THE MAP LEGEND

NMGIC, Inc. PO Box 9445 Albuquerque, NM 87119-9445 Est. 1984

http://nmgic.unm.edu

GIS Certification Update

Those members who attended NMGIC's Fall Meeting last November will recall that our invited speaker, Mr. Bruce Joffe, from the URISA Certification Committee, announced that after countless hours of conference call meetings, the Committee posted a certification program proposal on its website in April of 2002. The Committee then spent the months of September, October, and November reviewing public input and comments, and participated in discussions at numerous state GIS professional meetings (e.g., NMGIC's Fall Meeting). The proposal evaluation period is now over and URISA is forging ahead with GIS Certification. In December they posted the Certification Program for GIS Professionals on their website (*http://www.urisa.org/certification*), and more importantly, announced the establishment of the GIS Certification Institute (GISCI), a non-affiliated, tax-exempt, not-for-profit, organization created specifically for administering the initial certification of GIS professionals by reviewing their applications, accepting or rejecting them, and thence keeping the certified professionals' certifications up-to-date. More on the GISCI later.

The "Official" GIS Certification Program

The GIS Certification Program is **VOLUNTARY, at least for** now anyway. As Bruce Joffe informed us, there is **NO TEST. Instead, the program is based upon a SELF-DOCUMENTED POINT-BASED SYSTEM intended to acknowledge the** professional achievements of those people whose primary job responsibility involves the use of geographic information technology (GIT). Applicants must submit documentation points (along with their application fee – more on this later as well!) that record their educational and professional accomplishments. The program is set up so that points must be earned (self-submitted and then approved by the GISCI) in three categories: *educational achievement, professional experience, and professional contributions.* **The minimum number of points** required in each are as follows:

Educational Achievement:	**30 points**
Professional Experience:	**60 points**
Professional Contributions:	**8 points.**

An **additional 52 points are required** in any of the three categories or in some combination of the three. Thus, **the minimum amount of GISCI-approved points an applicant must have for certification is 150 points.**

In order to retain certification, the Certified GIS Professional must maintain currency with the profession and provide documentation (along with a renewal fee, one would assume) of those activities periodically to the GISCI. As it stands now, he or she must earn additional points *in each of the three*

Continued-On Page 4

INSIDE THIS ISSUE:

The Map Legend

Editor: Dave McCraw
Public Relations

The Map Legend is published by the New Mexico Geographic Information Council and is a benefit of membership in NMGIC. The opinions expressed are those of the contributors and do not necessarily represent the views of the New Mexico Geographic Information Council, except where specifically noted. Use of trade names or products does not constitute an endorsement by the NMGIC. Members are invited to send articles and announcements of interest to Dave McCraw. Please direct all correspondence to:

Dave McCraw
NMGIC, Inc.
PO Box 9445
Albuquerque, NM 87119-9445

Voice: 505.835.5594
Fax: 505.835.6333
Email: *djmc@nmt.edu*

NMGIC Web Site:

http://nmgic.unm.edu

NMGIC BOARD OF DIRECTORS

NMGIC STANDING COMMITTEES

Geographic Names Committee
Bob Julyan, Chair

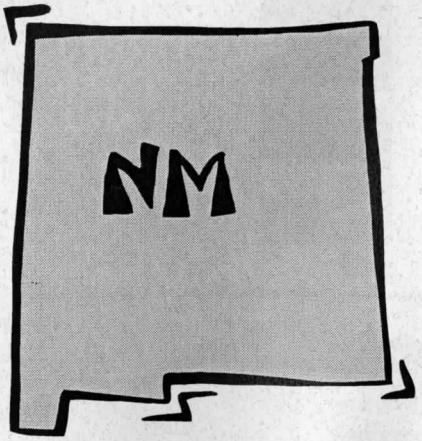
31 Avenida Almendro NE
Albuquerque, NM 87123-9648
Voice: 505.298.8420
Email: rjulyan@swcp.com

Global Positioning Systems Committee
Bill Stone, Chair

National Geodetic Survey
Albuquerque Public Works/Survey Section
PO Box 1293
Albuquerque, NM 87103
Voice: 505.768.3606
Facsimile: 505.768.3629
Email: stone-ngs@cabq.gov

State Mapping Advisory Committee
Mike Inglis, Chair

Earth Data Analysis Center
MSC01 1110
1 University of New Mexico
Albuquerque, NM 87131-0001
Voice: 505.277.3622, ext 235
Facsimile: 505.277.3614
Email: minglis@spock.unm.edu



FROM THE PRESIDENT

Happy New Year Fellow NMGIC Members. I want to take this opportunity to thank the NMGIC board for appointing me as the active President for NMGIC for 2003. I would also like to thank Bob Bewley for his volunteer service to NMGIC over the last two years. I am looking forward to this opportunity.

I want to give a brief background of myself for those of you who I have not had the opportunity to meet over the years. I got my first taste of Geographic Information Technologies back in 1990 as an undergraduate in the Geography Department at the University of New Mexico. A good friend of mine was taking classes at the old Technology Application Center and talked me into taking an introductory GIS class. I had always had a fascination with maps and it was at this point in my studies that I decided to become a geographer. I attended a few NMGIC conferences as a student but I did not become an active member until 1998 when I joined Bohannan Huston Inc., where I am currently working as the Project Development Manager for their Spatial Data Group.

Being a part of NMGIC over the last five years has allowed me to further educate myself on all the innovative types of GIT going on around the state, and to make a lot of new friends in the process. Over the last year, I was the Election Coordinator for NMGIC.

I would also like to welcome our new Board members Carol Earp with the Middle Rio Grande Council of Governments, Paul Rich with Los Alamos Labs, and Kurt Menke with Earth Data Analysis Center. Congratulations to you all, and thanks to everyone nominated for providing me with their background history.

The NMGIC board is working on hosting this year's spring conference in Los Alamos. The theme will focus on the water issues for the state of New Mexico. We typically hold both our spring and fall conferences in Albuquerque, but we are looking at rotating these events around the state so individuals do not have to travel long distances to have an opportunity to meet with their peers and participate in the conference.

We are also working on increasing our membership, so if you know of anyone who is not a NMGIC member and is involved with GIT, please encourage them to become a NMGIC member. NMGIC is a great forum for our GIT community to get together and make everyone aware of what is going on around the state. I am looking forward to seeing all of you at the spring conference.

Bart Matthews
NMGIC President

THE MAP LEGEND 2003 PUBLICATION SCHEDULE AND DEADLINES

Spring/ Summer Issue

Deadline for articles: May 15, 2003
Publication date: June 15, 2003

Fall Issue

Deadline for articles: September 15, 2003
Publication date: October 15, 2003

Winter Issue

Deadline for articles: January 15, 2004
Publication date: February 15, 2004

Editors of *The Map Legend* are looking for articles describing ongoing, recently completed, or recently awarded projects. "Newsworthy" items on your organziations, accomplishments of your personnel, or event/meeting anouncements....are all welcome. Your

Do you have information about a project, new techniques, GIS and related issues, announcements, news, etc. that you would like published in the Map Legend?

Continued–From Page 1

achievement categories within five years of initial certification or previous renewal to remain certified. If the Certified GIS Professional fails to earn an as-of-yet undetermined minimum amount of renewal points during that period, then he or she is no longer to be considered professionally certified by GISCI.

A Bit of Background

As you are probably aware, NMGIC has been keeping tabs on the GIS certification "movement," largely spearheaded by GIS academic faculty and professional organizations (primarily, but not exclusively URISA) over the past 3-5 years. In 2000, a joint NMGIC / GISAC subcommittee on certification formed to examine the issue and how it would affect New Mexican GIS practitioners, and published a white paper on its position on the issue (a pdf of this document can be obtained at *http://rgis.unm.edu/gisac.cfm*). At the time the GIS community considered itself a bit under attack by the surveying profession, which modified the National Council of Examiners for Engineers and Surveying (NCEES) Model Law in 1995 to include regulation of spatial data at the parcel level. The surveying communities in a few states (e.g., California, North Carolina) were able to convince their legislators to mandate that surveyors participate in specific aspects of GIS. URISA and NSGIC members joined the Model Law Task Force in 1999 to address the concerns of the GIS community and we learned in November from Bruce Joffe exactly how the Model Law was modified in late 2002 to satisfy all parties involved. The Model Law controversy and an International Certification of GIS movement spearheaded by the ISO occurring concurrently convinced many GIS professionals that certification was needed and the aforementioned URISA Certification Committee was established.

Citing D. L. Pugh's[1] attributes of a profession, Dr. William Huxhold[2] in 2001 claimed that while GIS has a specialized body of knowledge, a mission, a formal organization, a common language, specialized training, and a culture and lore, it lacks Pugh's final 2 profession-defining attributes: a code of ethics and certification. This has propelled the Certification Committee up to the present. In addition to providing guidelines on certification, GIS practitioners can now find a Code of Ethics in which they are strongly encouraged to abide by, both at the URISA website (*http://www.urisa.org/ethics/code_of_ethics.htm*) and at the GISCI website (*http://www.gisci.org/code_of_ethics.htm*).

Pros and Cons of Certification

According to the URISA Certification website, the benefits of certification are: career recognition through evaluation and approval of individuals, improvement of performance leading to greater career productivity and increased customer/client satisfaction, and ability to remain current in the field through renewal requirements of the certification program. Huxhold[2] lists additional benefits of certification:

- it helps define the profession;
- it assures quality in work performed;
- it sets a standard of competency;
- it helps prospective employers identify qualified individuals;
- it ensures continued expertise; and
- it improves the marketability of the professional.

He suggests that certified practitioners will have higher salaries than non-certified workers.

Major oppositional themes that were submitted to the public input section of the URISA Certification Guestbook (no longer open) included:

- it is an unnecessary bureaucracy;
- the cost of certification hurts the individuals who must pay to be certified and only benefits the certifying organization;
- it threatens free-market principles by hindering advancement of the field;
- it can place limits on skills and skill development; and
- it can incite workplace resentment and other feelings of ill will. In addition, it is unclear whether there will be any type of grandfather clause exempting those with large amounts of experience in the field.

Probably the most outspoken opponent of GIS certification is Mr. Henry Cordova who has published 2 excellent critiques of the issue:

http://www.geoplace.com/gw/1999/0599/599form.asp

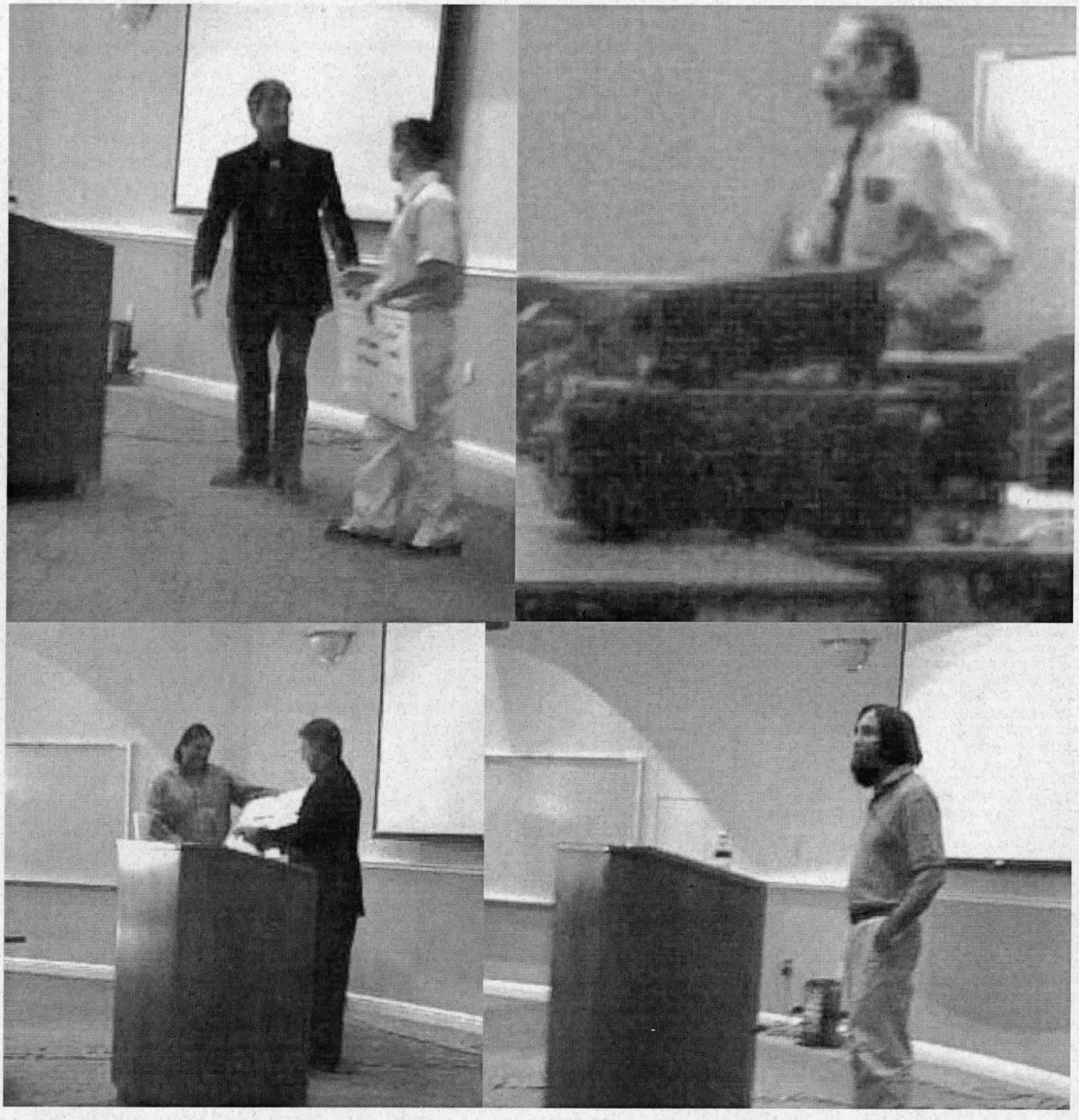
http://www.geoplace.com/gr/giscertification/AntiCertification.asp

the former being a general overview on the subject and its inherent problems while the latter is a Point/Counterpoint rebuttal to the URISA position paper. While it is beyond the scope of this article to summarize these papers, I highly recommend that individuals considering applying for certification read them.

Early ideas considered by the Certification Committee included testing both in a core area of GIS fundamentals as well as an additional specialty field in one of the plethora of disciplines that utilize GIS. Fortunately, it appears that this has fallen out of favor. However, the Committee makes it clear that certification does not apply to these people in other fields that utilize GIS as a tool. As Henry Cordova puts it:

"Certification boosters cavalierly dismiss these folks as mere users, and demote them to some vague second class status, reserving the exalted certificate for those who do nothing but operate GIS software. It might just as easily be argued that those who are GIS specialists working in support of other disciplines are mere technicians and should not be considered true professionals either. And what about those who administer GIS and configure and maintain spatial data systems; that is, those who install software, manage databases, integrate hardware, write macrocode, i.e., the more IT aspects of the field? Aren't these the *real* GISers? This just might meet with some resistance from those

Continued-On Page 7



Photographic Highlights from NMGIC's Fall Meeting on GIS Education in New Mexico.

Clockwise from upper right: Past President Bob Bewley awarding Mark Romero of NMSU the Jesse Rosbach Memorial Scholarship Award check; Special Guest Bruce Joffe presenting his GIS Certification talk; Larry Rose of T-VI describing their GIS Associate Degree program; and Bob Bewley awarding Nathanial Todea of UNM the second Jesse Rosbach Memorial Scholarship Award check of 2002.

NMGIC Awards First GIT Education Grant

In the Fall of 2002, the NMGIC Board received an application for the Jessie Rossbach Memorial Scholarship from Mr. Roger Kramer, an earth science teacher at Desert Ridge Middle School. The proposal for the scholarship did not meet the scholarship requirements, however the NMGIC Board felt that the proposal did meet NMGIC's wider goal of promoting geographic information technology education at all levels. The NMGIC Board decided to create a new category of award -- an educational grant. Each year the NMGIC Board will award a scholarship and/or an educational grant for up to $1000 based on the applications received. Mr. Kramer has received his educational grant in January. We asked Mr. Kramer to describe his project for the members below.

As recipient of the NMGIC Educational Grant, I would like to thank the members of the New Mexico Geographic Information Council for this award. For the past two years I have been a participant in the "Science and Geospatial Teacher Academy", held on the UNM campus and conducted by Anna Wilder O'Neil and Dr. Theresa Kokoski. As part of this academy, I learned the basics of GIS and the use of a GPS unit for collecting location data to be plotted on local maps.

With this grant I will purchase GPS units to be used in workshops for teachers. None of the other science teachers at Desert Ridge Middle School have had any experience in the use of GIS or GPS units. I have requested and received permission from my school administration to conduct workshops for the purpose of educating teachers in their use and how they can be used to enhance our science program. Eventually I want to expand the teacher training to the social studies, math and physical education departments.

Once students have received instruction in the use of GIS and the GPS unit, they will be able to check these units out to take home and collect location data to be used with research assignments. Planned assignments include locating and photographing erosion problem areas in Albuquerque and publishing these to maps that can be viewed on the class web site. Another is to locate places of interest in New Mexico, photograph and plot their locations on state maps to be included on our class web site. Students and teachers have also expressed great interest in the sport of geocaching where one uses the GPS unit to locate and place caches for others to find. In conclusion, my goal is to bring GIS and GPS technology to the teachers and students of Desert Ridge Middle School that otherwise would not available to them.

Roger Kramer, Earth Science Teacher
Desert Ridge Middle School
Albuquerque, NM

New Mexico's Center of Population

A by-product of the U.S. Census Bureau's 2000 decennial census was a determination of the center of population for the nation and for each state. A state-by-state effort (see ***http://www.acsm.net/statecenters.html***) is underway across the country to establish a commemorative survey monument at each state's center of population. The state monuments are multi-purpose -- they will physically mark the location of the centers of population, provide accurately-positioned monuments/geodetic control for surveying and mapping applications, and showcase the importance of geospatial technologies in our everyday lives. New Mexico's center of population commemorative effort has been undertaken jointly by the **New Mexico Professional Surveyors** (**NMPS**), the **American Congress on Surveying and Mapping** (**ACSM**), the **National Society of Professional Surveyors** (**NSPS**), the **American Association of Geodetic Surveyors** (**AAGS**), and the **National Geodetic Survey** (**NGS**).

On September 28th of last year, a small, but enthusiastic, group of volunteers gathered at Manzano Mountains State Park, near the southern end of the east side of the Manzano Mountains, to establish New Mexico's center of population commemorative monument. The actual computed center of population (N34.623012 deg. / W106.342108 deg.) falls about 1-3/4 miles northeast of the adopted ceremonial location. Since the computed position is in the middle of rather inaccessible rolling pinyon-juniper country - and private land, we decided to mark the spot at the State Park, where visitors would be able enjoy the novelty of seeing the monument, which is capped with a beautiful 8-inch diameter brass survey disk.

In the near future, **NMPS** and **NGS** will coordinate a high-accuracy GPS survey that will tie the new commemorative station into the High Accuracy Reference Network (HARN) and Continuously Operating Reference Station (CORS) network, the two highest-accuracy components of the National Spatial Reference System (NSRS). The station's descriptive and coordinate data will then be available on a geodetic control datasheet, published by NGS and available at ***http://www.ngs.noaa.gov***. The station can be occupied with GPS equipment and used to provide a GPS project's connection or tie into the NSRS - for both surveying and mapping/GIS applications.

The center of population is determined as the place where a flat, weightless, and rigid map of the state would balance if all residents were of equal weight. The center point for the entire country's population has been computed every decade since the first tabulation in 1790. It has tracked to the west and south over the years, migrating from Chestertown, MD in 1790 to Edgar Springs, MO in 2000. It will be interesting to watch over the coming decades to see what kind of movement pattern develops for New Mexico's population distribution. The 2000 commemorative monument will serve as the point of origin for monitoring this change. The next time you are driving along the east side of the Manzano Mountains, take the short detour to the Manzano Mountains State Park and visit New Mexico's center of population monument (it's located right next to the flag pole) - in a place where, quite frankly, not very many people live.

William Stone,
GPS Committee Chairman

Continued-From Page 1

who see GIS as only one of many technologies used to support cartography, photogrammetry, remote sensing, and other "core" geomatics disciplines. How can we certify GIS professionals when they can't even agree on who they are and what they need to know?"[3]

The GIS Certification Institute

The GISCI has just been created within the last month. Its self-described purpose is to provide those professionals who work in the field of geographic information systems with a formal process that will:

- Allow them to be recognized by their colleagues and peers that they have demonstrated professional competence and integrity in the field;
- Establish and maintain high standards of both professional practice and ethical conduct;
- Provide a basis for judging the validity of allegations or complaints involving GIS practitioners;
- Encourage aspiring GIS professionals to work towards certification for the purpose of professional development and advancement; and to
- Encourage established GIS professionals to continue to hone their professional skills and ethical performance even as GIS technology changes.

Its stated objectives are to:

- Certify a substantial share of the GIS industry, making the GISCI a powerful voice and tool for GIS Professionals.
- Reach a net annual income greater than $500,000 to support full-time staff and expenses within 5-7 years.
- Establish a fund that will give back grants to the GISCI member associations to develop educational programs that compliment the certification effort.

A 70 slide powerpoint presentation on the Institute is available for download as a pdf at its website.

According to Bruce Joffe at last November's meeting, the GISCI's initial pilot phase will be carried out with GIS professionals throughout the state of Georgia. While it is uncertain at this time how much the GISCI Application Fee would cost each individual, he indicated that it would likely be somewhere between $250-$300. This does not seem an unreasonable estimate given the second objective above! Currently, the only employee of GISCI is Mr. Scott A. Grams, GISCI Certification Manager. Grams, who admits that he is not a GIS professional but an Association professional (whatever that is!), administers the application on himself in the Powerpoint presentation and shows how and where he fails. A Board of Governors is being assembled and presently consists of a Chairman (Peirce Eichelberger, from the URISA Certification Committee), a Vice Chairman, and a First Vice Chairman.

Henry Cordova has expressed serious concerns about the GISCI to me:

"In my opinion, these certificates will quickly evolve into a *de facto* prerequisite for employment, and perhaps even the precursor to a government license or registration. They will reflect arbitrary, and perhaps self-serving standards devised by an issuing authority, answerable to no one, and will not be subject to the control or supervision of any market mechanism. Those who are critical of these programs will be forced to place themselves in public opposition to [the GISCI], which could potentially deny them access to their livelihood. The [GISCI] administering this certificate program, however benign, will be faced with a substantial conflict of interest; they will be resistant to any change that may affect their programs negatively. Once a scheme like this takes hold, it will adopt a life of its own and it will be difficult to reform, even if its participants start having second thoughts. It will simply give too many advantages to those who have it, as well as the means of excluding those who don't."[3]

No matter what side of this issue you fall on, whether you desire certification and the prestige that will undoubtedly come with it (at the very least within human resources departments), or you tend to side with Mr. Cordova and believe it to be a costly, largely unnecessary evil, the situation is getting critical as the pilot program has already started. It is extremely important to stay abreast of the issue, and for this reason, NMGIC will continue to follow developments in GIS Certification as they come about and keep the membership informed.

1) Pugh, D. L., 1989, Professionalism in public administration: Public Administration Review, Vol. 49, p. 1-8.

2) Huxhold, W. E., 2001, Certifying GIS professionals: Urban and Regional Information Systems Association, <http://www.urisa.org/ GIS_CERT_PRES/index>.

3) Cordova, H., unpublished personal communication.

-Dave McCraw, Editor

GEOGRAPHIC NAMES—MOVING FROM PENCILS TO PIXELS

Nearly half a century ago the English writer and social commentator C.P. Snow wrote about "the two cultures"—science and the humanities—and the lack of mutual understanding and communication between them. At the meeting last summer of the Council of Geographic Names Authorities (COGNA) in Baltimore, a similar dichotomy was becoming apparent in the field of geographic names as well.

Traditionally, people interested in names have come from university English and history departments, perhaps from specialties such as dialectology, and their approach has been to grub around libraries and local history sources ferreting out the origins and meanings of individual names. That's the tradition from which I come, and it produced ***The Place Names of New Mexico,*** as well as almost all the state names gazetteers in the US.

But in recent years names have been swept up in the technologically driven GIS revolution, and at COGNA 2002 the change in orientation became obvious when the first speaker was Barbara Ryan, associate director for geography with USGS, who spoke about the National Map project. As the conference proceeded, I found myself in the ironic position of taking notes in an old notebook with an antique fountain pen, writing about metadata, the spatial data infrastructure, Framework data, an alphabet soup of strange acronyms (NSGIC, FGDC, etc), and wondering just what the hell is a "spatial footprint."

But despite feeling a little like a slide rule in a calculator world, I also realized that these are exciting times for geographic names, that technology, especially GIS technology, is taking toponymy into new and exciting regions, such as the National Map. Watch this space for developments.

Other interesting COGNA 2002 items:

John Parker, surveyor general emeritus of Victoria, Australia, spoke about the Australian experience of fixing locality boundaries in the context of determining just how far a name extends. Roger Payne, executive secretary of the US Board on Geographic Names, said fewer than 20 percent of named communities in the US are incorporated, leaving more than 80 percent with no fixed legal boundaries.

Robin Worcester, manager of the Geographic Names Information System (GNIS) database, spoke about the need for state-by-state maintenance of the database, now that Phase II (collecting names not on current federal maps) is nearing completion. Federal land-management agencies are mandated to make ongoing updates and corrections for their units, but this is far short of comprehensive statewide maintenance. Regrettably, no plan—and certainly no funding—has been devised to address this.

Note: Authorized individuals and groups can now make corrections and additions to a state GNIS file online. I'm authorized to do this for New Mexico, so if you are aware of any errors or needed changes, please let me know.

Worcester also mentioned the custom CDs with all name data for a state—or a group of states—is now available from USGS—Geographic Names.

Also soon to be available is the ***LANDVIEW*** DVD, reflecting the collaborative efforts of the US Environmental Protection Agency, the US Census Bureau, the National Oceanic and Atmospheric Administration, and the USGS to provide the public with readily accessible published Federal spatial and demographic data. The 2-DVD set including GNIS for the entire United States will be out in the near future at a cost of $90.

Increasingly, Native groups are turning to geographic names and GIS to record and foster cultural identity. An example is the Coeur d'Alene tribe in Idaho and eastern Washington.

Commemorative names (honoring an individual or group) as usual provoked the most discussion during the formal meeting of the USBGN. Hervey Memorial Peak and Mount Kennybaker in Alaska, Dook Mountain in Arkansas, and many others are examples. In New Mexico, both name proposals currently before the NMGIC Geographic Names Committee are commemorative: Harmon Draw and Bailey Butte.

In Virginia, an environmental group successfully proposed the name Entoto Knob for a feature in the George Washington National Forest. The name is an acronym for "embracing nature takes our thoughts and observations." Interesting.

COGNA 2003 will be held near Monterrey in California. I must end this now because my pencil is dull and I have to go sharpen it with a pocketknife.

Bob Julyan, Chair
NMGIC Geographic Names Committee

Federal Geographic Data Committee News

U.S. Office Of Management and Budget (OMB) Revises Circular A-16: *Coordination of Geographic Information and Related Spatial Data Activities*

What is OMB Circular A-16?

Circular A-16 provides a government-wide approach to development and management of spatial data, technology, standards, resources, and policies of the National Spatial Data Infrastructure (NSDI) as governed by the Federal Geographic Data Committee (FGDC). The Circular applies to your agency if it collects, produces, acquires, maintains, distributes, uses, or archives analog or digital spatial data. OMB Circular A-16 was published as a revised circular on August 19, 2002, and incorporates Executive Order 12906.

What are the significant changes to the newly revised Circular?

- Describes agency roles and responsibilities for developing the NSDI.
- Links the management of geographic assets to budget and performance.
- Assigns lead agencies for specific NSDI data layers (Appendix E, Circular A-16).

What does Circular A-16 require of your agency?

The Circular updates federal responsibilities in the management of geographic information and spatial data assets. Specific requirements:

- Implement FGDC approved data standards.
- Document existing spatial data holdings through an online data clearinghouse.
- Demonstrate agency performance for maintaining spatial data assets.
- Support interoperable software applications.
- Search for data or coordinate with partners before acquiring data.

What are the benefits of Circular A-16?

Implementing this Circular will improve the availability and quality of spatial data, help federal agencies avoid redundant expenditures, and leverage partnerships with other levels of government and sectors of society. These factors are crucial for developing E-Government -- one of five elements of the President's Management Agenda. Due to the importance of spatial data activities, OMB assumes a leadership role under Circular A-16 as Vice Chair of the Federal Geographic Data Committee.

What does this mean to my project?

- Many federal agencies will be working on guidance on how to impliment Circular A-16 in FY03.
- Until guidance is available from your agency, assume that this circular applies to you.
- The main areas where it Circular A-16 will affect your project:
  - -Development and maintenance of FGDC-compliant metadata.
  - -Contracts for geospatial data purchases must have language requiring the contractor to develop FGDC compliant metadata.

Where can I go to get more information?

Federal Digital Data Committee:
http://www.fgdc.gov

Circular A-16:
http://www.whitehouse.gov/omb/circulars/a016/a016_rev.html

Contract Language Requirements:
http://www.fgdc.gov/nsdi/docs/boilerplt2.html

-Compiled by Denise Bleakly

New GPS Continuously Operating Reference Stations and Real-time Differential Correction Signals in New Mexico

The National Geodetic Survey (NGS) is working cooperatively with a variety of other agencies and organizations towards the goal of establishing a national network of GPS Continuously Operating Reference Stations (CORS). CORS are permanently installed survey-grade GPS receivers and ancillary hardware that continuously collect and record GPS observations for post-processed applications - both surveying and mapping/GIS. Data from CORS stations are available, at no charge, from *http://www.ngs.noaa.gov*.

With the recent addition of two new CORS in New Mexico, we now have a total of six CORS in the state. The two new stations are both in Albuquerque - at the Federal Aviation Administration's (FAA) facility in the northern part of the city and at Kirtland Air Force Base.

The FAA station is one of several reference stations, located throughout the country, used to compute differential correction information for the FAA's Wide Area Augmentation System (WAAS), a satellite-based real-time differential correction service designed for en route aviation navigation. The station at Kirtland is part of the US Coast Guard and Federal Railroad Administration's Nationwide Differential GPS (NDGPS) system, which provides ground-based real-time differential correction signals for navigation and positioning applications. Both the WAAS and NDGPS signals are freely available to all users who are outfitted with the proper type of GPS equipment, which must include the ability to receive one of these differential correction signals.

We anticipate more CORS being added to the network in New Mexico in the coming months. I encourage all GPS users - in both the surveying and mapping/GIS arenas - to consider incorporating CORS data into their GPS differential correction process. For further information, contact Bill Stone at 505-768-3606 or william.stone@noaa.gov.

William Stone,
GPS Committee Chairman

GPS Highlight: The Degree Confluence Project

By now you've undoubtedly heard about the GPS geocaching craze, perhaps you've enjoyed the activity yourself. Our own Geographic Names Committee Chair and outdoor adventure author, Bob Julyan, wrote a piece on this phenomenon awhile back that was published in the Albuquerque Journal's "GO!" Outdoors Section. But are you aware of a related GPS-based endeavor that has become popular as of late, the Degree Confluence Project? Described as an "organized sampling of the world," its goal is to visit and photograph every latitude and longitude integer degree intersection in the world. There is, of course, one within 49 miles of you anywhere you go on the planet. As this issue of the Map Legend went to press, a total of 3,106 visitors had collected 18,789 photographs of 2,158 primary confluences and 194 secondary confluences in 115 countries. And excluding confluences in the oceans and a few near the poles, there are still 13,521 more to be visited!

It was started by a Massachusetts computer programmer, Mr. Alex Jarrett, who noticed that in 1995, when he bought his first GPS, that the intersection of N43°00'00" and W72° 00'00" was somewhere near his house, and he wondered what it looked like. In an interview in the 10 November 2001 issue of the Fredricksburg, VA newspaper, *The Free Lance-Star,* he said: "it turned out to be just a spot in the woods, but the journey of getting there and seeing all the zeros on the GPS was worth it!" He created a website with information for others who might be interested in trying this and a repository for the sampled photographs and accounts of successful confluence journeys by volunteers from all over the globe. You can keep up with the project's progress and perhaps even submit a confluence visit of your own at http://www.confluence.org.

The country with the most confluence visits documented to date is, unsurprisingly, the United States, with 805. The U.S. is followed by Canada (231), Australia (210), Sweden (79), France (67), Saudi Arabia (60), South Africa (58), and Finland and Spain (both with 54). The latest addition to the country list is 0° E30°00'00" in Uganda. As seen from the map below downloaded from the website, all but 2 of the 28 confluences in New Mexico have been successfully visited and documented. Of the two east central confluences not visited, a photo of a "Posted – No Trespassing" sign records the end of one unsuccessful attempt!

In addition to instructions for would-be confluence "spotters," visitors can download letters explaining the project for landowners, and possibly circumvent access problems. Letters are available in English, Spanish, Portuguese, Italian, German, French, and Bahsa Indonesian. One prerequisite for making a successful visit is that spotters must take at least five photographs of the confluence. Many photograph their GPS unit showing the zero minutes and zero seconds on the exact spot on the ground where the integer lines intersect; many also take panoramas in the four cardinal directions from the spot. The one explicit requirement of the photographs is that they *not* include people, "unless they live there."

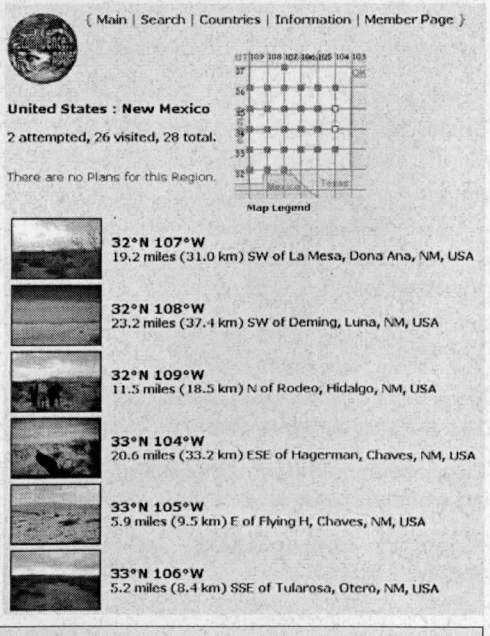
With the amount of interest and excitement the project has generated, submissions from spotters are not limited only to first time visits. Multiple trips to popular confluences are now pretty common. Every confluence in Germany was successfully visited a first time in little less than four months. The "hobby" of keeping track of how a confluence looks in successive seasons is quickly attracting a large following of spotters.

While the main goal of the project is to sample the primary integer confluences of latitude and longitude, there are a few special locations sampled as secondary confluences. These include the Royal Observatory at Greenwich, England, the arbitrarily defined zero for longitude (N51°28'00" 0°00'00"), the International Date Line in Fiji (S16°48'00" 180°00'00"), the geographic center of the European Community in Belgium (N50°00'23" E4° 40'00"), and the Zero Kilometer Mark in Moscow, marking the origin point of all roads in the Russian Federation (N55° 45'20.9" E37°37'04.4").

The pictures of confluences posted on the web page do indeed provide an interesting variety of landscapes and scenes, a true, hierarchical (uniformly spaced) sample of the Earth's random variability. While a few confluences are in urban settings (one is next to a Coke machine in Japan), the overwhelming majority of these latitude – longitude intersections are similar to the first one described (i.e., "just a spot in the woods"), in rural or wilderness settings. For example, no confluences in the U.S. fall inside a major city!

So if you are so inclined, check out the Degree Confluence Project website, put some fresh batteries in your GPS unit, grab your camera, lace up your boots, and join in the latest geographic craze. Select the confluence of latitude and longitude du jour, and make your GPS read "No Minutes, No Seconds." This, by the way, is the official motto of the Degree Confluence Project, and yes, you can get the T-shirt!

-Ed.



UPCOMING SPRING MEETING AND WORKSHOP

NMGIC'S SPRING MEETING

Where's the Water???

GIT Applications in Water Distribution, Allocation, Rights, and Modeling in New Mexico.

Meeting Details Coming Soon!

ALSO COMING THIS SPRING, IN CONJUNCTION WITH THE NMGIC SPRING MEETING:

A Free Workshop on

Utilizing the National Hydrography Dataset (NHD)

Presented by Jeff Simley, U.S. Geological Survey, Denver

The NHD combines elements of USGS digital line graph (DLG) hydrography files with USEPA reach files (RF3) to provide comprehensive coverage of hydrographic data for the U.S. Hydrographic feature names come from the USGS Geographic Names Information System (GNIS), complete with GNIS identification numbers. It is ideal for many hydrologic modeling and statistical applications. Currently, there is High Resolution NHD coverage for 20 subbasins in New Mexico available at no cost. Come learn how you can put the NHD to work for you!

Registration open to all NMGIC members.

See the NMGIC web site at http://nmgic.unm.edu for program details soon.

Sandia National Labs and Bernalillo County Work on a LandTrek Pilot Project

During the summer of 2002, the Bernalillo County Environmental Health Department and Sandia National Laboratories began a joint pilot project using the Department of Energy (DOE) LandTrek information system. LandTrek is a web-based system that facilitates federal facility site cleanup, closure and transfer or reuse. The LandTrek system is designed to encourage communication and collaboration among federal facility project managers, federal and state regulators, and other stakeholders associated with federal facility restoration projects and activities, from site identification through closure, reuse or land transfer. The joint project between Bernalillo County and Sandia is unique in that it is the first intergovernmental partnership to use the LandTrek system.

The Bernalillo County / Sandia National Laboratory LandTrek Pilot Project is using a web GIS application to present information on the Isleta Corridor Project which is identifying and remediating leaking underground storage tanks in Albuquerque's South Valley. Using this as a springboard, Sandia provided information on the location of environmental restoration sites at Sandia National Laboratories.

For more information:

The Bernalillo County Environmental Health GIS website: *http://outside.bernco.gov/website/imseh31/viewer.htm*

The Bernalillo County LandTrek Information website: *http://www.bernco.gov/departments/environmental_health/land_trek.htm*

LandTrek information website: *http://www.landtrek.org/*

Kevin Troutman, Bernalillo County Environmental Health Department *ktroutman@bernco.gov*

Denise Bleakly, Sandia National Laboratory *drbleak@sandia.gov*

-Denise Bleakly

2003 Membership Dues

New Mexico Geographic Information Council, Inc.

$25 Regular Dues; $10 Students (with ID); $100 Corporate Dues

Name: _____

Organization: _____

Business Address: _____

_____

City: _____ **State:** _____ **Zip:** _____

Phone: _____ **Fax:** _____

Email: _____

Enclosed is my: ☐ Check ☐ Purchase Order

Please make check payable to: NMGIC Inc. Payment should be mailed to: NMGIC, Inc., P.O. Box 9445, Albuquerque, NM 87119-9445.

Cool Internet Web Sites

Locations of Glossaries of GIS Terms

For this edition of Cool Web sites, I've chosen to focus on Glossaries of GIS terminology. I was looking for a good definition of the generic term "geospatial" and I discovered this wealth of glossary sites. This may not be an exhaustive list and as always, if you have any additions, please feel free to contact me at ***drbleak@sandia.gov*** or 505-284-2535.

ESRI *http://www.esri.com/library/glossary/glossary.html*

Berkeley Digital Library SunSITE GIS Resources on the Internet *http://sunsite.berkeley.edu/GIS/gisterm.html*

On-line GIS Dictionary *http://www.geo.ed.ac.uk/root/agidict/html/welcome.html*

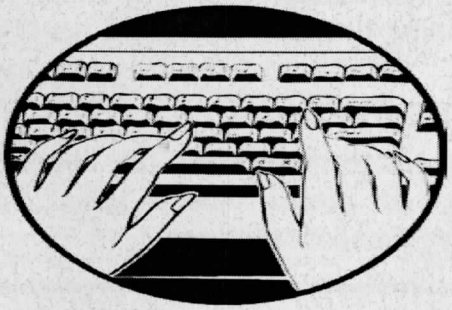
NCGIC PDF A Glossary of GIS Terminology *http://www.ncgia.ucsb.edu/Publications/Tech_Reports/92/92-13.PDF*

Association for Geographic Information—GIS Dictionary *http://www.geo.ed.ac.uk/agidict/welcome.html*

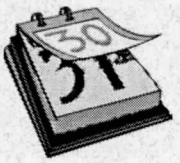
GIS Data Depot GIS Glossary *http://www.gisdatadepot.com/helpdesk/glossary.html*

GISDevelopment.net GIS Glossary *http://www.gisdevelopment.net/glossary/g.htm*

Index of other GIS Glossaries *http://www.gis.com/resources/library/dictionaries.html*



Calendar



GIS for Public Works and Engineering (ESRI Seminar), February 5, 2003. Marriott Pyramid, 5151 San Francisco NE, Albuquerque, NM. Register online at: *http://gis.esri.com/events/seminar_detail.cfm?shownumber=5573*.

Integrating GIS & CAMA Conference (URISA), March 30 – April 2, 2003. Hyatt Regency Columbus, Columbus, OH. Contact URISA website at: *http://www.urisa.org/cama.htm*.

ASPRS 2003 Annual Conference. Technology: Converging at the Top of the World, May 5-9, 2003. Anchorage Hilton & William A. Egan Civic and Convention Center, Anchorage, AK. Contact ASPRS website at: *http://www.asprs.org/alaska2003*.

GeoSpatial World 2003 Intergraph International Training & Management Conference, May 19-21, 2003. Hyatt Regency New Orleans, New Orleans, LA. Contact Intergraph website at: *http://www.geospatialworld.com/*.

Twenty-Third Annual ESRI International User Conference, July 7-11, 2003. San Diego Convention Center, San Diego, CA. Contact ESRI website at: *http://www.esri.com/events/uc/index.html*.

Public Participation GIS Conference (PPGIS), July 20 - 22, 2003. Portland State University, Portland, OR. Contact URISA website at: *http://www.urisa.org/PPGIS/ppgis.html*.

URISA 2003 Annual Conference & Exposition, October 11-15, 2003. Marriott Marquis Hotel, Atlanta, GA. Contact URISA website at: *http://www.urisa.org/annual.htm*.

Call for Workshop Ideas

If you have a topic you would like to see offered as a workshop, please contact the NMGIC Workshop Coordinator, Rick Koehler using the online form on the NMGIC web site. The form can be accessed at *http://nmgic.unm.edu*.

NMGIC wants to respond to the needs of its members, so please share your desires concerning these workshops.

2003 CORPORATE SPONSORS

Thank you for your support!