US Animal Telemetry Network Steering Group Meeting SG-9

March 26, 2021 Meeting Minutes

I. Co-Chairs Call the Meeting to Order (B. Woodward, S. Simmons)

S. Simmons welcomed everyone to the meeting and asked if anyone had updates for the agenda. There were none.

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

A. FY 2020 Funding Profile

- B. Woodward reviewed the FY20 funding profile for the ATN. The funding level for FY 20 is \$1.38M. The four agency contributions are divided as follows: \$550K from ONR, \$200k from BOEM, \$480k from IOOS, \$150K from NMFS.
- After 5 years of ATN funding, there are some uncertainties for funding of FY 21. This is still a work in progress. The ATN is trying to come up with the needed amount of \$1.385M total for FY 21. NMFS funding is still pending for FY 21. B. Woodward has asked IOOS for an increase up to \$685K. He highlighted some positions/projects at risk in the near-term if ATN is not funded to these levels, including the Network Coordinator, two regional data wranglers, GADNR receiver array line, and administrative support.
- B. Woodward asked if there were any questions. There were none.

B. AniBOS Steering Committee Meeting

AniBOS is an emerging global GOOS/OCG network of marine animals with oceanographic sensors that presents a cost-effective and complimentary capability for GOOS to fill critical observation gaps and will freely exchange R/T ocean profiles from animal tags via the WMO GTS for assimilation into global/regional ocean forecast models and analyses. The 1st steering committee meeting was on February 3, 2021, which involved 15 members from 7 countries. Topics included funding strategies, R/T and D/Mode data management, creation of the DM Committee and the Ethical Board, and defining the overall AniBOS communications approach. ATN is leading the development and implementation of the AniBOS real-time data management strategy and approach. The ATN R/T ocean profile data pipeline is internally functional in the ATN DAC and will undergo the next end-to-end demo/testing (including QC, encoding BUFR messaging, and pushing them to NDBC for insertion onto the WMO GTS) before going operational.

C. Workshop Reports

- B. Woodward discussed the ATN regional workshop summary report, including a 1-page infographic national synopsis, which summarizes priority themes/needs, outcomes, and recommendations. This document captures all the workshop high-level recommendations on one page. B. Woodward also shared summary pages for the regional findings and recommendations. These are almost ready to go live and were presented to the IOOS office, which requested that logos be added. Once these are available, they will be shared. However, the NERACOOS report is not complete, and a placeholder will be used in the meantime.
- D. ATN Asset Inventory

• B. Woodward reviewed the U.S. Telemetry Assets and Project Inventory, which is still on hold. He noted that new and updated information is difficult to obtain due to the pandemic. It will be important to give field researchers a chance to get out there and obtain information before ATN begins asking them questions.

E. Unifying ATN and MBON

 B. Woodward discussed unifying the ATN and MBON in IOOS. This is a process they have been working on over the last couple of years within the IOOS Office. G. Canonico and B. Woodward have been working on defining a structure within the office wherein ATN and MBON can be unified in a very positive way while preserving the brands. They are beginning to use the term "Marine Life" as a programmatic description of what capabilities might look like. In the near-term, there is the Bio Track Integrative Data Analyses, a collaborative MBON-ATN project to monitor biodiversity hotspots where megafauna share habitat and are expected to be impacted by climate change.

F. ATN Network Coordinator Succession Plan

- B. Woodward discussed network coordinator succession, including an action to put together a team that will define the best way forward. In the near-term, one option is to split the network coordinator duties between federal and non-federal positions. The longer-term goal would be an FTE (Full Time Employee) position within the IOOS Office. Current uncertainties include whether they will add duties to an existing FTE in the IOOS Office or potentially hire for a contract position. It will not be possible to advertise for the position until the above is resolved.
- M. Weise asked if there is a timeline being developed in terms of how the IOOS Office is working through these uncertainties. If they do not have the information by a certain date, should the group pull together to produce options? B. Woodward noted that the IOOS Office has a short fuse on when they will have to decide on funding for FY21. It is not expected that they will take too much time and by mid to late-April, there should be some resolution.

G. Other

- M. Weise asked that with the push to GTS, is it slated to include all different manufacturertype data, or will the focus be on one type specifically? Alternative text suggestion: B. Woodward noted that initially the GTS pipeline will be primarily used to serve SMRI and WC CTD data, but the DAC will continue to work with other manufacturers to open up the pipeline to a larger variety of tag types. They will also be wide open to any other possibilities.
- S. Simmons asked if there were any other questions. There were none.

III. Operational DAC Updates (M. McKinzie)

A. DAC Updates since SG-8

• From Jan 2021 – Mar 2021, 142 projects were registered with 97 discoverable in the portal, 58 species, 3363 tag deployments, and 21 datasets DOI minted and archived at DataONE (3 are pending). The registered vs. discoverable differences are because a handful of projects/datasets are not yet able or ready to be pushed to the portal. M. McKinzie is actively working on the projects and they are in various states of completion. They are continuing to grow each metric, which is important at this stage.

B. ARGOS Fees Program Updates

• Regarding the Argos Fees Program, M. McKinzie reviewed that ATN is supporting 48 programs with 1700+ tags (some IDs have been recycled) and representing 38 species. In the Alaska/Arctic region, ATN is supporting about seven projects monitoring sea

lions, seals, and bowhead and beluga whales. In the Pacific NW and Northern California, ATN is supporting three projects (elephant seals, fur seals, and two different species of Marlin). In the South Pacific, ATN is supporting nine projects monitoring a large variety of species (tiger sharks, manta rays, humpback whales, orcas, sea turtles, and more). In the Southwest, three projects are supported monitoring sea lions and sea turtles. The South Atlantic and Gulf of Mexico are also monitoring a variety of species and being supported by ATN. There are four projects in the Florida/Southeast area monitoring pilot whales and a variety of sea turtles. The Northeast is supporting about 15 projects, monitoring a variety of whale species, sharks, seals, Atlantic salmon, and loggerhead turtles.

C. BioTrack Updates

• BioTrack is a collaborative, multi-species synthesis project between ATN and MBON that seeks to assess and monitor hotspots of marine megafauna biodiversity by linking satellite telemetry data with remotely sensed environmental data on multiple EOVs and geographic "seascapes." The number of collaborators and projects are increasing in this program, so it is considered a success so far.

D. ATN DAC Data Workshops

• There have not been any ATN DAC Data Workshops since the last meeting. A virtual Southeast workshop is expected to occur in April 2021and a Northwest virtual workshop will likely occur in summer 2021. M. McKinzie invited members to add interested folks from the Southeast and Gulf of Mexico region to the list.

E. Portal Updates

- M. McKinzie also discussed ongoing portal updates and stated that she has been trying to get them operational. A major update is that it is now possible to include timestamps displayed in UTC, instead of only in the user's local time (which was confusing and not ideal). The one downside to this is that for current users who have previously logged on, it will not be automatically updated. It is only automatically updated for first-time users of the portal; previous users will need to update their settings on the splash page.
- Additionally, some environmental layers have been added to the portal. These include the IOOS global sensor, GHRSST, and OSTIA sea surface temp/sea ice. They are working on improving the access to the layers and the ease of loading them into the map. These layers can be combined to display integrated data on the portal map This functionality is also available within the MBON portal and other Axiom managed portals, but it is new to ATN DAC. The integrated map views can also be turned into curated data views for data comparison and/or data access and download,
- They also recently updated the data disclaimer statement on the splash page and on all the map layers. These updated statements added that communication and collaboration with authors is strongly encouraged. These were added at the request of many PIs and stakeholders who supplied feedback.
- M. McKinzie provided a DTAG and acoustic telemetry update. In regard to DTAG, they have set up synology raid array for data access and sharing and linked to RW. They are also working on NC template for V2 and V3 series tags, a DTag specific TagTools tutorial, and finalizing the octave forage package. With regard to Acoustic tags, they are making progress by working with Axiom and have added metadata fields to the Registration App, as well as working with the FACT network on visualization tools and data products. They are waiting for the final okay from Axiom about homing in on a dataset to test the whole pipeline. Some of the most exciting stuff happening is the work being done with the FACT network and tools being created to support SECOORA's needs.

- M. McKinzie has been spending a lot of time creating a standardized NC profile and trajectory template that will eventually be used to archive data at NCEI. This includes QARTOD QC flags. A Foie Gras version will also be generated (cleaned up version of data available to the PIs if they want it). M. McKinzie is also working on a crosswalk to DWC/OBIS version (which will be finalized later after determining if other fields need to be added) and an AniBOS template based on the eTAG. NC used in recent biologging standardization manuscript (now accessible online).
- M. McKinzie reviewed the role of AniBOS in the ATN DAC. They have now had 2 meetings of the AniBOS Data Committee, reviewing the pathway proposed and the role of GDAC, and how the various members of the committee will take part. There are 15 members from 8 different countries (including representatives from most global organizations, e.g., OTN, IMOS). Standard NC templates will allow data to come into the U.S. system, undergo QC, and decide if it is a profile or not. If it is a profile, it will be converted into standardized NC format. When the tag dataset is complete, it will eventually be archived. If it is a trajectory file, it will follow a different pathway (run through foie gras to be available to PIs, have a CSV standardized netCDF version of that data, QC version of that data as well). The AniBOS DataCommittee asked the question: what does the standardized ATN QC/NC template look like and how is it different from other templates? M. McKinzie will report back to AniBOS at a future meeting.
- S. Simmons asked if there were any other updates. There were none.

IV. SG Updates (B. Woodward, S. Simmons, All)

A. SG Discussion Items

- S. Simmons asked B. Woodward about the licensing work that has been done. B. Woodward noted it would be valuable to open this up for discussion. B. Woodward stated that Axiom has asked what type of license the ATN wants to apply to the data that will be permanently archived at NCEI. B. Woodward noted that input from the team on this would be useful. Axiom is suggesting they have a CC license that is unique and different from standard licensing and does not have the same restrictive feature to it. B. Woodward asked if anyone had anything to add to this discussion.
- M. McKinzie noted that NCEI is pushing them to apply a CC-0 license (currently a CC-BY license tends to be required). A CC-0 license waives all rights, and anyone can use information in any way they deem fit, even if it is not an appropriate use of the data. The CC-BY does retain some limited copyright language and does suggest that appropriate credit should be given to original authors but is not enforceable (though it may be important for projects that are not federally funded). B. Woodward added that this applies only to data that will be permanently archived by NCEI (the only place where it is an issue at the moment).
- M. Weise asked how much of the data is going to NCEI. M. McKinzie stated that right now, everything goes to DataONE. Once NCEI pathway is open, the DAC will only be able to archive near R/T trajectory and profile data files auto-ingested directly from a tag manufacturer. Data which are uploaded directly to the Research Workspace will have to continue to be archived at DataONE as will PAT tag data, even if auto-ingested. Eventually, delay mode data will be able to be archived, but this will require the development of another standardized template. When the NCEI pathway is open, it will only for data directly from the manufacturer's "auto-ingest.". When data goes to NCEI, data will be deployment-by-deployment and will not be packaged together by project, which would

allow data to be sent out faster. M. Weise asked about other types of data on multi-sensor tags and asked if it would all be going to those packages. M. McKinzie noted only real-time data and tags can flow through the mechanism (not delayed projects or data). M. Weise suggested that a hybrid would make sense. They may want to capture the full suite of data and have it archived. M. McKinzie noted it would need larger discussions with the PIs, which often depends on what files and data they need. M. Weise stated that this highlights a problem with past data, but it is important that archived data does capture the full suite of data. M. McKinzie agreed and noted this is where they want to go but would require standardized templates for every single file and would require templates for each field of metadata. While it is not impossible to get there, it will be an ongoing and continuous effort. M. Weise noted that data is already being archived in DataONE. M. McKinzie noted that PIs dictate which files get archived within their dataset package at DataONE. Typically, PIs choose to only archive cleaned versions of the trajectory data, not the full suite of files from an individual deployment. If we have access to the full suite of files, they can all be presently archived together at DataONE. This is always encouraged, but rarely do PIs agree and generally, those files are not provided to the DAC, even if requested, when data are manually uploaded to the DAC via the Research Workspace. M. Weise added that this is a huge topic to tackle and would require circling back later.

- S. Simmons asked if they pick one now, will there be wiggle room to change it later? M. McKinzie noted there might be some wiggle room, but it can get convoluted and put burden on the PI. This is another thing that should be thought about. M. McKinzie also noted it would be just as accessible as with DataONE.
- S. Hayes asked how quickly does the data go there? M. McKinzie stated that it is based on the embargo periods people put in the registration app, which she primarily uses to keep track of which projects will need to be archived. S. Hayes asked if this is the sort of thing that can have two levels of embargo to ensure people understand that after an embargo, it could go to NCEI and be archived? This would give it an extra level of accessibility. M. McKinzie stated that once it goes to NCEI, it would be publicly available.
- S. Simmons asked what the timeline is to decide about the license. B. Woodward stated that they have some time. However, it is a multi-faceted issue and to provide some cogent thinking about what the right license is; they need answers and clarity on the questions that are being asked. This is expected to take some time to figure it out. B. Woodward suggested tabling this for the moment and figuring out how to address it in a different way. B. Woodward added that he is not sure if it would really matter which one is chosen, because at the end of the day, neither is enforceable. The only thing the CC-BY does is provide a "warm, fuzzy feeling" that data should always include attributions when being used by others.
- M. McKinzie added that the license is way down in the metadata so users would really have to be looking for what type of license a dataset has. She expects people to either cite the source of data or not, regardless of the license and that they are unlikely to actually look for the licensing information. M. Weise noted that NSF programs, in particular, really want open access (as well as Navy and other agencies). Why is NSF saying that CC-BY is not okay or that it is restrictive? This might be an important thing to consider moving forward. S. Simmons suggested adding an Action Item on this.
- B. Woodward asked what would happen if they want a CC-BY license? M. McKinzie noted she is unsure. K. Hart added that she is still waiting on Department of Justice information regarding this topic, but they have not gotten back. Instead of it just being agency-by-

agency, they need a Department of Justice contact that would be able to help answer this question. There are so many of them, and this is one of those questions that might rise above agencies.

- ACTION: Review B. Woodward's licensing email in more detail and pull together questions about the archiving process to help the decision-making (all members). This will be discussed again at the next meeting, including what members have heard from other funders.
- S. Hayes noted that they cannot enforce anything but might be able to create an ATN page that highlights who the best collaborators are (those who cite sources) and a list of papers published that use the data but did not cite ATN. S. Simmons suggested bringing this conversation up again at the next SG meeting.

V. Review of Actions (Detailed account below; see table for summary of current actions)

A. Complete and distribute spreadsheet to organize in-progress telemetry projects

- M. McKinzie created a funder log spreadsheet that she is hoping all the major funders can fill out with the telemetry projects they currently support. This document is done and will be emailed to everyone after the meeting.
- M. McKinzie noted she has Google folders for each of the funders. M. McKinzie asked if members are okay with her emailing out this google doc and asking people to propagate information within the same document. There were no objections.

• M. McKinzie stated the log is self-explanatory, gray areas are intended for SG members to fill out (ignore the blue areas).

• ACTION: Information should be added a month before the next SG meeting and M. McKinzie can commit to providing updates once a quarter.

B. Set up a lessons-learned discussion with Fred from OTN regarding the lending library

- B. Woodward spoke with Fred 2-3 weeks ago and mentioned that they would like to have this discussion with R. Wells and others who might be interested. Fred is completely open to it and it just needs to be scheduled.
- R. Wells noted that things are in progress particularly thanks to M. McKinzie's efforts.
- ACTION: B. Woodward to contact Fred and schedule meeting with R. Wells and M. McKinzie.

C. Send a list of potential lending library inventory to ATN members; members should provide feedback by Christmas.

• Action complete and removed from table. S. Simmons stated that a more detailed summary will be covered in another portion of the meeting. See Section VI Task Team Updates – Item C.

D. Set up a new sub-group to explore options for a Network Coordinator succession plan

- B. Woodward noted he reviewed this earlier and there are no new updates.
 - ACTION: This is on hold and will be revisited at SG 10 or earlier.

E. Document possibilities explored for alerts to DAC users when downloaded data has been altered. Send to SG members

• M. McKinzie stated that there is very little they can do to notify users if a dataset has been altered. There is no way to know who accesses and downloads data from the portal and there is no obvious way to put out a group-wide alert (other than an email to everyone, which is likely not the right method). When an archived dataset is updated, the system will provide a note that data has been updated and this is embedded into the DataONE system.

This is likely the best option at this point and PIs should be checking that their datasets are always the most up-to-date versions of the data.

- ACTION: This is complete. Action removed from table.
- F. Initiate conversations with Gulf Coast PIs to facilitate more engagement.

• J. Price stated that he has connected with PIs in the Gulf Coast and they are working on receiving regional funding support for ATN and MBON. In Headquarters, they are backing off from the level of support they had previously because J. Price was instructed to get regional buy-in to receive more support from the environmental studies program.

• J. Price added that the Gulf top-level managers are looking more at operational things rather than baseline environmental work. This might be a mistake because there is so much baseline information that is necessary. There is a possibility that the GOMPS project may continue, and this would be a lead-in for MBON tagging activities. J. Price is hoping that they do not focus solely on operations but rather would focus on biology as well. J. Price will continue to engage with PIs in the area.

• J. Price added that BOEM took a big hit in the environmental studies program and was removed from a typical \$34M annual budget to something that was about \$12M less. They are now appealing through the chain of command in the Department of Interior to get a level of understanding they had given that the new administration might be more sympathetic. They also have a renewable energy component, which requires environmental impact assessments.

- ACTION: ongoing and change it to "continue conversations..."
- M. McKinzie commented that if anyone could benefit by sitting in on upcoming southeast workshop, J. Price can add them to the list. M. McKinzie will email the link to do this.

G. Craft strategic plan/procedure to re-evaluate funding each fiscal year, including how to use limited funds for supporting the infrastructure

• ACTION: B. Woodward noted this is complete. Action removed from table.

H. Review new package (ADEPTHER) for data visualization, funded by NPS (K. Hart, M. McKinzie)

• K. Hart noted that this action is still in process and the priority level is low. This falls under acoustic tracking and is further down the list for adding to DAC.

• ACTION: Share with rest of SG and discuss at next meeting. (K Hart, M. McKinzie).

I. 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)

• M. Weise noted that the outline in this summary can be added in the new Implementation Plan. The more recent ideas, for example user fees on DAC and general DAC costs for proposals, should be included in the 1-2 pagers. B. Woodward added that this action item has been overtaken by the user fees approach. The Recommendation is to work the concept into the IP and the remaining issues will be addressed by user fees output team activity.

• ACTION: Work the concept into the new Implementation Plan and allow the user fees output issue to be covered within the task team activities. No separate 2-pager is needed, and this item will be updated.

J. Determine which sections of the Data Policy Document should be pulled out to support the needs of the acoustic data community. Then, discuss with general counsel how to ensure data policy is in line with federal law (J. Young, B. Woodward)

- B. Woodward noted that the writing process has been initiated with the help of Matt Biddle. The data policy has been replaced with data management guiding principles.
- ACTION: Sections should be ready for SG review and comment before next SG meeting.

K. Discuss federal data policy requirements to ensure data policy is in line. Seek guidance from general counsel (B. Woodward, J. Blythe)

- The results of this discussion will be included in Action Item 10.
- ACTION: Consolidated with previous Action Item. Action deleted from table.

VI. Team Activity Updates

A. User fees approach for acquiring funds from Other IOOC Agencies (B. Woodward) Sub-group Members: Bill*, Bob, Woody, Mike, Jim

• B. Woodward noted that this team has been contemplating a new name for "user fees." The recommendation for the new term is "ATN DAC Data Management Services". The next step is to develop a 1–4-page document with explanation of service fees.

• M. Weise added that they will continue to work with Axiom on the requirements document. There are different costs and efforts required for different tags and streams; we need to capture estimates to show the benefits of the DAC. W. Turner suggests that when working with Axiom, they should include costs that offset those estimates with the cost of running the actual DAC (operational costs). S. Simmons added that data management costs will be added the PI service costs as well so it will be considered to a degree. J. Young noted that she would be happy to work with this task team to show data services included. M. Weise asked if J. Young has any common language to use. J. Young noted that there are a few examples and that she can share a canned data policy and general language regarding what the money is used for (ACTION).

• Task team activity is on-going. User fees will be renamed "ATN DAC Data Management Services."

B. ATN Implementation Plan Revisions (J. Young)

Subgroup-members: Joy*, Sam*, Stephanie, Mike, Bob, Sean, Meg

• The goal is of this group is to develop the outline for the next phase Implementation Plan for the ATN. The original ATN Implementation was developed in phases, but this new IP will utilize "goals", specifically program and operational goals.

• B. Woodward asked for time to review the plan and provide input at next meeting. S. Simmons noted that these are just initial thoughts, the plan could change, and that they need approval to move forward now. B. Woodward suggested rewording a goal:

"Contribute/Participate in the development of the IOOS Marine Life Program."

• B. Woodward asked about the difference between operational and program goals. J. Young noted that operational goals are starting to be actionable but not totally measurable so they would need to add operational actions after. The SG discussed the level of detail that should be included in the Implementation Plan. J. Young noted that this discussion was to get consensus on the four broad topics, and then the team will flesh out the program and operational goals for each. A few items noted and included the need to add language to support marine biodiversity, emphasize the need for sustained telemetry observations, and the importance of baseline data. J. Young presented the draft mission and vision for the IP and noted that the team would send the language to the SG for review by the next meeting (ACTION).

• Task team activity is on-going. The team will continue to flesh out the four broad topic areas and provide the draft mission and vision language to the SG for comments.

C. Tags for Researchers (R. Wells)

Sub-group Members: Randy*, Matt, Greg, Meg

• M. McKinzie noted that this team provided the SG with a poll with package options for the equipment to be purchased the ATN loaner program. The SG decided on Option 1 (65k), which included the following items:

o1 - Goniometer (on loan to ATN from CLS)

• 2- ICOM R30 handheld receivers + computer cables (purchased from Wildlife Computers)

o 2- Yagi antenna, for use with ICOM R30 receivers (purchased from Wildlife Computers)

o10 - VR2Tx acoustic receivers (purchased from Innovasea)

o 2 - VR100 receivers (Innovasea)

o 2- VHTx transponding omni-directional hydrophones (Innovasea)

• After purchasing these pieces of equipment there are few thousand dollars left in the pot, these funds will be spent to purchase two small pelican cases to house the ICOM R30, Yagi antenna and associated cables as well as some metal 'ATN' labels, and supplies for acoustic receiver maintenance and up-keep (e.g., additional batteries, o-rings, desiccant packs, silicone lube). The Innovasea equipment should ship early may and the WC equipment should ship by mid-April. With the SG approval, the purchased equipment will be sent to R. Wells who will identify the method to manage and distribute the equipment.

• B. Woodward will be the decision maker for the program and the regional groups. M. McKinzie noted that the program needs to be advertised on the website and consider other avenues to promote. Additional details such as length of the loans, the return process, and data to DAC requirements need to be included with the program details on the website. The SG agreed that a formal application to take part in the program needs to be drafted and approved (include items like project plan, length of loan, etc.). B. Woodward noted that F. Whoriskey has had experience running a similar program and will connect with him to draft the ATN application (ACTION). J. Young noted that FACT is drafting their loaner program as well and is happy to share the documents as a starting point. B. Woodward asked who all would like to join the meeting with F. Whoriskey. M. McKinzie, R. Wells, and J. Young volunteered.

VII. Steering Group Terms of Reference Review and Discussion (B. Woodward, S. Simmons)

A. The ATN Co-Chairs provided an overview of the SG Terms of Reference (ToR) status. The ToR sunsets in 2021 and needs a review prior to the renewal. S. Simmons noted that with the renewal the SG can make any amendments needed to the document. The ToR was first drafted 5 years ago and the changes in the processes (member term limits, etc.) need to be captured. S. Simmons proposed that the SG members approve the renewal of the ToR today and then she and Bill will work on revisions and provide amendments before the next SG meeting to be approved then (ACTION). The SG all agreed to approve the renewal of the ATN SG ToR. It was suggested that an amendment to stagger the SG member terms be included in the next ToR.

VIII. Final Items (B. Woodward, S. Simons)

- A. B. Woodward and S. Simmons reviewed the actions from the meeting (see table below).
- B. Wrap Up
 - S. Simmons and B. Woodward noted that the SG-10 meeting will take place in June/July 2021, and the date will be set ASAP.

• S. Simmons asked if the SG had any comments on the meeting format. It was noted that that blocking meeting time to 5pm but only setting the agenda through 4:30, to give an additional 30 minutes of discussion time if needed, is a good method going forward. Meeting was adjourned.

Action Items

#	Action Item	Responsible Party	Due Date	Comments/Updates
	Set up Google Drive and collect log of telemetry projects supported by major funders.	M. McKinzie, Funding Members	Before SG 10	M. McKinzie will share google doc, funders should fill out log.
	Set up a lessons-learned discussion with Fred from OTN regarding the lending library.	B. Woodward & R. Wells		Fred is ready to have discussion, just awaiting scheduling. Include M. McKinzie.
	for a Network Coordinator succession plan.	B. Woodward, S. Simmons, S. Hayes, J. Price, M. Weise, K. Hart, M. McKinzie	SG-10 or earlier.	
4	Continue conversations with Gulf Coast PIs to facilitate more engagement	J. Price		Ongoing. M. McKinzie will also email SG members a link to sit in on upcoming SE Workshop.
5	Review new package (ADEPTHER) for data visualization, funded by NPS	K Hart, M. McKinzie	SG-10	On-going, low-priority.
	Determine future funding opportunities through identification of agency needs to achieve funding goals. Work the concept into the new Implementation Plan and allow the user fees output issue to be covered within User Fees Task Team activities.	M. Weise, R. Wells, K. Hart, B. Houtman		
	Determine which sections of Data Policy Document should be pulled out to support the needs of the acoustic data community. Then, discuss with general counsel how to ensure data policy is in line with federal law.	J. Young, B. Woodward	SG-10	The writing process has been initiated with the help of Matt Biddle. The data policy has been replaced with data management guiding principles. Sections should be ready for SG review and comment before next SG meeting.
	Review B. Woodward's email on archiving and citing and discuss their thoughts decision via email (NCEI and licensing issue)	All SG members	SG-10	
	Arrange for a demo to highlight the environmental layers recently added to the DAC and maximize the information dissemination and get input on usefulness/utility	M. McKinzie, SG members		M. McKinzie to lead and send doodle poll to gauge interest from all SG members
10	Share template language on user fees	J. Young	SG-10	
11	Send draft IP mission and vision language to the SG for review	J. Young	SG-10	

	Connect with F. Whoriskey to discuss best practices for ATN loaner program	B. Woodward, M. McKinzie, R. Wells,		
		J. Young		
13	Renew and revise TOR for SG approval	S. Simmons, B. Woodward	SG-10	

Meeting Attendees

Steering Group Members

Hart, K.	USGS	kristen hart@usgs.gov	
Hayes, S.	NMFS	sean.hayes@noaa.gov	
Holland, K.	UH	kholland@hawaii.edu	
Levenson, J.	BOEM	Jacob.Levenson@boem.gov	
Ogburn, M.	Smithsonian	OgburnM@si.edu	
Price, J.	BOEM	james.price@boem.gov	
Simmons, S. (co-chair)	ММС	SSimmons@mmc.gov	
Skomal, G.	MMF	gregory.skomal@state.ma.us	
Smith, D.	Army COE	David.L.Smith@usace.army.mil	
Turner, W.	NASA	woody.turner@nasa.gov	
Weise, M.	ONR	michael.j.weise@navy.mil	
Wells, R.	Mote Marine Laboratory	rwells@mote.org	
Woodward, B. (co-chair)	IOOS/ATN	bill.woodward@noaa.gov	
Young, J.	FWRI	joy.young@myfwc.com	

Others

McKinzie, M.	MBARI/ATN	mmckinzie@mbari.org			
Schwartz, S.	IOOC	sschwartz@oceanleadership.org			
Desai, K.	IOOC	kdesai@oceanleadership.org			