

## OUTREACH EVENT REPORT AND RECOMMENDATIONS

Report Writer's Name:

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Event: **22nd Annual ESRI User Conference, (ESRI UC), San Diego, California - 8-12 July 2002.**

**Notice:** Note that the opinions expressed are my own and not necessarily those of the USGS, and any errors in reporting what occurred during the conference are my own and not those of the presenters.

### **Executive Summary**

I attended the 22<sup>nd</sup> Annual ESRI Conference, the largest GIS conference in the world. The USGS was well represented at the conference, with a 30-foot exhibit in the exhibit hall, an entire Map Gallery room, papers, and frequent mention in the plenary session. My activities at the conference included a map in the Map Gallery, attending Technical Workshops, and helping set up and staff the USGS exhibit.



*In my opinion, the ESRI Conference lives up to expectations as the largest and best GIS conference in the world. The conference featured over 1,000 user papers and*

*technical workshops, 500 exhibitors, over 100 special interest group meetings, and over 11,000 users from half the countries in the world.*



*Where else can one have this sort of fun but at an ESRI UC?*

### **Top Recommendation**

During the 1999 ESRI UC, ESRI staffperson John Calkins gave a presentation that pulled data from a variety of servers to analyze grizzly bear habitat in Yellowstone National Park. One could have heard a pin drop in the plenary session as the nearly 9,000 of us hoped that nothing would crash. Next, there was an audible sigh of relief for John and an amazement that it actually worked!

The above scenario was just three years ago. At the 2002 ESRI UC, nearly every plenary session demonstration, as well as many technical workshops I attended, featured the use of data that does not reside on the user's computer, but rather, remotely on the Internet via spatial data servers. It has become commonplace to do so.

This conference, coupled with the global events of the past year, has made me even more convinced that the USGS needs to place all of its spatial data on servers for

data users around the world to more efficiently and effectively use it to address spatial societal issues. If data users still want the data on CD or other media, we could charge for the media. But I recommend that we place all of our data online. The data user support, and eventually Congressional support, that we would receive would be enormous. I recommend that the personnel that we would free up in filling orders by doing this could be placed in formatting our data online to better meet the needs of customers, for research, and for partnership building in The National Map effort.

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### **Acknowledgements**

To make working at a conference the size of the ESRI UC a success requires a team effort. I commend Rachel Trusty, Brian Tolk, Elizabeth Colvard, Jonathan Walkes, and Ben Sleeter for being an integral part of

planning for our USGS exhibit at the ESRI UC, and all the USGS employees who helped staff the exhibit. I salute Bob Pierce, Barb Ray, and Jennifer Sieverling for organizing the USGS Map Gallery and all those who took part by producing and displaying their maps and posters. Once again, the WRD San Diego office (George Scott) helped with shipping materials back to Denver. I have not mentioned every name, but know that I am appreciative of all help for this worthwhile event.

I believe the customer networking, ties to key organizations, and issues raised at this conference are important to the future of the USGS, and it was important to be involved. I thank those who approved my attendance at this conference.

### **Related Reports**

Email me at [jikerski@usgs.gov](mailto:jikerski@usgs.gov) for my report on the ESRI Education User Conference, held immediately before the User Conference, 5-7 July 2002. The report you are reading now covers the User Conference only.

Rachel Trusty from the USGS Western Geographic Science Center has written a separate report on the 2002 ESRI UC that includes more information about our USGS exhibit, among other things.

### **Conference Overview**

During the 2001 User Conference, I was fortunate to have a brief private chat with Jack Dangermond, President of ESRI. In 2000, I and the USGS Education Program received an ESRI Special Achievement Award. Both would prove difficult to top in 2002, but nevertheless, the conference will once again no doubt be of the highlights of the year.

Where else can one learn about GIS in literally every major sector of society, at a multitude of scales, and around the globe? Where else can you meet GIS professionals at the exhibit, in the map gallery, and in sessions from Nepal, South Africa, and Brazil?

Such is the nature of the ESRI UC – it is at once overwhelming and fascinating. It gives one a sense that all of us using GIS are not just making a living at it, but we are also contributing to knowledge about our planet and making a positive impact on its resources and people. This knowledge about the Earth is becoming more and more critical each year. The ESRI UC is an incredible learning and networking experience. It is also humbling--realizing how little I know about the field after nearly 20 years of being in it. We're all learning!



*As a geographer, I always have appreciated the prominent billing that geography receives at the ESRI conferences.*

I encourage everyone that is involved with any sort of work with the Earth to attend the ESRI UC at least once in your lifetime.

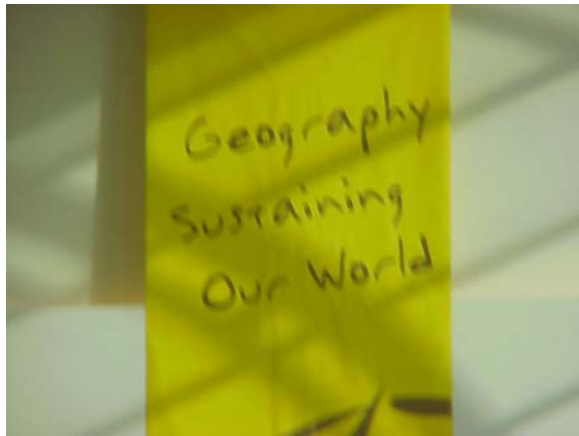
In addition, if you want to see how a conference **should** be conducted, go to the ESRI UC. They host a series of computers where attendees could check their outside email, receive information about the conference tailored to their needs, as well as contact others who were at the UC via a internal communications tool. This year, the convention center was on a wireless Internet connection, meaning that if you had wireless connectivity, you could access the Internet anywhere in the convention center!

This was the 5<sup>th</sup> ESRI User Conference at which I have had the privilege of representing the USGS. The USGS has exhibited at the conference each year since 1998. Prior to that and continuing to the present day, the USGS has participated with paper presentations and maps in the map gallery since the conference's inception in 1980.



*It seems amazing that a short six years ago, less than half that number attended the ESRI UC as in 2002.*





*Last year's theme at the conference was "Creating Communities." This year's theme was "Sustaining Our World," with an emphasis on sustainable activities and resources and technology to support them.*



*This photograph shows the new section, upstairs. The exhibit hall occupied part of the new section, downstairs. Despite its increased size, the conference was once again very well organized. I'm sure the ESRI staff works long hours to prepare for the conference and it really shows.*



*Main hall, San Diego Convention Center. This year, the convention center in San Diego is twice the size it was last year, making for some long walks but good for exercise.*



*View from the Marriott Hotel of part of the San Diego Convention Center, showing the new section, just above the white fabric roof.*



*It is difficult to imagine a more scenic setting for a conference than the view one gets from the San Diego Convention Center.*

### **USGS Presence at User Conference**

By participating in the conference, we sought to demonstrate the leadership that the USGS has in geospatial standards, research, The National Map, and in digital data such as NED and Aster that users can and have used in their work. We sought to further our partnerships on many levels, particularly in regards to The National Map.

#### *Opening Day*

During the plenary, we were mentioned in the first five minutes, concerning our Map Gallery. Second, when Jack Dangermond used the Geography Network, up came the GeoMac site in New Mexico! Third, The National Map DataMIL project in Delaware was featured with 2 presenters later in the morning ([datamil.udel.edu](http://datamil.udel.edu)).

#### *Press Room*

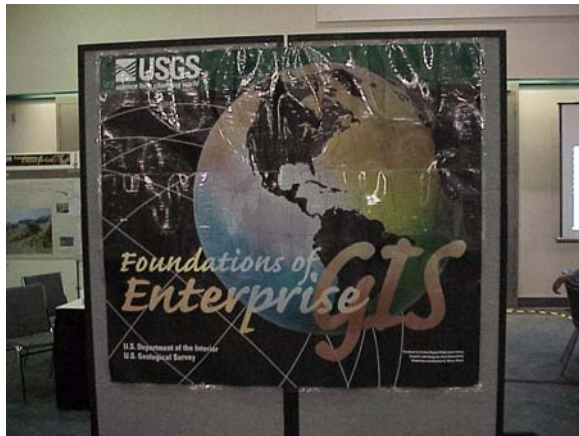
Rachel Trusty from the USGS Menlo park office visited the ESRI Press Room and told the people there about the USGS, its goals, and its presence at the conference. The National Atlas had press kits in that room as well.

### *Map Gallery*

For the second year in a row, rather than posters scattered throughout the Map Gallery, ESRI asked the USGS to display all of its maps in a special section. In this section, which was an entire room at the entrance to most of the technical workshops, we must have had at least 100 maps. Bob Pierce, Barb Ray, and Jennifer Sieverling were the main forces making this happen, and they should be commended because it attracted a great deal of attention. From what I understand, David Greenlee had an integral part in ensuring its success, and John Kosovich had an entire wall of maps on display, some showing his LIDAR research. I'm sure others were key success factors that I have not mentioned.

During the Opening Night of the Map Gallery, we received less traffic than the main map gallery "sail area." However, because of our position, we were along the path that attendees had to trek to their chosen technical workshops. I observed people stopping by the map gallery all during the week until the Thursday afternoon tear-down.

The theme for the USGS map gallery was enterprise GIS, and projects highlighting The National Map and others were featured along with Enterprise GIS.



*Entry point of USGS Map Gallery room.*

groups networked in new ways (Colorado Natural Heritage Program, Colorado Division of Wildlife, USGS, University of Northern Colorado, University of Colorado, and School Districts). (2) Through an educational project, new spatial data and maps were created; and (3) Through an educational project, teachers and students used geography in new ways, through studying biodiversity in earth and life science courses. I recommended to the producer of the spatial data, Amy Lavender of the Colorado Natural Heritage Program, that she submit a poster for next year's conference that highlights the new maps and data created that illustrate urban growth, land cover, protected land, endangered species, and more themes.

The Map Gallery seems to reach new heights each year.



*Joseph Kerski showing the project "Exploring Biodiversity Along Colorado's Front Range" in the USGS Map Gallery.*

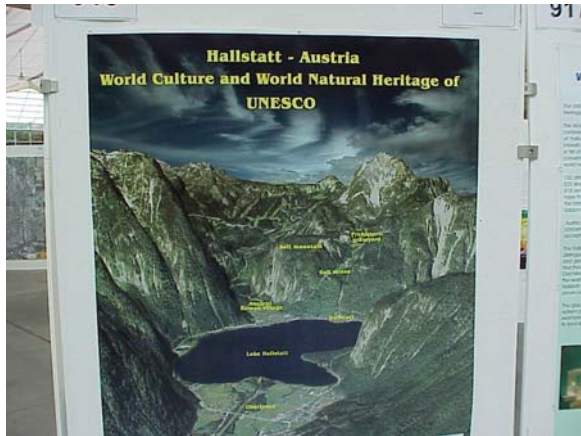


*A portion of the enormous Map Gallery at the 2002 ESRI UC.*

This year, the Map Gallery featured a special focus of GIS along the Salton Sea.

I emphasized in this poster the fact that through an educational project, different





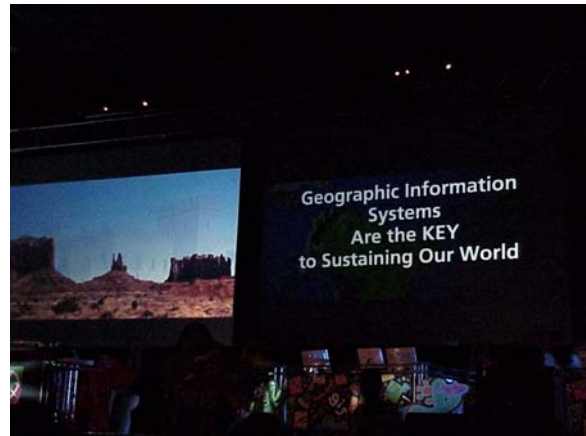
One of my two favorite map gallery entries; a 3D rendering in Austria, and ...



...the other, a map merging original drawings, historical maps, and Landsat images of the Lewis and Clark expedition by David Rumsey and Telemorphic, Inc.

### **Plenary Session – Opening Day**

The two threads that ran through opening day this year were the conference theme “Sustaining Our World” and ArcGIS 8.2.



Opening Day is one of the few times when almost everyone at the conference is together in one room—probably close to 9,000 of the 11,000 registrants. ESRI staff and others conduct professional presentations, with excellent graphics, lighting, and sound. It is an amazing event, and one gets the sense that instead of all of us working in separate cubicles around the world, that we’re part of something global, something quite exciting, something that can help make the world a better place.



Mr. Dangermond always advocates that we need a unifying consciousness, to connect our GIS and geography community with the larger world. It is clear that he doesn’t want this to be an “insiders-only” club, but rather, bring geography and spatial analysis to

benefit all peoples and societies.



*Jack Dangermond speaks about "Sustaining Our World," the conference theme.*

Sustainable development means living within the regenerative capability of the biosphere. We are not currently doing that. GIS provides a framework for understanding what's going on with the Earth, a process for guiding human activities, and gives a framework for *action*. The message was that the Earth's course is not sustainable. Success needs powerful tools and systems. Tools alone are never enough. GIS and geography will set a new course. GIS provides a foundation for action and global security for a sustainable future.



*Mr. Dangermond's 3D Earth demonstration was quite impressive.*

G.net, an architecture for loosely coupled systems, is ESRI's answer to the need for enabling technologies, for GIS data to grow GIS ready. G-net can be implemented at any scale, for any group - cities, counties, states, countries. Geography Network is an implementation of G-net. G.net's architecture for distributed GIS services includes users, metadata, and services. The Geography Network was featured. It grew by 300% in 2001 and is an implementation of the g.net architecture. The Geography Network interface will be redesigned in a few weeks.

Truly, one can, from this conference, see that what Mr. Dangermond speaks about concerning the evolution of GIS from projects to systems to networks, has come to fruition.

As Directions Magazine reported, Mr. Dangermond said that his own view is that GIS is just beginning. There is an increasing adoption of spatial information as a key business driver. He has talked in previous plenary sessions about companies such as Sears, for example, using GIS. It is not just specialized GIS applications in which there is growth, but in the implementation of enterprise management workflows that encompass multi-departmental functions.

Mr. Dangermond is very humble about what has been his pivotal role in geographic information science since the 1960s. ESRI has more than 100,000 users and over 1 million licensed software seats. The virtual campus has 100,000 users. ESRI Press features 28 publications. Despite 2002's disastrous market trends for many electronics and computer firms, ESRI is still growing at 20% per year! This is remarkable.



ESRI built ArcGIS 8 with a completely new architecture and user environment based on current IT standards. It includes Visual Basic Applications (VBA) for customization. ArcGIS 8's features include the fact that it is --

- 1) Integrated into one system
- 2) Single scaleable platform
- 3) Common data model
- 4) Deployable in a number of configurations

ArcGIS 8 includes ArcView, ArcEditor, and ArcInfo. They all include three components--ArcMap, ArcCatalog, and ArcToolbox. The ArcView version of all three is slimmer than the ArcInfo version; ArcEditor's version lies somewhere between the two.

Only 3 ArcView 3.3 technical workshops were on the conference program. I attended one of them. This shows the emphasis on ArcGIS 8.

Survey analyst, a new extension, was highlighted.

ESRI educational services conducts 38 courses for 60,000 students each year. The Virtual Campus is up to 40 courses and has 140,000 users. ESRI Press includes 40 publications. A new book, ArcHydro, was mentioned, as was the Mapping Our World, a book in which I had a small role as reviewer (see below).

The geoprocessing tools have been completed in ArcToolbox with over 400 tools in operation. Other themes throughout the plenary session were mobile GIS, real-time GIS using data on the Internet (as I mentioned in the "top recommendation" on page 1, database cartography, and 3D GIS.

ArcReader was featured. This is an Arc-Objects based light viewer for dynamic maps authored in ArcView and ArcInfo.

Introduced in the fall 2001, it provides GIS users with a method to publish and make available electronic maps locally and over networks as PMFs (Published Map Files). This is similar to the relationship between Acrobat and PDF files. One difference is that the electronic maps can contain live data access to any data source. ArcPublisher is needed to write the PMFs. One can download ArcReader now, and from what I understand, it will be packaged with all future ArcGIS releases beginning with 8.2.

ArcGIS 8.3 is scheduled for Fall 2002, and ArcGIS 9 is scheduled for a 2003 release.

More products are being ported to Linux and Unix.

Following Jack Dangermond, David Maguire spoke about ArcGIS, the geodatabase, ArcSDE, and ArcIMS. Rich Turner spoke about the goal in 8.2 of integrating ArcGIS with ArcIMS, new and better cartography tools, rubbersheeting, edgematching, and transforming.

I thought that the ability to create spatial bookmarks in ArcGIS is quite handy.

All of GRID's functions are now in Spatial Analyst. 3D at 8.2 includes new 3D animation and cross section. They illustrated flood modeling with animation that was most excellent.

### **Keynote Address**

The keynote was delivered by Cynthia Moss, the founder and director of the Amboseli Elephant Research Project in Kenya. She showed how she has been tracking the movements and studying the behavior of more than 1,000 elephants. Once again, geography and spatial analysis

are key to understanding and then also helping a problem (encroachment on elephant habitat) not to become worse.



*Cynthia Moss, Jack Dangermond, and Dr Harvey Croze, former director of the UN Environment Programme. They showed that, using QuickBird's .6-meter imagery, one could spot elephants from space!*

### **President's Award**

Jack Dangermond presented an award to Al Leidner, from NYC, who created a new GIS center following the destruction of the old one at the World Trade Center.

### **My Community, Our Earth**

A portion of the plenary was dedicated to the My Community Our Earth Project (MyCOE). This project was organized by NGS, AAG, the UNEP, and ESRI, and illustrated how geography and spatial thinking can address all aspects of sustainable development.



*Some of the winners of the contest for MyCOE from Africa and from the USA were saluted at the plenary session by Gilbert Grosvenor and Jack Dangermond.*



*Exhibit hall featuring the work from all over the world by students in the MyCOE project. I signed up as a mentor with the project last year. The project can be found on [www.geography.org/sustainable](http://www.geography.org/sustainable). MyCOE included over 2,000 schools and 500 mentors. I was pleased to see an entry from a school in Ghana where I have been working a bit with one of the instructors.*



*Enormous globe in the MyCOE exhibit hall.*

## **National Geographic Society Presentation**

Jack Dangermond presented Gilbert Grosvenor with a Lifetime Achievement Award for his work with the National Geographic Society. Grosvenor stated that we cannot afford to ignore geography, because of the changing cultural makeup in the USA, because of globalization, and because of the need for environmental literacy. He was the one who started the state geographic alliances. Because the USGS has worked with the geographic alliances over the past decade, I felt good about our contribution. I have presented at alliance meetings and inservices in Nebraska, Wyoming, Colorado, and Iowa, and I know others at the USGS have done the same, such as Roger Barlow in Kentucky.



*Gilbert Grosvenor, former director of National Geographic, describes the NGS education program.*

## **Community Atlas Award**

Those who know me understand how interested I am in education and why the presentation of the Community Atlas award is one of the highlights of each ESRI UC for me. The Community Atlas project asks students to create maps that describe their community and to post them on the web. The class receives free ESRI software in return for submitting a project. Each year, a winning school is selected. The project can be found on [www.esri.com/communityatlas](http://www.esri.com/communityatlas). I've conducted a few community atlas trainings, together with the Colorado Geographic Alliance, most recently in March 2002 at the Cherry Creek School District, Colorado.

This year, the ESRI Community Atlas project award went to Steve Branting and his students from Lewiston, Idaho. He and his students were most articulate and impressive. They studied their community's history and geography that included mapping the cemetery.





*It was phenomenal to see Jack Dangermond, Roger Tomlinson, Gilbert Grosvenor, and other leaders of the geography and GIS communities waiting to shake the hands of this group of middle school students from Lewiston Idaho after the presentation. Imagine being a middle school student, addressing 10,000 people, about your school project!*



*Charlie Fitzpatrick of the ESRI Education Team receives supportive words from Jack Dangermond for his role in GIS in education. The K12 program now includes 22,000 schools.*



*Teacher Roger Palmer, Joseph Kerski (USGS), and Charlie Fitzpatrick (ESRI K12 Program Director).*

### *Kids Camp*

Each year, students from kindergarten through high school participate in a "Kids Camp" where they work through problems using GIS, and create maps.

On several of the days of the conference, the Kids Camp maps were displayed in the foyer of the convention center, and were quite impressive!



Wednesday evening at each ESRI conference is “family night”, where friends and family of attendees can tour the exhibit hall and map gallery. This is a good model that brings GIS into the community at large, and one that I wish all GIS-related conferences included.

GIS Day 2001 introduced over 3 million people worldwide to GIS. This year’s event will be held 20 November 2002. I have signed up the USGS RMMC for this event and encourage others to participate as well. GIS Day is sponsored by NGS, AAG, USGS, the Library of Congress, UCGIS, and ESRI. See [www.gisday.com](http://www.gisday.com) for more information.

### **USGS Exhibit**

Thanks to Stephen LePage and others from HQ, we had an excellent exhibit, in my opinion. I and others worked with ESRI exhibits staff to ensure that (1) we obtained the exhibit space for free (saving us \$3500 x 3 = \$10,500 total), and (2) that we were all adjacent in the exhibit hall.

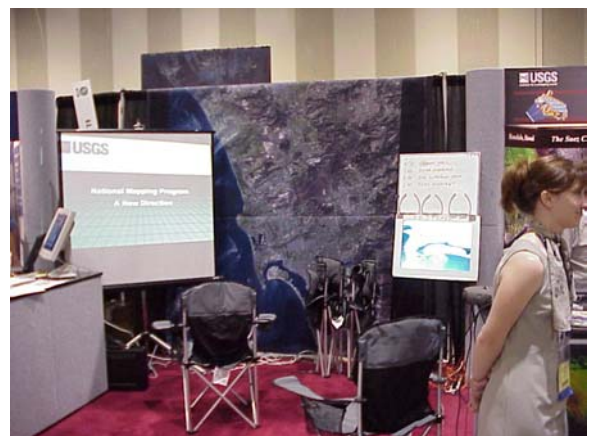
A picture is worth 1,000 words. While we had an excellent exhibit in 2000 and 2001, contrast this image of the USGS exhibit at the 2000 ESRI UC...



with the following from the 2002 ESRI UC, below:



*Our exhibit featured the USGS on the left...*



*...a demo theatre in the middle...*





*... and EDC DAAC on the right. Across the aisle was NBII, staffed mostly by USGS employees. We were all in a "federal solutions" area of the exhibit hall, at the far south end. Nearby was NRCS, NPS, and the US Forest Service.*



*The exhibit booths were not empty for long!*

Our exhibit themes were:

- (1) The National Map
- (2) Wildfire Research - GeoMac
- (3) New spatial data products, such as SRTM, the Global GIS CD project, high resolution NHD.

I brought some of Trent Hare's excellent global CDs, which were very popular:  
<http://webgis.wr.usgs.gov/globalgis/>

Our goal at the conference is to reflect applications and use of GIS at the USGS, rather than simply the base data we produce. We also seek cooperative research and development agreements, and production agreements with those we come into contact with.

The role of geographic data, partnerships, and research is central to the USGS. Our presence at this conference capitalized on this theme.

Perhaps because of the sheer size of the exhibit hall (20 aisles holding probably 500 exhibitors, plus the ESRI islands), I did not feel as though our exhibit was quite as crowded as in 2000 and 2001.

Our exhibit included two laptops and monitors with Internet hookups. Digital demonstrations included ArcView demonstrations on NHD, remotely sensed data, digital data formats, and digital data applications. The most frequent questions were on how to format our data to use with ESRI software, such as NED, and NHD. We also received a fair number of questions on The National Map, perhaps because of the mention of it in the plenary session and because of the fact sheets and posters about it that we had on display.

The digital demonstrations, backdrop posters, and handout materials with which we operated the USGS exhibit were excellent.

Our USGS site [geode.usgs.gov](http://geode.usgs.gov) was featured and is better than ever for browsing spatial data.

The exhibitors were well equipped to handle the technical nature of this audience. They had experience in using and manipulating USGS data, were familiar with data and



services from all disciplines, and were those who work well with the public. We have a great many of these types of individuals at the USGS, and I am proud to work with them. Furthermore, each person's "discipline depth" and experience in GIS to their own projects creates a seamless presence and enhances our overall effectiveness.

This conference's exhibit once again was a joint venture between RMMC, HQ, EDC DAAC, and WGSC. This showed how effective a cross-center outreach effort can be. I am very pleased to report that the 2003 ESRI UC has been approved as an official NMD-sponsored event, which came out of our Lafayette LA event planning meeting in May 2002.

Distribution and Display Items in Exhibit:

Miscellaneous:

Joseph Kerski's "How to Use USGS Data in ArcGIS," "How to Download and format DLG Data", and "How To Download and Format Terraserver DRGs and DOQs." We also displayed USGS postcards, Landsat cards, ASK USGS bookmarks, and new "The National Map" paper pads.

GIPs

Topographic Map Symbols, Map Projections, California State Indexes, USGS GeoData.

Unfortunately, "Aerial Photos and Satellite Images" was out of stock.

I have been working on revising the GIS GIP, which will be available next year at the conference.

Sample of Factsheets (not the complete list)

Digital Price Sheet, National Elevation Dataset, National Hydrography Dataset, A Global Digital Elevation Model, National Land Cover Dataset, Earth Explorer, USGS Web addresses, Science, Society, Solutions An introduction to the USGS, Educational Materials from the USGS, all of The National Map fact sheets, Analyzing Land Use Change in Urban Environments, Lake Tahoe Interagency Monitoring Program , LIDAR-IFSAR to enhance DEMs, The Environment and Human Health: USGS Science for Solutions, GeoMac, Earthquake fact sheets, and some sample circulars.

***Exhibit Hall***

Each year, the exhibit hall gets bigger and better. Many exhibitors are no longer in booths, but in "cities" or "islands". I spent more time in 8 Technical Workshops this year, and did not see as much of the exhibit hall in detail as in years past.



*QuickBird images from Digital Globe were displayed along the walls of the exhibit hall-- this one of Cairo and the Great Pyramids.*

I-Cubed once again showed EarthViewer. This allows delivery of I-cubed products over the Internet via EarthViewer, a streaming geospatial Internet browser. See [www.i3.com](http://www.i3.com) and [www.earthviewer.com](http://www.earthviewer.com). As last year, this was one of the most

impressive things at the conference.

I talked with the author of [www.gistools.com](http://www.gistools.com) -- among other things, the programs he has written successfully format SDTS DLGs for ArcView.

LizardTech's showed their Djvu technology. This works with existing paper documents in the same way as what MrSID does to image files--supercompresses them for ease of access. It reduces the file size of high-resolution scanned documents by up to 1000 to 1. See [www.lizardtech.com](http://www.lizardtech.com) for more information.

Voice Insight, from Belgium were in the exhibit hall. The president of the company visited the USGS in Denver in 2000. Their voice-activated GIS is truly amazing: [www.voice-insight.com](http://www.voice-insight.com)

My favorite exhibit in the hall was the global education mobile from Mississippi.



*The Global Education Mobile allows Mississippi educators to conduct GIS and remote sensing training in a mobile Winnebago equipped with satellite Internet and laptop computers.*

I attended part of the USGS all-hands special interest group meeting, which featured Bob Pierce speaking about Enterprise GIS.

### **Workshops Attended**

I attended the following workshops:

1. ArcMap Introduction
2. Map Analysis
3. James Rattling Leaf, Rosebud Sioux Tribe and Sinte Gleska University's presentation.
4. Municipal education from Portland, Connecticut presentation.
5. Principles of Geographic Analysis
6. Using Map Projections in ArcGIS.
7. Spatial Analyst.

I think the most amazing thing I saw at the ESRI UC this year was not all that flashy, but incredibly useful. At this workshop, they downloaded a hydro tools extension. It was all .dll files, but it did not matter to ArcGIS where it was downloaded to, and the Windows registry did not have to be tinkered with. In ArcGIS, they then turned

on the new hydro toolbar and the functions worked!

#### 8. Great Maps in ArcView 3.3.

### **Lewis and Clark Special Interest Group Meeting**



I attended a meeting organized by George Dailey, ESRI, and Alex Philp. As a follow-up to 2000 and 2001 SIGs, this year's event highlighted efforts over the past year to develop partnerships among private and public sector entities interested in Lewis and Clark geospatial questions and research, and progress toward data sharing for the development of a National Lewis and Clark Data Infrastructure. In addition, a working prototype of the "Lewis and Clark Information System" was shown, incorporating a variety of amazing new technologies for interactive web-based delivery of Lewis and Clark geographical and multimedia information.

See [www.lewisandclarkgnet.org](http://www.lewisandclarkgnet.org) for more information. The model for the project is the MERLOT--Multimedia Educational Roundtree for Learning and Online Teaching. The guiding questions are what was life like in 1803, what is it like today, and what will it be like in 200 years? They are working with [www.lewisandclark.org](http://www.lewisandclark.org), the

Lewis and Clark Heritage Foundation.

Also, see:

<http://www.eoscenter.com>

<http://www.lewisandclarkeducationcenter.com>.

<http://www.corps-of-discovery.com>

<http://www.2003-2006.com>

### **Recommendations**

I definitely recommend that the USGS participate in as many ways as possible in all future ESRI conferences.

This year, we opted for a high-speed internet connection rather than the dial-up option. This made it possible to show some of the features of the USGS web, particularly ArcIMS sites, and this worked infinitely better than the dial-up connection we had in the past. Thanks to Ben Sleeter and Rachel Trusty for working out all of the difficulties with the connection.

I still have a concern that some of the excellent data sets from EDC DAAC require very specific software, and are not easily used to the bulk of the GIS and remote sensing community who might use ESRI products. I am convinced that the use of these products would mushroom if we would convert each of these data into several more formats.

### **Books**

At the ESRI conference, once again I examined the book "Geographic Information Systems and Science" by Paul Longley, Michael Goodchild, David Maguire, and David Rhind. It is most excellent and I recommend this book should be purchased as it is one of the "essential readings" in GIS for our center. ISBN 0-471-89275.



These authors are the same GIS leaders who wrote the 3-part book that has since been referred to as "The Big Book of GIS" back in 1990. I plan to use this book the next time I teach GIS at the University of Denver, along with the "Getting to Know ArcGIS."

### *Mapping Our World Book and Community Geography Book*

A new book from ESRI Press received a great deal of attention not only at the EdUC (see my related report) but also at the User Conference, entitled *Mapping Our World--GIS Lessons for Educators*. This book was displayed in the Spatial Outlet, the sales area for the ESRI UC, below (in back of photo).



The book contains standards-based GIS lessons in physical and cultural geography, with the data included so that educators can run these lessons in their classrooms. The authors conducted a book signing event and hands-on sessions at the conference. I was thrilled to have a small part in this, as I was one of the reviewers of the book before it was published. The USGS also had a presence where all of the teachers received some of their training in GIS.

At the EdUC, I met with a team of authors

and reviewers for the next educational GIS book, *Community Geography*. I am thrilled to serve as one of the reviewers for this book. It will be a perfect complement to *Mapping Our World* because it brings spatial analysis right to the community. Often, students are disconnected with school because they don't see the relevance to their own day-to-day life. This book will show teachers and students not only how and what to analyze on the local level, but that they can make a positive difference in their local communities. The geographic inquiry method will be emphasized throughout--acquire geographic resources, explore geographic data, analyze geographic information, and act on geographic knowledge. Publication is set for early 2003.



*Joseph Kerski, Anita Palmer, and Roger Palmer. Anita Palmer is one of the authors of the Mapping Our World and Community Geography books, and Roger Palmer is a contributor to the Community Geography book. We recently taught at the National GIS Institute for Educators together in Boulder, Colorado (see report I have written about that event).*

**\*\*End of 2002 ESRI UC Report\*\***