

**IRIS Board of Directors Meeting
Nov. 14-15, 2018
Salt Lake City, Utah**

Attendees:

Board Members: D. Wiens (Chair), C. Thurber (Vice Chair), K. Fischer, S. Hansen, K. Koper, V. Schulte-Pelkum, Z. Peng, D. Shillington, M. West

IRIS Staff: R. Detrick (President), T. Ahern, C. Shin, J. Taber, R. Woodward, R. Porter

AGENDA

Wednesday, November 14th

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| 8:00–8:30 | <i>Breakfast</i> |
| 8:30–8:35 | Welcome – Chair’s and President’s remarks |
| 8:35–8:45 | Approval of Consent Agenda |
| 8:45–9:15 | Review of SAGE II CA/CSA Terms and Conditions (Detrick) |
| 9:15–10:00 | Discussion of SAGE II CA/CSA Terms and Conditions |
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| 10:00–10:30 | <i>Morning Break</i> |
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| 10:30–12:00 | Programmatic Updates <ul style="list-style-type: none">• Instrumentation Services (Woodward)• Data Services (Ahern)• EPO (Taber) |
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| 12:00–1:00 | Lunch/Preparation for calls with NSF and USGS |
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| 1:00–2:45 | Management and Program Guidance I <ul style="list-style-type: none">• CoCom Issues for Board (Thurber)• Governance Committee Nominations (Thurber) |
| 2:45–3:15 | Conference call with Bill Leith/Cecily Wolfe (USGS) |
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| 3:15-3:30 | <i>Afternoon Break</i> |
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| 3:30–4:30 | Conference call with Maggie Benoit (NSF) |
| 4:30–5:00 | Discussion of calls with NSF and USGS |
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| 6:30 | <i>Dinner</i> (Spencer’s for Steaks and Chops) |

Thursday, November 15th

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| 8:00–8:30 | <i>Breakfast</i> |
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| 8:30–10:00 | SAGE II Implementation Issues <ul style="list-style-type: none">• SAGE/GAGE Governance and Management• Integrated EPO Implementation Plan• 2019 IRIS/UANVCO Community Workshop• SAGE website/social media |

- AGU plans (Town Hall, IRIS booth, IRIS Membership Meeting)

10:00-10:30 *Morning Break*

10:30-12:00 Other Issues

- CORES (Catalyzing Research Opportunities in the Earth Sciences)
- Updating the Seismology Grand Challenges document
- Pursuing funding for frontier activities not supported by SAGE II
- Plans/priorities for responding to the NSF Mid-scale Research Infrastructure solicitation
- Status of post-*Langseth* planning: SZ4D

12:00–1:00 *Lunch*

1:00–3:00 Board Executive Session

- Response to CoCom Issues for Board
- Governance Committee Appointments
- Other items requiring Board approval
- DS Director Search
- HQ and DMC office leases
- Dates for Winter and Spring BoD Meetings
- Other

Adjourn

MINUTES

Meeting called to order by Board Chair Doug Wiens about 8:30 am on Nov. 14th, 2018.

1. Consent Agenda

Motion 1811-01: The Board unanimously approved the following motion (Thurber moves; Schulte-Pelkum seconds): *“The Board approves the following Consent Agenda items as presented in the Nov. 9th, 2018 pre-Board webinar with documentation provided and reviewed prior to this Board meeting.”*

- Minutes of the May 2018 Board meeting. Minutes have been posted on the BoD website.
- Appointment of the membership of the Board Nominating Committee (Karen Fischer, Miaki Ishii, and Fan-Chi Lin)
- Nominating Committee report with six nominees for three open Board positions
- South Dakota School of Mines and Technology as an IRIS Member Institution
- SAGE II Cooperative Agreement and Cooperative Support Agreements

2. SAGE II

Bob Detrick reviewed with the BoD the Terms and Conditions of the new SAGE II Cooperative Agreement and two associated Cooperative Support Agreements. He highlighted the following:

- Cumulative value of the award is \$93,672,734 which assumes 2% increase per year

- Any proposed changes in Key Personnel (Detrick, Ahern, Anderson, Hafner, Taber, Woodward) requires NSF approval
- GSN, PASSCAL, PASSCAL-MT, DS, and EPO all identified as “top priorities” by NSF in the case of a “constrained funding environment”
- Cooperate in NSF-led annual external reviews of SAGE facility components and activities beginning with Data Services in Yr 1 (jointly with UNAVCO)
- Participate in a comprehensive external review of all SAGE facility components in Yr. 3 of the award
- Conduct at least 1 in-person meeting of Governance Committees each year
- Must notify NSF prior to engaging, or negotiating with, any entity to support additional projects with funding external to the agreement
- Must notify NSF 30 days prior to submitting proposals to NSF that leverage SAGE facility components
- NSF approval is required for foreign travel by Co-PIs and Key Personnel
- Use of carryover funds must be “coordinated” with NSF

By March 1, 2019 the following must be completed:

- Implementation of SAGE Governance Structure in coordination with UNAVCO
- A description of lines of authority and how decisions will be made, and disputes, if any, resolved under the new governance structure
- Define appropriate GPRA performance metrics
- Submit a coordinated education, outreach and workforce implementation plan with UNAVCO

In addition, IRIS is required to do the following:

- Develop, design, implement and maintain a SAGE facility website
- Convene an annual community workshop with UNAVCO
- Develop and maintain a virtual collaboration site with copies of permits, MOU, vendor agreements, etc.
- Submit a single Annual Project Plan to NSF May 1 of each year. Quarterly reports must be submitted on March 1, June 1, Sept. 1 and Dec. 1 of each year. Annual report due August 31st of each year

The Board and SMT discussed these requirements and how we will coordinate our response with UNAVCO. Detrick and Wiens will try to meet with the UNAVCO President and Board chair during AGU week to discuss these plans.

Action Item (1811-01) – The IRIS and UNAVCO Presidents and Board chairs will meet during AGU week to discuss the SAGE II and GAGE II Terms and Conditions that impact both organizations.

3. Programmatic Updates

Bob Woodward, Tim Ahern and John Taber gave the Board updates on the status of the Instrumentation Services, Data Services and Education and Public Outreach programs. They also discussed plans for the next 5 years.

4. Management and Program Guidance I

Cliff Thurber presented the CoCom report to the Board. He reviewed a list of several informational items from CoCom for the Board and twelve items CoCom asked for a Board response on. The Board response for these twelve items is summarized below.

4.1 (TA) Request approval to submit a proposal to NSF for NNA support of Alaska TA.

The Board supports investigating the use of Navigating the New Arctic (NNA) to obtain funding to continue operation of Alaska TA stations beyond their planned removal in 2020/21. Any proposal should be done in partnership with UAF. Although the Board supports investigating this possibility, it is concerned about the longer-term feasibility, cost, and sustainability of a TA operations team if the number of stations an NNA proposal could support is too small. The Board will conduct its normal review of any proposal prior to its submission.

4.2 (PASSCAL) Recommendation for "Grand Challenges Report" update to support decadal panel review.

Rather than convening a workshop to update the Grand Challenges Report, the Board will appoint a small ad hoc writing team that will produce a short (~5 page) white paper for submission to the CORE review that synthesizes the key points from a number of recent reports (Leesburg Futures Report, SZ4D Report, 2018 IRIS workshop report, etc.) along with the Grand Challenges Report (see below).

4.3 (GSN) Endorsement for seeking funding for WGLTSS Pilot Project (as described in Project Charter).

The Board accepts the report of the WGLTSS Working Group and thanks the members of the Working Group for producing a comprehensive report and set of recommendations, The Board supports the GSNSC continuing to pursue options for funding of the initiative recommended by the working group. The Board would like to see more information about the plans for such a proposal and the role of IRIS in such a proposal (e.g. it seems like WHOI and/or SIO/UCSD would likely be the lead institution(s) on such a proposal). The OCE program managers for the OTIC and OBSIC programs should be consulted about possible funding through these NSF programs. The Board will conduct its normal review of any proposal with direct IRIS involvement prior to its submission.

4.4 (DS) DSSC produced a "Priorities for Data Services" document, for board review, modification and endorsement

The Board thanks the DSSC for the Priorities for Data Services document which will be a useful planning document for the Board. However, the Board asks for clarification regarding the low priority given for archiving MT and acoustic data. With the initiation of the new PASSCAL-MT program under SAGE II and the expanded collection of infrasound data by both the TA-AK and GSN it seems these data types should not be a low priority for the DMC. Data products also have value - is it known how much such products are being used?

4.5 (DS) Removal of network data from the DMC archive for networks that are part of the Federated System. Allow network operators to opt out of having data at the DMC if data can be reliably provided through the Federated System.

The Board approves the opt-out for network operators if the data can be reliably served in the longer term through the Federated System, but is not supportive of deletion of data from all networks in the Federated System.

4.6 (DS) DSSC ready to send letter regarding support for DS Data Workshops to NSF.

The Board does not recommend sending a letter at this time. It appears that NSF would be supportive of holding Data Workshops under SAGE II if the NSF concerns regarding past Data Workshops can be addressed.

4.7 (DS) DSSC advocates for 2 face-to-face meetings per year using existing DS budget resources.

The Board supports giving Standing Committees the option of holding a second face-to-face meeting provided the costs of this second face-to-face meeting are covered by program funds. Each committee

will have to make this decision in March for the following FY and funds will have to be moved from the Program to the Governance/Management budget line in the Annual Plan and Budget.

Motion 1811-02: The Board unanimously approved the following motion (Fischer moves; Shillington seconds): *“Each spring, the GSN, EPO, PAS, and DS Standing Committees shall determine their plan for face-to-face versus virtual meetings for the next fiscal year, and prepare their Annual Plan and Budget accordingly. The options are to have two face-to-face meetings or one face-to-face meeting and one virtual meeting.”*

4.8 (DS) Pursuit of other funding sources. DS seeks Board approval for the following sources of funding: EarthCube Council of Data Facilities (a potential Mid-Scale Infrastructure proposal); USGS for CEUSN data management after the first 6 months of funding; NSF/OCE for OBS and OOI data, and other Federal and state agencies (DOI, DOE, NOAA, DOD, etc.)

Continued CEUSN funding for the DMC beyond FY19 appears unlikely, according to the USGS. OCE has indicated a willingness to support archiving of OBS and OOI data. The Board is supportive of a proposal (not led by IRIS, but preferably jointly with UNAVCO) with the EarthCube Council of Data Facilities to move the IRIS ADC into the Cloud. The Board will conduct its normal review of any proposal prior to its submission.

4.9 (MT) Review and approve EMAC charter, working group/subcommittees

Motion 1811-03: *The Board approved the proposed EMAC charter (Thurber moved; Koper seconds; approved unanimously).*

Motion 1811-04: *The Board approved the proposed EMAC Instrumentation WG charge and proposed membership (West moved; Shillington seconds; approved unanimously).*

Motion 1811-05: *The Board approved the proposed EMAC Software WG charge and proposed membership (Thurber moved; Hansen seconds; approved unanimously).*

4.10 (IDS) What should the role of IDS be under SAGE-II?

IDS remains a valuable activity. The Board does not recommend developing an IRIS IDS SZ4D RCN proposal at this time, given the existence of other such proposals, but that an IRES proposal would be appropriate to pursue. IDS is encouraged to submit a Simpson Fund proposal for international intern support. The Board indicates that IDS can continue to have access to IRIS staff support comparable to what it has had in the past.

4.11 (EPO) EPOSC expressed concern about the negative impact of a loss of IRIS branding both for the research community as well as for educators and the general public - likelihood of needing to rebrand again in 5 years? EPOSC offers to draft letter to NSF on behalf of seismological community expressing their concern

The Board understands and shares the concern of the EPOSC regarding protecting the IRIS “brand” but does not want such a letter written and sent to NSF at this time.

4.12 (DS) Draft policy for Datasets from Temporary Deployments

The Board does not approve this new policy at the present time. DS should consult with other Standing Committees and other stakeholders to resolve concerns and modify the policy as needed before bringing it back to the Board for review and approval.

5. Teleconference with USGS and NSF Agency Representatives

The Board had a 30-minute telecom with Bill Leith and Cecily Wolf from USGS and a 45-minute call with Maggie Benoit from NSF.

The topics discussed with USGS included adoption of TA stations in Alaska, the transition of CEUSN operations from IRIS to USGS/ASL, and USGS interest in acquiring nodal sensors and having them maintained by the PIC. USGS also provided the Board with an update on IPAs they are funding with IRIS EPO and IDA/UCSD and the status of the USGS subduction zone science initiative.

Topics discussed on the NSF call included the review of IRIS DS (planned for the summer of 2019), the NSF desire for an IRIS-UNAVCO community workshop in 2019, how NSF would like to work with IRIS to meet other requirements in the SAGE CA, Data Workshops, and NRC CORES study and the importance of IRIS providing input to that study.

6. SAGE II Implementation Issues

The Board was updated on implementation issues related to the new SAGE II Cooperative Agreement:

6.1 SAGE/GAGE Governance and Management - we propose to utilize the revised N GEO governance model which was discussed with the UNAVCO Board last March

6.1 Integrated EPO Implementation Plan – John Taber and Donna Charlevoix (UNAVCO) are working on developing this plan. It will build on what was described in our N GEO proposal. The draft EPO implementation plan will be presented to the Board for review and approval at its next meeting.

Action Item (1811-02) – A draft IRIS-UNAVCO EPO Implementation Plan will be presented to the Board for review and approval at its next meeting.

6.3 2019 IRIS-UNAVCO Community Workshop – IRIS and UNAVCO are exploring holding a joint community workshop in early October 2019. A joint 6-member organizing committee will be appointed by both Boards. Donna Shillington will represent the IRIS Board on this committee; two other committee members will be chosen from the IRIS community including one early career scientist.

Action Item (1811-03) – An organizing committee for the joint IRIS-UNAVCO Community Workshop to be held in Fall 2019 will be appointed by the IRIS and UNAVCO Boards.

6.4 SAGE website – The new SAGE II Cooperative Agreement requires that IRIS develop a SAGE website. A strategy for developing the SAGE website and linking it to the existing IRIS website was discussed. A preliminary design for a SAGE logo and banner for the SAGE website was also presented to the Board.

Action Item (1811-04) – A developmental SAGE website will be presented to the Board for review and approval at its next meeting.

6.5 AGU plans – The Board was briefed on AGU plans including the IRIS Membership Meeting (on Monday, Dec. 10th at IRIS HQ in the AAAS Building), the IRIS booth, and an GAGE-SAGE-EarthScope Town Hall on Wednesday, Dec.. 12th.

7. Other Issues

The Board discussed a number of other issues described below:

7.1 CORES (Catalyzing Research Opportunities in the Earth Sciences) - NSF's Division of Earth Sciences has asked the National Research Council to conduct a "Decadal Survey" to "*set priorities and strategies for its investments on research, infrastructure, and training in the coming decade*". The committee's charge includes preparing a report with three elements:

- (1) A concise set of high-priority scientific questions that will be central to the advancement of Earth sciences over the coming decade and could help to transform our scientific understanding of the Earth.
- (2) Identify infrastructure needed to advance the high-priority Earth science research questions from (1); evaluate the current inventory of research infrastructure supported by EAR; and identify gaps in infrastructure capabilities.
- (3) Discuss how EAR can leverage and complement capabilities, expertise and strategic plans of its partners (other parts of NSF, other federal agencies, international partners).

The first meeting of the CORES committee was held after the Board meeting and it was not clear what sort of input the committee would seek from the EAR community for this study or when that input would have to be provided to the committee. The committee seems to be working on a very fast track, and the window for input may be short.

The Board discussed updating the Seismology "Grand Challenges" document which is now about 10 years old. NSF has indicated it could provide funds for a workshop to do this, however the Board was concerned about the feasibility of holding the workshop on such short notice and obtaining broad input from the community. The Board also noted that there were more recent reports including the Leesburg "Futures" report, the SZ4D workshop report, and the 2018 IRIS Community Workshop Report that provide broad community input on high priority scientific questions and facility needs that would be highly relevant to the CORES effort. The Board recommended that instead of holding a workshop to update the "Grand Challenges" document, a small *ad hoc* writing committee be formed to summarize the key points of the above mentioned reports in a short (~10 page) document that could be submitted to the committee. Karen Fischer, Thorne Lay and Brandon Schmandt were suggested as members of this committee. The committee could also consider soliciting views from the broader IRIS community via email/webinar on key science questions, new instrumental/methodological developments, and future facility needs.

Action Item (1811-05) – Establish a small *ad hoc* writing group to synthesize key points from recent community planning in a short white paper to provide as input to the CORES study.

The Board also discussed forming a joint IRIS-UNAVCO committee to explore different management models for a single, integrated seismo-geodetic facility post-2023. Bob Detrick, Doug Wiens and Anne Meltzer or Anne Sheehan were suggested to represent IRIS on this committee. Just after the Board meeting, NSF notified IRIS that it has asked the NRC CORES Committee to convene a public workshop to address "*different management models for future seismological and geodetic facility capabilities*". IRIS and UNAVCO will be invited to participate in this workshop which will be held in May 2019.

Action Item (1811-06) – Discuss with UNAVCO forming an *ad hoc* committee to provide input to the CORES management workshop in May 2019.

7.2 Pursuing funding not supported by SAGE II - The Board discussed with the SMT pursuing funding outside the SAGE II award for high-priority frontier activities identified in our NCEO proposal, but that were not funded as part of SAGE II. This includes establishment of a NSGF, HPC/Big Data, modernization of the portable instrument pool, and development of a capability for long-term (>1-2 yr) seafloor seismo-geodetic observations. The NSF Directors “Big Ideas” initiatives, specifically the Mid-Scale Research Infrastructure program may provide opportunities for IRIS to pursue funding for these frontier activities outside of SAGE II. At the time of the Board meeting the Mid-Scale Research Infrastructure solicitation had not been released, but could be of interest in pursuing at least two proposals: (1) a proposal focused on acquiring next-generation instrumentation for multi-scale imaging of the Earth from the near-surface to the core, and (2) a collaborative proposal with the EarthCube Council of Data Facilities to move the IRIS Auxiliary Data Center to shared infrastructure in the Cloud.

Action Item (1811-07) – When the Mid-Scale Research Infrastructure program solicitation is released IS and DS should review the solicitation and determine if it would be appropriate to submit one or more proposals. These proposals will need to be reviewed by the Board before submission.

7.3 Post-Langseth and SZ4D Planning - The Board discussed the status of post-*Langseth* and SZ4D planning. NSF is planning to hold a small “Ideas Lab” workshop, probably in March, with outside facilitators to explore options for a *Langseth* replacement. The MSROC has formed a Seismic Working Group to provide input to this workshop. In parallel with this, MSROC is discussing submitting a proposal to NSF for a broad marine seismic community workshop, possibly in early 2020, modeled after the OBSIP workshops IRIS held in 2013, 2015 and 2017.

NSF has made several RCN awards related to SZ4D planning, but is not expected to make any major commitment to a SZ4D program until after the CORES report is completed. The USGS subduction zone science initiative also seems to be on hold due to budget uncertainties.

10. Board Executive Committee Session

The Board met in Executive Session from 12:00-2:45 pm. Topics included:

- Response to CoCom Issues for Board
- Governance Committee Appointments
- Other items requiring Board approval
- DS Director Search
- HQ and DMC office leases
- Dates for Winter and Spring BoD Meetings
- Other

During Executive Session the Board passed the following motions:

Motion 1811-06: *The Board approves motion to adopt Enabling Resolutions for the Morgan Stanley investment account and authorizes the IRIS President and CFO to issue instructions to Morgan Stanley Smith Barney (MSSB) for opening or maintaining accounts for Incorporated Research Institutions for Seismology (the “Corporation”) as described in the Morgan Stanley document “Authorized Persons and Enabling Resolutions for Corporations. (Fischer moves; Thurber seconds; approved unanimously).*

Motion 1811-07: *“The Board approves submission of FY20 Indirect Rates to NSF to using historical levels. (West moves; Peng seconds; approved unanimously)*

Motion 1811-08: *“The Board approved the revised PASSCAL SC charter. (West moves; Schulte-Pelkum seconds; approved unanimously)*

Motion 1811-09: *“The Board approved extending the PH5 Working Group through FY20. (Shillington moves; West seconds; approved unanimously)*

The Board reviewed and approved (with a few exceptions) the proposed Standing Committee membership changes. This information has been conveyed to the Project Leads and Standing Committee chairs. The Board has asked that Seismic Source WG charge be revised/updated and resubmitted to the Board for review and approval.

Meeting adjourned by Board Chair Doug Wiens about 2:45 pm on Nov. 15, 2018.