition to the agencies. It is important to focus on the value of the investment being made—standardized data sets and data management. It is even more exciting if real-time data can be made available.
- J. Price noted data management is a small investment long-term, so a DAC fee should certainly be included in data management plans. BOEM will have a policy asking PIs for their data management plans up front in their proposals—including personnel and archiving costs.
- W. Turner asked for clarification about who would be charged the fee. B. Woodward replied that fees would be intended for PIs doing research and uploading their data to the DAC. W. Turner noted that NASA already requires data management plans, so it would be making sure PIs look to the DAC for data management.
- M. Weise comments on the idea of a fee for users of the data—this may be worth exploring. However, the current idea is a fee on the front end for PIs.
- J. Price, B. Houtman, W. Turner, and M. Weise agree to be a part of the team.
- Returning to the idea of fees for users, M. McKinzie notes that the data will always be archived somewhere else for free (ex. DataONE or NCEI), so they may not choose to come to the DAC to pay for the data.
- S. Simmons comments that it may be questionable to charge users a fee if we’ve already charged PIs. B. Houtman agrees that the front-end fee is preferable and less complicated. W. Turner also agrees, and notes NASA is a proponent of publicly available data.

**3. Preparing the Next ATN 5-Year Implementation Plan (2021-2025) – How to organize; Specific areas to cover (Sam\*, Stephanie, Sean/John, Joy, Mike, Bob)**

- S. Simmons noted that she will not have the bandwidth if she takes on another activity (to be discussed later in meeting). The group will have to discuss who can take the lead on the actual plan development.
- J. Young said she would have some time to contribute, though is hesitant to commit to taking the lead at this time.
- B. Woodward stated that the new implementation plan can be modeled from the last one—so this effort is more of an update/expansion of the previous plan.
- M. Weise offered to help support (without committing to take the lead) and suggested taking a close look at the audience. Pushing it up to a high level at OSTP previously dictated what could go in the plan—so this is something to keep in mind for this next round.
- B. Houtman agreed and recommended not creating a document that must go through the SOST vetting process. He offered to help guide and make sure the document is targeted at the appropriate level.

The teams are asked to report their results to the Steering Group at our SG-8 meeting in November (date TBD) for discussion and action.

**C. M. McKinzie updates SG members on the operational Data Assembly Center (DAC)**

- Update Jan 2019 – Dec 2019
  - 54 Projects Registered
  - 31 Discoverable in Portal
  - 27 Species and
  - 504 Tag Deployments in Portal
  - 6 Datasets DOI minted and Archived at DataONE
- Update Jan 2020 – Aug 2020
  - 111 Projects Registered
  - 71 Discoverable in portal, spanning the globe
  - 46 Species and
  - 1875 Tag Deployments in Portal
  - 10 Datasets DOI minted and Archived at DataONE (2 pending funder approval)
  - M. Weise asked if people are getting more comfortable with process of getting data into the workspace and then into the portal. M. McKinzie reported that the staff (including herself) as well as the PIs are gaining comfort =with the data submission and data archival process and Axiom designed tools. The workshops are helpful for teaching researchers. In person workshops are more effective then virtual training session, but both have been useful.
  - M. McKinzie noted that there is a small hurdle in getting up some of the historical data up in the Portal. The visualization process for datasets, primarily historical that cannot be auto-ingested is not as well-defined. Manually uploaded datasets require more effort and staff time, both for the ATN Data Coordinator as well as Axiom staff to get from the Research Workspace to the Data Portal. As people continue to bring in new projects with historical data or data that cannot be auto-ingested, the queue of projects to make discoverable in the Portal grows. M. Weise noted that as development capacity grows, and Axiom’s tools and ingestion routines improve, we should be able to allocate more resources and Axiom staff time away from DAC

infrastructure develop to project support which should help manually uploaded projects get through the queue faster and clear the bottleneck.

- Other telemetry updates
  - M. McKinzie notes that they are now visualizing seabird data. This sets ATN apart from many other telemetry networks that don't want to deal with seabirds.
  - Moving away from strictly satellite tags—there are now some GPS/GSM tags available in the Portal. This also sets ATN apart from other telemetry networks.
- ARGOS fees program
  - Frequently brings new researchers and projects into the system
  - 38 projects currently with over 1400 tags
  - S. Simmons asked if programs should continue to get tags if they are not providing the data required. M. McKinzie indicated that no, programs should not get new tags until they provide data from the tags that were already paid for.
- Upcoming workshops
  - Southwest: Aug 26, 2020
  - Southeast: Fall 2020
  - Northwest: Winter 2020
- Year 3 DAC Priorities (Jun 2020 – May 2021)
  - Develop national data aggregation capability through continuous data integration with tag manufacturers and other data sources, make data publicly available in the ATN Data Portal
  - Develop the capability to deliver real-time ocean profile data from animal-borne sensor tags to global (and regional) weather and ocean forecasting centers via the WMO GTS
  - Develop data synthesis tools including integration of reproducible state-space model functionality into the ATN DAC (Foie Gras)
  - Develop optimized ingestion pathways for new, sophisticated multi-sensor tag types (e.g. Dtags) and acoustic telemetry
- Discussion
  - J. Blythe asked how many of the ~1800 tags visible in the Portal are acoustic. M. McKinzie replied that none of the tags currently displayed are acoustic. There are data from roughly a thousand tags in the Research Workspace from five acoustic telemetry projects that Axiom can use as pilot projects to determine how best to display acoustic telemetry data and metadata in the Portal. More acoustic data is needed from the agencies.
  - B. Woodward and B. Houtman complimented M. McKinzie on her work on the DAC.
  - M. Weise offered to give a nudge (as a sponsor) to PIs in his agency to help move data uploads along. Participation is required in contracts.
  - M. McKinzie has shared list of invited participants to South West workshop and flagged who has registered.

#### **D. Discussion on the Draft Data Policy Document**

B. Woodward opened the discussion for comments on Version 5.0 of the Data Policy Document.

- J. Blythe noted a few concerns about the way the document is written. The SG has enough federal representation to make the document a federal policy. The language used currently does not indicate that it is such. B. Woodward recommended the group dive deeper into this topic at a follow-up meeting.

- J. Blythe noted two federal policies: The Geospatial Data Act 2018 and the Open Government Data Act. These momentous federal data policies change the ways the government pursues data management. These laws open data access and emphasize engagement. Making data easier for public to use is an important piece.
- M. Weise suggests a terms of use section could be added to the document. The OBIS Sea Map could be a useful reference.
  - J. Blythe remarks that the OBIS terms did conflict with USGS processes. Licensing may have to be reconciled.
- M. Weise suggested ATN may need a new team to help navigate this issue.
- B. Houtman suggests looking around for precedents and keeping in mind the bottom line: agencies must satisfy their agency requirements.
- B. Woodward highlighted the glider and ARGO DACs that may have data policies to look at. It is important to keep in mind what is needed in the end. The group agrees that it is up to the agencies to enforce their own data requirements, yet how is this possible with a central data center? “Data Policy” may not be the right word for this document.
- S. Hayes added this is a general counsel issue that should be looked at with the help of legal experts for IOOS. B. Woodward agrees.
- B. Woodward suggests tabling this specific element of the document (section 4) for now.
- M. Weise adds that there are non-federal data guidelines included for foundations or other funders of tags, and the guidelines included in the Data Policy Document is needed for those groups.
- J. Young echoed the suggestion to keep part of the Data Policy Document (potentially under another name) so that projects can move forward.
- B. Woodward asked for suggestions on a specific next step. M. Weise suggested J. Young pull out areas needed for acoustic data community to move forward (B. Woodward, J. Young). The following step would be to consult with general counsel. Details of how to do this need to be worked out (J. Young, J. Blythe)

#### **E. Election of Steering Group Chairperson**

- B. Woodward reminded the group that he was elected chair in August of 2019. The SG Chairperson term is one-year, so it is time to elect a new chair.
  - It has been suggested that this year, co-chairs are elected to lead the SG. B. Woodward and S. Simmons are both willing to be co-chairs for the following year term.
  - B. Woodward asked if there are any other volunteers to run for a co-chair position. SG group members support the election of Sam and Bill as co-chairs.
  - B. Houtman, S. Hayes, M. Weise, J. Blythe, and K. Hart offered support for the election of Sam and Bill.
- M. Weise conducted the official election. He reminded the group that the voting members (those providing funding) are ONR, BOEM, NOAA, and the IOOS program. These are the official voting members. M. Weise asked for any other official nominations. None were offered.
- M. Weise asked the funding members for official votes on the election of S. Simmons and B. Woodward as SG co-chairs for the following year:
  - J. Price, BOEM, voted yes.
  - S. Hayes, NOAA, votes yes.
  - M. Weise, ONR, voted yes.
  - B. Woodward, IOOS, voted yes.
- With support from all voting members, S. Simmons and B. Woodward were officially elected steering group co-chairs for the following year.



## F. Closing Items

- The next meeting (SG-8) will take place likely in early November and will be virtual. Exact dates will be sent out at a later date.
- B. Woodward notes that the Terms of Reference will be discussed at the November meeting.
  - The SG is set to sunset in 2021. These Terms of Reference can be amended at any time with concurrence from the SG voting membership and the IOOS PO. The SG may be renewed or extended at any time by renewal of these terms of reference, in conjunction with revisions to or extension of the implementation plan, ongoing interest, and resources to maintain an ATN. The SG can be dissolved prior to 2021 with agreement among the IOOS PO, the SG voting members and the IOOC.
  - This provision can be updated and will be revisited in November.
- B. Woodward closed the meeting.

## Meeting Attendees

### Steering Group Members

Blythe, J.	BOEM	<a href="mailto:jonathan.blythe@boem.gov">jonathan.blythe@boem.gov</a>
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### Others

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## Action Items

#	Action Item	Point	Due Date
1	Complete spreadsheet to organize in-progress projects and send out to SG members. The spreadsheet will ask members to indicate the key funders and provide points of contact that M. McKinzie can reach out to for information on projects.	M. McKinzie	
2	Incorporate J. Young's comments into policy document and send out for final review.	B. Woodward & J. Young	
3	Document the possibilities explored for alerts to DAC users when downloaded data has been altered. Send to SG members.	M. McKinzie	
4	Initiate conversations with Gulf Coast PIs to facilitate more engagement.	J. Price	
5	Begin strategizing the next 5-year ATN plan, given that the current plan ends in 2021.	B. Woodward	
6	Craft strategic plan/procedure to re-evaluate funding each fiscal year, including how to use limited funds for supporting the infrastructure.	B. Woodward	
7	Review new package (ADEPTHER) for data visualization, funded by NPS.	M. McKinzie	
8	Determine future funding opportunities through identification of agency needs to achieve funding goals. Develop 1-2 pager defining importance and options for funding, including 1) baseline operations, and 2) ATN project/topic support.	M. Weise, R. Wells, K. Hart, B. Houtman	
9	Determine which sections of Data Policy Document should be pulled out to support the needs of the	J. Young, B. Woodward	

	acoustic data community. Then, discuss with general counsel how to ensure data policy is in line with federal law.		
10	Discuss federal data policy requirements to ensure data policy is in line. Seek guidance from general counsel.	B. Woodward, J. Blythe	
11	Coordinate with B. Woodward to show support for inclusion of ATN activities in IOOS Regional Association proposals	All SG members	