

## OUTREACH EVENT REPORT AND RECOMMENDATIONS

### Purpose of Travel:

12<sup>th</sup> Annual Texas State GIS Forum and Training Conference

### Attendee's Name:

Joseph J. Kerski  
Geographer: Education/GIS  
Denver

### Location:

Austin TX

### Web Site:

[www.tnris.state.tx.us/gisfestival](http://www.tnris.state.tx.us/gisfestival)

### Other USGS Attendees:

Jean Parcher - TX  
Dave Roach - TX  
Bill Flynn - TX  
Dee Lurry - TX  
Jennifer Lanning-Rush - TX  
Sheryle Jackson - CO  
Sabra Lopez Gould - CO  
Keven Roth - HQ

### Trip Date(s):

29 January - 1 February 2002

### Purpose of Event:

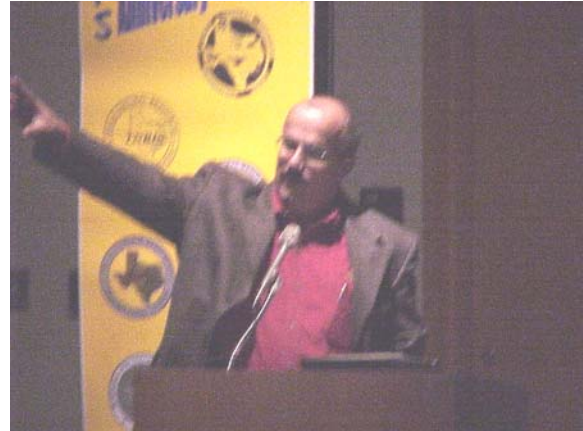
GIS Conference, State of Texas

### My Activities at Conference:

- (1) Attend meeting on GIS in education with TNRIS staff, Orton staff, and others in Texas interested in the topic.
- (2) Conduct presentation on GIS in education at the conference.
- (3) Operate USGS exhibit in exhibit hall.

The conference was sponsored by TNRIS,

the Texas Natural Resources Information System. TNRIS was created in 1972 and serves as the principal state archive for natural resources data. TNRIS is part of the Texas Water Development Board and receives guidance from the Texas Geographic Information Council (TGIC), which is comprised of state agencies and universities.



*Hugh Bender, TNRIS Director, addresses the attendees in the introductory session.*



*Jean Parcher and Joseph Kerski operating the USGS exhibit at the Texas GIS conference.*

TNRIS is organized in four sections: Information Services, Research and Distribution Center, the Texas-Mexico Borderlands Information Center, and the

Texas Strategic Mapping Program (StratMap). StratMap's main function is to create data for public distribution. Funded in 1997, it manages the production of DOQs, DEMs, DLGs for hypsography, hydrography, soils, transportation, and boundaries.

I must commend the folks at TNRIS in the strongest way possible. To do that, I will cite an example that I use in most of the GIS-related trainings I conduct around the country. I say to the participants:

“This activity of downloading and formatting these data sets that we just spent *three hours* on would have taken *10 minutes* to do if we had been working with Texas data from the TNRIS site.”

I think that anyone who works with spatial data and GIS can understand what I am saying here. I truly believe that TNRIS provides an excellent model for other states to follow. If every state had a TNRIS equivalent, the data users would gain by having accessible, easy-to-use data sets at their fingertips. Ultimately, the society would gain from the increased use and application of spatial data in science, engineering, and education. Fortunately, several states do have a parallel organization to TNRIS, and one only needs to compare the extent of GIS use in states with and without these organizations to understand that these agencies make a big difference in terms of data use and application in their states.

Not only are the TNRIS data holdings and production impressive, but also the entire TNRIS organization--their political structure and the amazing progress they have made in their 30 years of existence, the way *they*

*strive to make the data sets accessible and usable to the data users*, and their overall enthusiasm and good-naturedness. The TNRIS staff makes not only the conference an enjoyable one, but it is a pleasure to work with them throughout the year. For example, they provided me with some much-needed data and imagery for a GIS workshop I conducted at UTEP in September 2001. They really do go the extra mile. They have excellent working relationships with other excellent organizations such as the University of Texas Center for Space Research. If one were to think of the best characteristics of an organization that the USGS could partner with, I believe that TNRIS would meet all of those criteria.



*The 2002 Texas GIS Festival was the largest such event in the history of the state.*



*One of the numerous high-resolution Landsat images printed on canvas paper by TNRIS on display at the conference. These really were quite impressive!*

### **Exhibit and Materials**

In the USGS exhibit, we featured new data and technology in research and Geographic Information Sciences. We displayed the Texas NED plot and a National Map poster that I created from material that Bill Flynn and Chuck Ogrosky sent me. TNRIS also displayed this National Map poster behind the registration desk.

The Texas NED plot once again generated a great amount of interest. As others have done, I recommend that all state NED bases be sold as a standard USGS product.



*Attendees peruse USGS materials at our conference exhibit.*

We distributed the following materials:

- 3 - Tapestry in Time maps + pamphlet
- 3 - Texas State Base 1:500,000 map
- 3 - Seismicity of Texas thematic maps
- 3 - Austin TX topographic maps
- 150 - Aerial Photographs- Satellite Images booklet
- 50 - Coastal Fact Sheet - JOSEPH
- 50 - Educational Materials from the USGS
- 10 - Estimated Use of Water in USA circular
- 50 - GeoMac - Wildfire fact sheet - JOSEPH
- 10 - Ground Water and Surface Water circular
- 50 - High Resolution Land Cover fact sheet
- 20 - Historical Landsat Image Book - JOSEPH
- 150 - How to Get Info from USGS info sheets - JOSEPH
- 50 - How to Use USGS Spatial Data - JOSEPH
- 50 - IFSAR-LIDAR research and information sheets - JOSEPH
- 50 - GIS in Education Article - JOSEPH
- 50 - Implementation and Effectiveness of GIS in Education - JOSEPH
- 20 - Map Mysteries - JOSEPH
- 20 - Teaching with Topographic Maps - JOSEPH
- 75 - Map Projections posters
- 50 - NHD fact sheet



- 50 - National Land Cover Dataset
- 150 - National Map fact sheet
- 50 each - National Map fact sheet on pilot efforts in Texas, Idaho, Utah, Delaware, etc.
- 50 - National Atlas fact sheet
- 100 - National Elevation Dataset fact sheet
- 100 - National Hydrologic Dataset fact sheet
- 10 - Quality of Our Nation's Waters circular
- 50 - Texas Topographic Map Indexes
- 100 - Texas State Fact Sheet
- 150 - USGS GeoData
- 50 - US-Mexico transboundary project information sheets - JOSEPH
- 200 - WWW USGS info sheet

Other exhibitors included ESRI, HP, The Texas Bureau of Economic Geology, Vidar, VarGIS, GeoWarehouse, Applied Field Data Systems, Intergraph, Trimble, and GDT. There were approximately 30 exhibitors, up from the 17 that were there last year (my estimates only, not the official counts).



*The USGS exhibit at the conference, showing our table, materials, display rack, backdrop, and computer.*

**Audience**

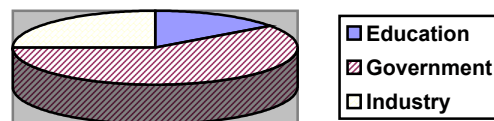
The audience at this conference is GIS data users from industry, nonprofits, federal, state agencies, as well as university professors, university researchers, and K12 teachers.

The USGS has participated in this event many times since the inception of the conference in 1990.

This year, Sheryle Jackson and Sabra Lopez Gould attended the conference as part of their state ESIC and business partner work. TNRIS is a state ESIC.

We had the correct personnel at the exhibit. The personnel required at this conference need to have experience working with the public, and have knowledge about applications of GIS using USGS products, USGS research in Texas and as applied to spatial data, USGS products and services with emphasis on GIS, geologic data, hydrologic data, satellite images, digital imagery and cartographic data, the National Map, cooperative agreements between the USGS and state, private, and federal partners, and the Texas Stratmap program, TOP program, and other projects involving the state and the USGS.

**Outreach Focus Area**



**Exhibit Schedule**

We set up the exhibit on Tuesday afternoon, and operated the exhibit on Wednesday, Thursday, and Friday morning. We broke down the exhibit on Friday afternoon.



*The Texas Bureau of Economic Geology produced these high-resolution DEM and LIDAR images of Austin. They even offered these prints for sale.*



*Attendees at the Texas GIS Conference numbered around 300. The conference lasted for 3 ½ days. Preconference workshops on 29 January for the attendees included digital imagery, finding and using GIS tools, low-cost GPS, and ArcMap Cartography.*

## Hardware Notes

I must pass along notes I took on a very impressive scanner and plotter that I witnessed in action at the conference. The plotter was the HP DesignJet 500ps uv. The scanner (Vidar's Atlas Pro) was set to

only 400 dpi when I visited the exhibit, but the photo head is the most accurate available today, and the results were amazing. It can go up to 1600 dpi.

I gave the HP and Vidar folks a *Tapestry in Time* USGS map--a geologic landforms map with many colors and a black background. I am amazed to report that their scanned and printed copy looked better than the original--even the black edging of the map!

The plotter provides 1200x600dpi resolution on glossy media and is available in 42" wide and 60" wide models. Definitely the best plotter I've seen in 17 years of working in cartography and GIS!



*The HP DesignJet 500ps uv. The representative is holding a small picture that was scanned on the Vidar scanner and plotted on this HP plotter. A picture says a thousand words!*



*Participants at the Texas GIS Festival represented consultants, data providers, researchers, graduate students, and educators.*

### **Conference Overview**

The Texas GIS conference is worthwhile for several reasons. First, it sponsored by an organization that we work extensively with--TNRIS. We have similar goals and commitment to spatial data, research, and education, specifically GIS and remote sensing.

Second, the conference not only provides us an opportunity to share with others what our organization can offer, but we can use the conference to further our partnerships with TNRIS and others in the state.

Dr Mehlberger of the University of Texas gave an impressive keynote address, focused on studying the earth from space. He trained Space Shuttle astronauts in how to interpret landforms and geology from space. His photos are on [eol.jsc.nasa.gov](http://eol.jsc.nasa.gov).

One of the interesting sessions I attended was by John Calkins of ESRI, who discussed GIS and Homeland Security, a key issue for the USGS and many other organizations. Hugh Bender of TNRIS discussed *The National Map* of Texas, the

Texas Geography Network node ([txgn.org](http://txgn.org)) and the GeoSpatial One Stop effort.

I attend so many of these events that I am always looking for unique ways to heighten the interest at GIS conferences. The TNRIS folks held a film competition, complete with awards ceremony. I viewed several of these films on topics such as LIDAR, floods, and GIS in transportation, and they were quite impressive. The whole idea of a competition was, I thought, quite innovative. It would be interesting to expand this idea to a map, poster, research project, and data set competition (as long as people didn't take it too seriously, which they didn't).

These "side endeavors" should be considered as serious outreach tools. For example, one of these videos eventually led to a huge partnership

Thanks to Dr Gordon Wells at the Center for Space Research (and affiliated with TNRIS as well), I made an excellent contact with NCAR in Boulder, Colorado. I have already been in touch with NCAR and will be working with them in the future, thanks to the connection that began with the Texas GIS conference.

### **Shaded Relief Product Notes**

The USGS recently produced Colorado and Utah shaded relief paper map products from NED data. These are wonderful maps and a popular item. A number of people at RMMC have been discussing partnerships with state organizations to produce more of these maps. I spoke with Mike Parcher and Hugh Bender about this effort, and showed them the existing maps, and they seemed interested in working with us to produce one for Texas. Bill Flynn will follow up.



## **Education Track Notes**

I am very pleased to report that Mike Parcher of TNRIS has taken a lead role in geospatial education in Texas. I was amazed at how many teachers at the GeoTech conference I attended in Dallas earlier this year knew of Mike and his efforts and resources.

Mike organized an education meeting and an education day during the conference that was well received and attended. He spoke of a "Texas Geographic Society" that he is organizing, that might enable TNRIS and others to apply for grant funds to further geography and GIS-related education in the state. This is a very exciting development!

Given the support that TNRIS gives to education, the availability of spatial data in Texas, and strong geography and education departments at UT, A&M, Southwest Texas State University, UNT, and many community colleges, it is not surprising that many educators in the state are using GIS, from middle school to university level. I conducted a GIS institute at UTEP in September and at the College Station independent school district in October 2001. Southwest Texas State University has a school-to-workplace grant to train personnel in GIS tools and methods. I expect the interest to gain momentum and plan to continue to work with TNRIS in this regard.

*Two of the teachers were so excited about GIS that I worked with them in the empty exhibit hall for nearly two hours after the conference ended!* We downloaded TIGER, Census, and TNRIS/USGS data and analyzed it in ArcView!

I spoke about "GIS in Education" at the conference, and I was joined by Christine Voigt, who described the new ESRI Press

book, *Mapping Our World: GIS Lessons for Educators*. Susan Hovorka from the Texas Bureau of Economic Geology discussed her extensive lessons and data for environmental sciences, and Paul Bond spoke about watershed modeling with American YouthWorks, a service-learning high school in Texas.

We were followed by a presentation from several representatives from the Orton Foundation, who discussed their Community Mapping Project and GIS in education. I have conducted several workshops with the Orton Foundation in the past, including two days in 2000 and one week in 2001 in Colorado, and a two-hour workshop at the GeoTech conference in Dallas in January 2002. The Orton Foundation was founded in 1995, and its goal is to empower rural communities with resources to enable them to make wise land use decisions. Their community mapping program ([www.communitymap.org](http://www.communitymap.org)) aims to link educators with community decision makers, promotes real-world projects for students to learn about social and physical sciences, and provides a method for students to give results back to their community (through their research). Orton's goals overlap the USGS' in many areas and it is an excellent organization for the USGS to be involved with.

### **Comments and Recommendations:**

The importance of USGS activities and partnerships in Texas cannot be overstated. Over the years, we have been involved in the Texas Stratmap program, US-Mexico Transboundary program, and the Texas Orthophoto Program (TOP).

I am pleased that the USGS plays a major role in this conference. We absolutely need to continue doing so. Our relationship with

TNRIS is long-standing and needs to continue to grow.

I've been attending GIS conferences since the mid-1980s, and it is gratifying to see more and more intersection between education and GI science. The Texas GIS Forum was a great example of the convergence of these trends. More organizations are viewing education as not something they "do on the side," but as an integral part of their operations, aligned with their goals. Pursuing education-related projects can help them meet their overall goals as well as lead to further partnerships with traditional and new partners.

I was also pleased to see the USGS on the conference program. The reason for conducting workshops at the conference is to add value to our presence above and beyond our exhibit.

The traffic at the exhibit is, as is the case during many of the conferences we attend, is lighter than during break times. By conducting presentations, we have the opportunity of working one-on-one with the attendees. We have the opportunity of obtaining their feedback on programs such as the National Map. We work with data users to demonstrate *how* our products and spatial data in general can be used in their fields of study. It does more than tell folks *what* products are available, but how they can be used.

At all GIS conferences, education is becoming more of a central issue. This conference included, as it did in 2001, an educational track that included my presentation. GIS and remote sensing in education is one excellent avenue for the USGS to form partnerships with academia, industry, and government.

Despite the fact that this year's attendance was much greater (up by 25% or more) than in 2001, I still believe that the Texas GIS Festival could benefit from even greater exposure and publicity. The event could perhaps be publicized earlier and to a greater extent at local colleges (such as Austin Community College) and universities (University of Texas, Southwest Texas State University, Texas A&M, Texas Tech). Numbers aren't everything, however, and there is a high degree of camaraderie at this medium-sized conference. Many people know each other at this conference and are comfortable working together.

The USGS computer demonstrations, display, and handouts were appropriate and of the correct volume. I thank the TNRIS staff for providing us with such an excellent location. The exhibit booth at a conference such as this, where most of the audience knows us well, serves as a reminder to our role in geospatial data production, research, and partnerships, and provides a good meeting place to network with the conference participants.

### ***Acknowledgements***

I would like to thank Jean Parcher for helping with the conference and our exhibit there. This was much appreciated and even more so given the fact that Jean is a full time graduate student at the University of Texas. I also thank Bill Flynn' and Dave Roach's assistance and support. It is in large part because of Jean and Bill and Dave's presence in Texas that the USGS has enjoyed a growing relationship with governmental organizations, private industry, and academia throughout the state. Our National Map Area Maintenance Office is located in Austin, which is also undoubtedly helping the National Map effort here.



I also appreciated the experience, assistance, and publications from Texas WRD staff, Dee Lurry and Jennifer Lanning-Rush. WRD staff helped with the exhibit and loaned us a new computer monitor as well, a flat-screen, which was excellent. I also thank Mark Eaton for supporting my travel to this event.



*My Other Computer is a Cray! Cray supercomputer in building where conference was held, University of Texas Pickle Research Center.*

\*\*\* End of 2002 Texas GIS Festival  
Conference Report \*\*\*