

Dates: Sunday, January 23, 2011 and Monday, January 24, 2011

Present: A. Newman, L. Dahlman, D.S. Stamps, D Marsland, S. Wdowinski, J. Taber, J. Ryan, I. MacGregor, D. Carlson, S. Olds, V. Sloan, M. Miller

Absent: E. Hill, B. Lillie

Sunday, January 23, 2011:

Chair, A. Newman brought meeting to order at 6:42p (MST).

Agenda Items

1. Introductions
2. Review minutes from last teleconference
3. Overview of E&O activities in 2010
4. Overview of planned activities in 2011

I. 3/24/2010 MEETING MINUTES WERE APPROVED

II. Overview of 2010 Activities

- a. Questions about whether we've hit steady-state in the number of workshops. Seems as though a reasonable number may be ~10 or less.
 - i. Funding of workshops is diverse.
 - ii. USA science & engineering festival was extremely successful. Constant interest from children and parents. Mostly from eastern Seaboard. Next festival is in 2012.
 - iii. AGU and GSA booths were lightly trafficked this year. A lot of interest came after the LIDAR session at AGU.
 - iv. May be necessary to find a new cyber learning platform for remote workshops (WebX worked, but went down).
- b. Google meeting at NSF this coming Wednesday (funders looking for more bank for buck).
 - i. GPS velocity Viewer (GEV) developed this past year...still in alpha/beta phase.
 - ii. UNAVCO has developed a more advanced GoogleEarth KMZ
 - iii. Shelley bugs Goodwillie couple of times a year on getting vector data into GeoMapApp
 - iv. Google is interested in creating images for the population, not necessarily scientists. At least 10k+ people is probably a starting point.
 - v. Google wants *data*, and hence our internal earth *models* are not preferred.
- c. Building 'teachable moments' outreach tools
- d. Contribute to IRIS's 'Active Earth Display'
- e. Social networks as a 'teaching medium'

✓ The tools we have today will not be the tools our students use in a few years ... **to solve problems we don't even know about...**

Adapted from "Did You Know"

<http://www.youtube.com/watch?v=cL9Wu2kWwSY>

(great dinner discussion. Watched video "Did you know", about how to teach with ever increasing information and dynamic technologies/competing interests of students.

- a. Overview of planned activities in 2011.
 - i. D.S. Stamps – talks about what piqued her interest in Geophysics, due to her involvement in a high school recruitment program of the Jackling Institute of the then University of Missouri-Rolla

QUESTIONS

- Should SAFOD E&O be taken over by UNVACO? Meghan argues that since SAFOD is planned to transition and no E&O effort is currently funded, another home may be more appropriate.
- Should we work with IRIS through USArray as it travels through the Eastern US? Arguments for include the need to develop an integrated message from Earthscope to the community, regardless of whether or not geodetic data are sufficient to resolve strain. The Earthscope national office may be the ideal partner to champion this, however, because it is changing, they may not be well suited at present.
- With US Array headed East Coast it's a geology story vs. the public identifying the separate components so a more integrated approach may be more appropriate.

Meeting Concludes at 9:45p**Monday, January 24, 2011:**

Chair, A. Newman brought meeting to order at 8:34a (MST).

Agenda Items

1. Introductions
2. Geodesy Curriculum
3. NSF Review
4. RESESS Sustainability Planning
 - Discuss Ideals of what we want in program
 - Identify funding partners
 - Identify next steps to realize goals

I. Geodesy Curriculum

- a. Geodesy - no books etc. available with new and current information.
 - i. Strategic plan meeting identified as goal and E&O to look at it.
 - 1) E. Hill, D. Carlson, A Newman met at AGU to discuss.
 - 2) Putting together workshop Fri or Tues 1/2 dayWhat material exactly should be identified?
What method should we go about to get this information?
What is the mechanism to getting this done – funding etc.?

Action plan: A. Newman to put together outline and team

Suggested: S. Wdowinski, E. Hill, D. Marsland, M. Pritchard, J. Baldwin, S. Anandakrishnan, B. Hammond, J. Wahr

Idea is to keep small and diverse

Shimon: suggests Geoff Blewitt : has good intro to geodesy content (could be alternate for J. Wahr) also Hans Peter Plag – writing a book on Geodesy

Create segments for undergrad curriculum brings geodesy into appropriate fields.

Web Models. – geomorphology (Paul Bierman)

OPEN GROUP DISCUSSION:Jeff: need to measure, Cutting Edge whose job it is to bring together. In third iteration – should continue to produce info within community. Partnering up with Geoprisms. The continued margins possibility of working. Intro courses. Will have some kind of funding in works. Build things in Geodesy with in Geoprisms.Val: folks attached to text books. Books do not have geodesy. Create module on. If you want to reach broad audience – use text books.Jeff: if you have something covering basics, bring to forum. Does not have to be corporate exercise.

Prentice Hall – set something NAGT and AGI would handle financial end, UNAVCO to put text.

LuAnn- suggests Terk. Looked with partner, MacDougal/Mattel, NSF materials grant and worked to produce website.

Val – Prentice Hall is another publisher contact

John – key is you got a grant. Maybe align with “Geodesy Long Term Goals” document

Meghan – The long-term goals document was slowed by writing team. At board meeting, will map path for closure. Integration at undergrad level is important. Feedback from community members and looking at what is presented. Geodesy is under represented. How can we improve? Looking at strategic plan and cooperative agreement for proposal writing, not reinventing, just refreshing. Hoping with E&O goals, to build road map this spring.

LuAnn – Revolution in space science, infuse technology into earth science.

Dave M – engage in as many in field test as possible. Set up network of early adopters and wide use. Create net before putting out there...word of mouth

Jeff – agree, provide buy in and standard of how things are taught. Live interaction critical.

Meghan – Questioned whether this meeting is affiliated with upcoming workshop or are they working for broadening scope?

Andy – need to define the goal, and mechanisms to go about. Major goal is to find team to get funding.

Meghan – It’s not going to be just list of names?

Andy – Not what the community wants to do. Want more buy in from scientists. Keep E&O integrated in to what scientists are currently doing. Get close to what they are doing now.

Meghan – overall approach is to define whom our major stakeholders etc.?

Andy – yes

Meghan – if we query, what is the text they teach from, what would we learn? Will there be any info going into workshop if we have mechanism for polling. It would be nice to know if there is another mix out there.

Shimone - you’ll want to broaden, go to teaching board – what do you use?

Val - should ask publishers

Meghan - its at least a way to start.

Shelley – depends on survey...

Andy – make survey brief if we do one

Meghan – Is Geodesy representative, what type of text book

Sarah – get module out as quick as possible. Likes online module as you can reach more with online first and then get feedback from community on what approved.

Shimon – with textbooks, every 2 years there is a new edition

Sarah – but online is good start.

LuAnn – creating learning strategy. Develop faculty expertise better.

Andy – We just need materials. Don’t know how much buy in we get

Dave M. – grants are substantial, if you bring in large number of people and provide opportunity to get paid to use, then word will be passed along teaching community if product is good.

Andy – Type 1 and Type 3 more diverse. Type 1 getting out there. Type 2 more diverse core group and institutional Type 3 ?

Shimon – are we funding test people?

Dave – Field test – have people come to a short course workshop, go away and use for year, come back and get feed back.

Shimon – cost?

Dave - depends on type used

Jeff - it’s an accepted practiced. Define metrics and document. In exchange we will get answers. Suggests Type 2 method.

John- IRIS is using Type 1 now, and is good model for what we currently do.

Jeff – key is documenting impact. Define metrics and usage.

Dave C - (to John) How long did your process take

John – (to Dave C) 3 years.

Jeff – They always take longer than you think. Classrooms highly undermanned.

Val - There is the Garnet study – less effective.

Jeff – Failure was they were grilled constantly, “stop bugging” The approach was overkill.

Val - don’t want result that shows the worst.

Jeff – happy to fund small, more interested in large. (Track 2 funding)

Andy – Discussed fully, will be fabulous at community workshop.

Andy – 2 proposals Type 1 and Type 2 could work?

Jeff/Meghan – yes, as long as they are complimentary to each other. Plan should be clear enough.

John – GeoSTEP (STEP centers) Intro course for no Geoscience major. Heavily weighting to geodesy?
5-year \$10mil grant.

Andy – concludes topic.

5 min break.

II. NSF Review

Meghan – PBO March 2010, and reverse site in Aug 2010

Current co-op agreement supported by 2 core grants, Earthscope and funding facility. NSF EAR suggest integrating both to one agreement depended on mgmt. review. GOAL was to reduce total and streamline review. E&O 2009 was postponed, NSF has now selected evaluator and UNAVCO asked to schedule after COCOnet.

MGMT REVIEW draft recommendations. (see notes form M.Miller hand out)

4 broad topics –

?

Alignment with strategic and NSF strategic plan

Alignment of E&O and UNAVCO

4th topic???

Govt representation was very strong.

Recommendations are not final.

Broaden Community – how are we diversifying our membership major impact focus on TLS/Lidar 225 with active interest in UNAVCO, this could increase adding in TLS

Call for Geoscience disciplining in plan

TLS can change face of organization

TLS - what does community need. TLS assessment as soon as poss. (see handout)

Goals are community engaged.

Meghan gives brief on UNAV history for new members. 5.5 instruments in use, but only one manger running – will need more.

Support international –

Questions were brought up around governance issues. Voting membership all US. Non-voting includes international. Need international on advisory committees.

E&O partner with IRIS? Meghan asked them to expand list. We will have take on when rework of strategic plan. Either we will have to find new resources, or identify what we currently do that can be replaced.

Feedback had been received from all but 2 of panel members by 1/24/11.

Leadership of panel was well organized. Gave us important direction but recognized current plan

Shelley- Was there broadening up with teaching education?

Meghan – Intuit in detail of 2. Spoke of integration of education and bylaws. Issue taken up bylaws and open up membership. Geodesy a science and critical tool. Overlap, but have community members on both sides and should be open in both research and & education and geodesy of science.

Andy – Are they going to have same membership or will they be integrated into one group.

Meghan – yes that really resonated. Open bylaws to integrate.

John – membership cost?

Meghan - \$1000. There is mechanism for member community to consider request for scholarship.

Andy – also with members use institution if they want to buy instruments.

Meghan – associate members can negotiate, but no guarantee. Can't get discount with us, but contact vendor directly and they may be able to work with member

Andy – works well, because we are small part of community.

Shimon – regarding point 4, how much is relevant for E&O

Shelly – capacity building

Meghan – yes, geodetic management led by other two but certainly capacity build.

Shimon – GAMIT joint activity is one.

Meghan – thanks you yes.

Sarah – regarding point 5, BBC contacted Meghan?

Meghan – BBC contact before current role, but yes

Sarah - Could we work with media to market?

Dave - Public has not been utilized, but we certainly can.

Meghan – E&O not let by us, we need to be more sophisticated in our approach. Maybe we should require wearing of orange shirts before filming.

Andy – could UNAVCO name be too corporate looking? Is that a hurdle to overcome?

Meghan – yes it may be factor...

John – do you see Capacity Building growing?

Meghan - goal is to define capacity efforts that could build on COCONet and its resources, leadership and stakeholders. Plan of use: COCONet proposal...year 3 workshop for Caribbean tech/science side. EAR and Int. Programs that called for broader definition.

Three main sessions: refining science questions, inclusivity of investigators in GPS and the capacity pieces. (We cast a wide net funding for 25-30 but current registrants are 150). Third focus on capacity and then wrap up. Organization is committing to draft and staying through Saturday to complete.

Andy – What about the language barrier?

Meghan – translating to French/Spanish and having translators present

Andy – back to draft recommendation doc. Maybe it would be best to wait for final before deciding what to do. Meghan agreed committee to be poised to have telecom in spring to revisit strategic plan. Process final recommend.

Andy proposes monthly telecom meetings. 1 to 2 hours.

Meghan says it would help Dave in transition and keep things on track. Preserve activities of greater value.

Andy suggests having one to two face-to-face meetings a year. Is it possible to have a meeting somewhere in the middle of the country for all?

Meghan states that facility has face-to-face once a year, PBO Earthscope meeting, AGU and monthly telecon. Provide funding for 1 to 2 face-to-face meetings would be ideal.

Dave and Meghan talked about area overlaps. For discipline based, Meghan should be involved.

Andy concludes – official 15-minute break.

III. RESESS Sustainability

a. Dave gives short history of RESESS.

i. Now in 2nd year of 5 year proposal.

ii. Had topic identified, but particular partner not okay. Planned integration with CU to serve as consultant and business plan.

John – Was there a change in the subaward?

Dave C. – It's not a subaward, funded or not funded.

Meghan – CU subaward was to a different initiative

iii. Dave to keep funding in mind. Put a quality program in place. Recruit support and have positive results from students

iv. Model of sustain: multiple partners, agency, non-profit and corporate. Dave to learn how things work. We need to work on our own.

OPEN DISCUSSIONS:

Shimon – what other programs are you talking about?

Dave C. – We are working to get out of doing just one program and instead have hands in many. If we think ahead, put admin of RESESS in core proposal and operation of in other partners.

Val – SOARS has a model funding of half from other partners, half by NSF.

Jeff - REU or ?

Val – no.

Dave C. – We need to strengthen the quality of program built sustainability from various pieces, which is what we need from committee. We might try it out this summer?

Jeff - A little description of experience of students.

Andy - OAG funding

Dave C. – Work immersion. 10-week program, interns spend in Boulder. SOARS works UCAR, we integrate into USGS Etc.

Val – model, here first summer, then working around 2nd 3rd year. Challenge is the field camp which makes year 3 difficult.

Andy – have exemption for field camp?

Sarah – Doesn't agree, field camp is necessary for geologists.

Andy – However not all are geologists, so field camp not so necessary for those. Not a geodesy program.

Dave C. - goes back field camp, when field hits one school, it's difficult to get participants

Andy – argues very strongly that it is not necessary.

John – Is field camp a junior or senior year program?

Jeff - It's usually summer of 2nd senior year semester. It's a cap stone.

Dave C. – back to Jeff's question. Pay salary, accommodation, and stipend for tuition and fees for conference etc. Between \$15-\$20k.

Shimon – How many can you support right now?

Val – 12, but schedule to decrease in later years

Dave C. – issue is the number of quality students.

Jeff – Thought idea was to bring students from all areas?

Val – The reason program exists is to promote earth sciences in minority groups. Out of 513 PHD, 12 Hispanics, 3 African Americans, and 1 Native American. Goal from NSF is to get them to PHD but if you get in workforce is better.

Jeff – Agreed. Getting them working then the plan to PHD and Masters increases.

Shimon – How many are American?

Val – 300 some. Recruiting we are working on – attending conferences. NSF in June, NABGG, GeoSci Alliance, SACNAS, AUG. Worked on web page. Working on where the students come from. We are currently 3 weeks from deadline. 2010: 12 total apps. As of today we have 23 app's. We posted in journals, petro engineering, minority websites, and commercial websites. Posted to newsletters and posted in Hawaii. Contact a few 100 met through Conferences.

Andy – a lot of these pathways, are they new this year?

Val – Yes, they are new this year.

Andy – 12 to select last year how did you narrow down.

Val – graduating sr's and some didn't fit. Cannot self identify since employees of UNAVCO.

John - sub award with IRIS and RESESS will talk.

Jeff – 2 year programs can affect.

Dave C. - many have connections in more.

Shimon – ...minority universities

Dave C. – 25% of pool of student in geoscience. But 75% are coming from everywhere else

Val - if you look at student pool per year, 60 are African Americans, 110 Hispanics, 20 Native Americans in geosciences. This is what we are trying to improve.

Ian – have you thought of industry component, rather than grad students? Industries like hydrology, or geo-mechanical aspects. All have high need of geo-technical. Work with in addition to?

Jeff – not necessarily GEO but the environment. GEO Part is important though.

John – not getting enough traction with faculty. Encouragement is key. Promote with faculty.

Andy – Inherently difficult, Spellman Morehouse has very little science, mostly pre-med. Focus is more liberal arts. Geoscientists are “looked down” upon. Getting dirty – saw that at going back to the farm.

Dave C. – be careful with the field experience with RESESS. Don't promote too much.

This years plan is REU for projects. Career Grant, Coconet. Second with Tech non-profit. GSA Geo core program, working with parks and recreation. USGS – 6 students 2010, 4 in geologic hazards, and asking to help fund salaries. Shell Oil is corporate possibility.

Call came from Shell and working to expand internship with undergrad and wants to partnership with RESESS.

Andy – important part, if we diversify methods, we'll career in other mechanisms

Val – It's funding as well

Dave M – Partnered with Shell at one point. Suggest that we ask for A LOT of money. The worst they can say is no, but they tend to provide more to increase workforce.

Andy – Identify what we want in our program first.

Andy – see about developing internship program and science phd.

Shelly – great need for field engineer realm. Make UNAVCO successful in this area. Enhance the public workforce.

Dave C. – the focus is in geoscience, but there is only one right now.

Val – half projects this year are geodesy. Do we want to expand to majority candidates?

Shelley – challenge is getting them here to work in Boulder.

Val – having mentor come out here for work..skype...visit lab?

Andy – view is RESESS doing well don't change facet. RESESS expanded to focus UNAVCO and other internship for other facet, training people to be more technical.

Ian – Provides the necessary tools to learn to communicate in their environment and make persuasive case.

Andy – Does it best serve community whole to diversify for the UNAVCO community

Shelly – Could that be something to talk about w/future officers?

Andy – job is to see if what community wants to do. Develop what you want to do. Do you want to chase the \$\$

Dave C – what a clear statement would be recognize 6 possible success and opportunity of RESESS but with the focus being geodetic.

Andy – do we want to advise this or no?

Meghan - We can but we should make sure it is not overly restrictive. When the investigators come to develop...build these into the proposal. Problem is remote support model, creating opportunity to community science. Will increase visibility without limiting student up front?

Ian – There are two ways of looking at it 1) View how you look at it 2) How we integrate UNAVCO and how we make use of the facility.

Meghan – it would speak to the student early in career.

Shelly –give student exposure.

Dave C.– There are ways to enhance flavor of program. 1) Hire mentors in field 2) Feedback 3) UNAVCO community to help with writing, without prescribing “fences”.

Andy – Doing Geodetic gravity research within RESESS is doable, but not a UNAVCO focus

Dave C. – we should attract post doc with complete freedom. Enhance geodetic without restriction

Sarah - Good idea to bring in geodetic early, it will inspire students.

Andy – Think of goals of strategic plan...its part of the geodesy curriculum.

Do we also want to discuss more long-term internships? Problem though is dual program with RESESS.

Would it isolate regular minority RESESS students from the general interns chosen solely on merit? Unless made generic program that would have diversity track.

Shelley – It would certainly be supported by RESESS; it is very intensive.

Dave C. - Andy has right direction for what next RESESS should look like. Would we have right tools in place with diverse applicants?

Andy – By doing that would we still have minimum number of minorities?

Meghan – It'd have to be based on work, not minority status.

Andy - We'd have to focus on the way you try and recruit then? How does committee feel. Long term 5 years out – have intern program under grad geoscience and geology program with diversity plan?

LuAnn – That's a fine plan. RESESS narrows any candidates down. Consider 6 weeks at a time, instead of 11 weeks.

John - Most get jobs if not interns, so doing 6 weeks would mean having to get summer job for other 6 weeks.

Val – Interns do get paid very well with current program.

Jeff – Find a program that will work well. Step Program could be sponsor that will fund and provide an intern. However that program tends to be shorter.

Meghan – It should bring good experience and be less intense. Have mentorship training. Have less ambitious ways to bring higher numbers. Or have vsome supporting activity that might be more attractive.

Shelley - For field campers – why not work with PBO?

Andy – Field camp isn't necessary for all scientists, even field-based ones.

Meghan – They are taking on more field geophysics. PBO missed opportunity once.

Jeff – building experiences, create complimentary options.

Val – 11 presentations in conference in fall, feedback was fantastic! Students were real prepared. Which opened doors and recommending programs.

Shimon – sponsorship, another corporate sponsor, TRIMBLE, LYCA.

Meghan – sort out ethics though. We don't want to presume favoritism.

LuAnn - Then have all vendors contribute.

Andy – Trimble is engineer community etc.

Shimon – give specific scholarships.

Andy– Likes how things developing within UNAVCO/RESESS

Andy convenes for lunch – but with continued discussion until 1:15

Discussions were how to get message out to public.

Align with specific goals to - on several “plates” instead of one “plate”

Andy – Discussion topic of next telcon. Have Dave put together what strategic plan goals are. Some of 2011 some 2012. Providing after COCOnet.

Meghan – Don’t wait for a formatting from the evaluator.

Dave C. – What this panel can help with versus what evaluator wants

Meghan – Acting on existing plan, have to manage through this year.

Dave C. – nothing on plate that’s through strategic plan. Let’s write map once so that it works with both.

John – Having outside help was good for IRIS

Approved

Monday, January 24, 2011:

Chair, A. Newman brought Executive Session meeting to order at 12:50p (MST).

Topics of discussion included:

1. The recent transition of E&O staff, and the continual burden they've been under. We would like more focused documentation from them as we go forward, but understand the current conditions.
2. EarthScope Office should be relieving some of the burden from the UNAVCO E&O. We may go back to the cognizant UNVACO program officer with this recommendation.
3. Coordinated E&O committee meeting between UNAVCO, IRIS, EarthScope, and AGU... others? Maybe just the chairs.....
4. Should we be focusing more on high-school students? Opening that link to students interested in geosciences at the time they start college, not a couple of years into it.
5. Further discussion on the need to clearly outline the E&O tasks and their alignment with the UNAVCO strategic plan rather than the preceding UNAVCO E&O strategic Plan
6. More time for open-ended discussion about future pathways would be beneficial in the next meeting.
7. Telecons no more than 1/mo would be tolerated by the committee. Such telecons should be focused on 1 or 2 topics and likely no longer than 1 hour.
8. A second face-to-face this year would be beneficial. Given the extensive level of knowledge of the current EOAC, it would be almost wasteful to not explore much more time for open discussion. Such a meeting may be held at Georgia Tech since it will be easily accessible by much of the committee.

Chair, A. Newman concludes meeting, and committee adjourns at 1:30p (MST)