## Spring 2019 IRIS Board of Directors Meeting April 17-18, 2019 IRIS Headquarters, Washington, DC

#### **Attendees**

**Board Members:** D. Wiens (Chair), C. Ammon, S. Hansen, V. Schulte-Pelkum, Z. Peng, S. Schwartz, D. Shillington (only 1<sup>st</sup> day), C. Thurber Absent: R. Aster **IRIS Staff:** R. Detrick (President), J. Carter, C. Shin, J. Taber, R. Woodward (on 1<sup>st</sup> day also K. Aderhold, K. Anderson, R. Busby, A. Frassetto, K. Hafner, J. Sweet)

Also in attendance on 1<sup>st</sup> day, Standing Committee Chairs

### AGENDA

#### Tuesday, April 16th

- 3:00-5:00 Board Member Orientation John Rodock (Baker Donelson), Jackie Henson (Baker Donelson), Greg Plotts (Aronson LLC), Swanson (HR)
- 5:30-7:00 Buffet dinner at IRIS HDQ

Wednesday, April 17th (Board, SMT, PM and SC chairs)

8:00-8:30 8:30 8:35 8:45-9:00	Breakfast Welcome – Chair's and President's remarks Approval of Consent Agenda FY19 and FY20 NSF/USGS budgets <i>(Detrick)</i>
9:00-10:00	<ul> <li>SAGE-I</li> <li>SAGE-I Spendout (Shin)</li> <li>TA Demobilization Plans and Budget (Woodward and Busby)</li> <li>Return of TA sensors, dataloggers to PIC (Woodward, Busby)</li> </ul>
10:00-10:15	Break
10:15-10:45	SAGE-II Yr 2 Annual Plan and Budget
10:45-11:30	CoCom Report <i>(Thurber)</i>
11:30-12:00	Preparation for meeting with NSF and USGS
12:00-1:00	Lunch
1:00-2:30	Meeting with NSF and USGS
2:30-2:45	Break
2:45-3:00	Follow-up discussion of meeting with NSF and USGS

- 3:00-5:00 Management and Program Guidance I
  - Status of SAGE-II Deliverables (Detrick)
  - Equipment Usage Trends at the PIC (Woodward/Anderson)
  - Nodal Usage and Support Policy (*Woodward/Anderson*)
  - Change in Seismic Source Facility Cost Recovery (*Woodward/Anderson*)
  - Charter of Source Facility Advisory Committee (*Woodward/Anderson*)
  - Mid-scale Infrastructure Proposal (Woodward/Anderson)

6:00 Dinner at Bobby Vans

#### *Thursday, April* 18<sup>th</sup> (Board and SMT)

8:00-8:30 Breakfast

8:30-10:00 Management and Program Guidance II

- Endorsement of Data Services Strategic Priorities (Carter)
- Data Acceptance Policy for Datasets from Temporary Deployments (Carter)
- Plans to retire full SEED by end of 2019 (Carter)
- Status of GLISN proposal (Woodward)
- BoD Action Items from the Budget and Finance Committee
  - Comments on/approval of FY18 Form 990
  - > Approval of current Aronson LLC for 2019 audit
- 10:00-10:15 Break
- 10:15-12:00 Future Planning
  - Status of La Piana Consultant Study (*Detrick*)
  - NRC CORES study and Management Workshop (*Detrick*)
  - NSF Large Facilities Workshop (*Taber*)
  - OBSIC and post-Langseth Workshop (*Detrick, Woodward*)
  - Board Nomination Committee membership
  - Other issues

12:00-1:00 Lunch

1:00-3:00 Board Executive Session (Board + President)

Adjourn

#### **MINUTES**

Meeting called to order by Board Chair Doug Wiens about 8:30 pm on April 17th, 2019.

#### 1. Consent Agenda

**Vote**: The Board unanimously approved the following motion (Thurber moves; Schulte-Pelkum seconds): *"The Board approves the following Consent Agenda items with documentation provided at the April 10th 2019 pre-Board webinar."* 

- January 2019 Board Meeting Minutes
- 2019 IRIS/SSA Distinguished Lecturers (Sarah Minson, Ross Stein)

### 2. FY19 and FY20 NSF/USGS Budgets

The IRIS President updated the Board on the status of FY19 and FY20 NSF and USGS budgets:

- FY19 NSF budget will increase 4% over FY18 to \$8.1B (+\$308M); R&RA budget up 3%; The House report instructs NSF to fund its existing research infrastructure at "no less than fiscal year 2018 levels".
- The President's budget request for NSF in FY20 is -10% (~\$1B less than FY19). RR&A budget down 11%; GEO FY20 proposed budget is down 13.3%; EAR is down 12.6%
- SAGE-II FY19 budget is not known; proposed FY20 SAGE-II budget is ~\$22M, down 7.1% from FY18
- USGS proposed FY20 budget is down 14.4% from FY19; Hazards budget is down 19% from FY19, but GSN budget actually +8K to \$6.66M. USGS budget also includes ~\$1.7M for completion of MT-TA in L48 (with out-year funding until the project is completed)
  - => NSF guidance on SAGE-II Yr 2 budget is for a 2% increase over SAGE-II Yr 1.

### 3. SAGE-I

*SAGE I Spendout.* Candy Shin, IRIS CFO, presented the Board with a summary of the SAGE-I spendout. There are two major SAGE-I activities continuing beyond FY18: Transportable Array operations in Alaska and Office of Polar Program activities. As of 3/31/19 total SAGE-I funding was \$147, 393, 505. As of 2/28/19 non-TA, non-Polar spending was \$83,779,698, \$112,555 more than budgeted, a difference of just 0.13%. This deficit will be absorbed by continuing SAGE I expenditures associated with the Transportable Array.

*TA Demobilization Plans.* Bob Busby summarized TA demobilization plans. Removals will begin in the 2020 field season and be completed in 2021. IRIS submitted a removal plan to NSF in early April. This baseline plan proposed removing 133 of the 194 new Transportable Array (TA) stations deployed in Alaska and northwest Canada during the 2020 and 2021 field seasons and returning the equipment to Anchorage by September 2021. This plan proposed to remove 66 stations in 2020 and 67 stations in 2021. The 66 stations removals in FY20 included 23 stations in Canada and 43 stations in Alaska. The 67 station removals in FY21 included 10 stations in Canada and 57 stations in Alaska, mainly north of the Arctic Circle. The University of Alaska, Fairbanks, with funding from the USGS, will adopt and continue operating 43 TA stations, mostly in south-central Alaska. An additional eighteen TA-installed stations will be "left behind" including 9 at existing sites where the site permit is held by the Alaska Volcano Observatory and 9 stations installed at permanent research facilities (e.g. Tooklik Field Station) or adopted already by other organizations. The total cost of this plan was \$12,062,368 over two years. NSF provided feedback on this plan after the Board meeting and we are substantially revising these plans based on that feedback.

*Return of TA Sensors, Dataloggers to the PIC.* A transition from field activities to closeout activities is expected in July to September 2021. Station huts will arrive in Anchorage loaded with all station materials in truckloads or barged containers. Upon receipt of the huts, Alaska TA staff at the Anchorage warehouse will unpack the huts and dispose of expendable or unneeded materials. Some materials may be provided to our Alaska partner organizations for their use, and other parts as surplus or salvaged. Only high-value equipment, such as dataloggers and sensors, will be shipped to the PASSCAL Instrument Center. In the demobilization plan submitted to NSF we budgeted to return up to 150 broadband sensors and dataloggers to the PIC where they will be tested following well-established procedures and made available for general use by the PASSCAL facility.

**Action Item (1902-01)** – IRIS will a submit a revised 2-year TA demobilization plan to NSF reflecting their latest guidance on this proposal.

#### 4. SAGE-II YR. 2 Annual Plan and Budget

At its January meeting the Board had directed all Standing Committees to develop two budgets for SAGE\_II Yr. 2: one budget at the same level as SAGE-II Yr. 1 and a second budget assuming a 2% overall increase in budget. The Board reviewed the impact of these two budgets for each program (included in the CoCom material). The biggest impact of a flat budget would be on the PASSCAL Active Source facility, Polar, and Data Services. During the Board's meeting with NSF, Maggie Benoit confirmed that our SAGE-II Yr.2 budget will be 2% above SAGE-II Yr .1, or \$18,360,000. After the Board meeting we also learned from Mike Jackson that the Polar budget cut sustained in Yr.1 will be restored in Yr. 2. He also wants us to include three project-specific supplemental budgets in the AP&B.

**Motion** (Schwartz moves; Peng seconds): *"The Board unanimously approves the SAGE-II Yr 2 proposed budget, assuming an overall 2% increase over SAGE-II Yr. 1 allocated among the programs as assumed in the SAGE-II 5-year budget submitted to NSF in November 2017".* 

Action Item (1902-02) – IRIS will submit a SAGE-II YR 2 Annual Plan and Budget to NSF by May 1, 2019.

### 5. CoCom Report

Cliff Thurber presented the CoCom report to the Board. He reviewed a list of informational items from CoCom for the Board and some specific items CoCom asked for a Board response on. The CoCom action items were discussed by the Board in agenda items in Management and Program Guidance I and II (see below).

#### 6. Meeting with NSF and USGS

The Board had a one-hour meeting with Maggie Benoit and Mike Jackson from NSF and, via teleconference, Cecily Wolfe from USGS.

Topics discussed with NSF included: SAGE-II Yr. 2 budget guidance from EAR and OPP, status of approval of SAGE-II deliverables, the planned SAGE-GAGE Data Services review planned for later this year, feedback on the TA demobilization proposal, the Mid-Scale Infrastructure program, the National Research Council CORES study, and possible changes in how SAGE and GAGE are managed post-2023.

Topics discussed with USGS included: Bill Leith's successor, changes in personnel at ASL, USGS funding for GSN in FY20 and beyond, USGS continuing support for CEUSN (including data management), and new limits on USGS travel to scientific conferences.

### 7. Management & Program Guidance I

#### 7.1 Status of SAGE-II Deliverables

Bob Detrick described the status of SAGE-II deliveries. SAGE-II performance metrics and the proposed SAGE-GAGE governance structure have both been approved by NSF. A joint IRIS-UNAVCO EPO Implementation Plan has also been approved by NSF. IRIS is still waiting for NSF feedback on a prototype SAGE Facility Website. We are also waiting for NSF to provide guidance on a SAGE Collaboration website.

#### 7.2 Equipment Usage Trends at the PIC

Kent Anderson, at the Board's request, presented a briefing on equipment usage trends at the PASSCAL Instrument Center. Over the past seven years, the average number of new PASSCAL experiments each year has been about 56; the average number of continuing experiments has been

about 47. The number of new NSF funded experiments has declined significantly since 2012 from about 30 to less than 10 (there was an uptick in 2018). At the same time, university funded experiments have grown significantly in recent years. Scheduled broadband instrument usage has remained relatively stable for the past 5 years. Texan usage has declined while the demand for nodal sensors has been rapidly increasing. These trends will inform new instrument acquisitions in the coming years.

### 7.3 Nodal Usage and Support Policy

The Board was briefed on a new Nodal Usage and Support policy approved by the PASSCAL Standing Committee (PASC). The PASSCAL node pool is growing (733 now) and in high demand. Some PIs own their own nodal sensors and want to carry out experiments using both PASSCALowned nodes and community-owned nodes. Kent explained that these mixed experiments raise issues (e.g. IRIS cannot ship nodes it does not own; scheduling IRIS-owned nodes requires tight control; concerns about loss of control of IRIS-owned nodes and data handling responsibilities in these mixed experiments). The Nodal Usage and Support Policy seeks to clarify what IRIS can and can't do under these circumstances. The key points of the policy for different deployment models are:

- 100% IRIS Supported Experiments (all IRIS nodes)
  - ▶ IRIS coordinates all logistics with PI
  - IRIS handles shipping, experiment set up and data offload (PH5)
- Mixed IRIS/Community nodes
  - ➢ IRIS handles PASSCAL nodes
  - PI's ensure the other community nodes are coordinated by those node owners involved
- 100% Community Nodes
  - Responsibility of the PI; IRIS will provide software and instructions on data handling

IRIS will continue to facilitate meetings of a Node Owners group and will continue development of tools and operational models to be shared with all academic node owners. After discussion, the Board unanimously approved the following motion:

**Motion** (Schwartz moves; Peng seconds): *"The Board approves the Nodal Usage and Support Policy developed by the PASSCAL Standing Committee".* 

### 7.4 Change in Seismic Source Facility (SSF) Cost Recovery

Currently SAGE funding for active source experiments is limited to consulting services to help PIs plan usage and write SSF proposals, training the community in how to utilize the SSF and expand the number of trained shooters, and insurance for shooting. SAGE funding does not cover field experiment costs; these costs must be included in a proposal submitted with UTEP, the operator of the SSF. Who the SSF chooses to support is between UTEP and the PI. Some solicitations (e.g. FRES) limit the number of proposal submissions from an institution, which can be a problem if more than one group requests SSF support. IRIS has proposed a model, similar to what is done with OPP proposals, in which SSF-related experiment costs are funded through a supplement to the SAGE award. IRIS would include a letter of support in the PI's proposal providing a cost estimate for the active-source elements of the experiment. If the proposal is funded, the experiment-specific funds would be passed through to UTEP as a new sub-task to their SAGE subaward from IRIS. Oversight of the SSF would be provided through the PASC. After discussion, the Board unanimously endorsed this new SSF cost recovery policy and encouraged IRIS to discuss this model with NSF.

### 7.5 Charter of Seismic Source Facility Advisory Committee

The PASC has proposed to the Board that the charter of the Seismic Source Facility working group be changed to make it an Advisory Committee reporting to the PASC. The SSFAC would advise the PASC and PASSCAL program manager on SSF issues, develop and review policies on SSF usage, and review support letter guidance and the budget estimation process. Membership recommendations for the SSFAC include:

- Beatrice Magnani
- David Okaya
- Donna Shillington
- Lindsay Worthington
- Lee Liberty
- Rob Abbott
- Marianne Karplus (observer)
- Galen Kaip (observer)
- Kent Anderson (IRIS)

**Motion** (Thurber moves; Schulte-Pelkum seconds): *"The Board unanimously approves the proposed charter for the Seismic Source Facility Advisory Committee (SSFAC), which will report to the PASC. The Board also approved the proposed membership for the SSFAC".* 

### 7.6 Mid-Scale Research Infrastructure Proposal

The IRIS pre-proposal for the Mid-Scale Research Infrastructure Program was approved for submission of a full proposal (due May 20, 2019). The focus of this proposal is on enhancing portable instrument capabilities for imaging from the surface to the core with a focus on three areas:

- Adding a shared-use Near Surface Geophysics Facility as envisioned in the NGEO proposal
- Enhancing imaging with Large-N (2,500 more nodes) and infrasound sensors
- Acquiring next generation data acquisition and broadband sensors for deep Earth imaging

The Board discussed community members who could contribute sections to the scientific justification for this proposal. Susan Schwartz and Chuck Ammon agreed to be Board reviewers for this proposal

**Action Item (1902-03)** – IRIS will submit a revised Mid-Scale Research Infrastructure Program proposal by the May 20, 2019 deadline.

### 8. Management & Program Guidance II

8.1 Data Services Strategic Priorities

Jerry Carter reviewed changes to the Data Services priorities document. The highest priority is attracting and retaining a dedicated and talented staff and maintaining state-of-the-art facilities. Service priorities included:

- Core Services (all must be present)
  - Ingestion
  - Archive & Curation
  - Quality Assurance
  - Discovery, Access and Distribution
- Secondary Services (in order)

- Support for Community Standards
- Product Support
- Support for Data Ingestion from the Developing World
- > Training
- Data Priorities (in order)
  - Data from IRIS Operated Sources
  - > Data from non-IRIS Operated Sources

The Board endorsed these priorities but questioned how they would be applied to data that were offered for archival. [All data will be accepted per the approved data acceptance policies as long as the resources are available to host them.] They also noted that no mention is made in the document of non-broadband data.

<u>8.2 Data Acceptance Policy for Datasets from Temporary Deployments</u> Jerry Carter discussed changes to the Data Acceptance Policy for Datasets from Temporary Deployments approved by the Data Services Standing Committee (DSSC). The following table summarizes these changes:

Source of Data	Old Policy	New Policy
Data from NSF and non- profit educational/ research institutions	\$1250/TB for all data over 10 TB	<ul><li>\$1125/TB for SEED data over 10TB;</li><li>\$240/TB for PH5 data (and other formats) over 40TB</li></ul>
Data sets generated by other Federal or State Agencies	\$2500/TB for all data over 10 TB	<ul><li>\$1125/TB for SEED data over 10TB;</li><li>\$240/TB for PH5 data (and other formats) over 40TB</li></ul>
Data sets generated by for-profit organizations wishing to use the services of the IRIS DMC	\$3750/TB for all data over 10 TB	\$2250/TB for SEED data; \$480/TB for PH5 data (and other formats)

**Motion** (Thurber moves; Peng seconds): *"The Board unanimously approves the revised Data Acceptance Policy for Datasets from Temporary Deployments proposed by the DSSC".* 

### 8.3 Plans to retire full SEED by end of 2019

Jerry Carter briefed the Board on plans to retire full-SEED by the end of 2019. The user community will be notified through: 1) a late April newsletter, 2) a Message Center broadcast, and 3) notices posted on the DS webpage. Support will be provided for the community during the transition including software tools and tutorials in the use of web services.

#### 8.4 Status of the GLISN proposal

Bob Woodward briefed the Board on the status of the GLISN proposal. The proposal is largely complete with the exception of the science justification section. The proposal should be submitted soon.

8.5 Board Action Items from the Budget and Finance Committee

The Board's Budget and Finance Committee seeks the full Board's approval of three items:

- Submission of the IRS Form 990 for FY18
- Approve selection of Aronson LLC for FY19 Single Audit
- Approve plans to withdraw \$50K in May and another \$50K in September to replenish PNC unrestricted account

**Motion** (Ammon moves; Schulte-Pelkum seconds): *"The Board approves submission of the IRS 990 by 4/30/19".* 

**Motion** (Hansen moves; Thurber seconds): *"The Board unanimously approves Aronson LLC for the FY19 single audit of IRIS".* 

**Motion** (Hansen moves; Ammon seconds): *"The Board unanimously approves plans to withdraw \$50K in May and another \$50K in September to replenish the PNC unrestricted account"* 

### 9. Future Planning

### 9.1 Status of La Piana Consultant Study

Bob Detrick briefed the Board on the status of the La Piana consultant study being done jointly with UNAVCO to examine potential strategic restructuring of IRIS and UNAVCO in light of NSF potentially integrating SAGE and GAGE into a single facility post-2023. We expect them to deliver a preliminary report before the CORES management workshop on May 13-14. A final report should be submitted to both the IRIS and UNAVCO Boards by early June.

### 9.2 NRC CORES study and Management Workshop

The National Research Council's CORES committee will be holding a workshop on management models for seismic and geodetic facilities on May 13-14, 2019 in Chicago. IRIS will be allowed to have 3 attendees at the workshop. Bob Detrick, Bob Woodward and Board Chair Doug Wiens will attend from IRIS. The workshop will include presentations, panel discussions and breakout sessions with managers and scientists from scientific facilities in the U.S. and abroad.

### 9.3 NSF Large Facilities Workshop

John Taber and Trisha Pinckney attended the annual NSF Large Facilities Workshop held this year in Austin, TX. Takeaways from this year's workshop included:

- Branding and renaming
  - > OLPA is not asking facilities to change all existing materials
- Privacy and EU regulations (GDPR)
  - IRIS should be compliant once we post our privacy policy
- Facility performance measures
  - Users, training, published papers
- Core competencies and key personnel
  - Project management experience will be sufficient, certification not required
  - Example of transition of prime awardee
    - Ocean Leadership -> WHOI for OOI

#### 9.4 OBSIC and post-Langseth Workshop

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Bob Detrick and Bob Woodward attended the NSF-supported Post-Langseth Workshop held April 1-3 in Washington, DC. The purpose of this workshop was to identify options for providing the research community in the U.S. with access to a capability to acquire large-offset marine multichannel seismic data and a large-volume, tuned airgun source for active source OBS experiments. The workshop identified the following options which will be transmitted to NSF:

- **Options 1 and 1A:** a private entity, institution or consortium of institutions purchases and outfits a general purpose oceanographic vessel with seismic capabilities and operates it as part of the Academic Research Fleet (with the 1A option being purchase of R/V *Langseth* from NSF by a private operator.)
- **Options 2 and 2A:** a private entity, institution or consortium of institutions purchases and outfits a ship for use only in seismic operations, with 2A being R/V *Langseth*.
- <u>"New Option 2"</u> was prepared during the course of the meeting when a proposal was presented by the JAMSTEC representatives who offered to provide their ship R/V *Kaimei* to US researchers for collaborative projects at a fixed rate far below its operating cost. This was developed into a broader recommendation encouraging collaboration in both directions with other countries.
- **Options 3 and 3A** represented different methods of leasing vessels with seismic capabilities. Option 3 involved a long-term lease (~5 years) with a single commercial operator providing one or more vessel(s) as required to meet NSF-funded science objectives. Option 3A involved setting up a contracting office at a research institution to negotiate individual charters of commercial seismic vessels of opportunity.

## 9.5 Board Nomination Committee membership

The Board discussed membership of the Board Nominations Committee and recommended the following membership:

Doug Wiens (Chair) Karen Fischer (past Chair) Andy Newman, Lindsay Worthington, Mike Bruzinski

Action Item (1902-04) – Bob Detrick will contact proposed members for this committee to determine if they are willing to serve.

### 9. Board Executive Committee Session

Topics discussed in the Board Executive Session included:

- Motions as noted above
- Succession planning

# Schedule for upcoming BoD meetings: November 13-14, 2019 – Ft. Collins, CO

Meeting adjourned by Board Chair Doug Wiens about 1:30 pm on April 18th, 2019.