The Map Legend

New Mexico Geographic Information Council, Inc.

...reporting on geographic information for and about the Land of Enchantment...

Volume 5, Number 3 Spring 1994

Victorio? or Victoria? Park

Bob Julyan

Ask most New Mexicans knowledgeable about the State's history, which person they most associate with the Black Range in southwestern New Mexico, and the chances are good they'll mention Victorio, the Warm Springs Apache leader who camped there and who battled U. S. Army troops there.

That's why, when I recently contacted the Geographic Names Committee (GNC) members and said a problem existed with the name Victoria Park in the Black Range, every one of them said immediately, "It should be Victorio," before I explained further.

The problem was detected by Gila National Forest rangers revising maps in the Black Range Ranger District. Four features exist there named Victoria Park: the park, Victoria Park Mountain, Victoria Park Canyon, and the 7.5-minute USGS Victoria Park quadrangle. James E. Paxton, Jr., of the ranger district, submitted name-change proposals to the U. S. Board on Geographic Names, which referred them to the GNC and asked for a timely recommendation.

There was no question that the Forest Service was correct in saying the present name is a spelling error and that the name historically was Victorio Park. The Forest Service provided ample documentation supporting the fact that the Victorio name was derived from the Warm Springs Apache chief Victorio. The Forest Service also documented the correct name being well-established in earlier documents and maps and that the error is understood by present ranchers in the area.

Still, the possibility existed that the name Victoria Park, while universally acknowledged to be an error, nonetheless had embedded in local usage. Counterbalancing that were: (1) any local usage, should such exist, would be restricted to a very small number of people (the Black Range—and especially this part—is singularly remote and unpopulated, even by New Mexico standards) and (2) any local usage of Victoria Park in this instance would not outweigh the importance of preserving the true historical origins of this name. The Apache leader Victorio is well known throughout New Mexico and was historically important in the southwestern part of the state; having his name appear as Victoria where he camped would be analogous to having a feature near Mount Vernon and named for George Washington appearing on maps as Georgia.

For these reasons, the GNC recommended adoption of the Forest Service's name-change proposals.

New Name, Same Department

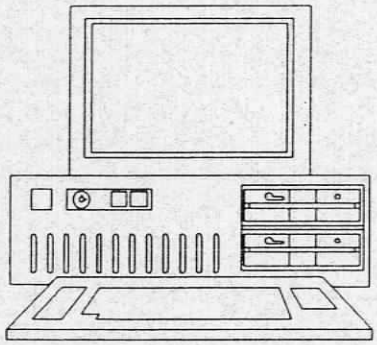
by Richard Friedman

McKinley County Rural Addressing Department . . . Special Projects Department . . . GIS Center. Within one year the Rural Add . . . Special Proj . . . GIS Center has had several different names. But don't get confused by this identity crisis, it's still the same department it was a year ago. After an extensive audit of the staffs duties and responsibilities, the County's Personnel Department recommended the name change.

The GIS Center has integrated the use of geographic imagery with GPS vector GIS to aid in data creation, analysis, and visualization. Scanned aerial photography is the most commonly used type of geographic imagery at the GIS Center. Uses of the scanned aerial images have included updating rural road and house locations for the addressing program, digitizing house and pueblo footprints in the Pueblo of Zuni, and assisting the Navajo Nation Chaco Protection Sites Program in identifying and mapping archeological sites.

The addition of image processing to the GIS tool box has improved the Center's ability to respond to the geographic information needs of McKinley County. The Director of the GIS Center, Rich Friedman, will be one of the panelists for the Spring Meeting's afternoon session on geographic imagery. His presetntation will highlight how the use of geographic imagery has enhanced the GIS program.

The Map Legend



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From the President
Richard Friedman

April 1994

Virtually every civilization throughout history has recognized the importance of geographic data. As civilizations have become more complex, the geographic data that define these civilizations have also increased in complexity. The sheer magnitude and volume of geographic data required to make knowledgeable management decisions in our complex society has led to the advent of computer based Geographic Information Systems (GIS). GIS has the potential to affect virtually everyone who uses, manages, or analyzes geographic data. As professionals who prepare and maintain geographic data, we are often faced with the responsibility of creating and maintaining a GIS.

Creating a GIS is more than purchasing hardware and software; this is only the beginning. Creating a GIS is more than building a database to use with the software and hardware; this just completes the tool box. The entire GIS package must also include analysts to use the software, hardware, and data. Without the analysts, the system is nothing more than an expensive drawing tool. Learning GIS is more difficult than learning to use a word processor. From the time we begin first grade until the time we graduate from high school we are continually taught how to use the English language. When we learn to use a word processor we already understand the principles and concepts behind communicating with written text. Conversely, we learn very little about creating, using, and communicating with geographic data in grade school. Learning GIS not only involves learning to use the software, but it also involves learning to think spatially.

The experienced analyst has learned to think about an abstract spatial environment. The analyst has learned to think about patterns, spatial relationships, spatial processes, and the interaction of spatial elements. The analyst and the computer system can not be separated; one is an extension of the other.

As GIS technology continues to evolve, the analyst must continue to evolve with it. This is one of the goals of NMGIC, to provide GIS professionals with the opportunity to meet and learn about this rapidly evolving technology. I hope that you will be able to join us for our spring meeting to learn more about geographic imagery and renew old friendships.

Seasonal Land Cover Regions

USGS and the University of Nebraska-Lincoln have recently completed a work-share research project on "Seasonal Land Cover Regions" of the lower 48 States. The research project included the development of a two-sided map featuring land cover and greenness information. One side contains a 1:7,500,000-scale Seasonal Land Cover Regions map, developed from Advanced Very High Resolution Radiometer (AVHRR) satellite data, digital elevation models, ecoregions data, and soils and climate data sets. The seasonal land cover map has correlating color box legends indicating such areas as forests, tundra, shrublands, and croplands. The reverse side consists of a 1:10,000,000-scale "USGS Level II Land Cover" map, a 1:20,000,000-scale "Length of Green Period" map, and 24 1:63,000,000-scale maps showing the onset of greenness, and peak greenness, each in a monthly progression. The data from which this map was compiled have been used by over 30 organizations in a wide range of research and applications projects. For example, the U.S. Forest Service is using the data as a source of fire fuel types for their national fire danger modeling. The U. S. Environmental Protection Agency and the National Center for Atmospheric Research are modeling national patterns of biogenic emissions to assess regional air quality issues. The Air Force is using the data to identify bird habitat and the impacts of birds on low level training flights.

Donald Lauer, Chief, EROS Data Center, Sioux Falls, SD, 605/594-6123

Secretary Babbitt Chairs FGDC Meeting

Secretary Babbitt, Chairman of the Federal Geographic Data Committee (FGDC), conducted a steering committee meeting on March 2, 1994. The agenda included endorsement of the final versions of the 1994 Plan for the National Spatial Data Infrastructure (NSDI) and the Content Standards for Spatial Metadata, as well as developing implementation plans for the NSDI Executive Order, which is expected to be signed soon by the President.

Gary B. Chappell, FGDC Secretariat, Reston, VA, 703/648-5595

NMGIC SPRING MEETING

Friday, April 15, 1994 ★ 8:00 am

UNM Continuing Education Conference Center ★ 1634 University Boulevard NE

The theme of the meeting is ***Geographic Imaging***. The program includes two speakers from Landrum and Arras and Spatial Data Research, a discussion panel, and vendor exhibits highlighting GIS, GPS, and imaging technologies.

Multi-Resolution Land Characterization Monitoring System

The Multi-Resolution Land Characterization Monitoring System is a multi- agency collaborative effort involving the Environmental Protection Agency (EPA), National Biological Survey (NBS), National Oceanic and Atmospheric Administration (NOAA), National Aeronautics and Space Administration (NASA), U.S. Forest Service, United Nations Environment Program, and USGS. The goal of the program is to provide a current baseline of global multi-scale environmental characteristics, and mechanisms for monitoring, targeting, and assessing environmental change. The objectives include development of a global (1-km scale) and regional (30-m scale) land characteristics data base from satellite and other resource 2 information. As part of the broader effort, regional land characterization projects have begun at the EROS Data Center. Production processing (noise removal and geometric registration) of Landsat data has begun for the lower Susquehanna River basin (southeastern Pennsylvania) and the region near the mouth of the Columbia River (Oregon/Washington border). These areas were selected for the pilot studies to demonstrate how the land characteristics data base will meet the requirements of the ecosystem mapping and monitoring programs of the consortium agencies.

Donald T. Lauer, Chief, EROS Data Center, Sioux Falls, SD, 605/594-6123

New Members of the Advisory Committee on Antarctic Names

On February 1, the U. S. Board on Geographic Names (BGN) has approved the appointment of four new members to its Advisory Committee on Antarctic Names (ACAN). The new members are Jerry Mullins, USGS; Julie Palais, National Science Foundation; Olivia Radford, Library of Congress; and Mark Rockmore, Defense Mapping Agency. They will join the current members: Chairman, Peter Bermel, USGS; Alison Wilson, National Archives and Records; and Guy Guthridge, National Science Foundation. The Board officially transferred the support activities for the ACAN from DMA to USGS, on October 12, 1993.

Peter Bermel, ACAN Chairman, Reston, VA, 703/648-4430

Cooperative Research and Development Agreement (CRADA)

A Cooperative Research and Development Agreement (CRADA) between USGS and ETAK, Inc., of Menlo Park, California, a pioneer developer of in-vehicle navigation systems, was signed on February 22, 1994. The purpose of the CRADA is twofold: (1) to pursue joint research on the technology needed to collect, update, manage, and use digital geographic data bases; and (2) to develop a national transportation data base that combines the complementary aspects of currently available USGS and ETAK data bases. Cooperative work will begin with a proof-of-concept pilot project designed to evaluate the feasibility of this venture by using data for Washington, DC, and another metropolitan area. Both partners in the agreement believe that this project will effectively test the concept and will provide the data needed to determine the potential for private/public partnerships to enhance availability of earth science data. Meanwhile, USGS will continue to disseminate and publicize to the mapping community information about the CRADA concept and criteria, and to reiterate interest in using the CRADA vehicle to expand partnerships and cooperation with private organizations. Private mapping firms are encouraged to propose cooperative research and development activities that meet the CRADA criteria.

David Nystrom, Deputy Assistant Division Chief, Office of Research, Reston, VA, 703/648-4637

United States/Mexico Cooperation

Under the auspices of the bilateral agreement between the USGS and the National Institute for Statistics and Geographic Information of Mexico, USGS and the Director General for Geography (DGG) have developed a border mapping project. The purpose of the venture is to produce digital cartographic data that each organization can share, along the United States/Mexican border. On January 24 and 26, two representatives from DGG met with USGS staff to review the status of on going activities; develop plans for producing the border data; and to assign follow-on tasks.

Alan Stevens, Branch of International Activities, Reston, Virginia, 703/648- 5110

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Job Opportunities

The Map Legend features a "Job Board" in which job opportunities can be announced. Please give submissions to Heather Rex.

Summary of Current Federal Geographic Data Committee Projects

Development of the Strategic Plan for the National Spatial Data Infrastructure

The Plan is intended to provide the vision and list of actions needed to evolve the NSDI. Three draft versions of the Strategic Plan have been prepared by the FGDC Coordination Group and staff, and circulated among FGDC members and the community at large. Two national public meetings, one in Atlanta, Georgia, and one in Minneapolis, Minnesota, have included discussions of the Plan. The final draft of the Plan was developed by mid-December 1993, and includes actions, responsible parties, and completion dates. The Plan will be distributed nationally as the blueprint for the NSDI.

Competitive Cooperative Agreements for Partnerships

During FY 94 the FGDC is initiating a competitive cooperative agreements program to foster creative partnerships to implement actions needed to evolve the National Spatial Data Infrastructure. The FGDC anticipates providing seed money for several prototype tests of partnerships that may result in more significant future funding. Primary actions include contributing to standards development and building the geospatial data clearinghouse. Cooperative agreement proposals will be evaluated on the basis of participation among levels of government and between public and private sectors, the technical merit of the proposals, and the availability of matching funds from proposers.

Regional Activities

The FGDC Steering Committee consists of Washington, D.C.-based representatives. In most agencies, particularly those with land management responsibilities, the production, use, and management of geospatial data occurs in areas outside of Washington, D.C. Often the users and producers of geospatial data are not involved in discussions of the FGDC, and many Federal agencies' field operations do not communicate about needs and production plans with other agencies' field operations occurring in the same geographic area. The FGDC staff initiated discussions in various regions of the country about the possibility of forming "regional councils". These councils would foster communication among the agencies' field operations, provide a conduit for information and priorities to the FGDC Steering Committee, and provide a means for disseminating proposals for standards and policies to field people working with geospatial data. Some councils might be based on existing entities working on ecosystems or other regional issues that have geospatial data concerns. In other areas, councils would likely be groups of States. Council activities must be supported and managed locally, with "official" endorsement provided by the FGDC. Regions interested in forming such alliances have been asked to submit proposals to the FGDC.

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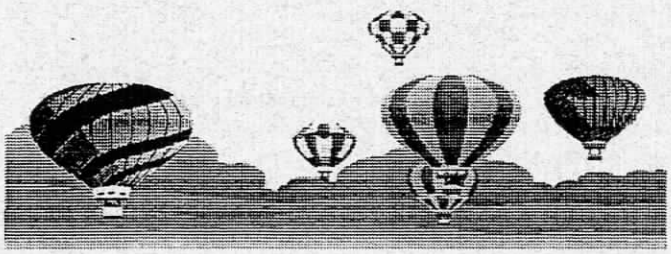
Corporate Profiles

LANDRUM & ARRAS

200 West Frontier, Suite 1
P. O. Box 536
Payson, Arizona 85547-0536
602 472-7141

Landrum & Arras is an established earth information firm that provides a broad range of integrated spatial information services and products. The firm meets the changing needs of engineers, planners, and resource managers throughout the southwest by offering: GIS database development, digital OrthoImage mapping, digital base maps and data bases for GIS and image processing systems, remote sensing/image analysis, 3-D terrain modeling and area volume calculations, GPS positional and attribute data collection information, low-cost pilot project development, research and development, technology transfer, training (GIS, CPS, and image processing), and consulting services.

Landrum & Arras is a small business that prides itself on utilizing the latest technology in order to provide decision makers with affordable, reliable, and readily digestible digital spatial data at known accuracies and confidence levels. The company integrates the latest technology: remote sensing, GPS, image processing, and GISs to yield the most powerful decision-making tools available. The integration of technology allows the merging of different data types, i.e., aerial photography, satellite imagery, field sampling, GPS positional information, and base map data for the needs of decision makers. Landrum & Arras is also authorized distributors of InFoCAD, a GIS software by Digital Matrix Services, Inc., and TNTmips, a GIS/image processing software by MicroImages, Inc.



Corporate Profiles

KOOGLE & POULS ENGINEERING

Photogrammetric Engineers & Surveyors

8338A Comanche NE
Albuquerque, New Mexico 87110
505 294-5051

Since their founding in 1964, Koogle & Pouls Engineering has obtained extensive experience in geodetic surveys; site surveys; utility surveys; black-and-white, color, and color infrared aerial photography; reprographics; analytic aerotriangulation; orthophotopreparation; photogrammetric mapping; and geographic and attribute database construction. They have also successfully completed projects covering a wide geographic area—from Washington State through California, to the City of Chihuahua, Republic of Mexico, thence to Arkansas and Wisconsin. Their staff includes professional engineers, professional surveyors, and certified photogrammetrists whose many years of experience include projects located from the Alaskan North Slope to the Republic of Zaire. The experience of sensor staff members covers from 20 to 40 years of diverse assignments covering the entire spectrum of photogrammetric engineering and allied control surveys. Since their founding, they have utilized a *Total Quality Management* approach to projects, where every staff member accepts the responsibility, within the framework of an overall program, for the accuracy of their work. Their clients receive support from experienced personnel, knowledgeable in the utilization of the advanced instrumentation available to them. Key personnel work closely with clients to ensure that they benefit from the reservoir of available photogrammetric experience and to ensure that each project is planned in the most cost effective manner to obtain the data and accuracies they require for present and future needs.

Koogle & Pouls has maintained an investment in technology, resulting in a complete surveying and photogrammetric capability including four Ashtech ME-XII global positioning receivers, Geodimeter 640 "Total Station" system; supercharged Cessna 206 aircraft, Zeiss RMKA 15/23 camera with closed circuit TV navigation monitors; automated film processor; LogEtronic printer; automated color processor; Borrowdale process camera; customized HE12 rectifying enlarger; Kern DSR 14 analytical stereoplotters; Intergraph 6040 and 6440 Interpro workstations; and Precision Image 636 color electrostatic plotter.

BOHANNAN HUSTON, INC.

Courtyard I
7500 Jefferson NE
Albuquerque, New Mexico 87109
505 823-1000

Bohannan-Huston, Inc., founded in 1959, is a multidisciplined engineering, architecture, photogrammetry, and surveying company with staff expertise covering a broad range of technologies and disciplines. The company contains groups specializing in surveying, photogrammetry and automated mapping, and computer applications.

The **Surveying Technologies Group** has been continuously involved in the practice of surveying for the last 35 years. This group has established literally thousands of geodetic and photogrammetric control points for orthophotography, GIS, and automated mapping projects throughout the United States. It employs operations and management staff along with professional surveyors and engineers to plan, organize, and supervise all phases of a project. This leadership and management staff have over 120 years of combined surveying experience and is supported by a full compliment of computations and computer graphics technicians.

The **Photogrammetric and Automated Mapping Technologies Group** is at the leading edge of technological progress and proprietary techniques in digital data acquisition for LIS, GIS, digital and conventional orthophotography, automated mapping and engineering route and site surveys. The group has successfully completed projects covering thousands of square miles throughout the United States and western Europe, and enjoys a national reputation in digital cartographic and facilities data and information systems. For the past 25 years, the firm has provided clients with a complete range of digital and conventional photogrammetric services, including project planning and consulting, topographic mapping, orthophoto mapping, terrain data, and site specific or large area topographic, GIS, LIS, and infrastructure databases.

Diginetics, the computer applications, software development, and client support group, consists of programmers, system managers, systems specialists, and training personnel. This group manages, maintains, and provides applications research, development, and training support for one of the most sophisticated computer aided surveying, mapping, design, drafting, and analysis systems in the private sector.

TERRA LAB

315 West Oak, Suite 101
Ft. Collins, Colorado 80521
303 490-8383

The Terrestrial Ecosystems Regional Research and Analysis Laboratory (TERRA) is an interagency organization composed of scientists and systems analysts from the Agricultural Research Service, Forest Service, U. S. Geological Survey, the Bureau of Mines, and the Environmental Protection Agency, with support from the Soil Conservation Service. TERRA also includes collaborators from IBM, the Consortium for Internation Earth Science Information Network, Colorado State University, and the University of Colorado.

TERRA was established in 1992. TERRA's mission is to incorporate realistic consideration of land and natural resource management understanding into terrestrial ecosystem components of earth system modeling as part of the U. S. Global Change program. Modern land management, in the context of global change, requires considerations of system sustainability from an ecosystem perspective. Therefore, TERRA's focus includes development of tools and technologies applicable to ecosystem management.

ENVIRONMENTAL SYSTEMS RESEARCH INSTITUTE, INC.

1426 Pearl Street, Suite 210
Boulder, Colorado 80302
303 449-7779

Founded in 1969 as a research group devoted to improving methods of handling geographic data, Environmental Systems Research Institute, Inc. (ESRI) has since become a leading vendor of geographic information system (GIS) software, with clients located worldwide. ESRI also offers education, consulting, and data automation services related to geographic information management. In addition to headquarters in Redlands, California, ESRI has nine domestic regional offices, eight international offices, 95+ domestic PC software distributors, and approximately 50 international software distributors.

ESRI's flagship product is the ARC/INFO GIS software, which was first introduced in 1982. Simply put, the ARC/INFO GIS integrates geographic information with a relational database management system to allow for the capture, management, analysis, and display of geographic data. ARC/INFO is used by thousands of organizations worldwide for environmental analysis, automated mapping/facilities management (AM/FM), urban and regional planning, resource management, health information services, publication quality digital map production, transportation analysis, market research and planning, education and research, and many other applications. In addition to ARC/INFO, ESRI also offers the ArcView and ArcCAD GIS software products.

Calendar

April 15, 1994. *NMGIC Spring Meeting*, UNM Continuing Ed Conference Center, 1634 University NE, Albuquerque. Contact Amy Budge, EDAC, Albuquerque, New Mexico. 505 277-3622.

April 25-28, 1994. *1994 ASPRS/ACSM Annual Convention and Exposition*, Reno, Nevada. Contact: ASPRS/ACSM Convention, 5410 Grosvenor Lane, Suite 100, Bethesda, MD 20814. Telephone: 301 493-0200.

May 9-12, 1994. *Tenth Thematic Conference on Geologic Remote Sensing*, San Antonio, Texas. Contact: ERIM, P. O. Box 134001, Ann Arbor, MI 48113-4001. Tele: 313 994-1200 ext. 3234. Fax: 313 994-5123.

May 23-27, 1994. *Fourteenth Annual ESRI User Conference*, Palm Springs, California. Contact: ESRI User Conference '94, 380 New York Street, Redlands, CA 92373-8100. Tele: 909 793-2853. Fax: 909 793-5953.

May 31-June 3, 1994. *ISPRS Commission IV Symposium: Mapping and Geographic Information Systems*, Athens, Georgia. Contact: Norma Reed, Georgia Center for Continuing Education, The University of Georgia, Athens, GA 30602-3603. Fax: 706 542-5990.

June 5-8, 1994. *GIS in Business '94*, San Francisco, California. Contact: GIS World, 155 E. Boardwalk Drive, Suite 250, Ft. Collins, CO 80525. Telephone: 303 223-4848. Fax: 303 223-5700.

July 10-15, 1994. *International Symposium on Spectral Sensing Research '94*, San Diego, California. Contact: Dr. Richard Gomez, U. S. Army Topographic Engineering Center, Ft. Belvoir, VA 22060-5546. Telephone: 703 355-2600. Fax: 703 355-3154.

August 7-11, 1994. *URISA-94*, Milwaukee, Wisconsin. Contact: URISA, 900 Second Street NE, Suite 304, Washington, DC 20002. Telephone: 202 289-1685. Fax: 202 842-1850.

September 12-16, 1994. *International Geographic Information and Resource Technology Seminar*, Toronto, Canada. Contact: J. Michael Power, Natural Resources Canada, Petawawa National Forestry Institute, P. O. Box 2000, Chalk River, Ontario, Canada K0J 1J0. Telephone: 613 589-2880. Fax: 613 589-2275.

September 27-29, 1994. *GIS in the Rockies*, Golden, CO. Contact: GIS in the Rockies, P. O. Box 13887, Denver, CO 80201-3887. Telephone: 303 932-2488.

October 25-27, 1994. *GIS/LIS '94 Annual Conference and Exposition*, Phoenix, Arizona. Contact: GIS/LIS, 5410 Grosvenor Lane, Suite 100, Bethesda, MD 20814. Telephone: 301 493-0200.