

Date: Monday, February 27, 2012

Present: R. Anthes, L. Dahlman, A. Newman, J. Ryan, D.S. Stamps, J. Taber, W. Taylor, S. Wdowinski, M. Miller, S. Olds, V.Sloan, M. Berg, M. Weber

Absent: E. Hill, D. Marsland, S. Semken

S. Olds brings meeting to order at 8:03a (MST). Spends time welcoming and introducing committee members and UNAVCO E&O team. Thanks A. Newman for his many years as Committee Chair and introduces S. Wdowinski as new committee chair.

Agenda Items

I. Overview of E&O activities for 2011 & Discussion – S. Olds

II. Overview for planned activities 2012:

- Update on RESESS 2012 including SACNAS – Sloan
- Update on geodesy curriculum development – Newman/S. Olds
- Short courses / Professional Development – S. Olds
- Update of ECE Director search – M. Miller
 - Identify community member to participate in search committee

III. Review of Guiding Documents – S. Olds

- Strategic plan; recommendations/suggestions over the past 5 years; thinking behind the work break down structure

IV. Discussion of long-term interests and priorities – S. Wdowinski

- What do we want the Education and Community Engagement to look like in 2018 and 2023?
- What major products and activities reflect our growing geodesy community would we want to see?

V. Executive Session – S. Wdowinski

I. Overview of E&O activities for 2011 & Discussion

- A. S. Olds starts with E&O report to board. Discussing significant events.
1. HIGHLIGHTS– started for just community, but found that it was reaching much more. Interest spikes first month then tapers.
 2. INSIGHTS: Provide large and small articles for Earthscope InSights. New publication will reach to broader audience. Taylor ADDS – developing website, first issue since office has changed over.
 3. BOOTH – presence at scientific conferences.
 4. COMM. DATABASE – journal articles have used UNAVCO resources, for data/scientific support. Trying to have a more reflective database of mentions.
 5. PUBLICATIONS – E&O does logistics of developing. An area that was never well articulated. While sporadic, is rather intensive.
 6. INTERNATIONAL ENGAGEMENT & PARTNERSHIP: identify we do work in a national arena. Concern that we have more of a connection with international collaborators. COCONet is an example, website.

Questions/Comments

S. Wdowinski: How does this effect, regarding change to ECE?

- M. Miller – there is a need for international. UNAVCO is in on going conversation with project committee on how to build meaningful relationship. Short courses in works. Trieste workshop being used as a model.

J. Taber: Are there affiliates?

- M. Miller – There are associate members at a \$1000 fee. Although they can make a case for hardship. By:laws allow UNAVCO to waive fee. UNAVCO only has a handful of members. UNAVCO is supporting members to come to science workshop. People really like being part of a global community. J. Normandeau pointed out that we have many that collaborate with and could benefit UNAVCO. We also hold a reception at AGU for those members.
- J. RYAN: Members in the Caribbean are hard to collaborate with. It's a strange situation and dynamic is unusual. Most are very economically or other way challenged institutions. It's harder to get them in to the U.S., rather than U.S. Territories.
- M. Miller agrees that there are huge gaps. We have active collaborations however.

S.Wdowinski: Could we lesson the cost, encourage board to accept more?

- A. Newman: We would need some member buy in –

S.Wdowinski: Could we – we offer to buy in?

A. Newman: ...or suggest sponsorship? There needs to be buy-in from someone

- R. ANTHES: Suggest UNAVCO adopt an international “partner”. It would be mutually beneficial for both.

M. Miller – asks A. Newman to come sit in with a group discussion.

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S. STAMPS COMMENTS on Trieste training session. It is important to have one on one to help. Encourage short courses, have extra personnel to help with that.

M. MILLER COMMENTS that UNAVCO will have JPL coming to offer GYPSY short course...finally

7. SHORTCOURSES – number of them offered over past 7 years. Hoping to add GYPSY to this list. Overall, we are doing a pretty good job, people are happy. There are typically 2:4 instructors.

Questions/Comments

A.Newman: There are some think courses are too short, any chance we can expand?

- S. Olds: The possibility is there to try with a few of them. We could be encouraged to increase by half a day to install software etc. or install on laptops.

L.Dahlman – Could we make it a prerequisite for a participant to show an install?

A. Newman: Or maybe moving the “play around” time to the middle instead of the end of a session?

8. PROFESSIONAL DEVELOPMENT: higher and secondary education research that can be embedded to curriculum. Cumulative total of participation of teachers, faculty and/or scientists. The impact is higher than original planned.... have reached over 1,000.

Questions/Comments

S. Stamps – Is there a desire to interact more?

- S. Olds – Yes that was one of the recommendations, to translate into a webinar to expand reach.

L. Dahman – Possibly consider something in between a face to face and webinar, or maybe a do series of webinars. See what public want by doing an assessment with target group.

S. Wdowinski : What would be the optimized number of teachers to reach. Is it quality, or quantity that we want?

- S. Olds: The approach is to large-scale groups. The threshold is with new content. A lot is not available in textbooks.
- M. Miller: There are 15,611 Earthscience teachers K-12

J. RYAN COMMENTS: Community College faculty is an untapped resource. An exposure to geoscience starts in high school, but there is a gap. Students are trending toward 2:year colleges. Earth science is not seen college prep.

- S. Olds: How we can influence a group that is involved in college prep tests. Offer a bank of questions?

9. OUTREACH TOOLS DEVELOPMENT: Web development and design. Such as highlights and event response pieces. Collect metrics, web pages viewed, unique visitors to outreach, and unique visitors to RESESS web.

Questions/Comments

R. Anthes: How long do they stay on web?

- S. Olds: The metrics are on when it is viewed, not how many hits

10. GEODESY CURRICULUM – committee team working towards NSF TES Phase I proposal – May 2012.

11. EXTERNAL REVIEW – overall prospective was positive.

II. Overview of planned activities 2012:

- A. Update on RESESS 2012 including SACNAS: V. Sloan states it has been a good year. There were 13 interns with 2 that were offsite. All but one presented at conference. All are student interns are currently in school with a couple who are currently in grad school .Two student interns are working on publications. Fourteen students from the 2010 and 2011 internships have re-applied, only two of them we have had to turn down. We are hoping to bring in 5-6 new interns.

Budget - NSF award states that in years 1 and 2 there is an increase of funds, while in years 3 through 5, funds decrease with idea of the program receiving external funding and sustainability. Program can currently host 12 interns. RESESS opened application on Jan 1, 2012, and closed on Feb 10. On Feb 3rd a recruiting message was sent to SCEC to use the AGI listserv and within a week the program had 100 more applications. The program has 160 total applications, 130 of them being complete. Out of that, about half are underrepresented students. Legally we cannot ask any self-identify questions, so we are getting that information via the essay questions. RESESS will have a panel of 6 trying to narrow down the application list. We will have 9 returning interns, and would like to have 6

new interns out of the 130 applications. RESESS has a sub-award with CU. Through the Department of Geology, we will be hiring a grad student to help with mentoring and they will also provide an overnight geology field trip for the group. Constraint is in the managing of projects. Other internships do not have the writing piece. We are in talks to re-think the use of a writing piece. Sustainability piece going well but needs more attention. Exxon Mobile will allow proposal for some money. Would have to be renewed yearly. UCAR and RESESS becoming involved with CHART, pulling together to work with issues around the Delta, on the community side. We have some developing projects happening now. Met with Scott Denning, E&O Dir. of CMAP at UNC. Talking about collaborating – 5 year, second phase. Linda Gundersson of USGS is also interested in a program to try and create a long-term salary for students.

Questions/Comments

J. Taber: What about PI funding?

- V.Sloan: That is going away from NSF. There is going to be shift - more funding for fewer REU. Supplemental funding is going away. Not very appealing to REU point of view.
- M. Miller: ...and REU has too much to track.

J. Ryan: There is a work around, put it in the front end of proposal. Make it seen as a participant support within the indirect. Supplement models works about the same way. It may just mean some retooling. The sub-awards do what now??

- V. Sloan: They help with the evaluation process and outreach recruitment.

- B. Update on geodesy curriculum development: S. Olds – We are teaching the learners of the future. The next generation is “DIGITAL NATIVES”; they are more self-directed and less dependent and are better arrayed to capture new info. We need to be more reliant on feedback and more attuned to group outreach. We should be more open to cross discipline and are more orientated towards people being their own individual nodes.

Our near term efforts:

- Working with SERC on the Teaching Geodesy site.
- Textual reference for introductory geophysics level students.

Mid-term efforts:

- Cascadia Stress/Strain project – focused on west coast.
- Polling people for input. Could bring in another specialist.
- Integrate Module – SERC.

Long Term Efforts:

- UNAVCO partnered with SERC to submit NSF-Tues proposal
- Develop curricular modules
- Looking at suite of PIs, community college-teaching vs. research.

- C. Short courses/Professional Development: S. Olds - UNAVCO has a number of K-12 workshops, starting in March 2012. UNAVCO will have some small sessions throughout the upcoming NSTA workshop as well. Development is also in the works for some other potential short courses we would like to offer in the near future.

- D. Update of ECE Director Search: M. Miller – The ECE director position was posted on the job site about two weeks ago. The title has changed to, Program Director –Education and Community Engagement. UNAVCO received recommendation for someone to be able to work with our international members, however now is not time to propose a new direction. There has been at least one community member in mix. A screening date for candidates is scheduled for Monday, March 5th. The job itself has the advantage of hiring either a fulltime UNAVCO employee, or a faculty buy-in. This was decided as to give us the best possible candidate pool. The problem with working the faculty buyout option is with our PEO, employee has to be 75% to benefit. There is quite a large area of other job openings, mainly due to company reorganization. There is a concerted effort to be more diverse. Meghan will be on search committee for director, but requests an advisory committee and/or community member to join the search committee as well.

Questions/Comments

S. Wdowinski: How big will the search committee be?

- M. Miller: Hoping to have 4-5 members.

J. Taber: When do you plan to hire this person?

- M. Miller: Once committee is established, we would like to set interviews by late April/May.

V. Sloan: Any viable candidates apply so far?

- M. Miller: Yes, but we need to be open to others out there that have not yet applied

S. Wdowinski: How much effort will be involved for the community member to be on the hiring committee?

- M. Miller: UNAVCO has the ability to share presentation thru WebEx, so it is not a requirement for person to come for interviews. However if the person is willing to travel to be there in person, that would be great.

S. STAMPS COMMENTS: It is a good thing to see how a candidate handles a skype/webex interview.

L. DAHLMAN COMMENTS: The director's position is so important. To have people skills is also important.

A. Newman nominates Susan Schwartz

M. Miller would love to work with Susan and asks for another EOAC member.

S. Wdowinski would be interested, but not sure about committing time

L. Dahlman is also interested in being on panel

R. ANTHES nominates Raj Pandaya

V. Sloan nominates Beth Pratt-Sitaula

S. Olds seconds the nomination and comments that she has and extensive pedagogy background and knows the community very well.

A. Newman suggest someone that has good knowledge of the community, possibly an ex-board member would be good?

S. Stamps nominates Ross Stein

A. Newman nominates Sue Owen

S. Olds nominates Kristine Larson

M. Miller reads off a series of former board members: Krishnan, R. ANTHES, Beavis, Blewitt, Calais, Owen, Pritchard, Schwartz, Thatcher etc.

S. Wdowinski nominates Sridhar Anandakrishnan or Dave Sandwell

III. Review of Guiding Documents

A. S. OLDS shows chart “ Scope of UNAVCO Education and Outreach” to show something to maximize efficiencies.

1. STRATEGIC PLAN has been updated. The mission statement has changed. She explained the vision and asked committee how they thought the ECE could fit into that plan. She reviewed other sections of the strategic plan that focused on education and outreach. (MELISSA – get full details from Shelley to attach).

Questions/Comments

A. NEWMAN COMMENTS: SAGE (Summer Applied Geophysical Experience) would be a good environment. They work with E&M, undergrad and graduate students. J. Taber agrees but says funding could be hard to come by

2. TECHNOLOGY

- a) Continue to strengthen natural hazard event response capabilities and preparedness

Questions/Comments

J. TABER COMMENTS: The object is to have products that are more viable for a lifetime

3. RESOURCES:

4. LEADERSHIP

- a) It all applies - provide training and professional development for the board.

5. Additional supporting document – S. Olds shows chart of documents that have been reviewed. Adrian Borsa looked through all of these documents and grouped them by department. Shows highlights from recommendations. Four documents mentioned same type of comment: (see Shelley) Val and Shelley have grouped by relevance. S. Olds reviewed with Group highlights. Will distribute to group. See that there is a lot of support for professional development in Short Courses, bringing in faculty residence, K-12 professional development with broader focus leaning towards college level, disseminating materials through web-based materials, train the trainer courses, concept of networking –keeping it in our thought process through international and large groups. Workforce development, support for internships, diversity of internships, the future of undergrad support, and sustainability.

6. FINAL PIECE – WORK BREAKDOWN Structure

Questions/Comments

R. ANTHES COMMENTS: These long lists are good to due, but they have no sense of priorities. Some focus on this list needs to be on to what we want to approach with.

- M. MILLER- This list is just an internal exercise on what’s out there; keeping things focused on what things need to be done 5, 10, 15 years from now. What’s out there that we aren’t thinking about yet? What we are looking

for is the big picture on where we are going and how do we resources that.
A prioritized list is what we are doing right now.

R. Anthes: Could it be filtered through what does agency want, etc.?

L. Dahlman: Imagine who the community is. Develop a panel of personas representing different communities. Have one person stand in for user community and focus on those people with what you need to share.

S. Olds: What you see is a summary of what we are doing right now. Some we do more, others we do less. We started with what we have done and been successful at.

M. Miller: The core support is still NSF based.

S. Olds: Would it be time then to shift from education materials, to more TLS?

A. Newman: GPS is still core. For TLS to be GEO coded, it needs GPS.

S. Wdowinski: GPS reflects core, all the others deal with broader communities and it depends where and how far you want to go.

J. Ryan: The awareness issue is important particular in the K-12. Some you could hand this off (TUES project is good example).

M. Miller: Works good with integrated techniques, science result side, and the interactions with these other processes. Where's it going to lead us; CASCADIA for example, or early warning, tidal loading of coast? This is a new field. How do we categorize?

A. Newman: In order to continue, the focus needs not go to the leading edge. We need to focus on the core. Leave the leading edge to larger groups.

R. Anthes: Interesting. Would it be better to develop a website and not train so much?

A. Newman: As an E&O group, the focus should be on what has been successful, educating on what has been done and is working currently.

R. Anthes: Schools are typically 15-20 years behind on the technology yet 90-95% are able to explain? There is a huge effort to educate on what we think is "standard old".

S. Wdowinski: UNAVCO isn't a good name. Maybe the E&O website could have name that would be more significant, publicly and educationally?

M. Miller: Agree, the UNAVCO name means nothing to the public. It sounds like an acronym, and people are constantly being asked, "what does it mean?"

S. Stamps: Maybe the effort should be concentrated to getting the name out even more? For example, coordinate with NASA, to have a similar set up as they do - sign up for updates, have public sign up?

J. Taber: Agree, we should make it top search on Google

S. Olds: Is there a way to rename UNAVCO initials?

M. Miller: That is a board issue

R. Anthes: How important is public recognition in overall plan?

M. Miller: We haven't stated a goal in our public outreach

R. Anthes: Make your base the most important, faculty would be second, your diversity third.

J. Taber: NSF should help in getting the name out there. They put the high value on public side.

S. Wdowinski: Should we request our community to come up with something for NSF "Science 360".

S. Olds: Public outreach to community engagement – what does it mean, where are we going, what do we want it to look like?

S. Stamps: Celia Schiffman had at one point, built a 2006 Media Relations Implantation Plan. Seems that we are doing most, but do we have media contacts/media awareness kits online?

A. Newman: It has mostly been PI driven.

S. Olds: Agreed. We don't really do press releases, but we do promote. This is an area that has languished.

A. Newman: UNAVCO could hire illustrator. If the content is owned, it is a good way to promote UNAVCO. Illustrations are good because they can be passed around without specific permissions etc.

S. Wdowinski: Funding for faculty to work, maybe we could allocate that for an illustrator?

S. Olds: That's not in our realm. We are balancing how much we want to focus on curriculum in next two years. They would have to work with a science expert.

A. Newman: An illustrator would really understand what we are trying to get out. He/She would be a community tool.

S. Olds: Is this something we want to see in 5 years and we have high quality.

L. Dahlman: Based on highlights, yes.

S. Olds: The challenge would be if we end up with lots of graphics,

S. Wdowinski: ...then you have someone to integrate.

J. Taber: Would it be better to have a scientific illustrator, or graphic artist?

A. Newman: They should lean more toward the graphic art side.

S. Wdowinski: How about our distinguished lecturer program?

M. Miller: We often have not made the nominations we would like to make. There are a lot of people out there eager to be identified.

S. Wdowinski: UNAVCO should write it up in the next proposal.

J. Ryan: That could be a challenge managerially.

W. Taylor: From experience, it takes a lot of work to coordinate. EarthScope currently has 25 on their list, but it is not in the finances to support and it takes at least 20% of the administrator's time to support.

Committee breaks for lunch at 12-noon and resumes session at 1:05p (MST)

IV. Discussion of Long-term Interests and Priorities

Discussion of long-term interests and priorities

- What do we want the Education and Community Engagement to look like in 2018 and 2023?

IN 5 YEARS

FLIP CHART NOTES:

- Media/Journalist Kit/Contacts
- Illustrations: Scientific Graphics
- Infused into ESS
- Wikipedia Articles Adoption
 - Charette party
- Engage H. S. Elite into Geodesy
 - List of science fair topics/resources
- Connection to “high paying” jobs/careers
 - MATE ...Rob program
- Science Bowl – infuse questions into the bank
- Word of the day – get geodesy into this
- Strong partnerships w/community colleges’ ...technical...workforce development
- More support-content for broader impacts sections-web guidelines
 - Host brown bags on proposal...
 - Archive what we done in previous proposals
- Topic-focused Learning workshop – Professional level...practicing PIs/Grads/x-discipline/technology
 - Examples: forestry canopy heights, sharing similar tools
- Populate remote sensing...grace in Wikipedia, and then link back to geodesy
- Target appropriate NASA remote sensing/satellite E&O Teams ex: DesDNY

How big should ECE be?

- Tues/ATE/STCs/PRESESS HRD-informal
- Teaming/leveraging with career exploration for high school
- Leveraging distinguished lecture program with EarthScope
- Continued partnering with HBI’s & Minority serving programs
 - SACNAS –Science Symposium

L. DAHLMAN – An effort should be made to make earth science more important in school curriculum.

J. RYAN – Then take it directly to the source – have direct communication with the students. There are so many different technologies out there that can be made of use to E&O.

Monitor and populate the Wikipedia page.

Engage high school elite students

Tell them there are jobs out there that “pay well”.

Science Bowls – Get informative Geoscience questions on the board

Add a Word of the day to the website?

Establish strong partnerships with local community colleges and tech schools.

Run a “needs” assessment on technician type of people.

More emphasis on adding E&O support content. Getting the PI’s engaged with you. Hold a brown bag for scientist to get an idea or guidelines of how to present E&O in a proposal.

Utilizing a collection site to have centralized archiving in order to continue work whether staff is present from day 1 to day 100 etc.

Topic focused learning workshops at a professional level for practicing PI etc.

Populate remote sensing – Wikipedia, then link to geodesy pages

E&O should take leverage of satellites and the international space station. Use it to engage students in other fields.

How big should ECE be?

Utilize TUES/ATE/STC/ HRD – largely focus graduate level/ could they be used to sustain RESESS?

There are places to shop, need people to push them forward.

L. DAHLMAN- could it change the way the ECE is seen, if we can get high school, upper level?

J. RYAN – It's a question of strategy. The Type 1 document is focused on the impact and need. Our particular need is that geodesy is not well represented. Documenting what will be done will have its benefits. We should only start at a Type 2 if you have documentation in process. If you have the momentum, you can move quickly.

S. STAMPS – It is very important that we continue to get high quality students. If the name, geosciences is a problem, maybe it should be considered to change the name to something like Geophysics? Some schools offer career placement tests. Add geoscientists to career placement tests and target schools and those students that tested in science/engineering to encourage them in career goals.

S. WDOWINSKI – A target audience should be set, like high school juniors. Making it mandatory to take a geoscience course at that level.

S. OLDS - In moving towards enrichment environment we should find out which programs do that. We could then leverage with others similar to team up with career explanation. It would provide more collaboration with other E&O providers.

V. SLOAN: With the REU Workshop, out of 77 groups, we had 60 representatives attend. The goals were to start conversation and issues of interest. A pre-survey on what topics was done. What came out of that survey was questions on how to bring diversity, evaluation and tracking of students and what we began a development of a community for sharing ideas and resources. On a path to continue, it was decided to have small gatherings at large conferences (AGU, GSA). The next step is to produce an up to date REU listserv and a possible website.

S. WDOWINSKI – Could we include NASA support to that listserv? Shimon Wdowinski will provide list of contacts at NASA to Val Sloan.

S. OLDS – The desire by NSF was not only continued collaborations, but to find someone that is funded. Which is wonderful when you have passion and time. We are being highly encouraged to submit names for the science symposium. Asks committee to name some folks to lead this session and come up with theme for session. SUGGESTION: Subduction zone in Seattle, WA

IN 10 YEARS

FLIP CHART NOTES:

- Cloud Supported Software
- Short Courses
 - online
 - tutorials
 - taped/edited/cc
 - cookbooks

A. NEWMAN – Anything we are doing now that we DON'T want to be doing in 10 years?

S. OLDS – It would be nice to have other people to work with (more employees) that could be trained enough to send to workshops instead of having one person available. We could extend the outreach much more.

L. DAHLMAN – An idea would be to get high school teachers to teach other teachers. People that come to NSTA are leader teachers.

J. TABER – What does it cost to do that?

L. DAHLMAN - It's fairly inexpensive and in the long run more effective.

S. OLDS – Oceans Academy could have some possibilities there. It would be in small levels, but could extend to more.

L. DAHLMAN – Having a weeklong workshop gives teachers something to do. That could take off with not too much help.

V. SLOAN – With UNAVCO's current workload, this could be very difficult to do.

S. STAMPS – Provide more professional development courses and interactive tutorials.

A. NEWMAN – CLOUD Computing. UNAVCO could be good facility to host that.

S. WDOWINSKI - Could UNAVCO video tape the short courses then post them online for later interaction?

S. OLDS – The feedback we keep getting from each shortcourse is that people like to be more interactive

A. NEWMAN – Produce some online "cookbooks". Having web pages available with teaching content.

V. SLOAN –Geology provides a great opportunity for case studies. Draw people in for collaboration. Creating teaching tools etc.

M. Miller asks J. Taber to describe IRIS' scope of work.

J. TABER – IRIS' courses are not the same sort as UNAVCO. They tend to be more focused on the undergraduate than what they were in the past. There is an effort for producing an online professional development website. There is also an effort to have a larger formal effort on the "in-museum" display and getting content out to schools. Total FTE is 5.5. Publications are under E&O, but outside FTE.

M. MILLER- UANVCO is slated for 5%.

J. TABER - Running 1 in 4

A. NEWMAN – An argument needs to be made that this is all very important.

M. MILLER - Program officers see it all different. IF O&B can track separately, really, how does that work?

A. NEWMAN –If it does go through, then further the infrastructure for GPS across eastern U.S. Add tech content and long term GEODECTIC monitoring.

S. OLDS asks J. Taber – If your graphics department is under publications, what about web team?

J. TABER – Web team charges .5 in E&O, .5 in all other. But that half goes under our GNA. Our office support is under the overhead charge.

M. MILLER – The new director time is in question, could be charging indirect, G&A

What major products and activities reflect our growing geodesy community would we want to see?

SACNAS (DUE Mar 30) – Suggestions for Sessions to present?

FLIP CHART NOTES:

- Detection of and Adapting to Natural Hazards
- Long Term Imaging/TLS/Open
- Tsunami Ghost Forest
- Lahar, Ex Mt St Helens
- Forest Rainier
- Fires (stability slope studios)

Sue DeBari

Nick Zentner

J. RYAN – Breaking Silos Down, Cascadia.

J. TABER – Natural Hazard Session.

A. NEWMAN – detection of or adaption to natural hazards. In the long-term, how to prepare, discuss communities, tsunami, and erosion work on Mt St Helens – TLS. Ghost forest.

S. Wdowinski closes meeting with UNAVCO at 3p (MST). Rest of committee meets at 3:30p (MST) for the executive session.