

EDUCATION EVENT REPORT AND RECOMMENDATIONS

Attendee's and Report Writer's Name:
Joseph Kerski

Events:

- 1. Geographical Association 2002 Annual Conference, University of Manchester, UK**
- 2. GIS Workshop for Educators, University of Leeds, UK**
- 3. Meeting at University of London Institute of Education, London, UK**
- 4. Meeting at Royal Geographical Society, London, UK**
- 5. Meeting at Geological Society of London, UK**

Locations: Manchester, Leeds, London, UK

Other USGS Attendees: None.

Event Date: 2-12 April 2002.

Executive Summary

I attended the 2002 Annual Conference of the Geographical Association (GA) as a representative of the USGS. I attended also as a member of the Research and External Relations Board of the National Council for Geographic Education (NCGE), where my term lasts from 2002-2004. I did so to begin investigating ways for the USGS, NCGE, and the GA to partner in educational endeavors.

I operated a USGS exhibit at the conference and met with the GA board and many GA members individually. I then conducted a GIS workshop for educators across England at the University of Leeds. I met with faculty

from the University of London's Institute of Education. I met with education staff from the Royal Geographical Society, and with exhibits staff of the Geological Society of London.

I pursued this effort as a USGS and NCGE representative because of both of the organizations' (1) continuing emphasis on international activities; and (2) increasing emphasis on educational partnerships. The GA is the largest geography education association in the world, **and** it is an international organization. The NCGE is probably the second largest geography education association in the world. The USGS is one of the world's largest science organizations. I sought to meet these international and educational goals at once among three large, respected organizations.

I sought and obtained 4 funding sources for this trip: 1) The University of Leeds, 2) the National Council for Geographic Education, 3) the USGS, and 4) my own funds.

Geographical Association Conference



Joseph Kerski at the Geographical Association conference. The conference rotates each year, usually to a university campus. The 2002 conference and exhibits were held at the University of Manchester Institute of Science and Technology, in the building directly behind the sign.

The Geographical Association (GA) (www.geography.org.uk) is an international association centered in the UK for geography teachers, with a membership of 10,000, providing information and resources to teachers and students furthering the study and teaching of geography and promoting its contribution to education.

This was the second year in which I participated in the GA conference. Last year at the University of Sussex, I conducted a GIS in education presentation and operated a USGS exhibit. I joined the GA in 2001. I preferred this year's conference logistics to 2001, because sessions and exhibits were largely confined to two buildings on campus, rather than scattered throughout the campus as in 2001. This ensured multiple visits in the exhibit hall and an excellent opportunity to meet many more GA staff than I had met in 2001. The conference theme this year was "Life in the Global Village."



Jeremy Krause, 2002 President of the Geographical Association. His Presidential Address was entitled "Tell the World About Learning Geography." Krause said we need to tell the world about its richness as a subject, its contribution to the learning debate, and how we learned our geography.

Like the NCGE, the GA is dedicated to promoting the development of geography as a subject. The GA believes that geography

makes both a distinctive and a wide contribution to education and that it is an essential component in preparing young people for life in the 21st century. The GA is also committed to providing support to all those who are engaged with it—either for professional reasons or personal affinity with the subject.



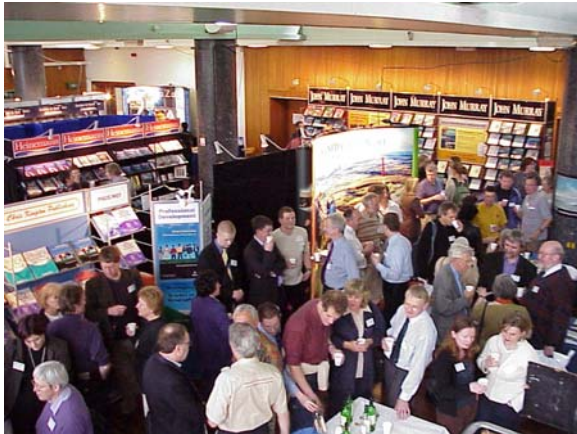
Approximately 750 people participated in this year's Geographical Association conference. This gathering was to hear the Presidential Address by Jeremy Krause.

During the Annual General Meeting following the Presidential Address, Jeremy Krause invited me to state my intentions for being at the conference—namely, to form partnerships among the GA, NCGE, and USGS. This was well received and I had numerous people talk with me about it afterwards. This was a fantastic opportunity to speak to most of the conference attendees at once, and I do appreciate President Krause for inviting me to speak.

Opportunities for partnerships with the NCGE range from allowing GA members to purchase NCGE publications at a discount, showcasing NCGE publications in GA literature, formally sponsoring each other's members for our annual meetings, and working on curricular development projects. Opportunities with the USGS include research in geographic education and creating lessons for the

educational community.

Each GA conference offers 8 professional development “pathways” to help attendees select the lectures, workshops, and field trips. These included leading and managing geography at the primary, secondary, and post-16 level, curriculum development for the new geography teacher at the three levels, Geography and ICT (Information and Communications Technology), and Improving Your Geographical Understanding.



Approximately 80 vendors exhibited at the 2002 Geographical Association conference, including textbook publishers, aerial photography companies, fieldwork centers, educational associations, software vendors, assessment and curriculum companies, scientific instrument companies, and nonprofit organizations.



Other exhibitors included the Ordnance Survey, the Royal Geographical Society, the Remote Sensing Society, the Geomatic Society, and the UK meteorological agency Met Office. In addition, the GA itself was an exhibitor, which displayed a vast series of resources as well as highlighted activities of its many subgroups.

This year, my travel approvals came in too late for me to submit a proposal to conduct a workshop. However, I attended and enjoyed the following sessions at the conference:

- 1) Interactive Mapping with AEGIS 3. AEGIS is a GIS software package created for educators.
- 2) Presidential Address, “Tell the World About Learning Geography.”
- 3) The Annual General Meeting of the GA. During this meeting.
- 4) Atlases and Digital Atlases, by Dr Patrick Wiegand.

A branch of the government, DFID, is granting the GA 60,000 pounds per year for three years for its “Learning Places” project. This shows how active the GA is in obtaining funding for its research projects. The GA is currently without an executive director but nevertheless seems to have a clear vision of where it is headed.

The GA seems fairly well known, even among the general public, no doubt in part due to high visibility projects involving standards-based education and field projects such as the 1996 Land Use UK. This involved 10,000 students who mapped one square kilometer cells for the entire country.



Sarah Clarke, conference organizer, seated at right, works with undergraduate students.

Most of these students were from the University of Manchester, which has one of the largest geography programs in the country--in fact, it is an entire School of Geography, not just a department. I was impressed at how many students work at GA conferences and how seriously they take their responsibilities.



It was a pleasure to see students competing in the final round of the "Worldwide Quiz," a geography competition for secondary schools, roughly equivalent to the International Geography Bee.

The 2003 GA conference will be at the University of Derby (pronounced "Darby") from 23-25 April 2003 with the theme "Valuing Geography."

USGS Exhibit



Joseph Kerski at USGS exhibit. The paragraph I submitted to describe the exhibit was, "The US Geological Survey publishes nearly 100,000 titles of topographic and thematic maps, books, and satellite images, aerial photographs in paper and digital form, excellent for teaching about watersheds, earthquakes, volcanoes, population, coastal processes, geology, biodiversity, landforms, historical settlement, and water resources.



Despite the position of the USGS exhibit near the end of the exhibit hall, it was almost continually crowded with conference attendees. Many of these attendees came back each day and some stayed for over 25 minutes.

The official "stand" spaces (they are called "stands" in the UK, not "booths") are 2 meters

by 1 meter. The GA gave us a discount on the exhibit from 180 pounds to 120 pounds.

Fortunately, the conference was held in a university, thus avoiding the usual restrictions in convention centers about being “over the line” and extending our exhibit outside the allotted space. I had been wondering how to squeeze into a space that was only 1 meter wide, and so I used a tri-fold tabletop display. This worked out wonderfully, as the curved backdrop I typically use would have been too wide. I had too much variety of materials to display on only one table, so I placed two tables together, forming a deeper exhibit, but the attendees could still reach all materials. Fortunately, I was able to use the tables underneath for storage.

Word-of-mouth quickly spread about our exhibit. At least 30 people took time to personally thank me for our resources and exhibit at the conference.

International Conference Logistics

Coordinating internationally for a conference is a bit more difficult than in the USA, as I expected and experienced in 2001. I bought plenty of surge suppressors and outlet converters to bring with me (some from *Magellan's Travel Incorporated*).

I found is that it is difficult to use university resources such as Internet access in the UK without being enrolled as a student. Fortunately, I was able to get an unused T1 line working in our exhibit space.

Shipping to an international conference was less problematic than in 2001, when Box Global delayed the delivery of our materials to the conference in customs and FedEx lost our exhibit on the way back to the USA. I experienced two hours of stress when I arrived and the materials were nowhere to be found. After several international calls, I located them in a back closet of the

conference center. It cost me \$250 to ship the tabletop exhibit and 1 map tube back to the USA, which was unfortunate because that came out of my travel expenses.

Nevertheless, despite these minor challenges, the conference was definitely worthwhile. The knowledge learned from international collaboration is fantastic and will no doubt contribute to our future USGS educational outreach as well as working with the GA from the NCGE perspective.



For Day 1 of the conference, I displayed posters from several teachers' packets along with several natural hazards photographs. I distributed information sheets, teacher's packets, surplus maps, booklets, and circulars that featured some aspect of cultural or physical geography and the tools to study geography. Because of the shipping cost on the return, I recommend that in the future, we ship or purchase gator board and construct our own backdrop on site.



We often talk about changing the exhibit each day of a conference, but rarely have I done it. At Day 2 and 3 of this conference, I changed the backdrop to feature a poster I created for the conference entitled, "What Can Students Do With USGS Resources?" shown here.

Publications:

For obvious reasons, I downplayed North America data and resources at the conference, even though I learned that American Studies is a big part of the curriculum, particularly in universities. This was a good opportunity for me to rediscover that the USGS really does have a good selection of data and maps for other countries. I brought world, Europe, and Asia maps, and such items as the new Europe digital data DDS CD. I displayed USGS booklets, fact sheets, posters, and CDs that emphasized geography education. These included water education posters, aerial photograph, web information, fact sheets on educational resources, GIS in education papers I have authored, and Gyps, posters, and teacher's packets.

Everything besides "Scientists in Action" was disbursed very rapidly, but carefully examined by the attendees, who in many cases returned to the exhibit two or three times.

GIS Institute

Dr Wiegand of the University of Leeds School of Education and I conducted a GIS institute at the University. The reason we did so was that we believe that GIS is the biggest contribution that geographers have made to society and economy since the Age of Discovery. As Dr Wiegand stated in the flyer advertising the institute, it underpins all of today's spatial decision making. Participants were charge 199 pounds for the 2-day institute.



Dr Patrick Wiegand and I conducted a GIS institute together at the University of Leeds, one of the largest universities in the UK. Leeds is the most popular university among students applying for undergraduate courses. During the current academic year, 24,000 students are attached to 570 different first-degree programs and 720 postgraduate degree programs. A further 24,000 are enrolled in short courses with the University.



The GIS Institute was held at the University of Leeds School of Education. Part of the School of Education can be seen in the background.



The emphasis on the GIS institute was to provide hands-on activities where participants explored real-world data sets in cultural and physical geography.

Agenda:

In the institute, we emphasized ArcView GIS because it is more powerful than the other software packages we examined. However, we presented the other packages as well.

Day 1

Exploring World Geography
 Exploring World Earthquakes and Volcanoes
 Quality of Life in Brazil
 Comparing UK Cities, with 3D
 Historical USA County Population Analysis

Day 2

Exploring Hurricanes in the Atlantic
 Using Ordnance Survey digital map data
 Collecting coordinates with GPS Receivers
 Bringing in GPS-collected data into GIS

Tour of other (non ArcView) packages: Local Studies, Aegis 3, Mapmaker Pro, Map Explorer

Next steps: Where Do we go from Here?

GIS software available for educational use in the UK includes, but are not limited to: ArcView, from ESRI UK, AEGIS, Local Studies, and MapMaker Pro. We had limited success with Mapmaker Pro, which includes an application called "SafeRoutes to School."

ArcView sells for 395 pounds for a school site license. ESRI UK also makes MapExplorer, a free educational tool, with a goal similar to ArcVoyager in the USA—provide a ramping up approach into GIS. A company called Wildgoose provides aerial imagery for a discount for educators.

As in the USA, educators in the UK face curricular constraints to running GIS in the classroom. Training and data are critical factors in its success. However, the National Curriculum includes GIS and spatial analysis.

A book published last year entitled "*GIS: A Sourcebook for Schools*", edited by David Green, as well as support from the Association for Geographical Information (AGI), and the new Geomatics Society all indicate that the disparate forces may be coming together for the use of GIS in UK schools.



As expected, I found the institute participants to be extremely well grounded in geography—most had a geography degree, and were enthusiastic about integrating GIS tools and methods into their curricula. We spent time in the institute showing some of the participants how to use MapManager, free software from ESRI that converts Ordnance Survey landline data (vectors) to ArcView shapefiles and coverages.



Dr. Patrick Wiegand tests GPS receivers and writes data CDs for participants before the workshop begins.



Dr Patrick Wiegand works with participants. Dr Wiegand is Reader in Geography Education and is the author of many research papers on children's thinking with maps. He is also the editor of numerous school atlases. This academic year, he is the recipient of a Leverhulme Research Grant to pursue GIS in education.



Participants collect coordinates with GPS receivers and collect data in the field at the University of Leeds campus. We encountered what appeared to be a datum issue between the Ordnance Survey base maps and the coordinates from the GPS receivers that we are still investigating.

GIS and the use of digital data face a challenge not only in education, but also everywhere in the UK, because of the fact that very little free government data exists. This is the case with most other countries in Europe and around the world; the notable exception in Europe being The Netherlands.

Nevertheless, the interest and the potential of GIS and remote sensing in the curriculum are

high, because the National Curriculum emphasizes real-world data in a problem-solving, inquiry-based (except in the UK it is “enquiry!”) environment. And, things are changing: The Ordnance Survey, for example, is giving away a free map to **all** 11 year old students in the country, and they give away free local digital map data to schools.



Collecting GPS coordinates at 1 degree West Longitude was a special thrill for me!



The teachers at the GIS institute were a wonderful group to work with—willing to take on new challenges despite their busy schedules and academic pressures. I learned a great deal from working with them. I have already had several email exchanges with participants since the workshop was held.



Part of the planning for the GIS institute at the University of Leeds was done in beautiful North Yorkshire National Park. Village residents in the National Park are strictly regulated in terms of what and where they may build to preserve the natural and cultural beauty of the Park.

University of London Institute of Education

At the University of London, on staff are several faculty members who are world leaders in geography education. I visited several of these professors, including Ashley Kent and David Lambert, from whom I had read books and articles during my research in geography education over the past two decades. As usual, they were very kind to me and spoke with me about their work.

Dr Kent invited me to a conference of the International Geographical Union in April 2003, following the Geographical Association conference. I would like very much to attend both of these conferences and work further with the international community. In addition, the IGU's next biennial conference (following Durban South Africa in 2002) will be in Glasgow Scotland in 2004.



The University of London Institute of Education has on its faculty several world leaders in geography education.

The Institute of Education has been offering a master's distance learning program for at least a year in Geography Education. Dr Kent described the program to me at the Association of American Geographers (AAG) meeting in 2001 and I must say that the program sounds most excellent; one of the very few of its kind if not absolutely unique in the world.

Meeting at the Royal Geographical Society



Entrance to the Royal Geographical Society, in Kensington Gore, Southwest London, across from Hyde Park and near the Royal Albert Hall—quite a neighborhood!

The Royal Geographical Society (www.rgs.org) has, since its founding in 1830, been a national and international focus of geographical research, information, and exploration. It merged during the 1990s with the Institute of British Geographers to create the largest geographical society in Europe, with a membership of 15,000. This would be roughly equivalent to if the Association of American Geographers and the National Geographic Society merged in the USA.

The RGS goals are to stimulate awareness, interest, and enjoyment of geography and environmental matters, act as an authoritative voice promoting geography, act as a focus for geographical research, promote the value of geography in education, provide a national geographical information source, and give training and advice to those organizing expeditions.

During the GA conference in 2001, the education coordinator of the Royal Geographical Society (RGS) invited me to their headquarters. I could not make it then, and decided to take her up on her offer this year. My goal was to discuss education strategies, as we both work for large, historical, scientific organizations. Judith Mansell and Felicity Thorne, education program, told me about a conference that RGS is holding in fall 2003.



A dog “guards” the entrance to the Royal Geographical Society’s map room. The collection of over 900,000 maps is the largest private collection of maps in the world. It is being re-cataloged and organized to make it more accessible to researchers. The picture library contains over 500,000 images from all corners of the world over three centuries.



The front hall in the Royal Geographical Society containing wonderful portraits of some of the Society’s famous explorers—Speke, Shackleton, Sir Edmund Hillary, and David Livingstone. The RGS facility also

contains numerous wonderful historical globes.



Judith Mansell, Education Coordinator for the Royal Geographical Society.

Regular journals of RGS include:

- 1) *The Geographical Journal*, first published in 1831.
- 2) *The Geographical Magazine*.
- 3) *Transactions of the Institute of British Geographers*.
- 4) *Area*

The RGS President is Lord Selborne, elected in 1997, and its director is Dr Rita Gardner.

Perspectives

One of my goals in the USGS communications and education program is to form formal partnerships with geography education organizations around the world. Geography education in the USA has been subsumed in the social studies since the 1920s and has only since the 1980s emerged as a science that society recognizes as a real need. In the UK, geography education never lost its prominence from the days when the Royal Geographical Society was sending explorers to the South Pole and beyond.

There is a great deal of potential recognition and publicity in educational outreach and partnerships that I sought at the GA conference, not just with the GA, but with other groups there such as the Ordnance Survey [see below].

The GA's counterpart organization in the USA is the National Council Geographic Education (NCGE). Although I've conducted exhibits and workshops at every NCGE conference since 1995, I kept thinking that there was more we could be doing. I petitioned the NCGE board to be on the ballot and was elected for the 2002-2004 term.

Working in education is an excellent way of starting long-term relationships with people and organizations. For example, I've worked on a grant involving conservation biology that has links to the Colorado Division of Wildlife and the University of Colorado EPOB Department, and through that, perhaps to others and even to our own USGS biology discipline. These relationships could lead to USGS staff being included in major research projects, for interns, or even funding for data production by one of these groups.

Similarly, I spoke with the Ordnance Survey, the UK's national mapping agency, about their efforts and ours in education.

(4) Since 2000, Dr Groat has several times stressed the building up of international partners and relationships. He mentioned this again at our educational team meeting in Reston in November 2000. I have been finding out who are key players in the UK in terms of GIS and education since that time.

The GA is slightly older than the NCGE, beginning in 1893, I believe. The GA is highly respected as one of the leading subject teaching associations and regularly consulted on a wide range of issues concerning geography in education. It is a major provider

of quality resources to the profession. Members receive journals on a regular basis and the GA publishes books and other resources to support geography teaching at every phase. It also provides curriculum advice, professional development, conferences and other networking opportunities. The journals include *Geography* (research), *Primary Geographer* (elementary school), *Teaching Geography* (secondary school), and a quarterly newsletter "GA News."

I was impressed by the numbers of people who told me that they did some work for the GA. This volunteer effort is amazing, considering that teachers are among the busiest folks on Earth. The GA is run by its members and its work is determined and monitored by a structure of committees that focus on and develop pieces of the subject. These committees are supported by a Headquarters staff based in Sheffield UK. The GA is a national association, but its regional and local structures provide a significant opportunity for the views of the geographical community to be heard and represented. The GA is locally active, maintaining over 40 branches that stimulate local activity throughout England, Wales and Northern Ireland.

Project-based activities include the Worldwise Quiz and Geography Action Week, both of which enjoy high reputations for quality and school involvement. GAW was the basis for our own Geography Action Week in the USA!

By participating in this meeting, we demonstrated the leadership that the USGS and NCGE have in partnering with educational associations on teacher training, development of curricular resources, and in resources for Geography Education that are high quality, science-based, project-based, and interdisciplinary. The fact that the conference chair, the GA president, and other GA executives took time to talk with me about

future partnership opportunities demonstrated that their interest is genuine in doing so.

I recommend that we pursue these opportunities for collaboration between the NCGE and GA, and between the GA and the USGS. The GA is non-partisan and unbiased, concerned with education and scientific literacy, just as the NCGE and USGS are. This conference also opened the door with other organizations, such as with the RGS, on educational and other projects. I made a great many contacts that will be useful for pursuing these initiatives in the future. I need to reassemble my notes and figure out “who’s who” in the GA to pursue these discussions. I met the 2003 incoming GA President as well, who was quite excellent and even owns his own publishing company.

The challenges facing geography education in the UK, despite their leadership in the world, are real. As in the USA, geography faces stiff competition. Therefore, I believe that the GA conference is a worthwhile one for the USGS to participate in, particularly as we seek to concentrate efforts on targeted audiences and de-emphasize “general public” events where the benefit is questionable for the resources expended.

Geography Education in the UK

The following is my own interpretation of UK geography education; unintentional interpretation errors may exist. The UK has had a National Curriculum since 1991. The curriculum is analogous to national standards in the USA, but is somewhat stronger. The core subjects are English, science, and mathematics. These are taken by all students. Foundation subjects, such as geography, are compulsory from Year (Grade) 1 to 9, after which they are optional. Nevertheless, geography is a popular option and is taken by approximately 60% of students. The General Certificate of Secondary Education (GCSE) examination is

taken at the age of 16 (Year 11), and students who pass in geography may go on to “A Levels” in Years 12 and 13. Local Education Authorities (LEAs)—the UK’s equivalent to the USA’s school districts—have curriculum advisor’s in different subject matters. Because the GCSE is so important, the 2 vendors on either side of our exhibit marketed the test materials. This is roughly analogous to the ACT or SAT, but it is given during the middle, rather than at the end of, high school.

At age 11, students go to secondary school, which is from age 11 to age 16; these are the “O levels/O grades”. The old terms were lower 6th form and then upper 6th which was age 17/18. Age 18 is when students in England go to University, which where tuition was free until just a few years ago, graduating when they are 21 (after a three year degree program).

In Scotland, 16 is the age when some students go to University. However, it is usually done after a further year when they have done higher secondary at age 17. They then do a 4 year degree.

Recommended Books

A book I consider to be essential reading has just been published by long-time GA member and Oxford University research associate and Geography Principal Officer with the Qualifications and Curriculum Authority Eleanor Rawling, entitled “Changing the Subject—The Impact of National Policy on School Geography 1980-2000.”

Another book I recommend is *Thinking Through Geography* by David Leat.

Educational Observations

1) *Physical Geography* is very strong in the UK, and thus USGS hazards and water resources information were incredibly popular. I would say that approximately 70% of the

attendees were very familiar with at least one USGS resource. Of these, the near-real time earthquake bulletin seemed to be the resource about which attendees were most knowledgeable. The UK geography curriculum is also much more focused on the world at large than seems USA geography. Still, local studies and data are still valued and important to educators.

2) *Field work* is required of all geography students, and I counted at least 4 exhibitors that were private and nonprofit organizations that ran fieldwork centers. These, including a center in Wales featuring multi-language studies in the highlands and another island off the Scotland coast, were fascinating programs that I'd love to share with anyone who is interested. I'd also love to visit these places for first-hand experience!

3) Very few attendees knew specifically about the NCGE. Most knew that there was a geography education counterpart to the GA in North America, but the NCGE had no bearing on what they did on the job everyday. So, it is an appropriate time to pursue this outreach effort.

Geological Society of London Visit



I met with exhibits representatives from the Geological Society of London. They sent me a list of their upcoming conferences. Several USGS managers were involved with

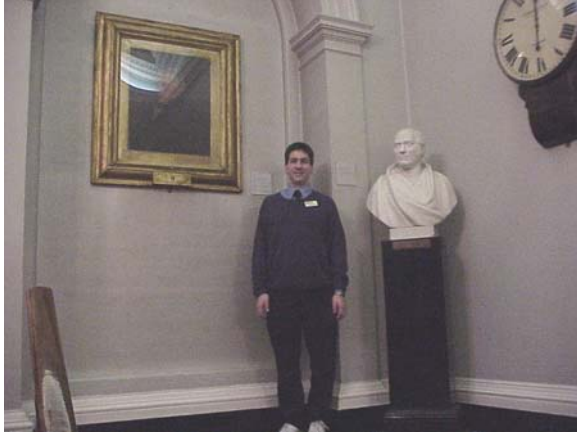
a Geological Society meeting about two years ago in Ireland or Scotland.



The Geological Society of London was founded in 1807 and is the oldest geological society in the world. Its web site is www.geolsoc.org.uk.

The Society has over 9000 members and is the largest national geoscience society in Europe. There are several categories of membership, each appropriate to the various stages of a geoscientist's career from student to retirement.

The Society exists to provide the working geoscientist with lifelong continuity, offering scientific and professional advice and support at all stages. It seems like an organization we should definitely keep in touch with. The Society's buildings themselves were wonderful, first constructed in 1670.



Joseph Kerski stands next to painting and statue of William Smith. Known as the “Father of English Geology,” he was the first recipient of the Wollaston Medal, the Society’s highest award, in 1831. I had read about William Smith in a book I highly recommend by Simon Winchester entitled “The Map That Changed the World.” Up the stairs from this picture is his map, one that took him 20 years to make, the world’s first geologic map! I was not allowed to take a picture of it, but ... I did see it, and it is wonderful.

Acknowledgements

I would especially like to thank Dr. Patrick Wiegand for his professionalism, hard work, and amiable nature that made the GIS institute a success. I thank him and the University’s role in funding part of my travel expenses.

I thank the teachers who attended the GIS institute and the GA conference for their enthusiasm and dedication. I appreciated the time that GA staff spent with me during a busy conference.

I thank the National Council for Geographic Education (NCGE) Board, and particularly Susan Hardwick and Connie McCardle, who funded part of my travel.

I would like to thank all those who helped me

with international travel, especially Jennifer Booras and Sandra Piksa, RMMC. I also thank those at RMMC who approved my travel to this event, especially Mark Eaton. I appreciated Dan Fossen’s help with tracking down the exhibit materials.

Pilgrimage to the Royal Observatory and the Prime Meridian at Greenwich

After meeting with the Geological Survey of London staff and with a geography education colleague from the University of Barcelona, Spain, I took the train to Greenwich and hiked up the hill to...



At the Royal Observatory in Greenwich, where the official clock for “Greenwich Mean Time” resides. An Ordnance Survey benchmark is on the small dark gray rectangle in the lower right of the photograph.



Marker at the Prime Meridian. I feel quite "centered" now that I have made the pilgrimage!



Tower Bridge in the distance and the River Thames, taken from the pedestrian footbridge built for the Millennium celebration.

*** End of Geographical Association-GIS
Institute-Report ***