



MMA NEWS

Missouri Mappers Association
P.O. Box 1692, Jefferson City, MO 65102

Missouri Mappers Association 1996-1997 Executive Board

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LETTER FROM THE PRESIDENT

Spring is finally here! We can say Good-bye to Old Man Winter and turn our thoughts to something else besides work. The next Board meeting is Friday July 25, 10:00a.m., at Miller Management. If you have any issues that need to be addressed or would like to attend, give me a call.

Plans are under way for the Annual Meeting. Instead of waiting until the meeting in August to ask for nominations, I would like to ask for them now. We will be electing the following: President, Vice-President, Secretary, Treasurer (2yr. term), and one Director (2 yr. term). If there is anyone you would like to nominate for one of these positions, or if you are interested in one yourself, you can contact me at (573)886-4262.

Everyone enjoy the summer and I'll see you in August.

Jeff Davis, PMM
President MMA

MISSOURI MAPPERS ASSOCIATION 13TH ANNUAL CONVENTION

Plans are underway for the thirteenth annual MMA convention. The convention will be held at the Holiday Inn Executive Center in Columbia. Dates are set for August 20, 21, and 22, 1997. Rooms have been reserved at a special rate of \$59.50 for Wednesday and Thursday evenings so mark your calendars and plan to attend.

The registration fee is \$80.00 for regular members and \$75.00 for student members. All registrations include the 1997-98 membership dues of \$15.00. Additional meal tickets are available for your spouse or guest. Additional information pertaining to the events and guest speakers at the convention will be forthcoming in the next issue of MMA News.

VIEW PROBLEMS AS
OPPORTUNITIES!

DAY & ZIMMERMANN GEOGRAPHIC INFORMATION SOLUTIONS (DZGIS)

Are you ready to move your mapping needs to a digital world? How do you convert and register dissimilar sources of mapping to your new base map? Can I work with both raster and vector images in my GIS? How do I integrate CAMA with GIS?

Day & Zimmermann has been providing Information Technology solutions to clients across the US for over 20 years. In 1994, the DZGIS Practice was formed to focus on providing solutions to existing and new clients. No new technology was developed, but a new approach combining common software, efficient processing and talented staff was implemented.

DZGIS provides three areas of service: (1) Program Management/Consulting?Integration; (2) Efficient and Timely Conversion; (3) Support to the Client in Application Development, Training and Implementation of a GIS.

Many clients have not taken the first step to move to a digital environment. DZGIS is supporting this using a series of building blocks to meet the client's needs and funding. This includes raster and vector integration, links to other data, hardware/software, geo-referencing, building topology, writing application programs and training. These building blocks can show results in the client's office within a month of project initiation.

Conversion of hardcopy source data and geo-referencing to a base map is a core business of DZGIS. Using a licensed software GeoFit, any vector or raster source can be geo-referenced through a triangulation process to meet the client's requirements. Parcels, land use, soils, planimetric and topographic data, FEMA data, utility features, roads, right of way, political boundaries, USGS quad maps, ETAK files, satellite photography, aerial photography, scanned Orthophotos; are all samples of data GeoFit to base maps by DZGIS.

Linking of Graphic and Attribute GIS information to CAMA systems is accomplished to allow the analysis required to manage our infrastructure. DZGIS is doing this with Cole Layer Trumble (one of the DZ companies) in several counties. Traditionally, CAMA has preceded GIS in many municipal governments. DZGIS is providing the GIS solution up front. CLT is then using the GIS data as a basis for the CAMA program.

In 1996, DZGIS converted over 4,000 map sheets from hardcopy to digital GIS. These included over 350,000 parcels, land use and soils, utility infrastructure, aerial photography and street center line files. Our digital deliveries and applications programming include AutoCAD, ArcInfo, MapInfo and Microstation.

For additional information, contact:
e-mail -brownwg@dayzim.com or Day & Zimmermann Geographic Information Solutions; Wes Brown, Sr. VP; Fairview Rd.; Charlotte, NC 28210.
Phone: (704)362-3289 Fax: (704)354-6278

ANNOUNCEMENTS

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For Sale/Wanted Column

Members, do you have mapping equipment you want to sell or purchase? We will advertise it for you in the MMA News free of charge. Send all information on type of equipment for sale/or wanted with your name and number to: Patty Williams, P.O. Box 565, Warrenton, MO 63383 or call Patty at (314)456-8885.

Board Meeting

The next quarterly board meeting is set for Friday July 25. The meeting will be held at Miller Management Services, Inc. in Columbia. Start time will be 10:00 a.m. and is scheduled to end by noon. Contact Jeff Davis (573-886-4262) for additional information. Your participation is encouraged.

Change Your Address?

If you have recently moved please let us know so you will receive the MMA News on schedule. Send address changes and corrections to: Gladys Smith; R2 Box 193B; Osceola, MO 64776.

Moving On

A special thank you is extended to Shelley Taylor for her help with the MMA organization. Shelley has moved to California. We wish her the very best and again thank her for all her help.

Dynamic Geographic Technologies, Inc. Moves

DGT, Inc. is pleased to announce that they are now located in the Historic Guitar Building in the heart of downtown Columbia, Missouri. The new number is: (573)874-3484. The new address is: 28 North Eighth St.; Suite 100; P.O. Box 434; Columbia, MO 65205-0434.

Help Needed With MMA News!

Do you have an announcement or do you want to share a bit of your knowledge with other MMA members? Send articles, photos or ideas to: MMA News; c/o BNH; 9801 Held Rd.; Hillsboro, MO 63050.

Day & Zimmermann
Information Solutions

Wesley G. Brown
Senior Vice President
GIS Practice

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FUNDAMENTALS OF A PARCEL-BASED GIS

George Yerion, L.S., Vice President of Computer A.C.E.S., Inc. is pleased to announce that Robert E. Myers, L.S., P.E., of Land Related Technology, will join him in presenting an educational seminar entitled Fundamentals of a Parcel-Based GIS (geographic information system) at six sites throughout Missouri. The seminar is an introduction to building a firm foundation for a versatile and accurate GIS and will include land parcel definitions, mapping basics, computer graphic basics, and building the parcel layer for a GIS.

Assessors, mappers, appraisers, and other governmental taxing authorities are personally invited to attend this full day seminar because many existing GIS's are now being rebuilt because they were not established on a good location framework. This seminar is scheduled for six locations around Missouri-Chillicothe, Ironton, St. Louis, Columbia, Warrensburg, and Springfield--in order to make it available to all interested parties. Scheduled dates are May 7 and 14, June 4 and 11, and July 2 and 9.

Intended for the person who must capture existing information onto a map or who wants to understand how to build a good framework for a GIS, the morning session will discuss topics involving the public land survey system, transfer of land titles, coordinate systems, map projections, base mapping, CAD vs. GIS, establishing controls, COGO (coordinate geometry), and "rubbersheeting". Discussion will emphasize how to build a good foundation that will allow versatility as the GIS gains wider acceptance and use.

The afternoon session will concentrate on Tools for Building a Parcel-Based GIS. This session is intended for the professional seeking software for platting, mapping, or building a GIS. Attendees will learn how to use inexpensive tools to plot deeds automatically for tracing onto manually inked maps; how to create a GIS; how to save time in plotting deeds and plats for inking. Demonstrations will include drawing metes-and bounds from land descriptions, automatic labeling and closure checks, "heads-up" digitizing, using GIS software for map queries, map production, and data analysis.

Mr. Myers is uniquely qualified to teach this seminar. Recently retired as the Missouri State Land Surveyor and Program Director of Natural Resources Division of Geology and Land Survey, Mr. Myers was responsible for the statewide Land Records Repository, preservation and remonumentation of the original government survey corners, and establishing standards for land surveys and geodetic control surveys in Missouri. Before working at Missouri DNR, Mr. Myers spent 25 years in private practice as a land surveyor and engineer.

Mr. Yerion is a Licensed Surveyor and as Past President of the St. Louis Chapter of Missouri Association of Registered Land Surveyors (MARLS) and Chairman of MARLS Vision 21 Committee, he is actively involved in educating the public about surveying and GIS. Mr. Yerion has 20 years of experience with COGO and other

computer-based mapping tools.

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Computer A.C.E.S., Inc. is a CAD/GIS consulting firm based in St. Louis and has been helping civil engineering and surveying firms become more productive through application of the appropriate technological tools for over four years. Computer A.C.E.S., Inc. is a licensed reseller of Nikon Surveying Instruments, Plus 3 Software's TERRAMODEL and ESRI's ArcView GIS.

For additional registration information contact George Yerion at (314)869-1223 or by mail at: Computer A.C.E.S., Inc.; 11220 W. Florissant Ave. #159; Florissant, MO 63033.

STATE TAX COMMISSION AND MO STATE ASSOCIATION OF COUNTY ASSESSORS 1996 ANNUAL MEETING RECAP

Those attending the annual conference December 1st thru 4th held at the Westport Holiday Inn in St. Louis seemed to enjoy the informative presentations and activities. Topics covered ranged from Federal Legislation affecting the telecommunications field to how assessors can stay out of the "hot box" when discussing higher taxes. For fun, people were shuttled to the Station Casino St. Charles for a great dinner and a night of hitting the slots.

Numerous hospitality rooms were open to the conference participants. They included Railroad, Utility & Corporate Sponsors, the Pro Val Corp., Computer Management, Western Air Maps, Business Records Corp., Government Systems Inc., and Affordable Blueprint Services. For the mapping enthusiasts Computer Aces, Inc and ESRI provided short classes and demonstrations throughout the annual meeting. Classes and demos were very informative, covering topics such as :ArcView GIS release 3.0 and Terramodel. Prizes were awarded periodically and most participants left these classes with an ESRI memento!



1. Senator Joe Maxwell spoke on Senate Bill 795 which deals with the school foundation formula and its relationship to the assessment of property. He explained the intent of the bill and how it is interpreted. Because of the complexity of the formula, many of those involved do not understand how the amount is derived for each school district. The formula is designed to give fair and equitable amounts per student throughout the state.

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2. Sarah Maxwell, an attorney working for the firm that handles the County Employees Retirement Fund, states that CERF is doing well and growing. They have paid out several death benefits and found that purchasing death benefits through an insurance company would be cost prohibitive. She also reported on the various offices within CERF, who is new and who will be replaced. In the future new ideas may be implemented that may enhance the retirement program.



3. Randy Turley of the State Tax Commission Counsel, Doug Burnett who is the newest member of the STC, Bruce Davis and Van E. Doley chairmen of the STC, discuss recent case decisions and the impact that those outcomes would have on the assessment of like properties.

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4. Johnny North Assessor of Laclede County (recently elected Vice-President of Missouri Assessor Association), Robert Boley director of Assessments at Jackson County, and Wayne Tenebaum Tax Specialist, are part of a panel "debating" the meaning of Market Value.



5. Mr. & Mrs. Daniel Franks, outgoing President of Missouri Assessors Association, expresses his thanks to those who gave their time and assistance to help make this a memorable year.

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OUTSTANDING MAPPER OF THE YEAR AWARD

APPLICATION

The "Outstanding Mapper of the Year" award is to be presented yearly at the Annual Meeting and is to honor an individual who has displayed outstanding qualities in the cadastral mapping field. The Award Committee will review the applications and make a recommendation to the Officers and Board of Directors for this award winner. Nominations will be accepted by employers or peers until July 1, 1997. Please keep in mind that nominations for this award requires no specific qualification. The person who makes the nomination should write a brief paragraph on why he or she feels this nominee merits the Outstanding Mapper of the Year Award.

Name of Nominee: _____

Employer: _____

Employers address: _____ Phone Nb. _____

I believe _____ should be nominated for Outstanding Mapper of the
Year because _____

(Continue on additional sheet)

Signature: _____ Phone Nb. _____

Address: _____

Mail Applications to : Stephanie Trejo, PMM
State Tax Commission
Rt. 1 Box 77
Elkland, MO 65644

A Typical Project for Orthophoto Base Maps

Written By

Bob A. Williams, Certified Photogrammetrist, Walker & Associates, Inc.

PART TWO OF THREE

Step 4--Digitize Digital Elevation Model (DEM)

A DEM is digitized by viewing the photography stereoscopically in a 3-D operation using precise measuring equipment. Points are digitized at elevation changes along creeks, streams, ridges, valley etc..., to create a 3-D representation of the terrain. The DEM is the source file to rectify the original photo imagery and create an accurate digital orthophoto.

Step 5--Scan Photography

Individual aerial photos are selected that best cover the existing map sheets. The photos are scanned using a precision scanner that maintains a high degree of accuracy. The original scan will be accomplished at a resolution or pixel size that will enable the accuracy, image quality and final plotting to be properly achieved. Approximately every-other exposure will be used in the scanning process.

Each raster file is checked to ensure a proper and consistent tone, as well as density, contrast, and brightness qualities. Each image will also be viewed on the screen at the approximate output scale, for image defects such as scratch lines, or other blemishes.

Step 6--Image Registration. On a digital orthophoto workstation, the camera fiducial marks are measured to obtain a row/column location in the image. The aerial photography and individual image orientation values obtained in the triangulation process will be used to control each individual image and register the uncorrected image file to the DEM file.

Step 7--Image Rectification. The DEM's will be used in conjunction with scanned image files to produce fully corrected orthophoto image files. A orthophoto is a image that has been fully correct to remove the errors caused by terrain relief, tip, tilt and swing of the camera and the lens distortion of the aerial camera.

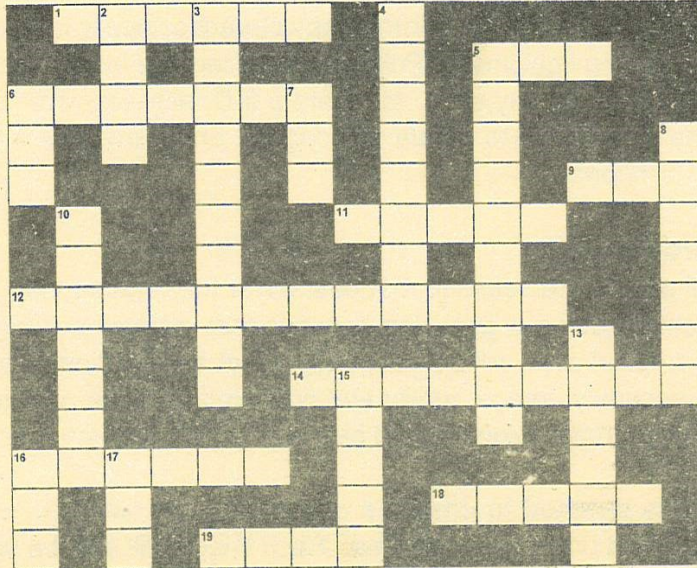
The orthophoto software differentially rectifies the image file on a pixel by pixel basis based upon the 3-D terrain or DEM file. The process removes image displacement that is caused by the factors mentioned above. The resulting digital orthophoto will have accurate x, y ground coordinates and a gray scale value for each pixel.

NOTE: The individual pixel size for the orthophoto image file for can be .50' , 1.0' or 2.0' resolution, depending on the map scales that are needed.

MISSOURI MAPPERS

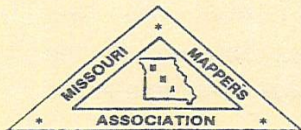
Across

1. One sixtieth of a minute of the circumference of a circle.
5. Professional Missouri Mapper (acr)
6. Person by whom a grant is made; the one who transfers the property.
9. A railroad track with two railway branches.
11. A land surveyor's measure equal to 66 or 100 links.
12. A person who makes maps as a profession.
14. The imperceptible addition of land to the shore of the ocean or the banks of a river.
16. 1/360th of the circumference of a circle.
18. The coating or texture on the surface of drafting film.
19. A written agreement, in proper legal form, which conveys title to, or interest in, realty.

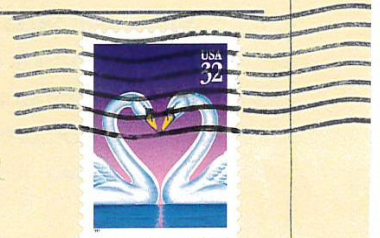


Down

2. "And others" or "and another" (Latin)
3. An aerial photograph whereby most scale and position distortions have been eliminated.
4. A nearly square area of land containing 36 sections.
5. A mechanical device used for measuring area.
6. General Land Office (acr)
7. A lineal unit of measure which equals 16.5' or 1/4 of a chain.
8. A one square mile of land containing 640 acres or one thirty-sixth of a township.
10. The person to whom a grant is made; the one who acquires property.
13. One-sixtieth of a degree of the circumference of a circle.
15. A straight line connecting the tangents of a curve.
16. Department of Transportation (acr)
17. Geographic Information System (acr)



**MISSOURI MAPPERS
ASSOCIATION**
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