

## EDUCATION EVENT REPORT

Attendee and Report Writer:  
Joseph Kerski, Geographer: Education/GIS

### MyWorld GIS Meeting

Location: Northwestern University,  
Evanston, Illinois.

Dates: 15-16 October 2004

### Description

A group of researchers, partnership developers, curriculum developers, and software developers active in GIS in education was brought together by Dr Daniel Edelson and David Smith of Northwestern University for a two-day workshop in October 2004. The two foci of the workshop were to:

1) Identify challenges to the use of GIS in education, including:

A. Conceptual. Difficulties of understanding GIS and its functionality that are inherent to geospatial representations and analyses.

B.. Usability. Difficulties of using GIS tools that have to do with the way that functionality is implemented in user interfaces.

C. Compatibility with infrastructure: Difficulties of using GIS stemming from the compatibility with the technical, physical, social, or organizational structures of educational institutions.

2) Provide input on key features of what an educational GIS should have, as input to the developers of MyWorld GIS.

The emphasis of the workshop was on teaching *with* GIS—using GIS and spatial analysis to enhance the instruction of history, geography, earth and biological science, chemistry, language arts, and mathematics at all levels, but primarily in K-12 education.



View of downtown Chicago from Skokie, Illinois. The workshop was held at Northwestern University because it is the home of the developers of MyWorld GIS. MyWorld is being developed through several grants, including one from the National Science Foundation.



MyWorld workshop participants. Approximately 30 people came from GIS

companies (Intergraph and ESRI), universities (such as Texas A&M, University of Maryland, and Eastern Michigan University), educational research and development organizations (such as Piedmont Research Institute, CIPE, Inquirium, EAST Project, and TERC), government agencies (USGS), K-12 schools, GIS education companies (GIS ETC), and others.



Dr. Daniel Edelson, principal researcher in the MyWorld project. Dr Edelson works in the Learning Sciences Program at Northwestern University. He recently hired David Smith to his staff, whom many of us have worked with for years in the Community Mapping Program.



One of our discussion sessions. The structure of the workshop included whole group brainstorming sessions, small group sessions, a share fair, a demonstration of MyWorld GIS, discussions, and evaluation.

I was very impressed by two things in particular, as follows:

1) The functionality of MyWorld GIS software. It already includes many of what I consider to be “core” GIS functions, such as proximity analysis, tabular analysis, and thematic mapping. We discussed what it would take for an educational GIS to reach the teachers who have not used a commercial off-the-shelf GIS software, and probably never will. Standards-based and inquiry-driven curriculum will need to be built around the MyWorld GIS.

2) The team that Dr Edelson brought together for this workshop represents, in my opinion, some of the most active, knowledgeable, and enthusiastic people in GIS today. These include many people with whom I have worked with for years and have a great respect for.



Our workshop room on the top floor on the Northwestern Campus.



View of Lake Michigan from our workshop site. The fact that the MyWorld team brought us together is evidence that they are interested in obtaining the input of those in the field, to make MyWorld as useful as possible.

There are two main branches of thought in GIS in education—using commercial off-the-shelf software (such as GeoMedia and ArcGIS), or use a GIS specifically created for education (such as MyWorld). Both branches have value in the curriculum. Because GIS has not fully taken hold at the K-12 level, I believe there is plenty of room for both branches.



Each of us highlighted several GIS activities and curriculum that we have developed or

been involved in during a Share Fair. These powerful examples of GIS in education were wonderful to see.



The purpose of the Share Fair was to support the discussion of most useful lessons and GIS functions.



After we identified 118 conceptual, usability, and infrastructure challenges to the effective use of GIS and spatial thinking in education, each of us identified the 12 most important challenges.



Ranking the challenges of GIS in education.



Joseph Kerski on the shores of Lake Michigan.



Dark, rainy fieldwork: I conducted a bit of hands-on glacial till investigation at 42 North Latitude, 89 West Longitude, before the workshop began.

### Acknowledgements

I thank Danny Edelson and David Smith for organizing this meeting, and for all of the participants for an interesting and lively discussion. The workshop was brief, but valuable, and I look forward to future collaboration with those in the workshop.

\*\*\* End of report\*\*\*