

EDUCATION OUTREACH EVENT REPORT AND RECOMMENDATIONS

Attendee and Report Writer's Name:

Joseph J. Kerski - USGS - Denver
Geographer

Location: St Paul MN

Other USGS Attendees: Ron Wencil

Event Date: 29 October 2004

Purpose of Travel:

First Geo-Tech Minnesota Conference

Purpose of Event:

GIS Technology and Methods Conference
for Educators



GeoTech Minnesota cake!

Summary

ESRI, the Minnesota Department of Education, the Minnesota Alliance for Geographic Education, the Minnesota GIS/LIS Consortium, the Minnesota Governor's Council on Geographic Information, and the Minnesota Land Management Information Center, and the USGS co-sponsored the first ever

"GeoTech Minnesota"—an event to inform and train teachers in the use of geospatial technology and spatial analysis across the educational curriculum.

Geotech Minnesota emphasized hands-on workshops and presentations by those who have used spatial technologies in education. Low-cost and free options for integrating geo-tech in the classroom were discussed and shown. Numerous schools throughout Minnesota use geotechnologies in innovative, inquiry-driven, problem-solving ways.

In my opinion, Minnesota is one of the best places for successful integration of geotechnologies in the curriculum. They have all the right pieces in place, with the support of the state department of education, enthusiastic and knowledgeable teachers, state agencies such as the Land Management Information Center in the Department of Administration and the Department of Natural Resources, and with the ESRI Office in St Paul as one of the focal points for GIS Education.



Sara Damon, chief organizer of the event, and Joseph Kerski. Ms Damon, a teacher in Stillwater MN, is very active in GIS in education and won the Community Atlas award from ESRI in 2001 (see

http://rockyweb.cr.usgs.gov/public/outreach/reports/esri01_t.pdf . At GeoTech Minnesota, Ms Damon taught a workshop on her project where students identified wildfire risk in Washington County in collaboration with the Minnesota Department of Natural Resources and local fire departments.



GeoTech Minnesota filled to capacity and beyond, with over 150 in attendance. This was very encouraging and I believe it is because of the many groups who came together to work on the planning for the event, but also because of the commitment of the educators of the region.

Conference Description

Workshop topics at the conference included GLOBE, watersheds, the Minnesota Environmental Atlas, GPS, EarthKAM, careers, the Canadian Arctic, the Community Atlas project, my Global GIS and site selection workshops, and more.



Angela Lee, left, ESRI St Paul, national leader in ESRI's education program, works with attendees of the geocaching event.

The Geo-Tech Minnesota conference (web site:

<http://www.macalester.edu/geography/mage/institutes/geotechmn/index.htm>)

was important for several reasons. First, it is one of the few conferences that is specifically focused on geography and technology integration in education. Second, it brought in important partners to support the educators—state agencies, local governments, private industry, and federal agencies. Third, GeoTech was obviously fully supported by the Minnesota Department of Education. If they see the value in promoting spatial thinking in the classroom, then more teachers will be supported in this endeavor, and the students will ultimately benefit through increased critical thinking. Problem-solving skills, interdisciplinary skills, and career opportunities.



Carol Gersmehl of Macalester College leads a GPS-to-GIS workshop at GeoTech Minnesota. She has been active in GIS education for many years.



Carol Gersmehl working with teachers in the GPS workshop.



Marlys Butcher and Jim Mecklenburg from Minnesota Department of Education, who were incredibly supportive of this event.



Joseph Kerski at the Minnesota Department of Education building where the event was held. I told the conference attendees that it was rare to have the state department of education on board and so supportive of this type of event, and more importantly, a long-term supporter of teachers using GIS in the future in the state. Following the event, additional training was held at Alexandria Technical College, Bemidji State University, Minnesota State University, and Macalester College.

Acknowledgements

I greatly appreciated the financial support of the ESRI Education Program for paying for my travel and lodging to this event, and for their unwavering commitment to events such as this all year long. I thank the USGS for their support of the time for my attendance at this event, and in particular, USGS geography liaison Ron Wencil.

I thank the organizers of GeoTech Minnesota, particularly Sara Damon, and the Minnesota Department of Education staff. I also thank all those who helped plan the event, and the teachers and students

who participated in the event, making it so memorable.

Keynote Address



My keynote address was entitled: "Spatial Thinking—Essential Skills for the 21st Century." It was a pleasure to speak to this group about a topic that we are all so passionate about. We were privileged to have in attendance, Dr Allen Schmieder, one of the founders of the GLOBE project.



In the keynote address, I emphasized why and how GIS is implemented, challenges and benefits, and issued several recommendations to the attendees.



Closing comments at the conference from those in the state government; again, showing the wide range of organizations who support these endeavors.



One of my favorite parts about this and every educational conference is meeting the students. This high school student, right, attended one of my workshops and it was a pleasure to hear about his enthusiasm for geography and spatial analysis. It turns out that his father, left, is a geography teacher!



Teachers doing some hands-on work with GIS—and it is obvious that they are enjoying what they are doing!



The Minnesota Department of Natural Resources staff was another exhibitor. It was a privilege to meet of the creators of a tool that many of us use a great deal—the Minnesota DNR Garmin GPS ArcGIS extension!

Information Exhibits



The exhibitors at the event included ESRI, USGS, Educational Technologies Inc., GLOBE, Metropolitan Council, Minnesota Department of Natural Resources, Minnesota Environmental Atlas, Firewise Minnesota, and the Washington County GIS Support Unit, and more.



Ron Wencil, USGS Minnesota Geography Liaison, at our USGS exhibit.

Our exhibit emphasis was on USGS resources to support GIS in education and real-world scientific investigations in the classroom. We brought and distributed GIS-based lessons on using USGS data sets, the Titanic, hurricanes, tornadoes, USA historical population change, world earthquakes, world demographics, locating fire tower, site selection in riparian environments, Map Mysteries lessons, Teaching With Topographic Maps Lessons,

paper on the Implementation and Effectiveness of GIS, USGS information on web sites, Lewis and Clark, our map catalog and map store, The National Map information, educational items, several water resources books on the Upper Mississippi River system, water-related posters and circulars, map and GIS-related posters and booklets, GPS information, information on rocks and minerals, and teachers packets. The biggest attraction was the large USGS thematic maps that we gave away.

Recommendations

All of us at GeoTech believe in the power of spatial technology and spatial thinking. It empowers students to investigate the world using 3D fly-throughs, maps, images, and databases that are interesting to them. A glance at the conference program illustrates the wide applications of GIS in education—history, math, geography, environmental studies, earth science, biology, and more.

The GeoTech conference emphasized interdisciplinary linkages between geography and science. It also emphasized examining real-world issues in standards-based education. These tenets, I believe, can continue to transform education to help students to be the problem-solvers we need in our 21st Century society.

I believe that the USGS and other federal organizations have a role to play in preparing teachers and students to use our data and products, and spatial data and technologies. I believe that it is also our responsibility to do so as a public service agency. Our relationship with some of the GeoTech Minnesota conference organizers and participating are some of our longest and most fruitful of all of our educational relationships and I will do all I can to ensure

that it continues.

We need to remain involved in education as an agency. Education shows our relevance to Congress and the general public. Education serves the needs of diversity, recruitment, and retention.



Minnesota State Capitol, 29 October 2004.



*I commend the excellent educational community for holding this event.
—Joseph Kerski.*

*** End of GeoTech Minnesota 2004 Report
