

Outreach Event Report

Event Name: 32nd Annual National Indian Education Association Convention

Participant: Joseph Kerski

Other USGS Participants: Carrie Jucht, EDC, Lance Clampitt and Dave Madril, Northern Rocky Mountain Science Center

Participants in Joint Exhibit: Jhon Goes In Center, Innovative GIS Solutions Founder and Industry Liaison for Sinte Gleska University-Sicangu Policy Institute, and James Rattling Leaf, Sinte Gleska University

Dates and Location: 28-31 October 2001 Billings, Montana

Summary

The USGS participated in the 32nd Annual Conference of the National Indian Education Association (NIEA) by hosting a double exhibit, together with Sinte Gleska University (SGU), and by conducting a GIS presentation with Jhon Goes In Center and James Rattling Leaf. This report describes our joint exhibit, our joint presentation at the conference, background on the NIEA, and suggests means in which the USGS can work with the NIEA and with the Native American educators in the future.



We continued an excellent working relationship between the USGS and SGU, fostered increased communications with the Native American Education community, and have started planning a future workshop on GIS for Native Americans at Sinte Gleska University. Above, James Rattling Leaf of SGU, Joseph Kerski, USGS, and Jhon Goes In Center, Innovative GIS Inc., and Consultant.

Acknowledgements

I wish to express my gratitude to James Rattling Leaf and Jhon Goes In Center for working with me over the past six months on our workshop. It was a great success and I have already received a telephone call and emails about our workshop from attendees. It was an honor to work with them, and I look forward to future collaboration. I also thank Carrie Jucht, Mark Barber, Lance Clampitt, and Dave Madril for their help with the USGS exhibit, materials, presentations, and for their enthusiasm and professionalism. I thank Sue Marcus for funding the travel for this event and RMMC for supporting my participation. In addition, I thank Carrie Jucht for teaching me some Minnesota colloquialisms.



Billings, Montana, host of the 2001 NIEA conference.

About Native American Education and the NIEA

The NIEA was founded in 1969 to give American Indians and Alaska Natives a national voice in their efforts to improve access to educational opportunity. It is the largest and oldest Indian education organization in the USA. The NIEA is headquartered in Alexandria, Virginia, and its web site is www.niea.org.

Despite the misuses of the federal government in controlling education for Native Americans up to the mid-twentieth century, within the last few decades, laws and policies have begun to change to reflect the actual versus perceived needs in Indian education. Many Native people now control their own educational activities, including administering contract schools, operating tribally controlled colleges, and serving on public school boards. NIEA was established to ensure that American Indians are included in local, regional, and national policy decisions. NIEA's goal is to foster access to education to preserve, not replace, Indian traditions. The link between education and culture is fundamental to Native Americans. This was evident even in the conference itself. Each day began with a flag song and a victory song or a call to order with a ceremony by such tribes as the Blackfeet and Northern Arapahoe.

Education is one of the means by which the beliefs of contemporary life are transmitted. Education consists of values as well as techniques, facts, knowledge, and skills. This is why education, and how it is conducted, is important to Native Americans who are seeking to preserve their own values as well as pursue their educational goals. This fact reflects why the joint participation of Jhon Goes In Center (Oglala Sioux) and James Rattling Leaf (Rosebud Sioux) in our workshop was so critical to its success, and why we need to be working together in the future.

Over 560 American Indian tribes and Alaska Native groups are recognized by the federal government, and there are hundreds more "unrecognized" groups. During the 2000 census, over 2 million people identified themselves as Native American. Over 60% of the Native American population is under 25 years of age, further underlying the importance of the mission of education. James Rattling Leaf has served on the USGS external advisory board convened by Dr Groat during Fall 2000.

Over 50,000 children attend schools operated by the Bureau of Indian Affairs (BIA). Other American Indian students attend public schools, private Native American schools, and private non-Indian schools.

Recommendations

I make these recommendations while being only partly familiar with the scope and detail of USGS work with Native Americans. We may be, in fact, already pursuing some of these recommendations.

Given the fact that Neil McCaleb and Gale Norton both spoke at the NIEA conference, and the positive feedback we had from SGU and the attendees of the conference, I recommend that the USGS participate in this conference in 2002. Carrie, James, Jhon, and I discussed an idea for a GIS hands-on work with computers during next year's conference. The ideal situation would be to get a grant from a computer corporation for laptops; the alternative would be to hold the workshop at SIPI (Southwestern Indian Polytechnic Institute) near the conference site in Albuquerque.

Jhon Goes In Center has written articles in *Native Geography*, the annual magazine of the ESRI Native American-First Nations Program, in *Photogrammetric Engineering and Remote Sensing*, and in many other journals. He is working with the US Global Change and Research Project, sponsored by NASA, to monitor global climate change. As he points out, Native people are spatial reasoners, and the adaptation of new tools such as GIS is the only difference from times past. Many methods, sense of place, and knowledge of the cultural and physical landscape are the same.

I have personally witnessed this fact, with my past work as Native American liaison in the Census Bureau's geography program, with a GIS institute for Native Americans at Northern Arizona University, and with a satellite broadcast on GIS at Southwestern Indian Polytechnic University—Native Americans already have an advantage to many others in learning about and using geographic technologies. Knowing about space and spatial analysis is already part of their culture. Most Native people have a sense of place and connection to the land that is tied to their conception of self. They already are familiar with the concepts of map projections, scale, watersheds, water quality, landforms, weather patterns, vegetation, and so on. Life centered on the soil, sky, landscape, plants, and animals obviously finds a natural home in geography and geographic information science. As Jhon Goes In Center says, "We have always lived by holistic and integrative philosophies." Many tribal governments have been using GIS for years, to map burial grounds, to maintain emergency services, protecting cultural resources, plan urban growth, and a host of other services.

I noted at the conference and in my reading that Native American educators share many of the same concerns as the educational community at large—dropout rates, disparity between schools, teacher training, and standardized testing.

Journals and News Media



Numerous representatives from the news media were present, not only from Montana but from across the USA.

Secretary Norton's speech was on the front page of the Billings Gazette. President Heart's report and a number of other articles about the NIEA appeared in other sections of the newspaper that day and the following two days.

I make the following recommendations on other media outlets to pursue with articles about USGS educational materials, USGS scientific research, and other appropriate issues:

Indian Country Today

This newspaper is published by Standing Stone Media, Inc., 579 Main St, Oneida NY 13421, 1 888 327 1013. This is their editorial address. Their main address is 1920 Lombardy Dr., Rapid City 57703. 1 888 550 1311. www.indiancountry.com

Winds of Change: American Indian Education and Opportunity

Recent contents of this excellent journal include: "Thoughts on Indian and Non-Indian Education," "Environmental Careers: On Tribal Lands and Beyond," "Oil Development vs. Indigenous Rights in the Arctic Circle," and "Environmental Education and Training Engage First Nations Students." This quarterly journal is published by AISES Publishing Inc. Web site: www.aises.org and www.winds.uthscsa.edu. The USGS already participates in the AISES conferences, and this journal would be an excellent outlet to publicize some of our work with Native Americans, and also to let the journal's readers know about USGS resources.

Tribal College Journal

I was very impressed by this journal as well. PO Box 720 – Mancos CO 81328. www.tribalcollegejournal.org. 970-533-9170.

American Indian Report

This is a national news magazine for all of Indian Country. Contact information: 3702 Pender Dr, Suite 300, Fairfax VA 22030. Email: air@falmouthinst.com. 800-992-4489. It is published once per month.

Regional Native American Education Associations

In addition to future work with the NIEA, the USGS could be working with regional Indian education associations. This conference was held in conjunction with the Montana-Wyoming Indian Education Association, Carol Juneau, Chairperson. This regional association is one of many such organizations that we could establish further ties with, participating in their own conferences, publishing articles in their newsletters, informing their members about the USGS, and asking them how we could better serve them.



One of the best-dressed visitors to our exhibit!

Other

Perhaps the best single resource that will be helpful to us in the future is the "Education" publication of Indian Country Today. This annual book contains a directory of tribal colleges, articles, features, and other important information.

In addition, most Native American colleges and universities publish their own newsletters and student newspapers. A good example is the "United Tribes On Campus News" from the United Tribes Technical College in Bismarck.

I also found out about a conference that occurs every three years called the "Indigenous Peoples Conference on Education." The next one will occur from 4-10 August 2002 at the Nakoda Nation in Morley, Alberta, Canada.

Another activity we could be involved in is the Native American Science Bowl. We have participated in something similar, the Science Olympiad, for at least a decade.

We would also do well to examine the 8th Annual College Guide for American Indians, published by Winds of Change magazine and AISES, in our effort to work with institutes of higher education.

We should also help compile data sets and applications for other tribal lands in addition to the one that James and Jhon developed for Rosebud.

Another organization we could work with is the National Indian Telecommunications Institute (www.niti.org) in Santa Fe, New Mexico. The NITI works in the areas of curriculum development, language preservation, a virtual museum, and access advocacy in technology. Its goal is to use the power of electronic technologies to

provide Native Americans with educational tools, equal opportunity, and self-determination.

I also learned more about the National Board for Professional Teaching Standards. Both Native and non-Native teachers can take courses to become “national board certified.” By learning about these activities, we can better meet the needs of teachers. Their newsletter is the “Professional Standard”, and their organization’s contact information is: www.nbpts.org 1525 Wilson Blvd – Suite 500, Arlington VA 22209. 703-465-2700. As of April 2001, 9,531 USA teachers achieved National Board certification. The certificate fields include: art, career and technical education, English as a New Language, English Language Arts, Exceptional Needs Specialist, Generalist, Math, Science, and Social Studies-History. This organization holds national conferences, usually in October.

I understand that the American Indian Higher Education Consortium signed an MOA with the USGS. I would like to know about the details of this MOA.

SGU is a member of the Upper Midwest Aerospace Consortium (UMAC). SGU will be offering relevant courses and developing curricula to accommodate tribal spatial needs.

We should also investigate work with the following:

National Congress of American Indians.

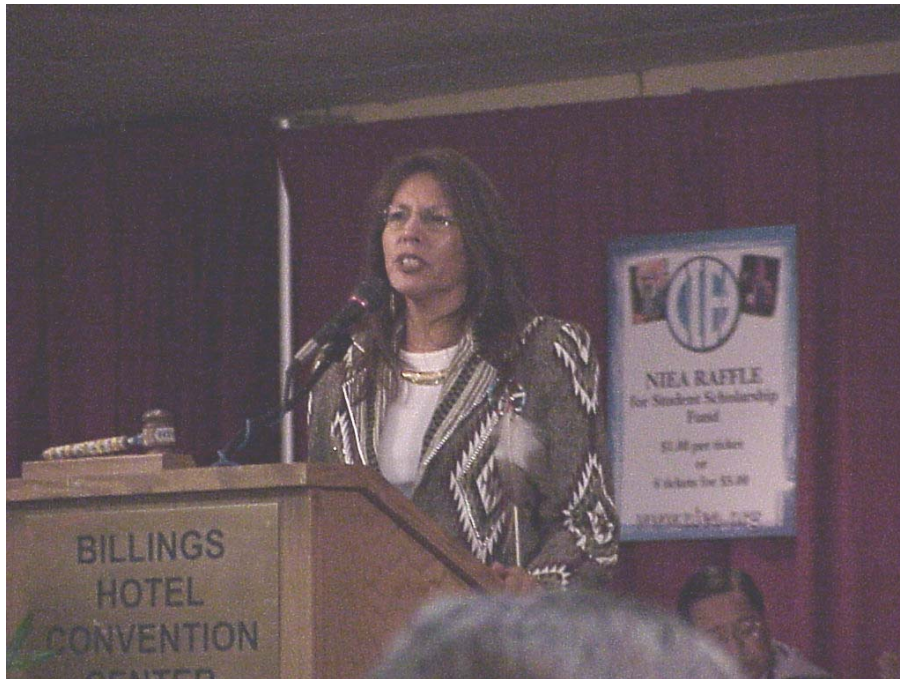
The US Office of Indian Education

Family and Child Education Program (FACE).

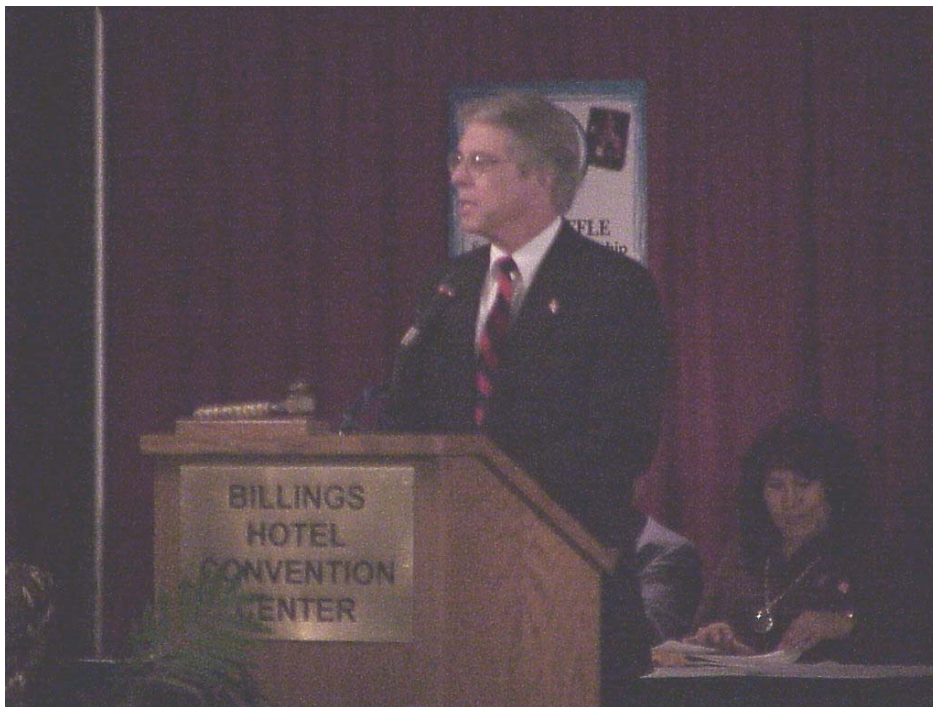
AISES has a K12 education program that includes professional development programs for teachers.

Keynote Addresses

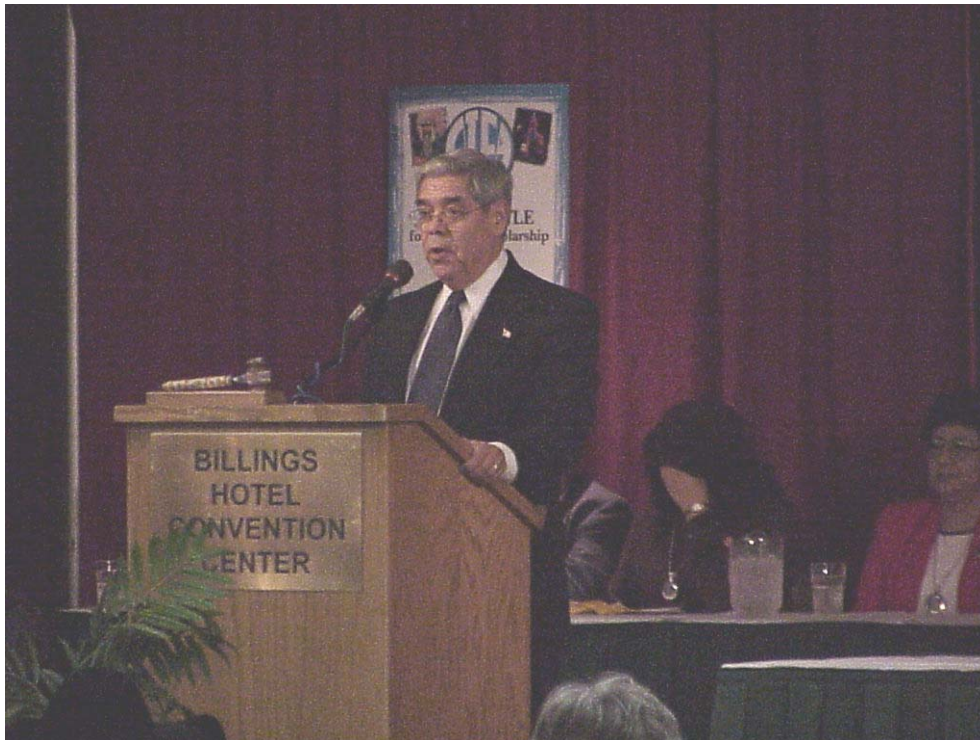
Carol Anne Heart (NIEA President), Charles Tooley (Mayor of Billings), Neil McCaleb (Assistant Secretary of Indian Affairs), and Gale Norton (Interior Secretary) gave presentations at the beginning of the conference. Gale Norton walked by our USGS exhibit and I caught up with her at the BIA exhibit. Meeting her was definitely one of the highlights of the conference for me, as well as working with James and Jhon at the exhibit and at the presentation.



Carol Anne Heart, President of the NIEA. She grew up on the Yankton Sioux and Rosebud Sioux, and Lakota was her first language.

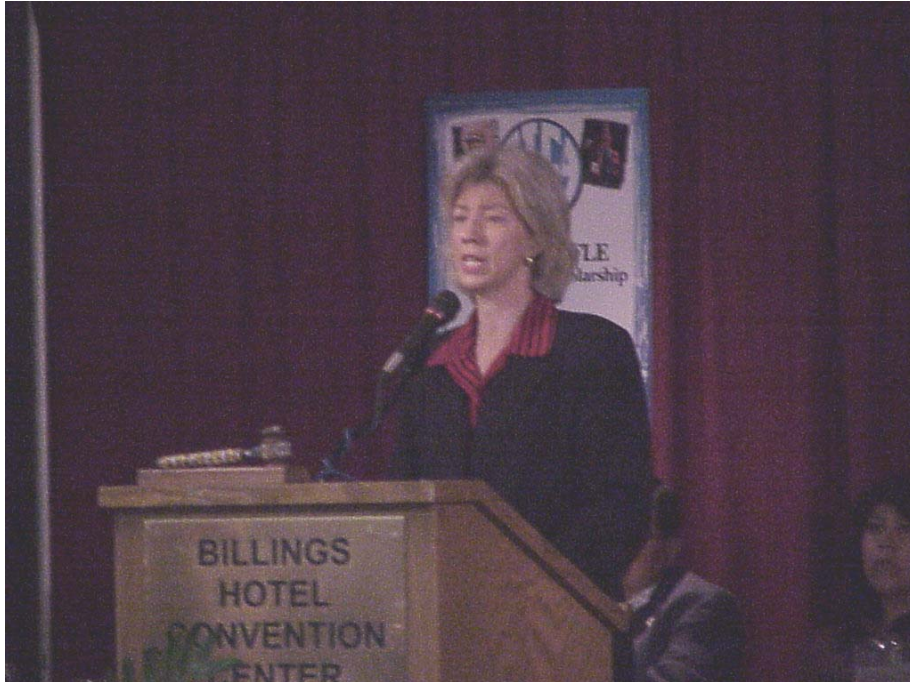


Charles F. Tooley, Mayor of Billings, welcomes conference attendees.



*Neil McCaleb, the Assistant Secretary of Indian Affairs
at the US Department of the Interior.*

Neil McCaleb is the 8th Assistant Secretary for Indian Affairs, is a member of the Chickasaw Nation of Oklahoma, and served in the Oklahoma House of Representatives and as the Oklahoma Secretary of Transportation. He noted that he was pleased that this year, we have the largest budget for Native American school construction ever (\$300 million).



Gale Norton, Secretary of the Interior.

Gale Norton's first speech after she became Secretary was to the National Congress of American Indians. The fact that she is the first Interior Secretary to address the NIEA spoke to the importance of this event and this organization. She spoke about the 185 schools that have gone online with broadband technology. Approximately \$123 million of the budget to improve school infrastructure will go to build 6 new schools; the remainder will fix the others. As of August 2001, all BIA schools are connected to the Internet. This is a significant accomplishment, given the traditional state of affairs in technology in some of these schools.

USGS - SGU Exhibit

SGU's highlights and demos occupied the right side of the exhibit, and the USGS occupied the left, but in reality, it was a seamless exhibit, with all of us working the entire exhibit. This arrangement worked very well and we had a tremendous synergy from working with Jhon Goes In Center and James Rattling Leaf. Carrie Jucht was instrumental in setting up this exhibit and I commend her on an excellent job.

Our exhibit was at the side of the exhibit hall, but because the conference organizers opened the side door, it was the first exhibit seen by attendees walking over from the workshop sessions. This gave us excellent exposure and constant traffic.



James and Jhon show customized GIS application in the exhibit.



Our USGS exhibit's success at this conference was in large part due to the partnership that we highlighted together with Sinte Gleska University. Above, Carrie Jucht and Lance Clampitt show our joint exhibit.

Presentation Items

Our presentation items fell into four main categories:

- 1) Educational Materials and maps
- 2) GIS in Education
- 3) Information about the USGS-SGU Memorandum of Understanding
- 4) Demonstration of MapTrails Native American GIS Education Application



Another view of our USGS exhibit showing Dave Madril and Billings DOQ produced and framed by EDC. EDC also produced and framed a Landsat image of the area. MCMC donated a Montana anaglyph image (to the right of Dave), which was very popular.



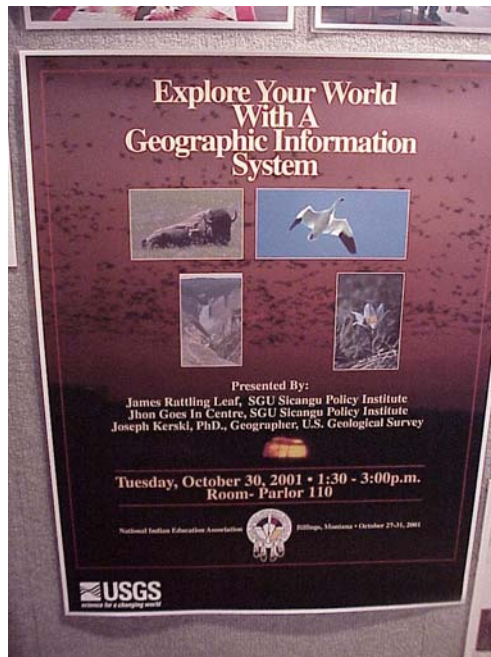
Joseph Kerski and Lance Clampitt with Landsat image of Billings region produced and framed by EDC.

Educational Materials and Maps Included the following:

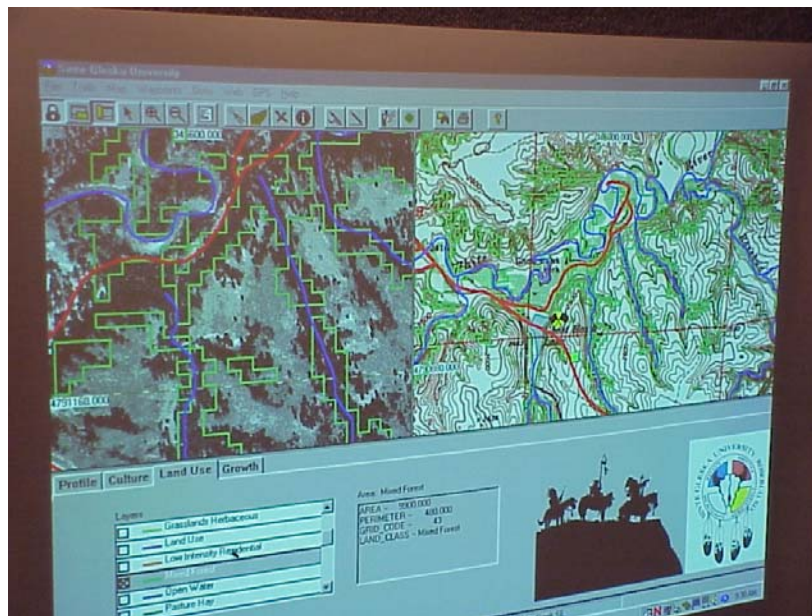
- Volcanoes
- Scientists in Action
- Aerial Photographs and Satellite Images
- USGS Geodata
- Gtopo30
- Land Cover Characterization Program
- Elevations and Distances
- Map Projections
- USGS Maps
- USGS Indian Lands Maps
- Landsat cards, bookmarks, and information
- How to Get Information from the USGS
- USGS web sites
- Earth Explorer
- USGS: Science, Society, Solutions
- Northern Rocky Mountain Science Center and other Montana-related USGS activities.
- Water Education Posters
- Teachers Packets
- Maps: Miscellaneous topographic maps
 - Washington DC satellite image map
 - What, Me, a Scientist?
 - EDC 25th Anniversary Poster
- National Atlas
- USGS-Microsoft CRADA
- EDC Brochure
- Montana indexes



We also highlighted the USGS-SGU MOU by displaying posters and pictures depicting the signing in October 2000 by Lionel Bordeaux and Chip Groat, above.



We also advertised for our workshop at the conference with a beautiful poster produced by EDC, above.



Screen from the MapTrails Native American GIS Education Application.

The MapTrails Native American GIS Education Application was developed with numerous partners in tribal and federal government including Rosebud Sioux and the USGS, education, and private industry. It features sound, movies, photographs, historical and current spatial data (including Corona photographs from the 1950s, IKONOS imagery, USGS DOQs, and more). I was quite impressed by this application as it allows one to quickly and easily view data in many formats.

The GIS in education materials that we distributed included the following:

- USGS GeoData
- GIS Touches our Everyday Life article (ESRI)
- Resources for K12 GIS Education (Kerski)
- GIS: Our Common Ground in Education (ESRI)
- Map Mysteries (Kerski)
- Teaching with Topographic Maps: 25 Ideas (Kerski)

Conference

The estimated attendance at the NIEA conference was 2,500. The National Indian Rodeo was held in conjunction with the conference, which drew additional people into the area and a few more into the conference. On the Tuesday Pow-Wow, over 4,000 people were fed. The NIEA President stated in her opening address that this was the largest gathering of Native Americans in the area since the Battle of the Little Bighorn in 1876—I think she was right!



Conference attendees gather for keynote addresses.

I attended a presentation by Katrina Coker of the Indian Community School in Milwaukee. The school's web site is www.ics-milw.org and her email is coker_k@ics-milw.org. This school is an excellent example of the innovative and high-tech possibilities of these schools, with students working on multimedia, digital audio and video, and Internet-based lessons. One idea I thought was interesting is charting students' birthdays in Excel. She also shared a grant opportunity from Intel called "Teach To the Future." She also talked about Microsoft Office's Classroom tools on the web. She also used PowerPoint and electronic photographs to teach about the parts of speech. I spoke with Ms Coker and will be in touch with her about using GPS, GIS, and remote sensing in their school.

SGU-USGS Presentation

Our presentation was entitled: "Explore Your World with a Geographic Information System." Our abstract is as follows:

Geographic Information Systems (GIS) allows students to explore local, tribal, and global issues with digital maps, satellite images, charts, and aerial photographs. Students can investigate land use, watersheds, historical settlement, ethnicity, urbanization, climate, and vegetation over time and space with GIS. Through this workshop, discover how to implement this exciting technology to enhance teaching and learning, and provide real job opportunities for your students.



James Rattling Leaf addresses attendees at our workshop.

Our format was as follows:

James Rattling Leaf – Introductions, Goals, USGS-Partnerships

Jhon Goes In Center –
Native American Education and geospatial analysis

Challenges and Opportunities

Joseph Kerski –

What is GIS

Why use GIS in Education?

Examples of GIS based lessons

Data for GIS

ArcView Demos: American Indians by County, county population change 1900-2000, tornadoes 1950-1990, hotlinking photos to map, GPS to GIS, world demographic analysis, floodplains in community

Jhon Goes In Center

Demo of SGU MapTrails GIS application

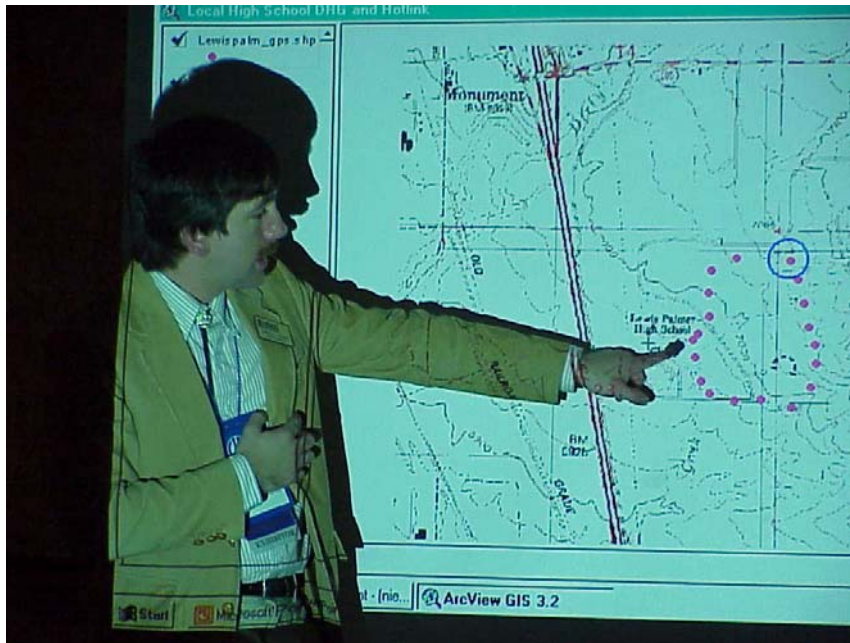
James Rattling Leaf –

James Rattling Leaf

Closing



Jhon Goes In Center discusses perspectives on GIS in Education.



Joseph Kerski illustrating how GPS coordinates can be brought into a GIS with a USGS Digital Raster Graphic.



Smiles all around after the workshop!

****end of report****