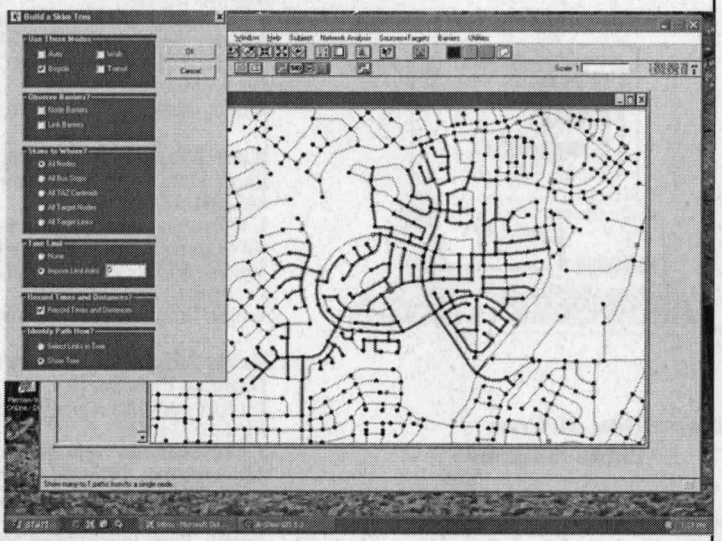
The Map Legend

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

http://nmgic.unm.edu

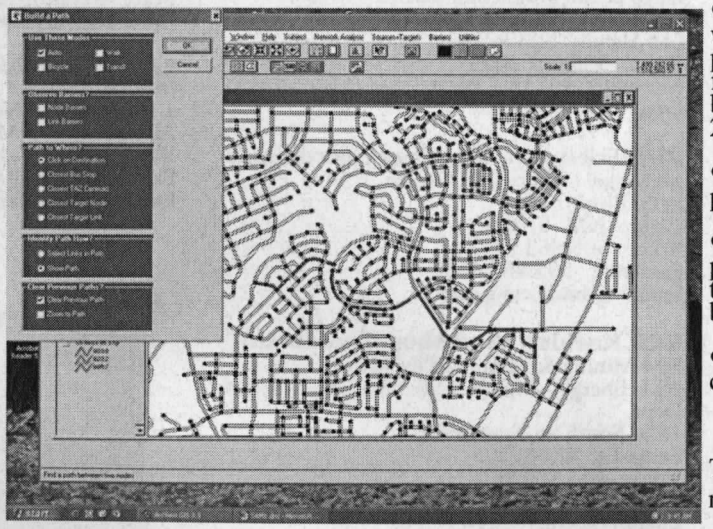
MRCOG Implements New Transportation Accessibility Model

The Mid-Region Council of Governments (MRCOG) of Albuquerque, New Mexico has implemented a new state-of-the-art transportation analytical model, the Transportation Accessibility Model, or TRAM. This GIS-ArcView based tool is capable of evaluating the levels of mobility and accessibility of current and future transportation systems for New Mexico's mid-region, centered on Bernalillo County. TRAM uses a network that contains all streets (including locals), as well as sidewalks, bike lanes, trails, and actual routes and schedules of the public transportation system. The network is based on over 85,000 links that can be modified to reflect even more detailed information for specific applications (such as ADA compliant sidewalks). The level of detail of the network allows the analysis to be sensitive to urban design rather than the traditional simple uniform algorithms and aggregated "representations" of a transportation system.



This model will allow MRCOG and its member agencies to address and evaluate a myriad of issues by:

- Determining true levels of walk access to transit using actual walking distances on sidewalks to actual bus stop locations.
- Determining the level of accessibility of specific locations (such as community centers, schools, employment centers, and shopping centers) via different modes or by combination of modes of transportation.



- Assessing general accessibility via any mode of transportation and/or proximity to a specific network facility type (i.e. bicycle trail/lane, bus stop) throughout the region. (use 2025 MTP data)
- Assessing the "connectivity" of pedestrian and bike systems.
- Evaluating and prioritizing proposed improvements to the transportation system from a market based perspective.
- Do community profiles based on census data for all the above issues.

The model generates "paths" on the network from one or more user

Continued-On Page 4

INSIDE THIS ISSUE:

GPS New Mexico CORS Network 5
NMGIC, GISAC, and RGIS News 6
Nombres Geograficas de Nuevo Mexico 8
Petroglyph National Monument GPS/GIS Rock Art Survey 9
NMOSE Wins ESRI Mapping Excellence Award 10

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

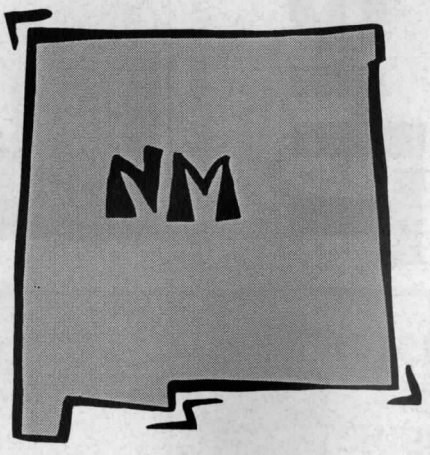
31 Avenida Almendro NE
Albuquerque, NM 87123-9648
Voice: 505.298.8420
Email: rjulyan@swcp.com

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

Hello Fellow NMGIC'S:

It's already August, and we are still waiting for the Southwest to see relief in the form of a lot of moisture. The month of July evidently was one of the hottest months on record. I know that I have not had a good rain at my house in some time. The drought we are experiencing was the theme for our Spring Meeting, "Where's the Water?" held in Los Alamos, NM. We will soon make the meeting presentations available to everyone, hopefully via the internet, and apologize for not making them available sooner. We relish the great feedback from everyone who attended the meeting. The NMGIC board would like to again thank all of our guest speakers and the Los Alamos National Laboratory for its hospitality and $2000 contribution to our organization.

Speaking of making the presentations available through the Internet, that will be a topic of our fall user's meeting on November 20th and workshop on November 21st: "GIS...What's the Big Picture: Connecting the National Initiatives to Our Work." We will look at the efforts currently underway by two federal programs in creating, organizing, and making available geographic data to the public by the means of internet map servers. In addition, there will be presentations from some of our fellow NMGIC members who are utilizing Internet Map Servers within their own line of work to help manage their businesses and use geospatial information. I know everyone reading this has most likely downloaded GIS data from the RGIS website www.rgis.unm.edu. The state of New Mexico is fortunate to have such a resourceful spatial database available to our GIT community. This particular site does not currently have an internet map but is an extremely resourceful website for downloading geospatial data. A majority of the data available for download are products generated by federal agencies with strong ties to our state.

As the federal programs Geospatial One-Stop and the National Map move forward, we hope to have a better understanding of how we -- the public -- will benefit from these initiatives and how we will be affected by them in return. I hope many of you will be able to attend our fall meeting and participate in our discussions about these programs. The more input we receive from the end users, the better we can understand how our organization can support the New Mexico GIT community. An example of this is Governor Bill Richardson's recent creation of the Geospatial Data Acquisition Coordination Committee. This new committee, which includes one of our own Board members, is comprised of nine individuals who will help coordinate and acquire geospatial data for our state. We are excited about this recent executive order, and are looking forward to coordinating mapping efforts to support our GIT community.

I hope everyone has had a wonderful summer, and I look forward to seeing you at the fall meeting.

Bart Matthews
NMGIC President

The Map Legend 2003 Publication Schedule and Deadlines

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
Spring/ Summer Issue

Deadline for articles: May 15, 2004
Publication date: June 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. Contributions should be sent to Dave McCraw.

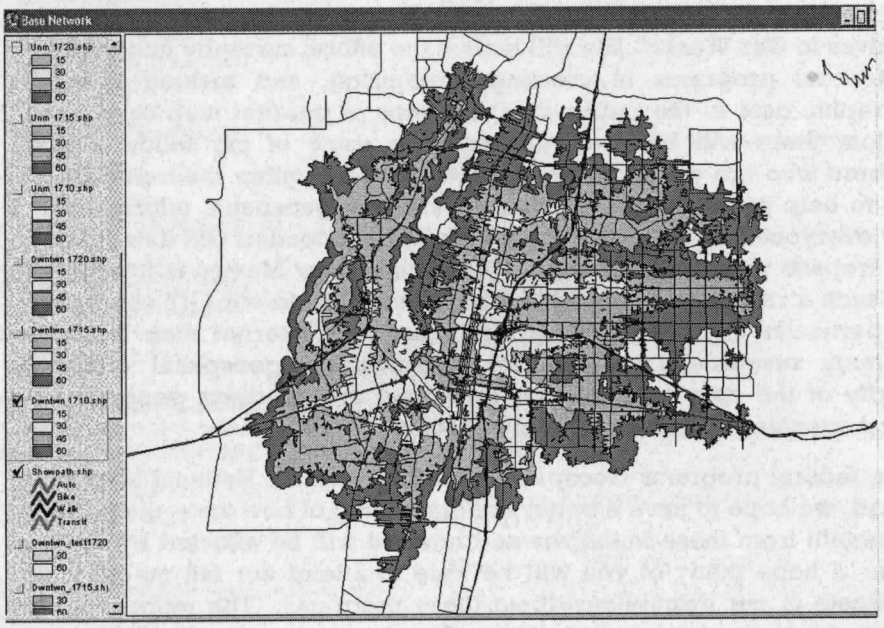
Do you have information about a project, new techniques, GIS and related issues, announcements, news, etc. that you would like published in the Map Legend?

Continued-From Page 1

specified origin(s) to one or more user specified destination(s) as illustrated by the figure above. The paths are generated using true distances instead of the "airline miles" that are used by less sophisticated applications as illustrated by the figure below.

The network on which these paths are built contains detailed information for each segment including speeds (for each mode), number of lanes, type of facility, bus route information, and the locations of bus stops. Segments and node fields are designed to allow for easy integration of attributes from other MRCOG applications such as the Land Use Analysis Model (LAM), the traffic counts program, the travel forecasting model and crash data. In addition, the model provides the flexibility to code local impediments to pedestrian and/or bike mobility (for example, the inability to cross certain streets due to high traffic volumes).

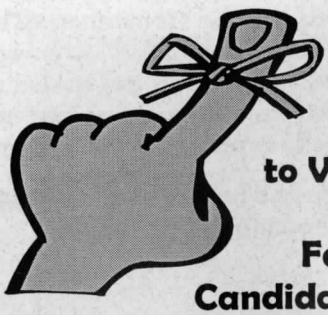
Once the paths are built the model can perform an accessibility analysis (by mode or combination of modes) based on a user selected parameter (e.g. distance, time). Travel time contours based on user specified intervals can then be produced (e.g., the figure on the right).



These contours can subsequently be overlaid on census data and market profile describing the demographic characteristics of the area covered by each time interval can be generated.

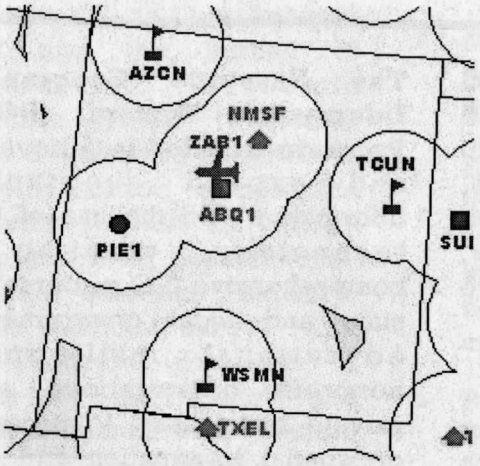
MRCOG intends to deploy the TRAM model in a number of areas including the evaluation of transportation alternatives, transit market analysis, environmental justice evaluations, transportation Improvement Plan project assessments, and for the development and assessment of transportation strategies in the region.

-Chris Blewett, Director
Transportation and Planning Services,
Mid-Region Council of Governments



Don't Forget to Vote for Your Favorite Candidates for the Upcoming NMGIC Board of Directors!!!

GPS Continuously Operating Reference Stations



New Mexico CORS Network

The National Geodetic Survey (NGS) is working cooperatively with a number of other organizations – governmental, private, and academic – on the development of a nationwide network of GPS Continuously Operating Reference Stations (CORS). CORS are permanently installed, survey-grade GPS receivers that continuously collect and record the full complement of GPS observables. This data can then be web-accessed, without charge, for post-processed surveying (centimeter-level) and mapping (decimeter/meter-level) positioning applications.

GPS installations that comprise the CORS network are owned and operated by the individual participating entities. For each CORS, NGS provides data access and quality control, coordinate determination, and ancillary information through its website. As of July 31, 2003, there are 401 CORS stations in the network, with 7 located in New Mexico.

The figure shows the locations of New Mexico's CORS, with the shading indicating, in 100 km bands, the distance a given location is from a CORS. WSMN, TCUN, and AZCN are owned and operated by NOAA's Forecast Systems Laboratory and are used primarily for the determination of atmospheric water vapor content (one person's "noise" is another person's "signal"). PIE1 contributes to NASA's global GPS tracking network used for precise satellite orbit determination. ABQ1 is part of the Nationwide Differential GPS (NDGPS) network of real-time broadcast facilities. ZAB1 is a ground reference station for the FAA's Wide Area Augmentation System (WAAS). NMSF was established by New Mexico Department of Transportation (NMDOT - the new name for the Highway and Transportation Department) this spring to support the agency's surveying and mapping efforts.

The CORS program is a very successful cooperative effort involving more than 70 individual organizations, all contributing to the common goal of establishing nationwide GPS reference station coverage for the nation's positioning requirements. The CORS data access system is easy to use and I encourage you to consider using CORS data the next time you need to differentially correct your GPS field observations.

For additional information, visit www.ngs.noaa.gov/CORS/ or contact Bill Stone, National Geodetic Survey, 505-768-3606 or william.stone@cabq.gov.

William Stone,
GPS Committee Chairman

MEET NEW MEXICO'S NEW ESRI ACOUNT MANAGER, KEVIN HODSON!

Effective on June 8, 2003, Nancy Bohac resigned her position as the ESRI Account Manager for New Mexico. Nancy is pursuing her career with an ESRI Business Partner, Digital Globe, and we wish her the best of luck in her new career. She has since been replaced by Kevin Hodson, who has submitted the following bio, and looks forward to working with us. Welcome Kevin!

I graduated from University of Maryland, Frostburg MD with a Bachelors degree in Urban Planning and Cartography. After completing an internship for Dewberry and Davis, related to flood plain management, I began my career as a GIS professional. My first position was a temporary one, during which time I worked for The Eastern Group, an oil and gas company in northern VA. During that time I was actively perusing other options in the field of GIS. I found such a position with the Loudoun County Sanitation Authority, a water and sewer authority in Northern VA. I helped build the authorities GIS system and instructed the engineering staff on the functionality of ESRI products. I completed a two year stay with LCSA prior to being hired by ESRI as a GIS Technical Support professional. My work with tech support involved a dedication to the USDA Forest Service as the main GIS support for their user base. Since that time, I have enjoyed a rewarding career as both the Forest Service account manager and now the account manager for New Mexico and Southern Colorado. I get great satisfaction through interaction with my customers and hope to provide a good level of management support and customer service.

On my free time I enjoy an avid outdoor lifestyle in the Rocky Mountains of Colorado including biking, skiing, hiking, camping and mountain climbing.

NMGIC, GISAC, and RGIS News

The highlight of the late Spring and Summer for those of us involved in NMGIC, GISAC, and RGIS was the creation of the **Geospatial Data Acquisition Coordination Committee (GDACC)** of the **New Mexico Information Technology Commission (ITC)** by Governor Bill Richardson (see Executive Order No. 2003-018, below). Membership of the GDACC, while not completely filled out at this time, will be primarily comprised by individuals active in NMGIC, GISAC, and RGIS. With this official clout, New Mexicans can look forward to obtaining more high quality geospatial data!

The long awaited **GISAC website** is now up and running! Interested parties can get the next month's agenda, news flashes, information on training opportunities, tutorials, links, and much more to come. Check it out at:

http://gisac.state.nm.us

As for the **RGIS Program,** part of its funding request each fiscal year contains an annual report to the legislature. This report includes the RGIS Program mission statement, goals and performance measures, and objectives. A summary of the report for FY03/04 is presented below.

The Resource Geographic Information System (RGIS) Program mission is to develop and expand geographic information and the use of GIS technology, creating a comprehensive GIS resource for state and local governments, educational institutions, nonprofit organizations, and private businesses; to promote geospatial information and GIS technology as primary analytical tools for decision makers and researchers; and to provide a central clearinghouse to avoid duplication and improve information transfer efficiency.

The RGIS Program is a cooperative effort between the

State of New Mexico
Office of the Governor

Bill Richardson
Governor

EXECUTIVE ORDER NO. 2003-018

CREATING THE NEW MEXICO GEOSPATIAL DATA ACQUISITION COORDINATION COMMITTEE

WHEREAS, the Information Technology Commission, pursuant to its authority under NMSA 1978, Section 15-C1-5, utilizes the Geographic Information System Advisory Committee (GISAC) as a standing committee of the Commission to guide development and use of geographic information technology in New Mexico for State government agencies; and

WHEREAS, an increased demand exists for accurate and timely geospatial data by State and local governmental agencies to provide information to support appropriate management and decision making; and

WHEREAS, the coordination of geospatial data acquisitions among State agencies would reduce duplication of effort and data while decreasing costs; and

WHEREAS, the special acquisition of geospatial data requires increased interaction with local, state, regional and national cooperative programs; and

WHEREAS, State legislators and New Mexico's Congressional delegation should be informed of the mapping needs of the State of New Mexico and so that they may support efforts to meet the State's needs.

NOW THEREFORE, I, Bill Richardson, Governor of the State of New Mexico, by virtue of the authority vested in this office by the Constitution and Laws of New Mexico, hereby establish the Geospatial Data Acquisition Coordination Committee of the Information Technology Commission for the purpose of assessing and coordinating geospatial data acquisition for State agencies in New Mexico. The responsibilities and authority of the Committee are to:

1. Coordinate with GISAC, the Resource Geographic Information System (RGIS) Program and the New Mexico Geographic Information Council (NMGIC);
2. Coordinate and leverage funding requests and projects for acquiring geospatial data for the State of New Mexico;
3. Assess, prioritize, and request acquisition of geospatial data for the State of New Mexico;
4. Identify funding sources for acquiring geospatial data;
5. Generate data acquisition scopes of work for RFI's and RFP's;
6. Represent New Mexico's mapping priorities and requirements at federal and state levels; and
7. Seek the support of New Mexico's Congressional delegation regarding the State's geospatial data needs.

The Committee shall be appointed by the Governor and shall include:

1. The GISAC Chair or designee;
2. One member from GISAC representing state government;
3. One member from GISAC representing local government;
4. One representative from NMGIC;
5. The RGIS Program Director or designee; and
6. One at-large member from the geospatial data community.

In addition, the Governor shall appoint two non-voting advisory members from outside state government.

THIS ORDER supersedes any other previous orders, proclamations, or directives in conflict. This Executive Order shall take effect immediately and shall remain in effect until such time as it is rescinded by the Governor.

ATTEST:

REBECCA VIGIL-GIRON
SECRETARY OF STATE

DONE AT THE EXECUTIVE OFFICE
THIS 27th DAY OF MAY, 2003

WITNESS MY HAND AND THE GREAT
SEAL OF THE STATE OF NEW MEXICO

BILL RICHARDSON
GOVERNOR

EXECUTIVE ORDER NO. 2003-018
Page 2 of 2

State Capitol • Room 400 • Santa Fe, New Mexico 87501 • 505-476-2200 • www.governor.state.nm.us

ITC and the University of New Mexico (UNM), specifically two UNM units – Earth Data Analysis Center and the Bureau of Business and Economic Research. These two units operate a statewide program to provide resource geographic information and GIS technology to state and local governments, educators, students, industry, and the public at large. The RGIS Program provides a network for interagency and intergovernmental coordination, data sharing, information transfer, and electronic communication. It supports public service programs, policy development and implementation, resource and assets management, and GIT strategic planning in New Mexico. The Program is now in its thirteenth year.

RGIS Program Goals:

- Provide all users with access to GIS data and actively disseminate selected GIS information as requested;
- Identify, develop, and maintain GIS data for the RGIS Clearinghouse;
- Promote the use of GIS as an analytical tool through special projects, technical support, and outreach;
- Work cooperatively with the NM GIS community.

Desired outcomes of the Program include:

- Reduce state and local government expense by providing, through the Clearinghouse, a convenient point of transfer for geographic information of all types;
- Maximize the value and utility of existing and new databases;
- Enable effective responses to requests for information from government, legislative, private, and non-profit entities through customized projects;
- Facilitate coordination among state agency staff, legislators, cabinet officers, key administrators, and other public officials.

RGIS Program Measures:

The success of the RGIS Program is measured via a set of metrics some of which are:

1) Number of new or revised datasets and related metadata made available over the Internet via the RGIS Clearinghouse. This **output** measure quantifies the Program's efforts to make GIS information easily accessible. **7,708 new data sets were added to the Clearinghouse.**

2) Number of distinct, unique hosts served by the RGIS Clearinghouse site and pages visited. This **outcome** measure quantifies web site usage, estimates demand for RGIS Program information and indirectly estimates satisfaction with Program output and access to that output. **14,309 hosts were served and 440,589 pages were visited during the year.**

Additionally, approximately 850 megabytes of RGIS Clearinghouse data were transferred per day totaling more than 310 gigabytes for the year.

3) Design a survey instrument, identify the target survey group, and tabulate survey results. Comments, suggestions and criticisms were solicited from regular users, the GISAC and New Mexico's most active participants in the GIS community:

117 responses were received to the ongoing "level of satisfaction" survey with only two (less than 2%) expressing dissatisfaction. 163 requests required follow-up action.

Finally, RGIS and EDAC received special recognition this summer when they were notified by ESRI that they had been selected from over 100,000 user sites worldwide to receive the **Special Achievement in GIS Award**! Congratulations!

GIS by ESRI

Environmental Systems Research Institute
380 New York Street, Redlands, CA 92373 USA
Phone 909-793-2853

Special Achievement in GIS Award

May 21, 2003

It is my distinct pleasure to inform you that your site has been selected to receive a "Special Achievement in GIS" award at ESRI's 23rd Annual User Conference. This award is being given to user sites around the world in recognition of their outstanding work in the GIS field. Your organization was selected to receive this prize from over 100,000 user sites worldwide. It is quite an honor.

The awards will be presented at a special ceremony on Thursday, July 10, from 3:30pm–5:30pm in Hall H in the San Diego Convention Center. This special event is open to all registered users and spouses are invited to attend the ceremony as guests.

Once again ESRI will be showcasing all SAG award winners in a special application on the ESRI Website: *http://gis.esri.com/sc2003.org/*. Our goal is to feature your organization and to share the importance of your contributions in GIS to our global community. To do this we need you to submit your information no later than June 20, 2003. Please use your email address to login and follow the instructions on the website submission form. We hope you'll be excited to participate. If you have questions regarding website submission, please contact Sandy Stephens at sstephens@ESRI.com.

If you have any questions regarding this award please contact Denise Miller at dmiller@ESRI.com.

I commend you and your coworkers on a job well done and look forward to meeting you at the ceremony.

Warm regards,

Jack Dangermond
President, ESRI

NOMBRES GEOGRAFICAS de NUEVO MEXICO

If the US Board on Geographic Names (USBGN) approves two proposals recommended recently by the NMGIC Geographic Names Committee, the New Mexico landscape will have two new place names, but don't expect to hear either in conversation at the Circle K anytime soon.

The name Harmon Draw had been proposed by a NM Museum of Natural History paleontologist for an arroyo in the badlands north of Placitas. The arroyo is about a mile long and is a tributary of Arroyo Uña de Gato, itself a tributary of Tonque Arroyo, which runs west toward the Rio Grande at San Felipe Pueblo.

The name Harmon Draw honors Harmon Black (1908-1995), who was born in Dawson and while a young man lived and worked as coal miner at the now-abandoned coal-mining community of Hagan, where he was a principal surveyor for the original railroad grade into the community. He later moved to Albuquerque, where he became division sales manager for Standard Oil Company. Following retirement in 1970 he remained active in numerous community organization until his death in 1995. While the proposal to name the arroyo for him was made in 1999, action on it could not occur until after the five-year waiting period the US Board on Geographic Names (USBGN) requires for commemorative names.

Though the arroyo is barely two miles long, it cuts through an interesting and geologically significant sequence of strata, and the surrounding landscape is especially scenic.

The other name recommended for USBGN approval is Bailey Butte, to be applied to a landform in extreme northeastern Catron County. The feature is partially owned by the proponent, a retired professor at NM Tech in Socorro and would honor his father, Arthur Paul Bailey (1899-1975), a professor of mechanical engineering until his retirement in 1965.

As with Harmon Draw, I visited the feature, and using my new digital camera I was able to send a photograph of it over the Internet to the USBGN, thus blazing a new trail in applied toponymy. The photograph, however, did little to convey just how remote and otherwise unremarkable the feature is, except in the context of its owner.

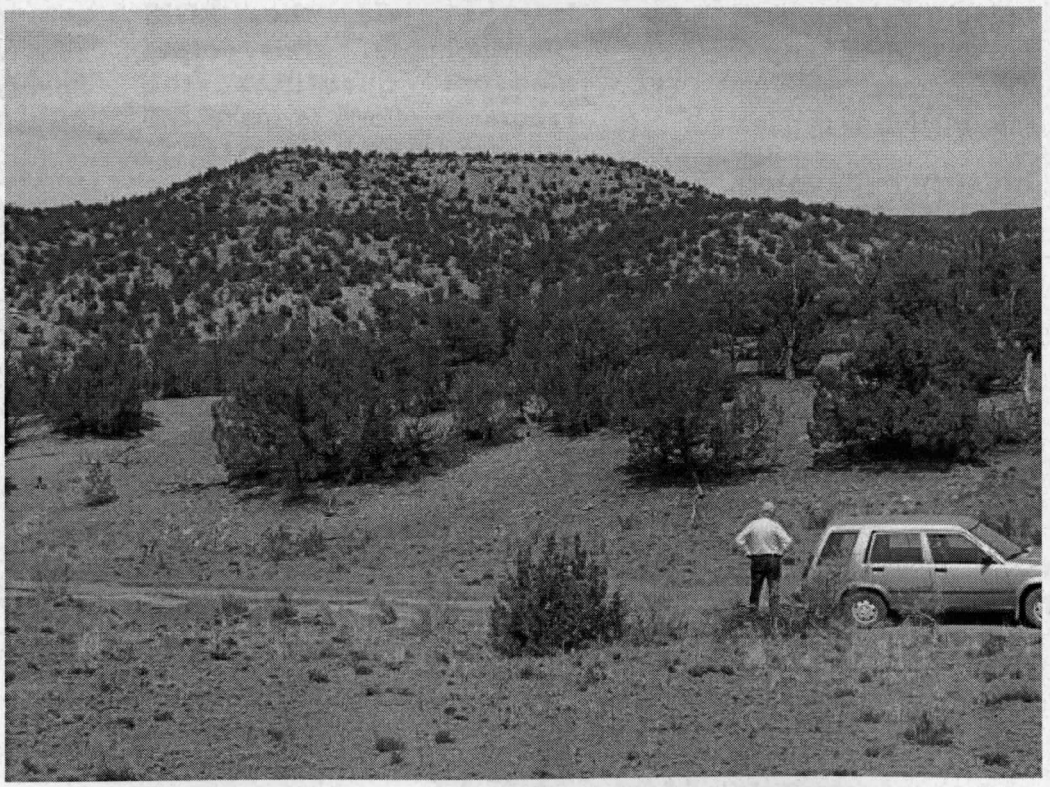
The photograph did stimulate a discussion in the Committee of whether the generic term *butte* was appropriate for a feature that seemed to lack the verticality and proportions normally associated with a butte. For better or worse, however, examples are rife of names whose generic terms don't really correspond with the features they identify. The Rio Puerco comes to mind; most people think of rivers as at least having water!

The final decisions on both these proposed names will be made by the USBGN. I'll keep you posted.

Squaw Peak in Arizona.

The proposal to rename the feature in Phoenix long known as Squaw Peak to honor the Hopi woman soldier killed in the recent Iraq war has received considerable media coverage. Few people would object to removing a name, Squaw Peak, that many find offensive and replacing it with this commemorative name. The problem is that the USBGN and the Arizona State Names Authority have procedures to be followed for such renaming, such as the five-year requirement (see above). Arizona's governor, however, believes the time to score political points is now, not five years from now, and has essentially muscled the state board into going along with her.

There have been recriminations and resignations. It's been a messy, nasty, and completely avoidable situation. It will be interesting to see what the USBGN does, though if the Arizona or US legislatures establish the new name by law, the USBGN no longer will have any jurisdiction.



Bob wants to know: Does this look like a "Bailey Butte" to you? (Nice photo, Bob!)

CCNS Spring—not likely.

Last year members of the Santa Fe-based group Concerned Citizens for Nuclear Safety (CCNS) floated down the Rio Grande from Buckman to Cochiti Reservoir, and on the way they encountered several springs they believed had not previously been identified. Before long I received a query asking how one of the springs might be named to commemorate the trip and the group, using the name CCNS Spring.

Several reasons exist why that name likely would not be approved, but two are instructive. One is that using an acronym as a name makes it opaque to the general public. How many of you would know what CCNS stood for? And would your grandchildren and great-grandchildren know? And what if the group disbands or changes its name, as such groups are wont to do? That's among the main problems with commemorative names: the enthusiasm that generates them usually is ephemeral, while the names themselves can be extremely durable.

Second, the proponent believed that since they discovered the spring—a very dubious conclusion—they had the right to name it. Admittedly, explorers and other discoverers of features historically have been their namers, but nothing in the USBGN policies confers upon discoverers an inherent naming right. (Also, that a spring along the Rio Grande had gone unnoticed and unnamed by local Native Americans is extremely unlikely.)

Two bad but irresistible puns.

Because streets in Albuquerque often have attached the Spanish terms *camino* and *calle, it is inevitable that* someone would name a street—are you ready?—Yippee Calle.

And I have to confess admiration for whoever put on an arroyo at the north end of Albuquerque the name Arroyo Borealis.

-Bob Julyan, Chair
NMGIC Geographic Names Committee

GIS and GPS in Rock Art Survey at Petroglyph National Monument

In June, 1990, Petroglyph National Monument (PETR) was established by presidential decree to "preserve, for the benefit and enjoyment of present and future generations.... the nationally significant West Mesa Escarpment, the Las Imagines National Archeological District, a portion of the Atrisco Land Grant, and other significant natural and cultural resources, and to facilitate research activities associated with the resources" (Public Law 101-313). Although a number of national parks and monuments have significant rock art present, Petroglyph National Monument is the only unit of the National Park System to be established primarily for the preservation and interpretation of rock art. Petroglyphs are images scratched or pecked on rock surfaces, whereas pictographs are painted images. The petroglyphs are positioned on a 17-mile volcanic escarpment on the west side of Albuquerque.

Although the petroglyphs have been photographed for many years, the first rock art survey of the escarpment was done in the late 1960's by the Albuquerque Archeological Society under the direction of Colonel Jim Bain, a pioneer in rock art recording in New Mexico. Some 1500 petroglyphs were recorded, and this survey became the basis for the creation of Petroglyph Park by the city of Albuquerque. In 1985, Dr. Matthew Schmader and staff of the Albuquerque Department of Open Spaces conducted a survey of 1100 acres of the escarpment and recorded some 10,500 images and 67 archeological sites. As a consequence of this survey, the escarpment was listed on the National Register of Historic Places. This initial survey provided the data which showed the area to be of great cultural significance and worthy of being placed in the National Park System (NPS).

In 1997, volunteers at Petroglyph National Monument started a new rock art survey. One difference between past rock art surveys and this one is that of locating the petroglyph. The traditional method to locate and survey a petroglyph is to establish datum points and use a tape and compass to determine the distance and angle from the datum point to the petroglyph. To relocate any one figure one must locate the datum point and reconstruct the distance and bearing information. The new survey was the first to use global positioning units to locate each petroglyph or panel. The use of GPS and GIS in this survey provides a unique geographical location for each locus, or rock with petroglyphs on it. This location is then linked to all the information recorded in the field about the physical location, special features, description, category, technique used, and repatination. The field drawing and photograph are attached to each locus. Most important, the spatial database is completely searchable electronically. Many of the questions that arise when discussing petroglyphs can be addressed with queries of the database.

Under the direction of Jack and Ann Francis, the survey of Petroglyph National Monument is coming to a close. There have been more than 24,000 elements recorded of which 534 are associated features--grinding slicks, rock alignments, etc. And 19,000 are actual petroglyphs. The survey serves as a baseline for the number of petroglyphs in the monument, the current extent of vandalism, and the types of petroglyphs inventoried. The locations of the rock art, including photographs and drawings, should prove helpful for future cultural resource studies. The condition of the petroglyphs, as reflected in the photos, will be utilized by law enforcement professionals when evaluating vandalism reports and by cultural resource staff to assess erosion. As a more complete survey of all units in the park is completed, resource managers will be able to query the database to support the planning, resource management, law enforcement, and maintenance programs for Petroglyph National Monument.

-Milford R. Fletcher, Kerri Mich and Dara Saville,
NPS Intermountain GIS Support Center

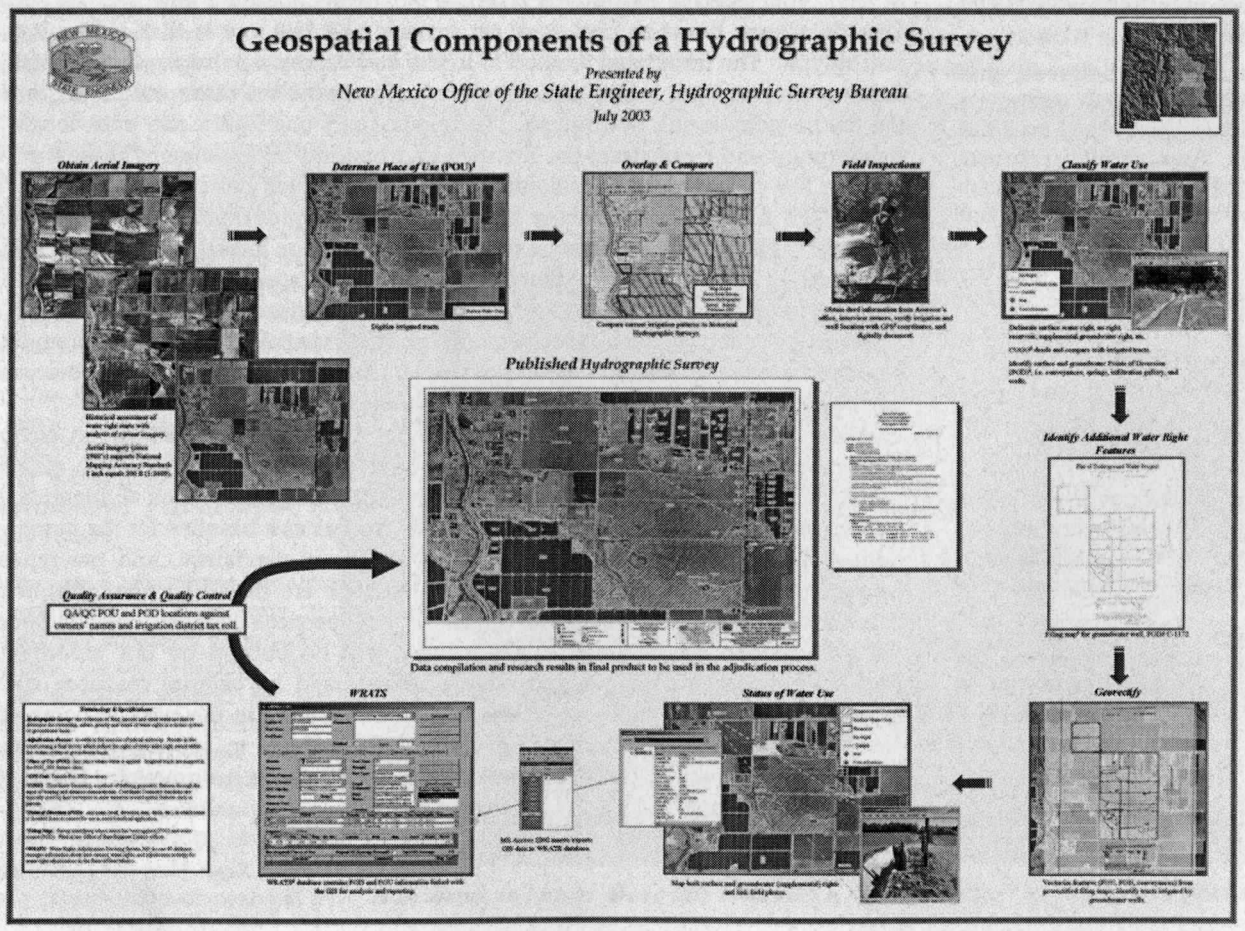
NMOSE wins ESRI Mapping Excellence Award Again!

The New Mexico Office of the State Engineer (OSE) won a prestigious award at the Environmental Systems Research Institute (ESRI) International Conference held in San Diego, California on July 6-11. The first place award for the "Best Instructional Presentation" featured a map poster illustrating the technical procedures required to plan and complete a Hydrographic Survey. The lead authors, *Christina Noftsker* and *Elizabeth Ayarbe,* collaborated with *Mike Recker* and *Jaime Bustos* to produce a winner that competed with approximately 1,500 entries. The conference was attended by over 11,000 mapping professionals from over 135 countries who use geographic information technologies.

The winners are part of the Lower Pecos Team from the Hydrographic Survey Bureau within the Legal Services Division of OSE. They are responsible for assessing, inventorying, mapping, and field checking sources of water, areas of water use, and water conveyance features. These tasks support the adjudication or legal identification of a water right. Through the use of sophisticated technology the Hydrographic Survey staff merge high quality aerial imagery and global positioning system satellite field mapping with historical water right lineage data to determine the most accurate characteristics of an individual's water right.

This is the second year the Office of the State Engineer has won an award for mapping excellence. New Mexico's investment into actively managing our water resources has produced an integrated system for mapping and analyzing water right information for the State. The agency is shouldered with a large mission. However, the accomplishments as reflected by these awards showcase the progress this agency has realized in a short time frame.

The winning team of Jaime Bustos, Christina Noftsker, Liz Ayarbe, and Mike Recker (left to right) present the award to John D'Antonio, New Mexico State Engineer (center).



Upcoming FALL MEETING and workshop

NMGIC'S FALL MEETING

GIS...What's the Big Picture:

Connecting the National Initiatives to Our Work.

Geo-Spatial One Stop, The National Map, Enterprise GIS and New Mexico Users

Thursday 21 November 2003

UNM Technology Park, Albuquerque

Meeting Details Coming to the Website Soon!

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

A Free Workshop

Introduction to the MINNESOTA MAP SERVER:

An Open Source Web Mapping Technology.

Friday 22 November 2003

UNM Technology Park, Albuquerque

Registration open to all NMGIC members.

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

EDAC Announces New Upcoming Geospatial Technologies Colloquium Series

While details are still being ironed out, Dr. Stan Morain, EDAC Director and Geography Department Chair, is putting together a new colloquium series on geospatial technologies. New Mexicans can look forward to informative outstanding talks from prestigious leaders in the fields of remote sensing and geographic information technologies beginning either late this year or early 2004. We are very excited about the new series and will keep you informed as the series develops!!!

Attention Students in GIT Classes.....

NMGIC offers a scholarship worth up to $1000 to students majoring in geographic information technologies (GIT).

See the NMGIC web site at *http://nmgic.unm.edu* for details and application form.

2004 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

The Columbia Shuttle Disaster on February 1, 2003 was a tragic accident. The disaster management and recovery of many of the parts of the Shuttle, showed the power of the geospatial technologies. For this edition of Cool Websites, I am focusing on some of the websites related to the Columbia Shuttle recovery effort.

Two articles on the Columbia Disaster are:

"Mapping Columbia's Debris Field," April 2003 Geospatial Solutions:

http://www.geospatial-online.com/geospatialsolutions/article/articleDetail.jsp?id=52680

"Columbia Shuttle Disaster Highlights the Power of GIS," May 2003 GeoWorld:

http://www.geoplace.com/gw/2003/0305/0305cvr.asp

Mid-Atlantic Geospatial Information Center (MAGIC) - Dawn Ortiz with the Center for Space Research set up this site to aid authorities in getting data: *http://columbia.csr.utexas.edu*

A website set up to facilitate down loading base data for the counties affected by Forest Resources Institute:

http://www.fri.sfasu.edu/Columbia/

FEMA's summary of the debris search: *http://www.fema.gov/diz03/e3171n71.shtm*

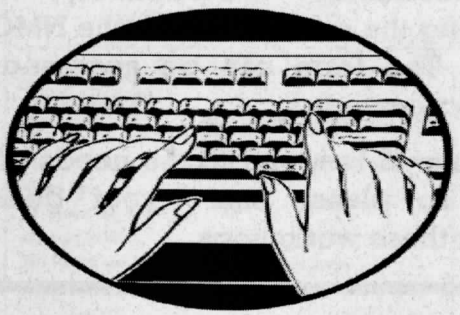
Human Urban Environmental Studies *http://strand.sfasu.edu/shuttle/spaceshuttle.htm*

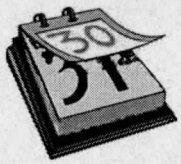
Additional websites and articles:

http://www.twdb.state.tx.us/publications/newsletters/WaterforTexas/wftspring03/art1columbia.htm

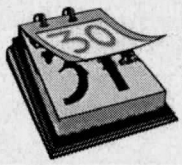
http://havenworks.com/space/shuttle/columbia/

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 (compiled August 2003).





Calendar



GIS IN THE ROCKIES: Geospatial Integration Today for Tomorrow, 1-3 October 2003. Plaza at the Mart, I-25 and 58th Avenue, Denver, CO. Register online at: ***http://GISintheRockies.org***

URISA 41st Annual Conference: Powering Progress Towards Process and Information Integration, October 11-15, 2003. Atlanta Marriott Marquis Hotel, Atlanta, GA. Contact website at: ***http://www.urisa.org***

New Mexico Environmental Health Conference, October 20-22, 2003. Sheraton Old Town Hotel, Albuquerque, NM. Contact website at: ***http://www.nmehc.org***

Annual ESRI Southwest User Group (SWUG) Conference, 25-30 October 2003, Jackson Hole, Wyoming. Register online at: ***http://www.swuggis.org***

Terrain Data: Applications and Visualization – Making the Connection, 27-30 October 2003. Embassy Suites Hotel/Convention Center, North Charleston, SC. Contact website at: ***http://www.asprs.org***

48th Annual New Mexico Water Conference: New Mexico Water Planning 2003, November 5-6, 2003. Hyatt Regency Tamaya Resort and Spa, Santa Ana Pueblo, NM. Contact website at: ***http://wwri.nmsu.edu***

Applied Geography Conference 2003, November 5-8, 2003. Antlers Adams Mark, Colorado Springs, CO. Contact conference website at: ***http://www.appliedgeog.org***

NMGIC Fall Meeting and Workshop, November 20-21, 2003. University of New Mexico Science and Technology Park, 801 University Blvd SE, Albuquerque, NM. Contact website at: ***http://nmgic.unm.edu***

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!