

National Visiting Committee Report Year 2
National Geospatial Technology Center of Excellence
DUE 0801893
ESRI, Broomfield, Colorado
February 10-12, 2010

The second meeting of the National Visiting Committee (NVC) for the National Geospatial Technology Center of Excellence was held on February 10-12, 2010 at the ESRI office in Broomfield, Colorado. Ten NVC board members were present representing industry, academia, and professional societies (see Appendix A).

Overall, the GeoTech Center (GTC) has made excellent progress since the meeting one year ago. Well organized read-ahead materials were provided that contributed to the effectiveness of the meeting. The leadership group has made significant progress in functioning as a cohesive unit, a challenge for any team geographically distributed across the country. Clearly, the many face-to-face meetings and conference calls are paying off. This stellar group works well together and they support one another.

The NVC was presented with 8 initiatives in the read-ahead materials and the agenda focused around these initiatives (see Appendix B). We have much praise for the center's progress over this past year, but still find room for improvement. We present our findings and recommendations below in the order the initiatives were presented and conclude with general recommendations for center operations and conducting NVC meetings.

Initiative 1: Completion of Geospatial Technology Competency Model

The work on the Geospatial Technology Competency Model that is being developed in conjunction with the Department of Labor (DOL) and the GTC is very appropriate. The model should result in the identification of core competencies for GIS Technicians at the national level. The Meta-DACUM job analysis should provide a detailed base of information that will help frame the core competencies. The work done so far is excellent and will be instrumental in bringing national recognition to the center. Additionally, the Meta-DACUM analysis could be very useful in refining the DOL's job descriptions for the new GIS/Geospatial occupational codes. The leadership of David Dibase and John Johnson on defining strategies to work productively with the DOL is excellent.

Concern: The Meta-DACUM data appears to have some data that could be considered ‘outliers’, and a true statistical analysis should be conducted to determine if that is the case, requiring removal or maintenance due to specially identified criteria for keeping the data as presented.

Suggestion: The importance of identifying a set of core competencies for GIS technicians that lead to a national standard cannot be overstated, especially if the competencies are supported by the DOL. Identifying the competencies and securing their acceptance as a national standard will require persistence and marketing, but the end result will be worth the effort. As a result, it is suggested that this be developed, with the external evaluator, as a primary goal of the GTC with appropriate objectives outlined with a timeline to ensure success.

Initiative 2: Implementation of Geospatial Technology Competency Model

The NVC understands that Initiative 2 is dependent upon the completion of Initiative 1, so this work is still in its infancy. However, excellent progress is being made and Chris Semerjian has demonstrated a solid grasp of the work that needs to be piloted in Georgia. The inclusion of administrators in the process is excellent. The plan for the matrix and handbook are strong and we understand more details on this will come in this next year. The NVC believes this was implied, but we want to ensure that main outcomes of this work include a model curriculum for a geospatial technology degree, a geospatial technology certificate, and introductory geospatial technology courses.

Concern: What appears to be missing from the implementation plan is a feedback mechanism for understanding how the GTCM is implemented at 2-year institutions.

Suggestion: We suggest that part of the GeoTech Website be dedicated to feedback and comments on materials provided by the center once the GTCM has been completed. This will allow GeoTech PIs and Co-PIs to better appreciate how the GTCM is used and its effectiveness.

Initiative 3: Community College Program Map

The interactive community college program map is right on track. The problems that have been encountered in executing this endeavor have been acknowledged, and methodologies have been shown to address these issues in the future.

The NVC recommends that slight modifications be made to increase the complexity in the symbology of point features. This aesthetic change, along with changes in some of the polygon feature colors, will enhance the visual appearance of the map. We recommended that the GTC icon be incorporated into major point features that represent the GTC main campuses. This will aid in branding the map as a uniquely GeoTech product that smoothly integrates with the rest of the GTC website. In order to appeal to users of the website, a frame containing the interactive map should be included in the main page in place of the static partners map. Allow for a link to the full page interactive map and move the partners map to another page.

The NVC liked seeing the experimentation done with spatial analysis functions and recommends that more of them be incorporated in the map functionality to enhance the user's experience and ability to customize. Maintenance of the community college data should be broken up regionally to ease the ability to update in a timely manner, and we emphasize the importance of the continual maintenance of the base data. We also recommended that the incorporation of Silverlight into the map processes should be pushed into the future, as the Flex viewer is acceptable at this point.

Concern: This is a dynamic project and it will be easy to become distracted with side projects for other users external to the center. We believe this map has the unique ability to create revenue/sustainability for the center; however, the GTC must avoid distractions for now and clearly outline the criteria for accepting and rejecting outside mapping projects in the future. Finally, we recommended that an experienced cartographic proofer be included in the map publishing process to maximize the professional appearance of the map.

Suggestions: A few other suggestions on web implementation of the Community College Flex map are listed below:

1. Allow the user to first click on a point before the tool tip is displayed. Currently, the tool tip causes a delay in roaming around the map
2. The Layer Visibility legend showing "Geospatial Colleges" – should be changed to "Colleges Offering Geospatial Education"
3. The same 'Geospatial Colleges' layer should be set up alphabetically.

Initiative 4: Supporting Sustainability of Geospatial Programs

The NVC agrees with the external evaluator's assessment on the first year's progress on "Recruiting and Retention". Data guidelines have been established for tracking student recruitment and baseline data for year one was collected. Activities for establishing 'Introduction to GIS' courses to meet the General Education requirement have been

evaluated at several locations. Some difficulties were noted where different state guidelines for Gen Ed requirements exist and might have to be overcome. Further effort is recommended to explore other opportunities for introducing students to beginning GIS courses.

Concern: The PIs working on recruitment and retention need to establish criteria for collecting and reporting retention data. Retention should be calculated based on the percent of students who complete one course and move into the next course, not just completion of a single course. If the program has multiple courses, retention from first, second and third courses should be tracked.

Suggestion: The center should also consider tracking students who complete their certificate or degree and move into the GIS job market or on to higher education in that field.

Initiative 5: Website and Repository

As stated last year, the website/clearinghouse represents, in many ways, the centerpiece of the GTC. It embodies the reason why the center exists—to provide a central point for community college educators, administrators, students, and employers to access resources, share, and build community. It has utility for the entire community college faculty, staff, students, and prospective students, and is the most visible component of the Center. Training and presentations occur in many locations, and are often hidden from larger view and have limited impact. The tangible presence of the center lies in the website. To many in the community, the website is the GeoTech Center. Given the web statistics that we have seen, we may only have a few seconds to demonstrate to a potential user that the site is a valuable resource. As such, resources need to be allocated to the site's improvement and maintenance. All of us have been involved with creating and maintaining websites, and we recognize that this means devoting significant staff resources to it. However, we feel it will be staff time well spent.

We believe that the PIs and all those involved with GeoTechCenter listened carefully to some of our recommendations last year about avoiding the replication of spatial data “one stops” and populating the center with hundreds of data and curriculum links, but rather, concentrating on having all content meet the goals of the Center. The effort in this direction is much appreciated and is reflected in the site's improvement over the past year. We understand how frustrating it is to have the two web contractors not meet the needs of the Center, and we are happy to hear about your pursuit of another contractor.

While comparison of this site with other high-quality geospatial web sites already in existence is proper, and shows the work that still remains for the GTC site to achieve its full potential, we must not lose sight of how this site appears from the perspective of the two-year college faculty, students, and administrators the GTC is serving.

Concerns: We believe that the website is not yet fully reflective of the excellent work being done in the Center and some of the concerns from 2009 remain. Parts of the site remain difficult to navigate and are under-populated. We believe that Phil's role as an ambassador for the Center is more valuable than having him spend time as the website curator. We recommend that a person be hired or reallocated during the next 6 months for at least half time to work closely with the web contractor and deliver documents and content that are reflective of the excellent work the Center is doing. It is important to keep examining other outstanding web models such as <http://www.giwis.org>.

Suggestions: A few specific recommendations include the following- :

1. The clearinghouse at the moment seems like a temporary building on the grounds of a school—it is not well connected to the rest of the site and has a different look and feel to it. It needs to be integrated with the rest of the site.
2. Remove the industry tab for now until it better reflects the goals of the center. Consider what the GTC will give in return for industry sponsors and show that on the page. We don't find the faculty-staff-individual division useful on the page. It may be better to let the user of the website to decide how they will use it.
3. Have a technical writer review the white papers for consistency and quality so that they all reflect the excellent work being done by the center. Work being provided to an academic community should consistently be of the highest caliber.

Initiative 6: Provide a National Voice for Two Year College Geospatial Education

The NVC was in agreement that work completed in Year 2 resulted in the GTC providing two year colleges a national voice. Led by Ann Johnson, with assistance from all Tier A and B partners, the GTC team addressed NVC Year 1 concerns by clearly identifying the target audience of faculty, staff and students of those colleges and stating objectives which address Goal 2 - to increase the capacity to train geospatial technicians through new partnerships among two year colleges, universities, secondary schools, industry and government.

Evidence of success include: 1) the GTC's—national recognition for completion of the Geospatial Technology Competency Model (GTCM); 2) recent agreement by the University Consortium of Geographic Information Science (UCGIS) to create an Affiliated Membership category for the GeoTech Center; 3) active involvement by **GTC**

Tier A and B partners in professional societies; 4) an excellent presence by the **GTC** at the 2009 ESRI Education User Conference; 5) awards received at 2009 Hi Tech by GeoTech partners; 6) Urban and Regional Information System Association (URISA) Board membership by Co-PI DiBiase and plans for publication of a special issue on geospatial programs of two year colleges in the peer-reviewed URISA Journal; and 7) excellent ties with and support from ESRI.

Accomplishments in successful branding of the GeoTech Center, participation by the PI and partners in many national conferences and workshops concerned with geospatial training and the creation of the website, webinars and workshops also have added to the national attention of the GeoTech Center as a major advocate for two year colleges. These accomplishments will lead to the desired outcome of the GeoTech Center serving as a “professional society”- like organization for two year colleges.

Concern: The NVC believes it is now time to prioritize outreach activities that will directly address the outcomes you wish to achieve. We suggest you clearly identify desired outcomes for Initiative 6 and then determine a few outreach activities that will help you achieve these outcomes.

Suggestions:

- 1) Concentrate on the development and refinement of the **GTC** website. Now that you have national attention, the “nation” will be eager to interact with it. The website is a major aspect of your voice, and it should reflect the needs of and benefits to two-year college faculty/students/staff at a high level of quality, consistency and completeness.
- 2) Worry less about trying to increase the number of faculty and students who belong to professional societies, since this is a measure for which data are difficult to collect and the actual benefit to faculty is hard to measure. You may wish to modify this desired outcome to reflect the number of professional societies that are now aware of geospatial programs in two-year colleges. This can be evidenced, for example, by reduced membership dues, reduced educator conference registrations, inclusion of two year college student eligibility for scholarships and awards, inclusion of two-year students in student chapters/councils and mutual agreements to reciprocate links to each party’s websites. In addition, having GTC partners actively involved in professional society conferences and serving as officers will add to the two year college faculty/students’ national voice.
- 3) Select a subset of geospatial professional societies, government, and industry partnerships for your focus. It appears that this is already being accomplished by

associations with the Urban and Regional Information System Association (URISA) and ESRI. You also may wish to partner with a government agency such as the (USDA). Establishing a solid relationship with each of these groups will then create strong advocates for the two year college faculty/students/staff within each of the desired sectors, while not spreading your efforts too thinly. From this base and when you are ready (i.e., a few years down the road) these partnerships will lead to many others.

- 4) Create a document that you can use to formalize your partnerships with academic groups, professional societies, government and non-government agencies and industries. List the benefits you will bring to these groups and the considerations you require. Two year colleges can provide them with benefits, such as trained geospatial workers, outreach to students, outreach to underrepresented groups, future clients, and publicity through the GTC website, presentations, exhibits, workshops and webinars. In return, you may wish for reduced membership dues for two year college educators and students, reduced or waived conference/workshop registration fees, eligibility of two year college students for awards and scholarships, internships for students and annual or one-time financial sponsorship.

In summary, Ann Johnson and the GTC Team have done an excellent job of providing a national voice for two year college faculty, students and staff. In Year 3, we suggest that the team focus their efforts on: producing a stellar GTC website, limiting their outreach to one or two representative groups from each sector (i.e., academia, professional societies, government and industry) and formalizing benefits and requirements for these relationships. The NVC would also like to see a few Tier C and D partners established.

Finally, the NVC looks forward to following the GeoTech team's activities in Year 3 as it continues to define its unique identity among federally funded educational projects.

Initiative 7: Professional Development

The GTC and its partners have demonstrated the success of motivated individuals and institutional support in conducting numerous professional development activities for college faculty. The use of geographic information science and technology (GISci&T) for campus-focused projects and seminars that highlight the capabilities of geospatial technologies are especially applauded for raising awareness and support for geospatial faculty.

However, the NVC recommends that the PIs take a step back to examine what has been learned from these professional development activities. The GTC states “a survey of needs expressed by 49.3% (37) of the respondents ranked Professional Training as Important”. What is not well understood is what methods of professional development delivery is most cost effective at achieving this goal. We did hear of anecdotal measures of identifying changes to professional development delivery that appear to be more effective. These delivery procedures and subsequent changes need to be documented and published so all can benefit from the experience and knowledge gained from all these GTC professional development activities. Many people are conducting professional development in geotechnologies. The GTC could establish leadership in this field by providing insightful “best practices” and models for current and future educators to emulate.

Again, the NVC recommends that GTC researchers continue to identify two-year college faculty who have geospatial skills and current GIS courses/programs as the only target audience for professional development outreach in these early years of the grant. Outcomes of the leading edge technologies focus area should be used to help inform professional development and training, and these activities also should link to the core competencies effort once that has taken form. Center-sponsored professional development activities should be replicable to the extent possible through clearinghouse materials posted on the web site. The outcomes from each professional development activity should be documented and assessed to identify what works and what is most effective.

The NVC continues to stress that the GeoTech Center web site should be the vehicle for information on GIS faculty training, organization of online materials, dissemination of training materials, notification of workshops, links to professional societies, contacts for mentors and explanations of options for geospatial certification. First-person testimonies of two-year college faculty on the benefits of professional development will also provide the opportunity for the GeoTech Center to display images and stories of people from diverse backgrounds to tie back to the Recruitment and Retention Initiative. Strategies for professional development should remain mindful of generational differences in learning, interests, and needs for geospatial training.

In summary, the NAB recommends that the GTC:

1. Continue to focus professional development for community college faculty who teach GIS.
2. Identify the core goals of Professional Development and an effective delivery format with follow-up and feedback to quantify outcomes.

3. Work closely with your evaluator to define desired outcomes for each professional development activity. Defining the type of impact and being able to quantify that impact is more important than having lots of participants doing something with little focus.
4. Continue development of an effective professional development information center on your web site. This might include:
 - Local and regional opportunities for faculty development such as workshops, conferences, training and career requirements
 - Online courses and training materials for self instruction
 - Explanation of certification options and benefits
 - Advantages of belonging to a professional society and links to society home pages
 - Personal testimonies of benefits of professional development that show diversity and inclusiveness in the geospatial community
 - Suggestions and case studies for campus projects and applications most likely to educate administrators about GISci&T
 - Links between identified leading edge technologies, core competencies and professional development

Initiative 8: The Synergy Initiative and Virtualization Scale Up

The NVC heard a proposal from the GTC toward the end of the evaluation meeting to pursue participation in a Synergy NSF Grant Initiative which would provide support and management in Project Management, including methods for ‘scaling’ a local or regional project up to a national level.

Concern: A majority of the NVC expressed concern about the Center’s involvement in such an activity, because of the way in which it was presented by GTC staff. Our concern sprang from a fear that this would be ‘just another program’, outside of the scope and focus of their Goals, representing a possible step backward from the tightened focus seen in all other GTC activities compared to a year ago.

That concern was heightened by the impression that participation in this Initiative was almost an afterthought, and not a carefully evaluated project. After extended conversations with the NVC Chairperson, who had the opportunity for separate and advance conversations with GTC staff to discuss this new initiative, and after conveying the results of those conversations to the NVC, it became apparent that the presentation did not adequately represent the potential of the new activity and that the fears of the group were not completely founded. This is now seen to be an activity that overlaps with

already-explored areas by GTC Staff and Partners, and can bring great benefit if managed properly.

Suggestions:

After extensive discussion, the NVC is prepared to support this new activity with the following caveats:

1. This activity needs to be linked to one of the GTC's main goals; it is not a new goal in and of itself.
2. This activity needs to be limited in scope, without being expanded to become another activity that cannot be supported with GTC staff resources. The GTC must exercise discipline to limit the focus of its activities in this area.
3. Proper thought must be given at the beginning of this project to define the measurable objectives desired and determine proper documentation and evaluation of those measurable results so as to properly connect them to the main goal.
4. The scalable expansion now seen with virtualization should be confined to that portion alone, and the project must not be used as a reason to expand the Center's activities.
5. The NVC sees this as an opportunity to drive traffic to the **GTC** web site as a means of obtaining the measurable objectives associated with this initiative.

With these areas met by the GTC, the NVC sees the potential for benefit to come from project participation, not the least of which is a clarification of the Center's understanding of NSF practices, nomenclature, and reporting, all of which will serve the GTC well as it carries forward. In addition, the Virtualization as a scalable project fits nicely into the work one of the Center's PIs has already undertaken, allowing its pursuit to keep from being a drain on already overtaxed resources.

In Summary:

The center has made impressive progress this past year and is well positioned to be a major player nationally in geospatially technology education. Very good research and development (R & D) is coming out of the center that will position the center well for exerting substantial influence on geospatial technology education in higher education. Awards received by the center this past year are very impressive. The center has greatly focused its efforts over the past year and this focus needs to continue! We are concerned that too much outreach to the masses may be occurring. Focus your efforts on relationships that better position the center for advancing key R & D activities – with

DOL, UCGIS, URISA, ESRI, GISCI (there may be others, but you understand). In another year you will have products to share and it will be time to shift gears and scale up.

Evaluation:

The GeoTech Center is being evaluated by Elaine Craft, director of SCATE, a longtime ATE Center. The Evaluation Report and presentation by Elaine were very helpful in orienting the NVC. Next year we would like the first closed session of the NVC to start with a report from Elaine.

Goals:

There is a bit of confusion in your written materials on what your goals actually are. We believe you know what you are doing; but you are not conveying it well in your written materials. Part of this stems from not having a clear idea of the difference between a goal and an objective (or at least not effectively communicating it.) We strongly encourage you to work with your evaluator to generate an updated version of your goals and objectives. Stated goals should be consistent in all GTC materials such as brochures, web pages, banners and presentations. All centers need to reformulate their goals and objectives in their first few years. This will help you communicate more effectively with external audiences, such as your NVC. Additionally, you might reflect upon your mission statement, after you refine your goals and objectives, and see if you would like to make revisions to it too.

Business Plan:

The Business Plan is actually an operational plan and is a good document to guide your work. (We do not believe that you need a business plan at this time, since you have ample funding for core activities into the near future.) The content of the plan is good, but once you revise your goals and objectives please modify your operational plan and circulate it to the NVC for review.

External Funding Opportunities:

We still advise the Center to limit its participation in new funding opportunities with the exception of positioning itself for a DOL grant closely tied to the competency model work. Expanding and marketing this work will likely need additional resources in the near future.

Budget:

Mike Rudibaugh asked on the phone if the GeoTech Center should do more or less faculty development. Our answer is “Less is More!” Don’t do so much unless you are extremely clear about the impact you are trying to achieve AND how this impact is

unique to the GTC. If you feel that you have committed too much money to participant support in your grant in these early years, do not be afraid to discuss this with your program officer.

Conducting the Annual Meeting:

The 2010 meeting was much improved over the 2009 meeting. The advance reading materials were a tremendous help. The NVC would like to meet in closed session starting at noon on Wednesday in Atlanta for the 2011 meeting. Good advance reading materials will be essential for our preparation.

Reduce the presentation portion in length to finish by noon, so that the project staff and the NVC can spend the entire afternoon discussing the project, instead of squeezing the discussion time to a short period in the late afternoon or early the next day. We say this because the NVC truly values the exchanges that we have had with the project staff over the past two annual meetings, and we hate to see that time so shortened.

We would like to remind the Center staff:

- Do not spend time at the meeting telling us things we can read in advance.
- If you would like us to comment on the web site or printed materials, give us homework in advance of the meeting.
We do not recommend having people call in during the meeting. If they are important to your work, bring them to the meeting. (However we understand that if a key member of the team is snowed in, of course they can call in.)
- Make sure all PPT slides are readable from across the room. Provide handouts of PPT slides (two slides to a page).
- Work with NVC Chair at least 2 months in advance of the meeting, and provide a draft agenda and outline of the read ahead materials.
- Make sure that all the PIs stay for the entire meeting; the NVC[?] is there for them.
- It is advisable that PIs arrive early and practice their presentations so they are well coordinated.

And once again we will say the NVC believes in this center, its vision and mission, and its PIs. You are building something that has not been built before and it is not easy. But it truly is a once in a life time experience, so enjoy it! The NVC is committed to your success.



Appendix A

National Visiting Committee Members Present

Deidre Sullivan (NVC Chair)	Director and PI for the MATECenter
Elaine Craft (NVC Member)	External Evaluator, SCATE
William Beston (NVC Member)	Broome Community College, Binghamton, NY
Joe Francica (NVC Member)	Directions Magazine
Bill Hodge (NVC Member)	GIS Division Manager of the City of Midland, TX
Gary Jeffress (NVC Member)	Texas A&M University – Corpus Christi
Joseph Kerski (NVC Member)	Education Industry Curriculum Development – ESRI
Marguerite Madden (NVC Member)	University of Georgia
Bob Samborski (NVC Member)	Executive Director of the Geospatial Information & Technology Association
Damion Scholtz (NVC Member)	Digital Mapping Services
Sid Shrum (NVC Member)	Greenville Technical College, South Carolina

CoPI's Present

David DiBiase	Pennsylvania State University
Vince Dinoto	Kentucky Community Technical College System
John Johnson	DACUM Specialist
Michael Rudibaugh	Lake Land College
Chris Semerjian	Gainesville State College
Kenneth Yanow	Southwestern College

GeoTech Center Staff Present

Phillip Davis	GeoTech PI/Director
Ann Johnson	GeoTech CoPI/Outreach Manager
John Nelson	GeoTech K-12 & Technical Assistant
Minerva Borger	GeoTech Center Manager

ESRI Education Team Host

Esther Worker	ESRI Education Team
Joseph Kerski	ESRI Education Team





Appendix B

National Advisory Board (NVC) Agenda

Wednesday, February 10 @ ESRI Offices

Time	Item	Lead
3:00-4:30pm	PI, Co-PI and GeoTech Staff Meeting (Denver Board Room - 2nd Floor)	Phillip Davis
6:30-8:00pm	Task charges and assignments from NVC chair to members and presentation by Elaine Craft. Pizza dinner and drinks provided. (Arizona Board Room – 2nd Floor)	Deidre Sullivan Elaine Craft

Thursday, February 11 @ ESRI (Denver Board Room – 2nd Floor)

Time	Item	Lead
	Please Note: Titles in <i>Italics</i> are Last Year's Goal Title	
8:30-8:45am	Welcome and Introductions	All
8:45-8:55	Overview of Meeting	Phillip Davis
8:55-9:25	Response to 2008-2009 Recommendations	Phillip Davis
9:25-9:45	Overview of Evaluation	Elaine Craft
9:45-10:05	Business Plan Overview	Ann Johnson
10:05-10:15	Coffee Break	
10:15-11:15	Goal 1 - Completion of Geospatial Technology Competency Model <i>(Core Competency Development)</i>	David DiBiase John Johnson
11:15-11:45	Goal 2 - Implementation of Geospatial Technology Competency Model <i>(Core Competency Development)</i>	Chris Semerjian
11:45-12:15	Goal 3 - Community College Program Map <i>(National Clearinghouse and Website)</i>	Mike Rudibaugh
12:15-12:45	Lunch Break	
12:45-1:30	Goal 4 – Support Sustainability of Geospatial Programs <i>(Recruiting and Retention Initiatives)</i>	Ken Yanow
1:30-2:00	Goal 5 - Website and Repository <i>(National Clearinghouse and Website)</i>	Phillip Davis
2:00-2:30	Goal 6 – Provide a National Voice for Community Colleges & New Goal 8 – Synergy Project on Virtualization	Ann Johnson
2:30-2:45	Afternoon Break with Coffee and Snacks	
2:45-3:15	Goal 7 - Professional Development	Vince DiNoto
3:15-3:45	Questions and Answers by NVC to Center Partners	Deidre Sullivan
3:45-5:00	NVC Private Discussion with Chair	Deidre Sullivan
7:00-9:00	Dinner and Reception @ Bonefish Grill	All





Friday, February 12 @ ESRI (Denver Board Room – 2nd Floor)

Time	Item	Lead
8:30-8:35am	Opening the Session	Phillip Davis
8:35- 9:00	NVC Overview	Deidre Sullivan
9:00-9:30	Q & A from NVC Members	All
9:30-10:30	Closed Executive Door Session	Deidre Sullivan
9:30-10:30	PI & Co-PI Break-Out Session (Arizona Board Room – 2nd Floor)	Phillip Davis
10:30-12:00	NVC Report out & Recommendation to GeoTech Center	NVC
12:00-1:00	Lunch Break	



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