USGS Education / Business Partner Event Report

Events:

1. National Association of Interpreters (NAI) Workshop (2004 Annual Conference).

2. Presentation for GIS Day, Department of Geography, Western Michigan University

3. Workshop, School of Education and Department of Geography, Michigan State University

Report Writers and Participants: **Steve Reiter, Laurie Jasso, and Joseph Kerski**

Event Dates: 14-20 November 2004

Locations: Grand Rapids, Kalamazoo, and Lansing, Michigan

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1. National Association of Interpretation Conference (National Interpreters Workshop)

Description of Event: According to the Mirriam-Webster Dictionary, to *interpret* means to explain or tell the meaning of, or present in understandable terms. It also means to represent by means of art, or bring to realization by performance. To impart understanding of natural and cultural resources by means of art, music, explanation, drama, graphics, and other means is exactly what the 4,500 members of the National Association of Interpreters (NAI) do. The organization's web address is http://www.interpnet.com.

Interpretive work includes sciences such as environmental studies, geology, climatology, geography, and hydrology, but also includes performing arts, visual arts, graphic arts, and the means to communicate to a wide variety of audiences. The USGS mission has similarities to that of the NAI: We conduct scientific research, but we also must continually think about how to impart our mission, data, and science results to a wide variety of users.

USGS Activities at NAI Conference: (1) Conduct preconference workshop in conjunction with NASA, on interpreting the landscape using GIS, GPS, remote sensing, topographic maps, and other resources.

(2) Conduct in-conference workshop on GPS, topographic maps, and other spatial data;

(3) Operate USGS information exhibit.

The NAI has grown from 2,200 members in 1990 to over 4,500 today, representing all USA states and 30 countries.

Communication Focus Areas Covered by This Event: Education Program; Business Partner Program

Grand Rapids Michigan, shown with the Grand River in the foreground. The conference rotates between different regions of the NAI each year. The 2004 NAI conference was held in Grand Rapids, Michigan. The region also provided field trip opportunities for the attendees—to glacial terrain, local wetlands, local historical sites, lakeshores, Native American lands, and other places where attendees could learn more about cultural and environmental interpretation.

In my opinion, we have the opportunity with the NAI to work with some of the most creative people, people who are skilled at what they do and are passionate about doing it. Above, a group of interpreters winds their way musically around the exhibit hall.

The Amway Grand Hotel was the conference site of this year's event, a wonderful facility that combined old and new. The only drawback is that the exhibit hall was a long walk from the workshop rooms, which lowered the attendance at the exhibition.

Self-portrait of Joseph Kerski (L) and Steve Reiter on the former railroad bridge as we set up for our preconference and in-conference workshops.

The NAI conference is structured as follows: Day 1--Tuesday: Setup and preconference workshops. Day 2—Wednesday: Keynote, workshops and exhibits. Day 3: Thursday--Keynote,

workshops and exhibits. Day 4: Friday--Field Trips. Day 5: Saturday--Workshops. The two days of exhibits were just right for the size and scope of this conference.

Attendance at this year's conference numbered around 850, including interpretive guides, rangers, museum curators, nature center managers, students of environmental and social sciences, tourism professionals, display and signage professionals, educators, and federal, county, and state employees of land-based agencies.

The next NAI conference will be held in November 2005 in Mobile, Alabama.

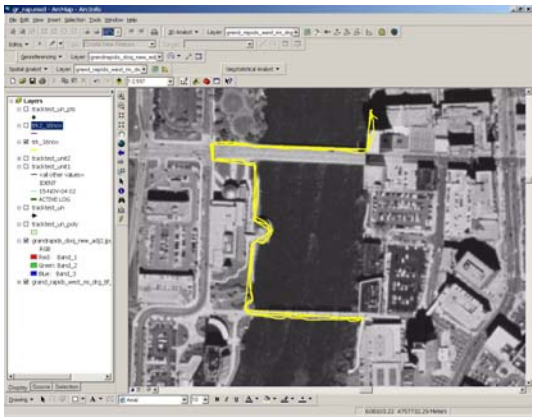
Federal Interagency Council on Interpretation Meeting

Laurie Jasso attended the Federal Interagency Council on Interpretation meeting during the Wednesday of the conference. She updated the members about organizational changes occurring at the U.S. Geological Survey, and the plan to use interpretive training as a step in the implementation of the Natural Science Network. She also highlighted the installation of an Interpretive Association, Rocky Mountain Nature Association, at the Denver Earth Science Information Center (ESIC) map sales counter and the intent for the Alaska, Reston, and Menlo Park USGS offices to follow this model.

Pre-Conference Workshop

Joseph Kerski (USGS), Steve Reiter (USGS), and Anita Davis (NASA) conducted a full-day preconference workshop for attendees who signed up for it in advance. This was the result of several months of planning between the USGS and NASA. The idea came from a conversation we had with NASA at the 2003 NAI in Reno, Nevada, and also from comments we received from our past 2-hour workshops that the attendees desired a full day workshop.

We set up the GPS receivers and planned our field trip route before the conference began. I don't think we saw the sun for more than 2 hours during the entire week, but we were fortunate to avoid most of the rain while conducting our fieldwork and classes.



Results of the GPS track that the attendees collected, plotted with ArcGIS on a USGS DOQ, and hyperlinked to photographs we had taken en route. GPS coordinates displayed atop a DOQ in ArcGIS, illustrating the nearness of the points to their actual locations. We also used the GIS demonstration to illustrate the USGS digital data sets that are available. All of this GIS preparation work required several weeks to prepare, but it was worth the effort.

** During the process of preparing data for the workshops, we seem to have discovered a coordinate shift problem with the Grand Rapids DOQs and DRGs.

The attendees, shown here collecting coordinates with their GPS units, were very enthusiastic about the workshop, rating it in a positive manner on the evaluation forms.

The preconference workshop included hands-on and discussion about how to use Landsat imagery, GPS, topographic maps, aerial photographs, historical maps and imagery, real-time spatial web sites, and other geographic data and tools in interpretive work.

We walked around the carousel mounted inside the Grand Rapids museum to determine the GPS accuracy in the GIS environment.

Above, Steve Reiter explains datum, tracks, routes, waypoints, and satellite reception issues with the attendees.

For the second year in a row, we wrote a paper entitled *Interpreting the Landscape with USGS Spatial Data* to accompany the workshop, which was published in the *2004 Interpretive Sourcebook*. Ours was one of the very few articles to incorporate images (topographic maps, aerial photographs) in the book, and we feel privileged to be included in this publication.

In-Conference Workshop

For the third year in a row, we conducted an in-conference workshop on mapping, GPS, GIS, coordinates, USGS resources for interpretive work (images, books, maps, real time data, and so on) at the NAI conference.

Participants in our in-conference workshop. We were pleased at the high attendance for both the preconference (17) and in-conference (35) workshops. It was a pleasure to work with the attendees, who hailed from other federal agencies (National Park Service and the US Forest Service, for example), state and local government, private industry, universities, and nonprofit organizations.

The demonstration portion of the workshops included a focus on USGS books, maps, and digital spatial data. Our goal was to illustrate to the attendees that for any region, there is a wealth of USGS resources to aid in interpretive work. Several attendees, already familiar with some USGS digital data, expressed a desire for higher-resolution DRGs in a non-proprietary format.

We discussed ways to access USGS information, such as the USGS product warehouse, the USGS Map Store, the USGS Education Map Catalog, The National Map, the real-time water information, Terraserver, real-time stream flow information, biological information, and more. We shipped and gave away lessons, guidelines, maps, sample aerial and satellite imagery, and much more.

Steve and Joseph have posted their curricular materials on http://rockyweb.cr.usgs.gov/public/outreach.

We received many positive comments about the workshop immediately afterward and during the remainder of the conference. During the workshop, we had a short discussion regarding the emplacement of geocaches in parks.

USGS Information Exhibit

Our exhibit was quite popular with the conference attendees. We distributed posters, information sheets, educational packets, product overviews, CDs, fact sheets, and guidelines on how to use USGS data, services, and products.

Impressive entrance to exhibit hall for the NAI conference at the Amway Grand Hotel.

Laurie Jasso (L), Steve Reiter, and Joseph Kerski at our USGS informational exhibit.

Our exhibit included a computer with a high-speed connection, which came in quite handy when we were demonstrating resources to attendees, and answering their questions. We demonstrated sites such as the USGS Map Store, the Publications Warehouse, Landsat imagery, DOQs and DRGs on Terraserver, wildfire mapping, real-time stream flow, and topographic maps.

During workshops, exhibit traffic was lighter, but we found that people often would stay at the exhibit for 20 minutes or more with specific questions. Once again, the only disappointment was that the exhibit hall was a fair walk from the workshops, which resulted in fewer people in the exhibit hall than were present in 2002 and 2003.

We arranged the exhibit space to encourage the attendees to spend time inside it by not blocking off the space with tables. We used one curved popup backdrop, featuring the Tapestry in Time and Terrain map, and the new geology of Lake Michigan map.

USGS personnel necessary to work this conference are those with experience with the public, with USGS products and services, with potential business partners, and with interpreters—their needs, their programs, and their background. These are exactly the type of people we had at the conference.

Among the most common questions were those on how to order materials, specific maps and research on themes or regions, GIS and GPS, and aerial and satellite imagery.

Acknowledgements

A successful presence at the NAI conference would not have been possible without the support of the following individuals:

[Joseph writing]: I thank my excellent colleagues at the USGS: Steve Reiter and Laurie Jasso. They were knowledgeable and enthusiastic to work with, and I believe we comprised a team that the conference attendees enjoyed working with.

We also thank Anita Davis at NASA for being an excellent partner in our workshop at the NAI conference, and for helping us plan and carry through a very successful event.

We thank Gene Jackson, Jen Reisner, Sherry Jackson, and others who were involved in the months of planning that led up to the event.

Recommendations

(1) This was the fourth year in a row that the USGS has participated in the NAI conference and the third year in which Steve and Joseph have participated. Previous year conference reports are available on:
http://rockyweb.cr.usgs.gov/public/outreach/reports/nai02t.pdf

and

http://rockyweb.cr.usgs.gov/public/outreach/reports/nai03t.pdf

We commend our USGS colleague Gene Jackson for his role in initiating USGS work with the NAI. We believe that this group of people is an excellent one to work with, not only for business partner purposes, but also because their work is interpreting the land and its people—their environment, culture, history, flora, and fauna. It would be difficult to find a more suitable organization for these professionals to be in touch with than one whose mission has always been to study the Earth—the USGS.

The NAI conference is an opportunity to network with some of the country's most creative people. This isn't just the most creative *interpretive* people, but the most creative people in *any* profession. Where else can one learn about bones, microscopes, landscape architecture, owl pellets, literature, and satellite images in one place? Interpretive work seems to draw people with a gift for storytelling, graphic arts, visual arts, history, geology, geography, environmental education, and many more fields. For example, we talked with Budd Wentz who designed and built his own large format (non-squinting!) microscope and many more.

The main emphasis at the NAI conference for the USGS is education, rather than for the business partner program.

(2) This conference showed the excellent results of a partnership between education and the Information Services Team. We encourage the USGS to keep partnering IS/GIO and Education/Communications in future endeavors.

(3) Our exhibit provided an excellent venue to network with attendees and other exhibitors, many of whom we already work with (USFS, NPS, BLM, NASA, etc.). While the Lake Michigan lakefloor geology and fish map did not spark much interest, everything else we displayed attracted much attention.

(4) Once again, the difficulty in knowing about and obtaining USGS **biological resources materials and publications** was at the forefront, particularly with an audience such as this, with a high degree of interest in information that is interdisciplinary and that includes plants and animals.

In my opinion [Joseph], we still need to work on a bureau-wide effort to more fully integrate biology resources into USGS workshops and exhibits. For the NAI, the most appropriate biology related resources are those dealing with invasive species and with biodiversity. This needs to be resolved before we'll ever truly be a seamless organization in terms of our communicating to the public at conferences.

(5) As in other conferences that we participate in, the combination of exhibit and workshop is an excellent one. From the exhibit, we routed people to our workshop, and after the workshop, people made a point to visit our exhibit to ask us additional questions for the 2 days.

(6) As in 2002 and 2003, we enjoyed the NAI conference. It is refreshing to realize that one can get a great field-based job with a history or environmental studies degree, as evidenced by the attendees.

(7) Our data and products are best explored in a hands-on mode. We recommend we do a GIS hands-on workshop in the future. To do this, we have recently invested in 10 laptop computers and a shipping case for this purpose. This is exactly what ESRI has done for all their off-site workshops, and it will serve us well for all of the conferences and training events that we conduct outside of our own facilities. It will also help for our own USGS training of our own employees in GIS.

(8) We recommend that we write an article for the NAI journal *Legacy.* We should also submit several tips for the *Interpretive Tips and Techniques* book, such as one that highlights terraserver and USGS imagery.

(9) We recommend we pursue work with several of the chapters of the NAI, particularly with the one that focuses on Native Americans. Joseph spoke for awhile with the representative for the Council for the Interpretation of Native Peoples, which is a chapter of NAI.

(10) Have we thought about exhibiting at the Society of American Archaeologists (www.saa.org) conferences? Several SAA representatives were in attendance at NAI and I asked them about their own events. This group is a large and growing user of maps, scientific reports, and aerial and satellite imagery.

(11) Given the increasing emphasis on USGS partnerships with other organizations, such as the NAI, we might conduct another preconference and in-conference workshop at the NAI 2005 conference in Mobile, Alabama.

(12) USGS should participate in the awards celebration by giving an interpretive award. This award recognizes the people who demonstrate innovation, professionalism and best practices in interpretation through publications and/or media.

(13) We should consider conducting a hands-on GIS course. Now that our mobile computing lab is soon to become a reality, we should consider this for the 2005 NAI conference (as well as other events). The reason is that GIS, like GPS and Remote Sensing, is best taught and learned in an experiential hands-on mode.

Conference Exposition

Exhibitors at the NAI conference are quite creative with their displays and what they offer interpreters.

The US Forest Service will be celebrating their 100th anniversary in

2005. The USFS, National Park Service, and NOAA were other federal agencies besides the USGS at the conference.

Because the NAI includes some of the most creative people, speaking with the other exhibitors not only helps us understand the content of interpretative work, but it provides excellent examples of how information can be displayed.

The approximately 60 exhibitors may be categorized as:

1) Government agencies with a lands emphasis, including USGS, FWS, NPS, USFS, NASA, and BLM.

2) Nonprofit organizations, such as the North American Association for Environmental Education.

3) Companies that manufacture display items (displays, signs, etc) for interpretive centers and museums.

Sample 3D landscape for teaching about landscape and processes from Mass Production, Inc.

4) Companies that produce and/or distribute items for interpreters, such as CDs, posters, activities, and much more.

5) Book publishers, such as Mountain Press Inc.

6) Chapters of the NAI, including regional sections, African Americans, Native Americans, Environmental Education, and Cultural Interpretation.

Western Michigan University Presentation for GIS Day

Upon the request of Dr Lisa DeChano, Western Michigan University Department of Geography, Joseph Kerski gave a GIS Day presentation in the department. Joseph's presentation focused on the value of spatial thinking in society, the need for geographers to spread spatial thinking outside the geography departments, and the changes that GIS has made at the USGS. Attendance at the workshop included graduate students, professors, and teaching assistants.

Joseph also met with Dr Joe Stoltman, one of the country's leaders in Geography Education. He also talked with the Geography Department chair about their proposal to scan in all of the USGS historical topographic maps. This would be a mammoth undertaking, but the results would be incredibly useful for all those researching and teaching about landscape change, human-environment interaction, and much more.

Michigan State University Workshop

Upon the request of Dr Judy Olson (right), Joseph Kerski conducted a workshop at Michigan State University. The workshop included hands-on work with aerial photographs, satellite imagery, topographic maps, and GPS.

The workshop took place at the College of Education at Michigan State University and attracted undergraduate and graduate students and faculty from both education and geography.

One of the geography students examining a new USGS wilderness areas map.

It was a pleasure working with these students and faculty from MSU.

Someone fishing in the Grand River near the site of the 2004 NAI Conference.

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