

USGS Education / Business Partner Event Report

Event: National Association of Interpreters (NAI) Workshop (Annual Conference).

Report Writers and Participants: **Steve Reiter, Don Showalter, and Joseph Kerski**

Event Date(s): 11-14 November 2003

Location: Sparks, Nevada USA

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 the hard sciences such as environmental studies, geography, and hydrology, but also includes performing arts, visual arts, graphic arts, and the means to get the message of the science across to the public. The USGS mission has similarities to that of the NAI: We conduct scientific research, but we also are continually thinking about how to impart that message to the users of our data.

USGS Activities at Event: (1) Participate in meetings with NAI Board (Ron Lofton), (2) Conduct USGS products, mapping, GIS, and GPS workshop. (3) Operate USGS information exhibit.

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

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

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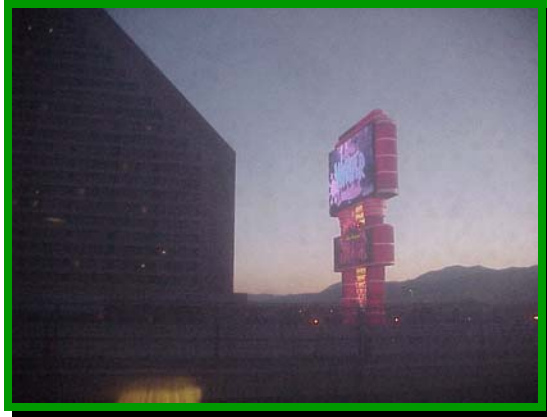
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Description

The 2003 NAI conference was held in Reno, Nevada, at a large conference center (The Nugget), which proved to be an excellent venue. The region, too, provided many field trip opportunities for the attendees—to deserts, historical mining communities, Native American lands, Lake Tahoe, and the Sierra Nevada, where they could learn more about cultural and environmental interpretation.



Above, Mr. Ashley George, near large screen at right, an elder with the Fallon Paiute-Shoshone Tribe, addressed attendees on opening day.



The Sierra Nevada at sunset behind the conference site. The NAI conference is structured as follows: Day 1: Setup and preconference workshops. Day 2: Keynote, workshops and exhibits. Day 3: Keynote, workshops and exhibits. Day 4: Field Trips. Day 5: Workshops. The 2.5 days of exhibits were just right for the size and scope of this conference.



The towers at the conference made for a challenge in collecting GPS coordinates, but we were successful.

Attendance at this year's conference numbered over 1,100, 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 2004 in Grand Rapids, Michigan.

Workshop and Paper

Steve Reiter and Joseph Kerski conducted a hands-on mapping and GPS workshop for conference attendees. The workshop was conducted during the first full day of the conference, right after the keynote speaker had finished. The title was "Interpreting the Landscape Using USGS Maps, Aerial Photographs, and GPS."

For the first time, we wrote a paper to accompany the workshop, which was published in the 2003 *Interpretive Sourcebook*. Ours was one of the very few articles (perhaps the only one) to incorporate images (topographic maps, aerial photographs) in the book. We feel privileged to be published in this volume!

Participants began arriving 45 minutes before the start of the session—a good sign! To get people thinking about the workshop topic of interpreting the landscape, given out were three quizzes consisting of USGS DOQs and DRGs (a landforms quiz), a national parks quiz, and a Native American tribal headquarters quiz.

Weekly Highlight, 3-7 Nov 2003 for US Department of the Interior: USGS Interprets the Landscape: The USGS will conduct a workshop on how to

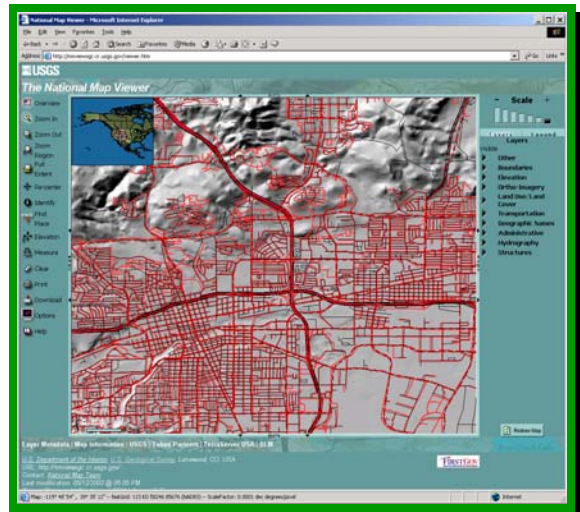
interpret the cultural and physical landscape using USGS maps, aerial photographs, satellite imagery, and Global Positioning Systems, and will host an educational exhibit at the National Association of Interpretation (NAI) conference in Sparks, Nevada, 11-15 November 2003. The workshop and exhibit feature new maps such as the Lake Tahoe lake floor map and the Lewis and Clark 200th anniversary map. USGS staff will seek to build partnerships with future distributors of USGS products through state and national park gift stores. The NAI was founded to improve communications for interpreters in National and State parks, wildlife areas, forests, wetlands, archaeological sites, and other protected areas (Joseph Kerski, Denver, CO, 303-202-4315).



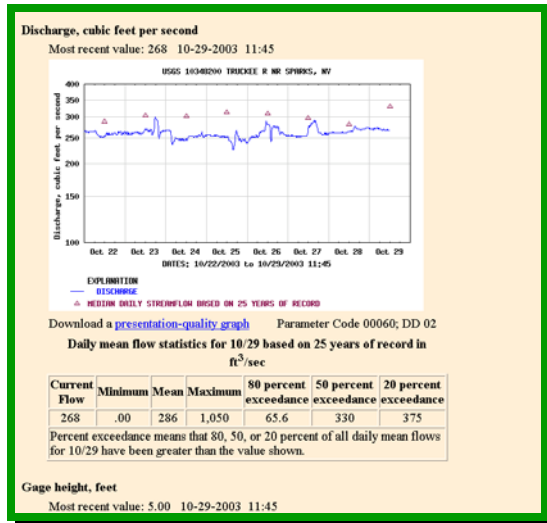
A full house gathers for our workshop!
These included people working for municipal parks, state parks, national parks, private companies, and others.



The demonstration portion included a focus on the Lake Tahoe and Yosemite 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.



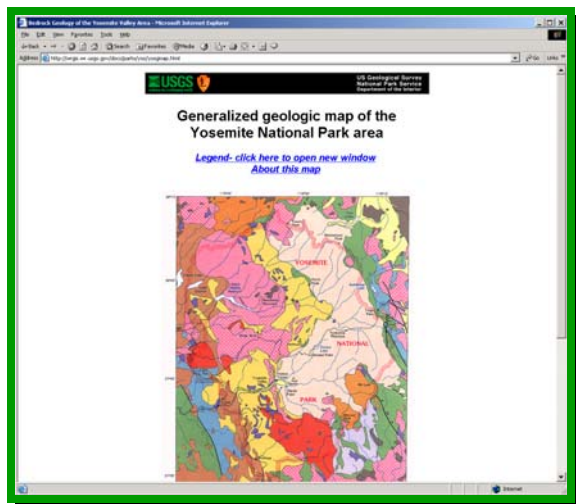
We discussed ways to download USGS information, such as the upcoming USGS product warehouse, The National Map (above), as well as the seamless data server, seamless.usgs.gov.



During the resources portion of the workshop, we highlighted USGS online (such as real-time streamflow, above) resources, CDs, books, leaflets, posters, videos, thematic maps, and topographic maps.



Steve Reiter leads off the coordinate system hands-on portion of the workshop. Our GPS hands-on work included discussion on datums, projections, scale, and accuracy. Steve is going to begin sending his GPS guidelines to Joseph for posting on the Rockyweb Education site.



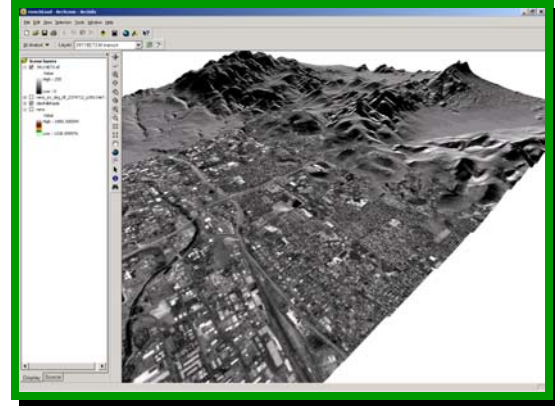
The hands-on mapping component included work with revision dates, scale, projection, symbology, and coordinate systems.



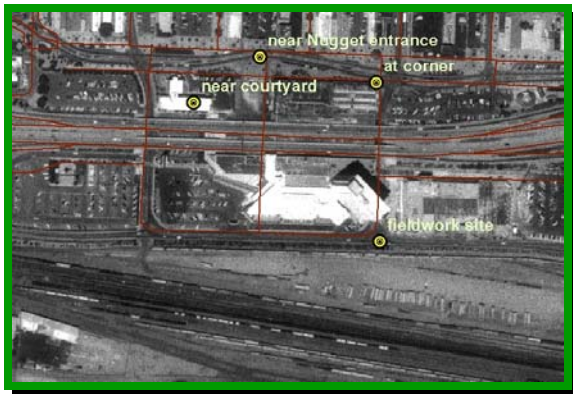
Steve and Joseph designed the workshop as follows: Landforms quizzes, Introduction to USGS, USGS resources for interpretive work (books, digital spatial data, maps, aerial photographs, web sites, personnel, satellite images, and more), GIS demonstration, hands-on mapping workshop, introduction to GPS, field work with GPS, closing and giveaways. In the resources section, we covered 11 categories of products, data, and resources offered by the USGS, how to obtain them, and how they might be helpful in interpretive work.



Participants working with the Reno, Nevada topographic maps. We handed out the landform quizzes, thematic maps of the Tahoe and Yosemite region, GPS information, information brochures and sheets on USGS maps, GIS information, and a printout of the entire presentation.



3-D Scene we created with USGS DEM and DOQ of Reno with conference site in the foreground.



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. We used GIS to show to hyperlink a photograph to a point, and how to analyze the data in three dimensions. All of this GIS preparation work required several weeks to prepare, but it was worth the effort.

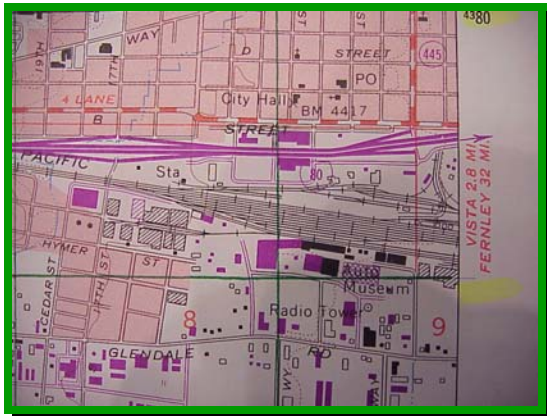


We received many positive comments about the workshop immediately afterward and during the remainder of the conference. During the workshop, an animated discussion arose regarding the emplacement of geocaches on public land. Several attendees complained about the trampling of sensitive vegetation areas and the encroachment of humans into known bear habitat due to geocaching activities. While not opposed to geocaching, they expressed a strong preference for “virtual geocaches”, where the target is a natural feature, and does not involve the placement of any objects. Steve Reiter will be mailing maps and packets used in the monthly Bldg 810 GPS classes to several interested parties. He will also send a soft copy text document enumerating tips for establishing an orienteering

course. The party from the Arkansas State Game Commission, involved in search-and-rescue activity, inquired about the feasibility of a GPS class at their location. They were also given the contact information for the Rolla ESIC.



Steve and Joseph were both pleased at the number of attendees in our workshop—about 50. Before the workshop began, we displayed on the door and wall large USGS thematic maps and aerial photographs to encourage attendance and to refer to during our workshop.

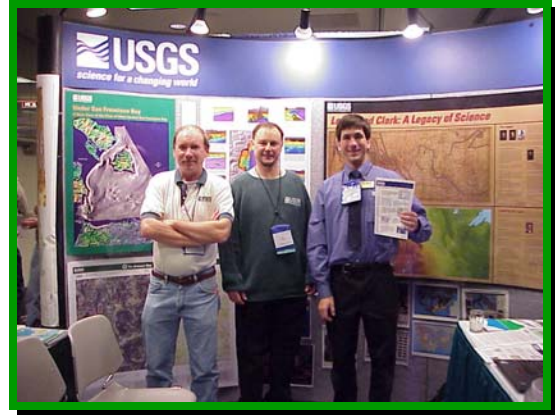


Area of focus—conference site--on the Reno USGS topographic map.

USGS Information Exhibit

Our exhibit was quite popular with the conference attendees. We distributed posters, information sheets, educational packets, product overviews, fact sheets,

and guidelines on how to use USGS data and products, and had a computer available with an Internet (phone line) connection.



L-to-R: Steve Reiter, Don Showalter, and Joseph Kerski represent the USGS at our information exhibit.

The exhibit was busiest during the first evening (350+ people) and immediately following the keynote presentations. During workshops, traffic was lighter, but we found that people often would stay at the exhibit for 20 minutes or more with specific questions. In all, over 500 people visited our exhibit or picked up materials.

We arranged the exhibit space to encourage the attendees to spend time inside it by not blocking off the space with the tables. We also displayed our Internet resources on a laptop computer with an Internet connection, for such sites as Photo Finder, Landsat imagery, DOQs on Terraserver, wildfires, streamflow, and topographic maps.

We used one curved popup backdrop, featuring the new USGS Lewis and Clark map, The National Map products poster, Lake Tahoe lakefloor map, San Francisco Bay survey map, and reduced size USGS thematic maps useful for interpretation that Gene Jackson created.

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.

We distributed quantities of each of the following materials and information. Other items existed, but this list comprises the bulk of the items:

Plastic model of “Topographic Salad Tray”, which, like at the NCGE conference in October, proved extremely popular and a great way of attracting people to our exhibit. (The biggest hit of the booth.)

Lewis and Clark pamphlet and fact sheet

Flyers of USGS map products (from Gene Jackson)

USGS topographic map note pads
Landforms, Native American tribal headquarters, and national parks quizzes using topographic maps and aerial photographs

A few thematic maps (Earthquakes in CA-NV, Grand Canyon, Yosemite)

Land and People education packet

USGS Information Sources

USGS mapping / GIS / geography web sites Information

Assorted topographic map indexes

Map Margin Information

USGS GeoData

Assorted Biology information sheets—
invasive weeds, animal disease

The National Map fact sheets

Map Mysteries Activities

How to Get Information from USGS

Teaching with Topographic Maps
Guidelines

Terraserver download guidelines

GPS information sheets

GIS poster

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 Don Showalter. They were knowledgeable and enthusiastic to work with, and I believe we comprised a team that the conference attendees enjoyed working with.

Gene Jackson, Karen Eberhardt, Ron Lofton, and others who were involved in the months of planning that led up to the event.

Mary Wadding, Gene Jackson, Jen Reisner, Juliette Wilson (Biology) and others for materials, travel, and shipping support.

I thank the Branch of Information Services for funding my travel to this event. Once again, the partnership between their staff and myself proved to be very successful and enjoyable.

Recommendations

(1) This was the third year that the USGS has participated in the NAI conference—2001, 2002, and 2003.

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 met a former USFS employee, now owner of an independent interpretive studio (McCall Studio's Becky McCall) who has talents in interpretation, design, writing, editing, research, and consulting!

The main emphasis at the NAI conference for the USGS is education, rather than for the business partner program. We did, however, speak with several individuals interested in the business partner program (reselling USGS products).

(2) This conference showed the excellent results of a partnership between education and the Information Services Branch. We encourage the USGS to keep partnering IS 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.) There are others with whom we would like to begin working with (see other sections).

(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 such publications. We appreciated the contributions of Juliette Wilson from the Biology Discipline in Fort Collins Colorado. However, we need to work on a bureau-wide effort to more fully integrate biology resources into USGS workshops and exhibits. For this conference, 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 next 2 days.

(6) As in 2002, we thoroughly enjoyed the NAI conference. For Joseph, it was somewhat of a change of pace from the mapping/GIS/geography conferences he more typically attends. It should be noted that the background of the attendees--earth-related topics, has much overlap with the science, geography, and GIS conferences attended. 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, the USGS needs to invest in 10 laptop computers in 2 shipping cases for this purpose. This is exactly what ESRI has done for all their off-site workshops, and it would serve us well for all of the conferences and training events that we conduct outside of our own facilities. It would 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, which would fit in nicely with our planned FY05 funding for Indian Education.

(10) We might think about exhibiting at the conferences of the Rocky Mountain region of NAI. This conference attracts over 200 attendees and takes place in our region during the spring season.

(11) 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.

(12) Just as in 2002, the only thing that would have made our workshop better is for a larger room that is set up in classroom mode (with tables), rather than in theatre mode (with chairs only). Steve brought a computer projector from Denver, which we definitely needed.

(13) Given the increasing emphasis on USGS partnerships with other organizations, such as the NAI, we recommend that we exhibit and conduct at least one workshop at the NAI 2004 conference in Grand Rapids. We should conduct another Interpreting the Landscape workshop and write a paper for the conference. Two of our workshop participants suggested that we expand our workshop into a half or full day preconference workshop. We might combine it with a remote sensing component (see NASA contact notes below). Another participant strongly suggested a workshop first emphasizing map reading and compass fundamentals should be offered before any mention of GPS is made. Taken together, a full day workshop combining the three entities would be necessary.

(14) Write an article for the NAI journal for the Business Partner program and to advertise the new USGS Store online.

(15) We were missing the base piece of the rotating display rack and therefore needed to purchase an additional table. This rack may need to be replaced or surplused.

(16) Configure laptop with a 1-800 access with a "9" prefix.

(17) Our most popular materials were: USGS topographic map notepads, Landforms map postcard, Lewis and Clark flyer, Geologic map postcard of the US, Educational Materials from the USGS, and the pamphlet: Discovering the Many Types of Maps Available from the USGS.

(18) The 3-D maps need a sign caption to let people know that they are 3-D viewable.

(19) Interest in GIS applications and education is growing noticeably now and

is expected to grow exponentially for interpretive and educational (middle schools and higher) applications. Very little interest was shown for The National Map. We need to improve our message of The National Map to emphasize—why should our different audiences be interested in it? What's in it for them?

(20) The pie plates topo model is recommended for all USGS exhibits where educators will be present. It can be used for hilltops and underwater contours. Joseph will link the activity to the Rockyweb Education site.

Note for 2004: Booth size will be 10' x 10'.

Key Contacts

Joseph spoke with Anita Davis, senior earth science education specialist with NASA, about the possibility of conducting GIS/Mapping/Remote Sensing workshops at the 2004 NAI conference and elsewhere. They spoke a few months ago about locating the USGS and NASA exhibits adjacent to each other, but it was too late for this year's exhibit schedule. We should do this in 2004!



Anita Davis at her NASA exhibit. EDC DAAC created a stunning Landsat mosaic on the display panel showing different Landsat scenes around the world, including the recent CA fires.

Joseph spoke with Geoff Carter of the Student Conservation Association about having SCA volunteers work for the USGS. With thousands of students in their program, and with the USGS facing more work and less staff in the future, this seems like an excellent win-win situation for both organizations.

He also spoke with the executive director of the Association for Partners of Public Lands, Donna Asbury. Gene Jackson began working with APPL in 2001. IS operates USGS exhibits at their conference as well.

Joseph spoke at length with several publishing companies about the possibility of publishing journal articles and a book related to interpreting the Earth with aerial photographs, GIS, GPS, and satellite imagery, and intend to pursue these articles and potential publishers throughout the coming year.

Steve spoke with representatives from the Arkansas State Game Commission about how GPS can improve their search and rescue operations.

Tim Fisher of the National Park Service's Big Hole National Battlefield is requesting information about stream gauge design, plus advice on an archaeology-based differential GPS project. Steve Reiter will investigate and contact Tim.

Paul Caputo, NAI staff, spoke with Don to state NAI's great appreciation of USGS's participation for exhibits, workshops, and corporate plus sponsorship these past years. The USGS logo appears on at least one out of every three NAI newsletters.

Jefferson County's Lookout Mountain Nature Center will be contacting Pete Modreski and Joseph for information resources for the new center.

Joseph attended a session about Geography Action and Geography Awareness Week by the new education director of National Geographic. He spoke with the director about USGS-NGS collaborative ideas.



The NAI conference provides us a way to network with people we work quite closely with during the year; for example, the fire staff of the National Park Service (above).

Exhibitors

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.

Folia Industries in Quebec could make us a floor or wall imprinted with a map, aerial photograph, or satellite image. This would be excellent for any USGS visitor center floor, wall space, or exhibit space.



One of the more innovative exhibitors was this architecture firm, which invited attendees to peek through the holes in the curtain at their designs inside.



Another innovative exhibit was this interactive kiosk inside a tree stump from Wildware.



One of my favorite exhibits was Budd Wentz' "Easy-View Microscope," which he has patented. No more squinting through a little microscope lens!



Joseph Kerski (right) takes a photograph of Taylor Studios' impressive stone-and-wood exhibit.

The approximately 60 exhibitors (more than in 2002) 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 for interpretive centers and museums. These included Solid Terrain Company (whom we bought a 3D model of Vail Colorado from for the Central Region USGS Visitors Center in 2003, Mass Production, Inc., and others.



The laser oval on this Solid Terrain Model is a new product from STM that

combines a 3D terrain model with a computer and laser light to tell the story of that region in a unique way.

- 4) Companies that produce items for interpreters, including Skulls Unlimited (As mentioned, interpretive folks are a diverse group!), Owl Pellets (the regurgitated remains from wild birds that can be analyzed in a biology class; see below), and others.



- 5) Publishers such as The Creative Company, University of Nevada Press, Mountain Press, and KC Publications.
- 6) Chapters of the NAI, including regional sections, African Americans, Native Americans, Environmental Education, and Cultural Interpretation.



Sun sinking over Lake Tahoe, photographed by Steve Reiter on 10 November 2003.

-- end of report --