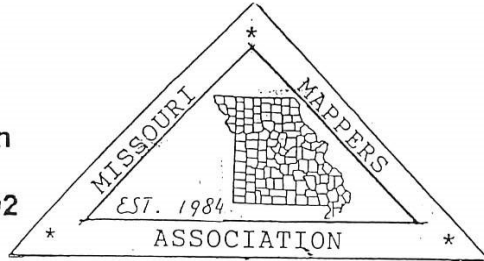


---

# M M A N E W S

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



October 2000  
Volume 16, Issue 4

---



2001 MMA Executive Board

Chris Matthews, Ken Agey, Jennifer Peterson,  
Barbara Kaszuba, Sarah Anderson, Patty Williams

## INSIDE THIS ISSUE

- \* MMA Committee Lists
- \* Board Meeting Dates
- \* Mapping Milestones
- \* Members Speak Out
- \* Biographical Corner
- \* 2000 MMA Awards

## A WORD FROM OUR PRESIDENT

I would, first of all, like to thank everyone who pitched in and helped pull off the 2000 Annual Convention. I am glad I had a great group of "seasoned" committee members to work with. I would also like to thank those members not on the committee that were asked to do little last minute things and did them without hesitation. Finally, I would like to thank those past Presidents for filling in the shoes for Teresa Barnes (1999-2000 President). I spoke with Teresa and told her about the Annual Meeting. She expressed her regrets at missing the Convention due to circumstances beyond her control, as she had to be there for someone else. Theresa also expressed thanks as the professional manner in which the Past Presidents and Board stepped in for her.

I am encouraged at the committee sign-ups and the reception of the Information Technology Committee. It appears that more people signed up for committees at the 2000 convention than in previous years. We will publish a committee list in most of the newsletters and people are welcome to join committees at any time.

Chris Matthews, MMA President

## Mapping Milestones

Eratosthenes (2000 –1900 BC) was (arguably) one of the phenomenal thinkers of ancient times. Among other things, he was the Director of the Library of Alexandria while still a young man, and also became an accomplished mathematician. Over two thousand years ago (200 BC) he calculated the circumference of the planet within about one-half percent accuracy. “Experts” criticized his with other widely varying figures in centuries following this, but in the end Eratosthenes has been shown to be remarkably accurate.

How did he do this? How did he get that close? Well some of it had to do with the luck of happenstance. Trading caravans told of a deep well (700 feet) in Syene (now Aswan), the bottom of which could be seen at noon on the Summer Solstice (June 21<sup>st</sup>). By chance, Alexandria was on the same meridian (North - South) and had a very high wall. The shadow cast by that wall at noon on the Summer Solstice was 7.2 degrees.

Slicing the planet through that meridian, we can visualize a thin slice of pie. The outer crust of the pie being the surface of the earth, the well is one side of the slice, and the line of the wall shadow the other. These lines project to the center of the earth, the central angle of the pie. That angle, 7.2 degrees was one-fiftieth the circumference of the planet. Now all that remained was to measure the distance between Syene and Alexandria and multiply that by fifty.

State of the art distance measuring was then carried out by **bematists**- professional walkers whose strides were accurate enough to chart property. But how could this be consistent? To be valid, a measuring device (as anything) must be faithfully reliable, consistent. It should do what it's supposed to do every time.

The book I read showed several bematists walking single file in a very straight line, as opposed to all bunched up- apparently a team effort.

Maintaining a straight line would seem much easier this way as the last one in line could keep an eye on the rest. Not only that, the measure of these strides would be based on a continuous rate of travel. Slower walking would be a shorter pace; sprinting would be longer. Staying in line would ensure a constant rate.

The deliberate part to me though, is that the statistics would compare most meaningfully if the individual's strides were different lengths.

Consider this: The four people below are apprentice bematists on a trial run. How good are they?

Name	Stride Lgth	# Strides	Calculates to
Dan	2.8'	1560	4368'
Chris	3.1'	1419	4399
Lolita	2.0'	2268	4536'
Beavis	6.0'	734	4404'
Average	3.475'	1495.25	4427'

Now these are just off the top of my head for demonstration and can be no more than food for thought. What does it give us to think about?

Let's say that an individuals stride may vary as much as much as 5%. Lolita is taking over three times as many strides as Beavis. So her measure should be the least reliable. In a real situation it probably would be off the most. Knowing this, we should award her measure the least credibility. What else would make a difference when measuring this way? How close could they really get?

Oh yes- Eratosthenes bematists found the piecrust to be about 500 miles between the well and the wall, calculating our planet to be to be 24,662 miles in circumference. This is only 200 miles off. . .

Next time: Where to from this?

How can this be compared to GPS?

Calculate the RMS error for our bematists.

Written By: Dan Reece

## MEMBER INPUT, INFORMATION, AND QUESTIONS

The following is from Christy Linhart, PMM, with Cooper County Assessor's office. If you have any suggestions for her, she can be reached at 660-882-2646 or fax her at 660-882-2640.

"Over the past 2 or 3 years, we have had 4 new fire districts formed which the boundary lines usually overlap into the neighboring county, this is not a problem. Our problem is that in 3 out of the 4 districts formed, the legal descriptions either overlap a previous district's boundaries, leave out small areas between district or have wrong directions, townships, ranges, etc. I have contacted the person that is overseeing the district, the lawyer that was responsible for the legalities for the district, talked with some of the taxpayers involved in the discrepancies, but to no avail. Nothing has ever been solved. I have spoken to our prosecuting attorney who has advised on how to handle the discrepancies and is going to send letters to the taxpayers and the districts involved. In a couple of the discrepancies we are going to use what was intended by the first district that was voted in, but this won't always solve the problem. If there is anybody that knows of something different that we haven't done or any of the legalities that could help or hurt us, I would appreciate the information."

### ACCEPTING CONTRIBUTIONS FOR THE MMA CONFERENCE EXHIBIT

Ideas and map submissions are needed for a convention exhibit that will be created to promote MMA at local and/or regional conferences and meetings. If you have any ideas about what should be included in this exhibit or want to submit eye catching maps or interesting historical documents, please contact Jennifer Peterson at (417) 831-8430 or email her [jpeterso@cityutil.com](mailto:jpeterso@cityutil.com).

We will also need people to help work the booth for thirty-minute or one hour blocks of time at the 6th Annual Missouri GIS Conference in Columbia, March 25-27, 2001. If you are planning to attend the conference, please sign up and support your organization while we work to increase our membership.

Watch MMA News for more details.

### BOARD MEETING DATES

Quarterly Board Meeting dates have been announced by Chris Matthews, MMA President.

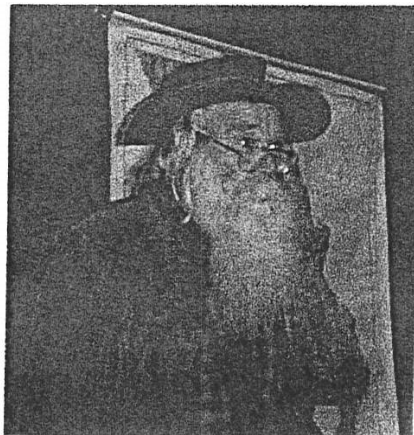
October 20, 2000

January 19, 2001

April 20, 2001

June 22, 2001

These meetings will be held at Sally's Restaurant in Vienna, MO, at 11:00 a.m. All members are invited to attend any or all meetings. Sally's Restaurant is located just south of the junction of Hwys. 42 & 63 on the west side of the highway.



NORMAN BROWN, SURVEYOR

### BIOGRAPHICAL CORNER

Chris Matthews was born in Chicago, Illinois and lived there and in New Jersey before his family moved to St. Louis, MO in 1973. After graduating from Parkway West High School, he received his Bachelor of Science in Geography from Southeast Missouri State University in May of 1984. Chris worked a couple of temporary surveying assistant jobs in southeast Missouri including one that involved Mississippi river channel blasting/dredging. Chris worked at Surdex Corporation for two years before joining St. Louis County Government in 1987 as a Cartographer and is approaching 14 years of employment there. Chris is married with 3 children (2 boys and 1 girl) ages 4, 7 & 11. They live in St. Peters, MO. Some of Chris' hobbies/interests include fishing, canoeing and swimming in his backyard pool.

## **SOUTHWEST CHAPTER**

June 2, 2000, the SW Chapter held it's spring meeting at Phelps Grove Park in Springfield, MO. Lyndel Link, from Ozark Mountain Surveying and King Coltrin from Great River Engineering volunteered their time, employees and equipment to provide us with a GPS demonstration. The survey crew worked in the spring showers while we received a basic explanation of GPS and how it is used for surveying. They provided specific examples of projects they work on and related some fun stories about surveying on a four wheeler. They also talked about surveying with a Total Station and the differences between the two.

September 29, 2000, the SW Chapter's fall meeting was hosted by the City of Springfield, GIS group. Wendell Ferrand, GIS Specialist, IS Department and Gary Smith, GIS Specialist, Planning Department, explained the history of GIS at the City of Springfield, and demonstrated several applications their areas have developed for use at the City. Some of these include the sewer look-up project, links to the assessor's database, the subdivision look-up project, zoom/view thresholds, the sidewalk survey project for ADA, an aerial photo comparison between meter resolution and three inch resolution, the administrative subdivisions project, the data inventory, (metadata) project, the process of getting new subdivisions into the map, and several zoning applications.

## **CHAPTER NEWS**

### **WEST CENTRAL CHAPTER**

The West Central District Chapter of Missouri Mappers Association met Friday, November 3, 2000, at 10:00 a.m. at MJ Harden Associates, Inc. in Kansas City. There were 11 Missouri Mappers representing seven counties and two members from the State Tax Commission present for the information program and tour. Randy Mayden presented a slide show which explained some of the business ventures in which MJ Harden is involved. After a tour of the mapping facilities, we were graciously served box lunches. After lunch, Julie Holtz presented a short slide presentation and then led us on a tour of the GIS facilities. We would like to thank MJ Harden Associates for giving us their time and a special thank you to Mike Cox for getting it all together.

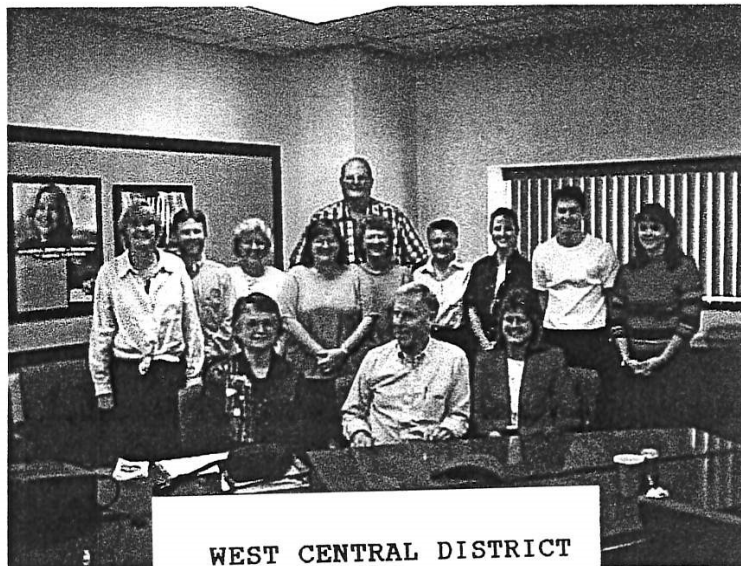
### **CENTRAL EAST CHAPTER**

Word from the Central East Chapter is that a reorganization is taking place after Eric Rodenburg resigned to relocate to another state. Any Central East members are asked to please submit information for the January newsletter.

### **SOUTHWEST CHAPTER-continued**

Our next meeting will be held December 1, 2000. It will be hosted by Sho-Me Power in Marshfield, MO. They plan to show their GIS system that is in Smallworld, and to talk about how they inventories transmission poles using GPS in helicopters. We will also be electing officers for the new year. Please have nominations ready for the offices of President, Vice President & Secretary/Treasurer.

If you would like more information, please contact Jennifer Peterson at 417-831-8430 or [jpeterso@cityutil.com](mailto:jpeterso@cityutil.com)

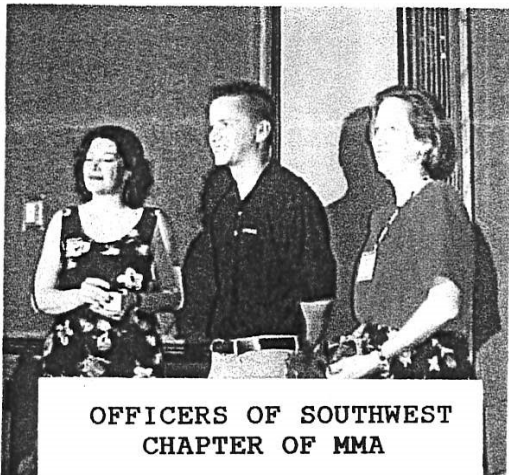


**WEST CENTRAL DISTRICT  
CHAPTER OF MMA**



**MEMBERSHIP COMMITTEE REPORT**  
By Gladys Smith

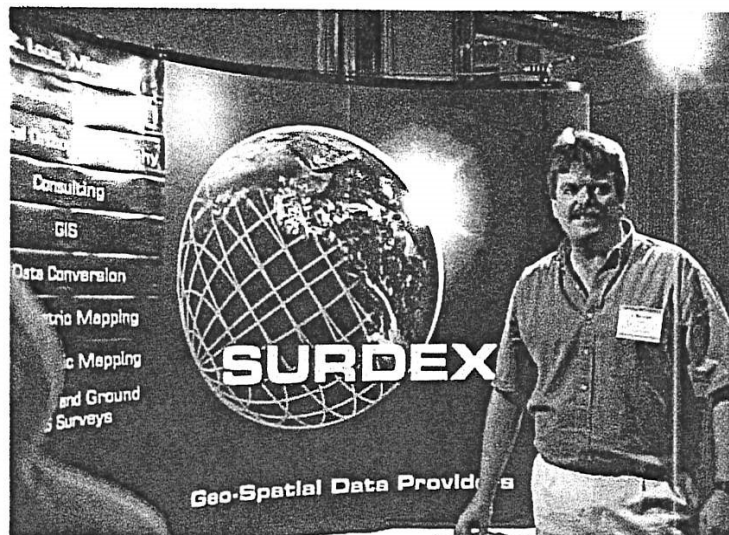
Membership is looking good. Renewal notices were sent out in August, and we had a good response. There are currently 67 counties with 206 paid members. Newsletters are being sent to everyone this time, but those members not renewed will be dropped from the publication list and will not receive future newsletters. Please check your mailing label to see if you are renewed so you won't miss any publications. Also, for you new members, if you did not receive a Missouri Mapper's Association certificate, let me know, and I will see that you get one.



**OFFICERS OF SOUTHWEST  
CHAPTER OF MMA**



**SOME OF OUR ALL IMPORTANT SPONSORS**



## AWARDS 2000

Congratulations to those who received awards at the 16th Annual Missouri Mappers Association Meeting!

The **Mapper of the Year** went to Debbie Booher from the Scott County Assessor's Office, and recognition was given to Robin Mooty from Stoddard County.

This year's **Fireball** award went to Jennifer Peterson of City Utilities in Springfield. As a relative newcomer to the organization, she has managed to jump in to help at a moment's notice. Her zeal and dedication to Missouri Mappers Association is greatly appreciated.

Kyle Gjerdulsen, who instructed several courses throughout the year, and has helped to educate fellow mappers, was given the **Education** award.

Chris Matthews' hard work in putting an excellent program together deserves applause. His efforts earned him the **Annual Meeting** award for chairing this committee.

This year's **Board Members**, Linda Crane, PMM, Immediate Past President; Teresa Barnes, President; Chris Matthews, Vice-President; Barbara Kaszuba, PMM, Secretary; Patty Williams, Treasurer; Ken Agey, Director; Sarah Anderson, Director, all received recognition for their hard work and dedication.

The officers of the district chapters were also recognized. They are:

**Southwest Chapter:**

Kyle Gjerdulsen, President

**West Central Chapter:**

Dan Roe, PMM, Chairperson

**Central East Chapter:**

Eric Rodenberg, Chairperson

George Brown, Vice-Chair

Stacey Priest, Secretary

Belinka Novotny-Held, PMM, Treasurer

Then a special recognition was given Committee Chairs who have held the position for 3 or more years -

**Publication**-Ken Agey

**Membership**-Gladys Smith

**Awards**-Stephanie Trejo

A very special thank you was extended to Krissy Williams for her untiring

efforts in the production of the convention booklet

The individual and corporate efforts of everyone involved contributed to the success of another year.

Their, and your, participation and dedication is greatly appreciated. Thanks again!!!!

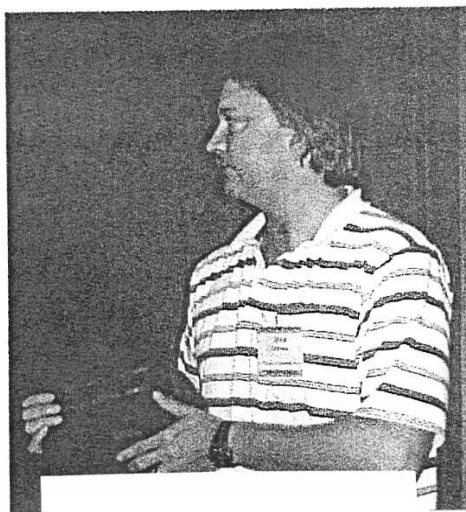
Respectfully submitted,  
Belinka Novotny-Held, PMM  
Awards Chairperson



MAPPER OF THE YEAR  
DEBBIE BOOHER



KYLE GJERULDSSEN



CHRIS MATTHEWS



BELINKA NOVOTNY-HELD

## Missouri Mappers Association 2000 Committee Lists

- Committee Chair's. are in bold- type
- Information was taken from registration Forms
- Information can be updated and reprinted w/ newsletters
- Individuals can be added to committees

### Annual Meeting:

**Julie Holtz** 816-889-1156 [jholtz@mjharden.com](mailto:jholtz@mjharden.com)  
Kim Swisher (exhibitors) 636-343-6111 [kswisher@walkerassociates.com](mailto:kswisher@walkerassociates.com)  
Mike Cox (Golf Tournament) 816-889-1311 [mcox@mjharden.com](mailto:mcox@mjharden.com)  
Mary Ann Kaiser 573-499-4814 [mak@mmsgis.com](mailto:mak@mmsgis.com)  
Carol Misener 636-583-6389 [cmarie@usmo.com](mailto:cmarie@usmo.com)  
Belinka Novotny-Held 636-797-5467 [b\\_held@hotmail.com](mailto:b_held@hotmail.com)  
Patty Williams 636-456-8885 [krissyw@mocly.com](mailto:krissyw@mocly.com)  
Chris Matthews 314-615-4239 [chris\\_mathews@stlouisco.com](mailto:chris_mathews@stlouisco.com)

### Awards

**Belinka Novotny-Held** 636-797-5467 [b\\_held@hotmail.com](mailto:b_held@hotmail.com)  
Patty Williams 636-456-8885 [krissyw@mocly.com](mailto:krissyw@mocly.com)  
Linda Crane 573-886-4260 [lindacrane@boonecountymmo.org](mailto:lindacrane@boonecountymmo.org)  
Loyola Vondera 636-583-6390  
Stephanie Trejo 573-751-1735 [trejothecat@hotmail.com](mailto:trejothecat@hotmail.com)

### Certification

**Marti Buckner** 417-745-6346  
Jeff Davis 573-886-4262 [jdavis@mail.boonecountymmo.org](mailto:jdavis@mail.boonecountymmo.org)  
Loyola Vondera 636-583-6390  
Tim Houtchens 417-546-7242 [timh@co.taney.mo.us](mailto:timh@co.taney.mo.us)  
Stephanie Trejo 573-751-1735 [trejothecat@hotmail.com](mailto:trejothecat@hotmail.com)  
Gary Drennan 417-725-4663 [gadren@aol.com](mailto:gadren@aol.com)  
Stan Balsman 573-547-8357  
Barbara Kaszuba 417-451-8229 [barbara\\_64850@yahoo.com](mailto:barbara_64850@yahoo.com)  
Belinka Novotny-Held 636-797-5467 [b\\_held@hotmail.com](mailto:b_held@hotmail.com)

### Education

**Kyle Gjeruldsen** 417-882-7331 [kjeruldsen@csinetwork.com](mailto:kjeruldsen@csinetwork.com)  
Carl Sohn 636-583-6389  
Jennifer Peterson 417-831-8430 [jpeterso@cityutil.com](mailto:jpeterso@cityutil.com)  
Gary Drennan 417-725-4663 [gadren@aol.com](mailto:gadren@aol.com)

### Historical

**Linda Crane** 573-886-4260 [lindacrane@boonecountymmo.org](mailto:lindacrane@boonecountymmo.org)  
Maria Hughes 636-949-7900 [mhughes02@mail.win.org](mailto:mhughes02@mail.win.org)

### Information Technology

**Jennifer Peterson** 417-831-8430 [jpeterso@cityutil.com](mailto:jpeterso@cityutil.com)  
Kevin Rasmussen 573-364-1891 [kevinras@rollanet.org](mailto:kevinras@rollanet.org)  
Ken Agey 816-889-1129 [kagey@mjharden.com](mailto:kagey@mjharden.com)  
Kyle Gjeruldsen 417-882-7331 [kjeruldsen@csinetwork.com](mailto:kjeruldsen@csinetwork.com)  
Chris Matthews 314-615-4239 [chris\\_mathews@stlouisco.com](mailto:chris_mathews@stlouisco.com)  
Stan Balsman 573-547-8357  
J. Michael Brown 636-532-3427 [michaelb@surdex.com](mailto:michaelb@surdex.com)  
Stephen Daw 816-756-0444 [daw@skw-inc.com](mailto:daw@skw-inc.com)  
Mike Sutherland 636-456-8885 [wcassessor@mocly.com](mailto:wcassessor@mocly.com)

### Legislation

**Darrel King** 573-796-4637 [montcnty@socket.net](mailto:montcnty@socket.net)  
Mike Sutherland 636-456-8885 [wcassessor@mocly.com](mailto:wcassessor@mocly.com)  
George Frink 660-248-3400  
Marion Tibbs 573-686-8084 [mltibbs@ims-1.com](mailto:mltibbs@ims-1.com)

### Membership

**Gladys Smith** 417-646-8880 [glad@tri-lakes.net](mailto:glad@tri-lakes.net)  
Mary Ann Kaiser 573-499-4814 [mak@mmsgis.com](mailto:mak@mmsgis.com)  
Sarah Anderson 573-243-3123  
Stephanie Trejo 573-751-1735 [trejothecat@hotmail.com](mailto:trejothecat@hotmail.com)  
Maria Hughes 636-949-7900 [mhughes02@mail.win.org](mailto:mhughes02@mail.win.org)  
Kay Schenewark 660-438-53223

### Publication

**Marti Buckner** 417-745-6346  
Gladys Smith 417-646-8880 [glad@tri-lakes.net](mailto:glad@tri-lakes.net)  
Mary Ann Kaiser 573-499-4814 [mak@mmsgis.com](mailto:mak@mmsgis.com)  
Chris Matthews 314-615-4239 [chris\\_mathews@stlouisco.com](mailto:chris_mathews@stlouisco.com)

## INFORMATION TECHNOLOGY COMMITTEE NEW OR REFORMED?

At the July, 2000 Annual Conference Business meeting, our organization accepted the change or reformulation of the former CAD (Computer Aided Drafting) Committee to the "Information Technology" Committee. Some may wonder what exactly this means and/or what happened to the CAD Committee. The CAD committee was always closely related to the Education committee, and the Info. Tech. Committee will also have close ties to the Education Committee. Often, activity within the CAD committee was nonexistent and reports were seldom submitted. The Education committee actually had more CAD related activities since around 1995 when some Computer aided drafting content was introduced at some regional workshops.

The Info. Tech. committee, as well as the Education committee, will absorb the functions of the former CAD Committee (whose original function was to have a common ground for ideas and concepts related to computer aided mapping). This could include methods of verifying plat out boundary closure up to true Geographic Info systems where many types of information (data) could be queries from a single point (tax id or parcel id numbers).

We could define the Information Technology Committee as follows:-provides a location in the form of a web site to inform and disseminate organizational information to members and to promote the organization to non-members.

Although the Info Tech Committee and the related website will require a lot of development work, it will eventually be the ultimate source of information for our organization. After being both a committee member and board member, it seemed a lot of time was spent "rifling" through drawers and folders to find various MMA forms for names, dates or lists of phone numbers. Often times I was trying to find information for another person who had already made a few calls to get someone's name or number. Since we all volunteer our time to the organization on a very part-time basis, this information is not always at our fingertips. Hopefully, a website will help all of us conduct our business swiftly and also provide a place for members to interact and express thoughts easier.

More news on the Information Technology Committee will be forthcoming in future issues of our newsletter as Jennifer Peterson (Comm. Chair) and the rest of the committee work hard to get the MMA site, "missourimappers.org" under construction.

Submitted by-  
Chris Matthews  
MMA President

## SUBMISSIONS TO MMA NEWS

Your business card or digital artwork can be published in the next three issues of the MMA News for only \$25.00! I also need articles about your county or company news by December 31, 2000, for the January, 2001, issue of MMA News. Please send your ads, articles, or other information to:

Marti Buckner, PMM  
Hickory County Assessor's Office  
P.O. Box 97  
Hermitage, MO 65668  
Tel: (417) 745-6346  
Fax: (417) 745-6715

## MMA CALENDAR OF EVENTS

Nov 19-21, 2000	MO Assoc. of Counties Conference	St. Louis, MO
Dec 1, 2000	SW MO Chapter MMA (Sho-ME Power)	Marshfield, MO
Jan 19, 2001	MMA Executive Board Meeting	Vienna, MO
Apr 20, 2001	MMA Executive Board Meeting	Vienna, MO
Jun 22, 2001	MMA Executive Board Meeting	Vienna, MO

## MMA NEWS

%Marti Buckner, PMM  
Hickory County Assessor's Office  
P.O. Box 97  
Hermitage, MO 65668



**JOEL ZITTERICH**  
GIS Project Consultant

1531 Airport Road, Suite 2  
Ames, IA 50010-8230  
Ph: 515.233.3311  
Fax: 515.233.4575  
Cell: 515.231.0848

www.promap.com      zitterich@promap.com

Buckner, Martha K PMM Exp 8-1-01  
Hickory County  
PO Box 314  
Hermitage, MO 65668