

EDUCATION-COMMUNICATIONS REPORT AND RECOMMENDATIONS

Attendee's Name and Report Writer:

**Joseph Kerski, Geographer:
Education/GIS, USGS, Denver, Colorado.**

Location: Fort Lewis College, Durango,
Colorado, and Silverton, Colorado

Event: Conduct GIS Workshop for
Educators at the Mountain Studies
Institute's Summer 2004 San Juan Study

Date: 3-4 August 2004



I participated in the Summer 2004 Institute of the Mountain Studies Institute (MSI). I conducted a GIS and GPS workshop during the institute as an introduction to how spatial thinking and technologies can be used in authentic, field-based settings. Following my workshop, others at the institute worked with participants of the institute in the field to analyze the ecology and physical and cultural geography of the San Juans.

MSI is an independent, non-advocacy, not-for-profit 501(c)3 mountain research and education institution and high-altitude field station. It was established in 2002 and its headquarters is in Silverton, Colorado. MSI's mission is to enhance understanding and sustainable use of Colorado's San Juan Mountains through research and education. MSI focuses on one mountain range but its studies have application to the study of mountain systems, environments, and people (students, educators, researchers, land and environmental managers, elected officials, and the general public).

This event capitalized on MSI's mission to capitalize on the San Juan's historic, cultural, and natural resources as a living laboratory and natural classroom. MSI fosters academic study, field research, database development and experiential learning, and provides logistical support.

Successful education revolves around partnerships. The partnerships that MSI has already developed in just two short years of existence are quite noteworthy. I was very impressed with Lee Dexter and the others that MSI is partnering with, and with Ellen Stein, the MSI Director. MSI staff works closely with Fort Lewis College, the U.S. Forest Service, the USGS, the BLM, and the local communities. Its core disciplines are geology, geography, ecology, and history. MSI is truly using research and education as a sustainable economic development model for mountain communities. That's exactly what we need more of!



Fort Lewis College, site of the first day of the Summer Institute from MSI. Fort Lewis College features a set of GIS courses on its campus. The institute was funded by a grant from the Colorado Geography Education Fund. Instructors included myself, Ellen Stein, Lee Dexter from Northern Arizona University, Cathy

Kindquist, Amy Chambers, Andy Guillford, and Kevin Blake from Kansas State University. Teachers could receive college credit for taking the course.



Joseph Kerski (sitting to the right of the rock) and Lee Dexter (to the right of Joseph) pose with the participants of the institute. These participants were from K-12 schools throughout Colorado and were enthusiastic and knowledgeable about their subject matter. They were a pleasure to work with!



Ellen Stein, Executive Director of the Mountain Studies Institute. I met Ellen at the 2004 AAG conference (report on <http://rockyweb.cr.usgs.gov/public/outreach/reports/aag04t.pdf>). I commend her on her vision and work for MSI. It was a pleasure to work with Ellen and the other instructors. I also thank Katie Brooks for logistical

support and Bill Ball for helping set up the laboratory. Bill has hosted a number of wonderful spatial data sets on the MSI web site <http://www.mountainstudies.org> and select data → GIS Data.

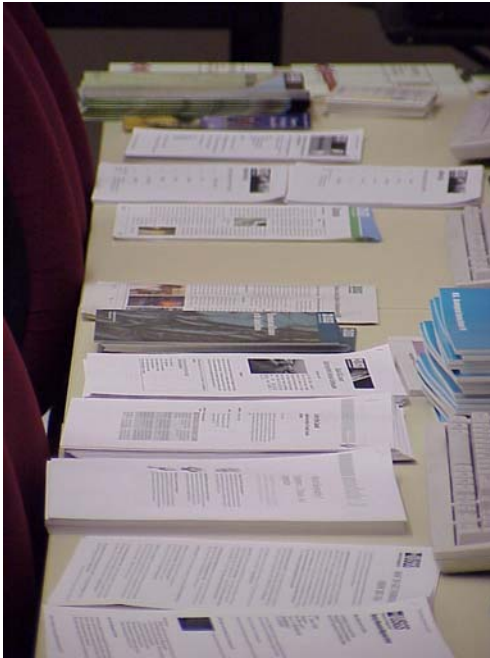


Durango, Colorado, as seen from the campus of Fort Lewis College, site of the GPS-GIS workshop. The campus was the ideal setting for this course, and we had a top-notch computer lab for our workshop. An added bonus was that the college's School of Music was located in the same building, so we were treated to sights and sounds of students of all ages playing the violin and piano!



Teachers worked through lessons I had written on population and natural hazards of Colorado and the San Juan Mountains in the morning. In the afternoon, we examined San Juan watersheds, land use, elevation,

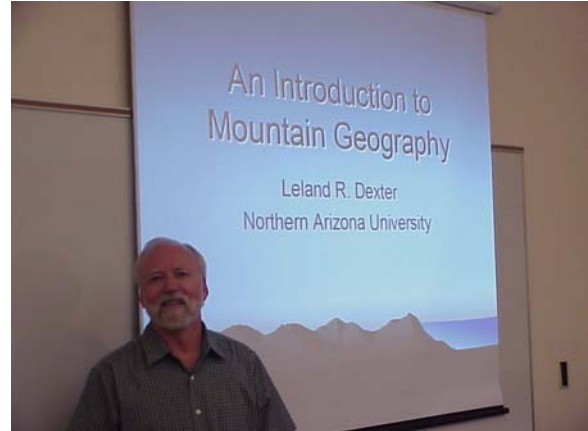
and mapped our GPS-collected field data using USGS digital topographic maps and aerial photographs. We used ArcGIS 8.3 software for the course from ESRI. We ended our session with a discussion of the issues surrounding GIS in the curriculum, and next steps for implementing GPS and GIS in the classroom.



I brought GIS-based lessons that I had written, posters, spatial data, software, USGS maps, and satellite images for the participants of the institute.



Teachers collecting GPS coordinates and attributes in the field. I thank the USGS Earth Science Information Center staff for the use of their GPS receivers. It was hoped that on subsequent field days, participants could consider how they might incorporate mapping, GPS, and GIS techniques to analyze their field-collected data.



Dr Leland Dexter of Northern Arizona University gave an introduction to mountain geography, which started the institute off on the right track. Dr Dexter is also the chairperson of the Mountain Geography Specialty Group of the Association of American Geographers.



Lobby of the historic Avon Hotel, MSI's headquarters. Note the old typewriters along the wall.



The headquarters of MSI is in the Avon Hotel in Silverton, Colorado. MSI is leasing the building but hopes to buy it. It is the perfect arrangement, providing conference meeting space, lodging, and office space for MSI.



Above, community members and MSI participants gather at the Avon for a presentation on the Geology of San Juan Mountains. My only two regrets were that (1) We did not have time to examine the sites using the spatial data sets where the participants would visit on subsequent days, and that (2) I was not able to spend the entire institute with the educators, as I needed to depart for the 2004 [ESRI User Conference](#).



Main Street of historic and scenic Silverton, Colorado, county seat of San Juan County, Colorado.



Approaching Silverton, Colorado, from the south, along US Highway 550, late afternoon on 4 August 2004. The instructors for the 2004 MSI Summer Workshop held a meeting where we discussed strategies for instruction at the institute.

Next Steps and Recommendations

The next event that the Mountain Studies Institute will support is their 2004 Fall conference, "State of the San Juans."

This event will feature science and research to link communities, researchers, and practitioners and will take place on 24-26 September 2004 in Silverton.

For more information, see:

****End of report****

<http://www.mountainstudies.org/conference/ConferenceRegistration.htm>

I look forward to future collaboration with the Mountain Studies Institute. They provide exemplary educational services with some of the smartest people in the field. They provide education in a spectacular setting that is dead center in the places that they are examining. They have an excellent vision and attitude about education and I wish them every success.

I also recommend to the GIS Colorado Community and others using GIS in research projects that the MSI web site is an excellent source for spatial data about the San Juan Mountains.

Lastly, I recommend to USGS and scientists from other state, federal, tribal, nonprofit, and business organizations that the MSI is an excellent group to partner with on research projects. This topic is a worthy one for future discussions. In my opinion, MSI is an excellent partner for grant proposals and projects involving research and education.



Historic Durango-Silverton narrow gauge railroad.