

Education Event Report

GIS Day 2003 and Geography Awareness Week 2003

Participant and Report Author :

Joseph Kerski, Geographer, USGS

Dates: 17-21 November 2003

Location: Denver, Colorado

USGS Denver staff were involved with five activities for the Geography Awareness Week and GIS Day 2003.

What is GIS Day and Geography Awareness Week?

GIS Day is a grassroots event that formalizes the practice of geographic information systems (GIS) users and vendors of opening their doors to schools, businesses, and the general public to showcase real-world applications of this important technology. The event is principally sponsored by the National Geographic Society, the Association of American Geographers, University Consortium for Geographic Information Science, the **United States Geological Survey**, The Library of Congress, Sun Microsystems, and ESRI.

This is the fifth year that GIS Day has occurred, and we have participated during all five years. In 2003, thousands of organizations hosted GIS Day events in more than 100 different countries. Through the combined efforts of GIS Day participants, millions of children and adults have learned about GIS technology through geography, and how it affects their everyday lives.

What is Geography Awareness Week?

Geography Awareness Week is part of National Geographic Society's initiative, *Geography Action*, a year-long program to promote the teaching and learning of geography. The theme rotates each year, and for 2003 is Habitats.



Students hold USGS GIS Day banner at the USGS benchmark at the edge of a 7.5-minute quadrangle for the start of GIS Day activities, 19 November 2003.

Summary of USGS – Denver - Activities for Geography Awareness Week and GIS Day are as follows. Other USGS offices held their own events, as well.

- (1) Joseph Kerski conducted a hands-on geography workshop for 65 preservice geography teachers at the University of Northern Colorado, 18 November 2003.
- (2) USGS staff conducted tours, hands-on mapping workshop, and GPS-geocaching event, 19 November 2003.
- (3) Joseph Kerski and David McCulloch conducted a presentation on publishing maps with ArcGIS software at the USGS Publications Conference, 19 November 2003.
- (4) Joseph Kerski taught GIS class at Emily Griffith Opportunity School, Denver, 19

November 2003.

(5) Steve Vandas, Pete Modreski, and Joseph Kerski conducted three workshops and operated a USGS information exhibit at the Colorado Science Teachers Convention, 20-21 November 2003.

Announcement of GIS Day Event that I posted on www.gisday.com in May 2003:

Do you love maps and GIS? The USGS Mapping facility in Denver is the place to be on GIS Day! Come tour the building where over 50,000,000 maps, posters, books, and digital data are shipped to data users around the world. After the tour, examine USGS maps, aerial photographs, and satellite images in our hands-on workshop! After the mapping workshop, we will do some real geographic field work, where we seek out and find several geocaches that have been hidden on the Denver Federal Center. Events run from 10am to 1pm. Contact: Joseph Kerski, USGS Geographer, at jjkerski@usgs.gov.

1. University of Northern Colorado Preservice Education Geography Workshop

At the request of Kathi O'Reilly, instructor at the University of Northern Colorado, I conducted a hands-on workshop for 65 preservice geography instructors at the University.



Joseph Kerski at the training site. The workshop began with a description of USGS resources for education—Internet, thematic maps, topographic maps, books, posters, lessons.



Some of the preservice geography teachers at the workshop. Activities included creating a thematic map of the area surrounding a school from an aerial photograph, topo bingo, map mysteries, interpreting satellite imagery, coordinate systems, and contour line interpretation.



Preservice geography teachers working with GPS receivers, which followed our work with topographic maps and interpolating the latitude and longitude of the training site.



This was an enjoyable group to work with and it also showed the need for geography training for teachers—many of them did not have the opportunity to study geography at the elementary or secondary level in the past—we need to be including the subject in our schools! Therefore I commend UNC and these teachers for their commitment in making that happen for the next generation.



Preservice educators gathering the materials that I brought to the training event.

2. GIS Day Events at the USGS Rocky Mountain Mapping Center

As in the past 5 years, we hosted a GIS Day event here at the USGS mapping facility here in Denver. This event was attended by approximately 120 people, including 105 middle and high school students, and 15 people from the GIS and scientific community.



Students gather with USGS GIS Day sign at the NAD 83 quad-edge benchmark dividing the Morrison from the Fort Logan 7.5-minute quadrangle.



The first part of the tour included the USGS Central Region visitors center, where the students explored biodiversity, urban growth, earthquakes, and recreational use of scientific data via the displays in the center.



I think the students learned something and had a good time! (see expression in the lower left corner).



The second part of the tour included the USGS Product Warehouse—a distribution facility housing 50 million CDs, maps, books, posters, and other materials.



These materials are housed in a 17-acre building. One of the teachers who brought her students was an innovative, GIS-using teacher who brought her students to the GIS In the Rockies conference last month; see report on:

<http://rockyweb.cr.usgs.gov/public/outreach/reports/gisitr03t.pdf>



Students tour the large thematic maps in our building of earthquakes, floods, landforms, energy, history, and other themes.



Next, I gave a demonstration of a 3D flyover with a DEM and DOQ and a Census data by county analysis for 1900 to 2000, showing counties that increased and decreased over the period.



After the tour, we convened in the mapping center auditorium, where we began with a discussion of what GIS is, and why computers give us an advantage over paper maps.



These were excellent students to work with and the attendance was our biggest in the 5 years of conducting GIS Day events here.



Next, Jeff Simley, our National Hydrography Dataset (NHD) coordinator, gave a demonstration of the NHD in use—a real GIS application that is used by thousands of people daily.



Students en route to Geocache #1. Both geocaches were boxes in which I had placed USGS bookmarks and items from Maria Jordan (ESRI)—GIS pencils and pins.



After a hands-on investigation of aerial photographs and topographic maps, location, and GPS, we went outside to find two geocaches that I had hidden on the grounds of the Denver Federal Center.



The students were quite tenacious and enthusiastic about finding the geocaches. See a one-minute movie of their expedition on:

<http://rockyweb.cr.usgs.gov/public/outreach/gisday03.mpg>



Some of the students from Emily Griffith Opportunity School. I will conduct a GIS workshop for these high school students on 17 December 2003 at their school.



Teachers and parents having lunch at our building with their students. The weather was nearly 75 F that day—perfect GIS Day weather!



After we gathered back in the auditorium, we discussed GPS a bit more, and conducted an interpretation of a Denver Landsat image. Some of the students then stayed for lunch, above.

3. Presentation at USGS Publications 2003 Conference

David McCulloch and I gave a presentation on how to export documents from ArcGIS to publishable documents during the USGS Publications 2003 conference. This conference attracted hundreds of USGS staffpersons involved in publishing scientific documents on the web and in print form. The conference allowed for networking and discussion of new procedures and policies.



Above, Joel Skalet and Mary Wadding at the USGS Publications 2003 Registration Desk at the Lakewood Sheraton, Colorado.



Some of the conference attendees discussing publication guidelines and procedures.



Our workshop was quite crowded, with approximately 80 people in attendance. I thank Jan Simmons for inviting me to speak at this conference.

4. GIS Class at Emily Griffith Opportunity School

Emily Griffith Opportunity School in downtown Denver serves 15,000 students each year with its vocational and technical courses, including programs for both high school and adult learners. In 2003, it began a certificate program in Geographic Information Systems. They began the program because of the career opportunities and interdisciplinary nature of

GIS, and the fact that it complements their existing IT program so well. I have been privileged to teach the first GIS course in their new program this semester. During our 19 November 2003 class, I showed the ESRI movie, "Layers of Our World." This is an excellent movie and one of a series of useful resources that they have placed on www.gisday.com.



5. Colorado Science Convention Workshops and Information Exhibit

Together with the USGS Central Region Office of Communications, we operated a USGS informational exhibit and conducted several workshops for 500 teachers at the Colorado Science Teachers Convention in Denver, 20 and 21 November 2003. My complete report can be read on:

<http://rockyweb.cr.usgs.gov/public/outreach/reports/cast03t.pdf>

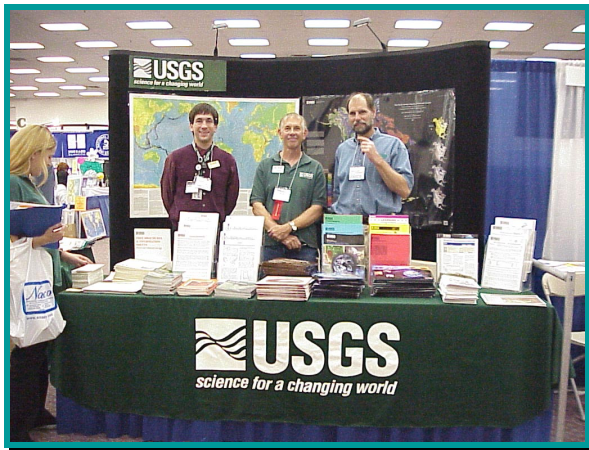
The workshops included our new Geography Electronic Magazine of Science (GEMS), exploring the earth with geo-referenced photographs, and geochemistry.



Joseph Kerski, Steve Vandas, and Pete Modreski at the Colorado Science Convention, where we networked with a number of our educational partners as well as a great many educators, educational consultants, government agencies, nonprofit organizations, graduate students, researchers, and professors.



Our USGS exhibit was popular with the attendees.



L-to-R: Joseph Kerski, Pete Modreski, and Steve Vandas at the USGS information exhibit at the Colorado Science Convention. We distributed a large number of CDs, maps, lessons, guidelines, posters, and books at the conference on geography, GIS, biology, geology, and hydrology.



Dr Pete Modreski and the attendees at his geochemistry workshop.



As sunspots have been quite active during November 2003, Pete's sunspot viewings were a perfect addition to the convention.

Acknowledgements

I would like to thank everyone who attended the above events for their enthusiasm and expertise. I thank ESRI's Maria Jordan for GIS Day materials and for her enthusiasm and support of GIS not only on GIS Day, but throughout the entire year. I also thank USGS staffpersons Gene Jackson, Richard Jimenez, Ken Gerson, John Sellars, Pete Modreski, Steve Vandas, Mark Thorp, Jeff Simley, and Dale Benson. I am sure there were others who were involved behind the scenes with making these events a success; their efforts are greatly appreciated as well.

end of report