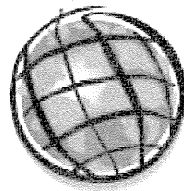


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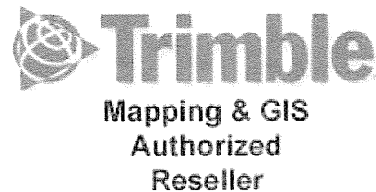
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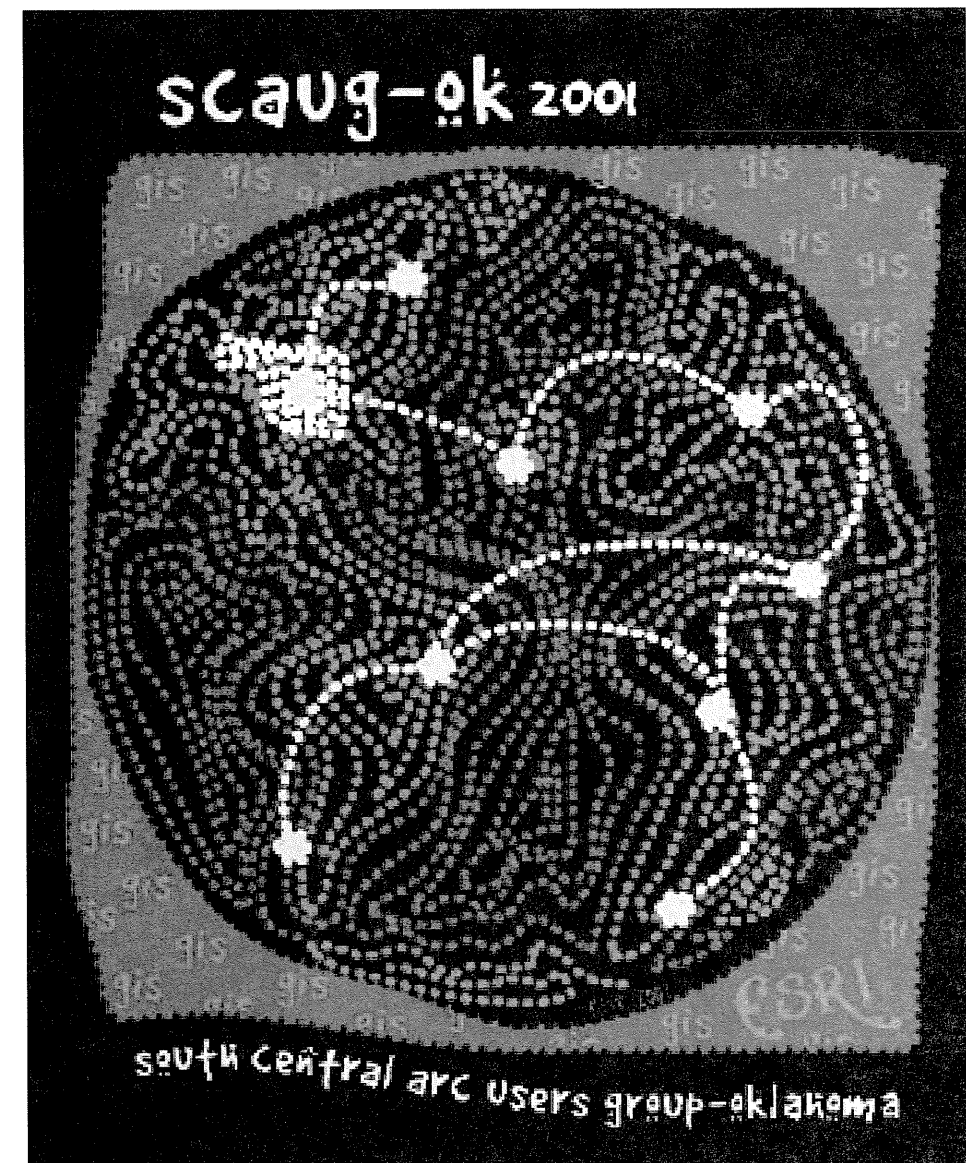
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## *SCAUG Oklahoma 2001*



## *ARC User Conference*

*September 20th*

*Moore Norman Technology Center  
Norman, Oklahoma*

## New Release! PMCgis for ArcGIS™ 8

◀ BIG NEWS FROM PMC

FEWER CLICKS = MORE PRODUCTIVITY

The Scaleable Solution!

PMCgis 8.1 is available as 7 different extensions, including the popular COGO extension.

### Extensions include:

#### COGO

Create or edit data from original sources using PMC's coordinate geometry tools.

#### Extended Editing Tools

A suite of editing tools with the following features and enhancements: annotation, copy to layer, attribute editing, image catalog, and address locator.

#### Splitting Wizards

A collection of easy to use parcel splitting wizards that includes the right-of-way builder, multiple lots, basic description, and grid.

#### Navigation & Query Forms

A collection of viewing features that includes reports, show area, show angle, overview, and queries.

#### Automated Printing

Tools designed to print map books.

#### Agricultural Land Valuation

Automatically calculates reports, and certifies agland values from soil survey and land cover classifications, based on user-determined parameters.

#### Quality Control

Tools designed to identify and report data discrepancies.

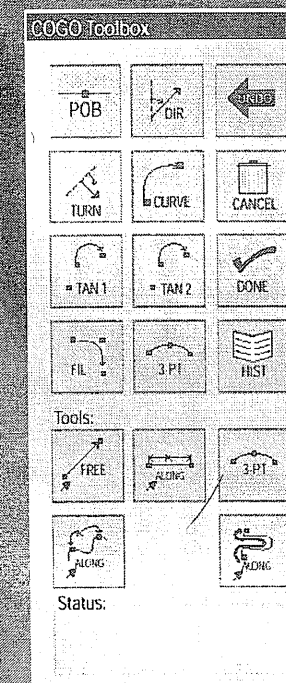


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## Pump Up Your ArcGIS™ with PMCgis!

# ArcGIS™ is even more powerful with tools from PMC.

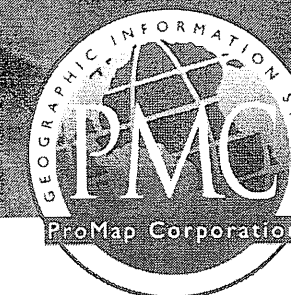
PMCgis 8.1 is the fourth generation of PMCgis extensions. It is the most inclusive version in this distinguished line of products and is an affordable enhancement to your GIS.



These tools allow you to use given measurements such as bearings, dimensions, and curve parameters to accurately build and maintain your data in ArcView. Plus, avoid complex math by allowing the tools to calculate missing information.

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PMCgis Toolbox 3.x is still available for only \$960!

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515/233-3311 • [info@pmcgis.com](mailto:info@pmcgis.com) • [www.pmcgis.com](http://www.pmcgis.com)

# User Poster Presentations

## Building a Municipal GIS for the City of Bixby

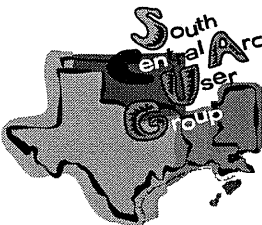
In many small towns across Oklahoma, traditional methods of gathering and storing municipal information are often time consuming and cumbersome. Organizing and accessing this data presents many problems for workers to quickly obtain the information needed to complete a job or start a project. Geographic Information Systems (GIS) offers an opportunity to actively store and access much of the property and land use information associated with municipal databases.

Meshek & Associates Incorporated specializes in helping smaller communities develop and inventory their municipal resources for better planning, maintenance, and prioritization of capital expenditures. Over the past couple of years, Meshek & Associates Inc. has worked closely with the city of Bixby to develop a GIS system using ESRI's ArcView to store its data. The poster that accompanies this abstract is an example of the GIS output available to the City of Bixby. The poster summarizes the work done for Bixby's Comprehensive Plan Update. Meshek & Associates Inc. teamed up with Stephen D Carr and Associates to update the database, maps, and written plan for Bixby. The GIS database and maps were generated from the original paper map comprehensive plan developed by Stephen D Carr. Having Bixby's Comprehensive Plan data in a GIS allows for quick access to property, utility, and land use information. Also, updates to the database can occur quickly and more frequently.

Meshek & Associates Inc. GIS Team  
Meredith Reeder (mreeder@meshekengr.com)  
Chris Hill (chill@meshekengr.com)  
Jena Daughhetee (jdaughhetee@meshekengr.com)

Meshek and Associates  
20 West 2nd Street - Suite 200  
Sand Springs, OK 74063  
Phone:(918)241-2803  
Fax:(918)241-9245

Poster Type: Communicative Poster  
Software used: ArcView, Blue Marble Geographics, Microstation



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User Poster Presentations.....15-18

# Oklahoma Arc User Conference 2001

South Central Arc User Group  
Oklahoma Chapter

September 20, 2001  
Moore Norman Technology Center  
Norman, Oklahoma

Greetings and Welcome,

We are very pleased to host the fifth annual conference of the Oklahoma Chapter of the South Central ARC User Group. Each year the conference has grown and we hope you find both professional benefit and personal pleasure in learning and sharing information here.

A sincere thank you to the ESRI San Antonio Office for the many contributions they have made to this conference: staff, equipment and prizes. We are also grateful to the corporations who are supporting this event by being exhibitors, advertisers and sponsoring the social event.

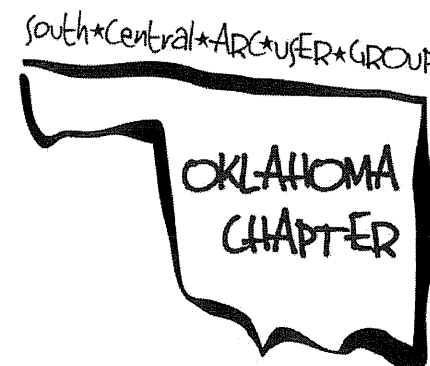
Special recognition is due to Cari Harris for her time, effort, and know-how in organizing this conference.

Enjoy yourselves, improve your skills and we look forward to seeing you again next year.

Sincerely,

The Steering Committee:

Cari Harris  
Steve Banks  
Kate Seney  
Scott McKinney  
Shellie Rudd  
Jerry Wright  
Kevin Koon  
Gary McElhaney  
Kara Flynn



## User Poster Presentations

Vegetation Diversity Analysis of the Tallgrass Prairie Preserve, Osage County

Peter G. Earls<sup>1</sup> and Michael W. Palmer<sup>2</sup>

Department of Botany, Oklahoma State University

We developed a GIS of the The Nature Conservancy's (TNC) Tallgrass Prairie Preserve (TGP) that contains several layers including prescribed burns, pastures, permanent vegetation monitoring plots, 30m-resolution DEMs, soil types, and 1m-resolution panchromatic DOQQs. From these layers we derived raster layers depicting burn history, grazing history, topography, woody vegetation, and DOQQ spectral variation and percent tree canopy cover at several scales.

We utilized these layers and species composition data from the plots to model several vegetation diversity indices across the entire preserve. The models are intended to aid TNC in restoring a functional tallgrass prairie ecosystem in the TGP and to explore tools for botanists in perfecting species lists.

We utilized the above layers to perform regression and ordination analyses, the results of which were used to derive maps of species richness, rarity, and composition. We developed a map of unusual habits that presumably would contain infrequently occurring species within the TGP. This latter map highlights locations that are on the extrema of several ranges of the above layers and was computed by summing Euclidean distances from the means of these ranges.

<sup>1&2</sup> mailing address: Botany, LSE 104, Oklahoma State University, Stillwater OK 74078

fax: 405.744.7074 (Attn: Botany)

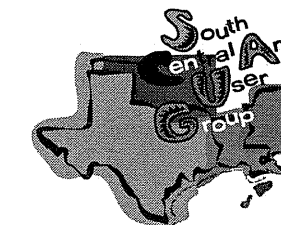
<sup>1</sup> telephone: 405.744.8974; email: earlsp@okstate.edu

<sup>2</sup> telephone: 405.744.7717; email: carex@okstate.edu

Poster presentation category: Analytical

Hardware used: Windows PC, Trimble GeoExplorer GPS receiver

Software used: ArcInfo Workstation, ArcView 3, SPSS, CANOCO, Pathfinder Office





## User Poster Presentations

Poster

Category: Analytical

Title: Intelligent Transportation Corridor Assessment Software

Abstract:

Vieux & Associates, Inc. is under contract with the U. S. Department of Transportation to develop software to help transportation organizations avoid conflicts and minimize impacts when planning transportation corridors in urban and rural areas. Potential conflicts would include environmental, land use, cultural, and social impacts associated with the need to expand transportation capacity to accommodate growing populations and travel needs. Vieux & Associates, Inc. proposes the Intelligent Transportation Corridor Assessment Software (ITCAS), which will allow transportation planners to access, query, and analyze data and evaluate alternative transportation options within a consistent framework. The effort envisioned will permit traditional buffer/overlay analysis, data and format manipulation, specification of decision rules, sensitivity analysis, least impact alignment determination, and Internet links to central data and information repositories. This poster illustrates the software tools and two analytical approaches ITCAS provides.

Software/Hardware: ArcGIS, VB6.0, Microsoft2000, Dual PIII, 1G, 2G RAM, 64M AGP Graphics

Author: Jean E. Vieux

Company: Vieux & Associates, Inc.

Address: 1215 Crossroads Blvd., Suite 118

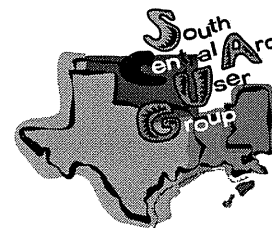
Norman, OK 73072-3359

Phone: 405 292-6259

Fax: 405 292-6258

Email: [jv@vieuxinc.com](mailto:jv@vieuxinc.com)

Website: [www.vieuxinc.com](http://www.vieuxinc.com)



## Exhibitors

MARKHURD

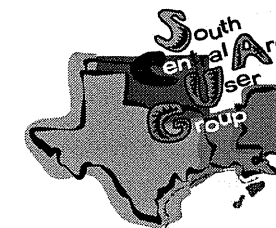
Western Data Systems

Topographic Mapping Company/Locarta

Strategic Consulting International

Azteca Systems

Environmental  
Systems Research, Institute



# Your GIS and Mapping Connection

## Project Management ~

- ✧ Consulting
- ✧ Setup
- ✧ Technical Support
- ✧ Conversion

## ESRI Software & Training ~

- ✧ ArcView 8.1
- ✧ ArcView 3.2
- ✧ ArcView Extensions
- ✧ Custom Training Classes

## Data Available ~

- ✧ Oklahoma Digital County Map Book
- ✧ Land Grid
- ✧ Culture
- ✧ Aerial Photos
- ✧ Satellite Imagery
- ✧ ESRI Data Sets
- ✧ T.E.S.S. Grid
- ✧ Tiger Data
- ✧ TexaGraphics
- ✧ GPS Base Data
- ✧ USGS Raster Quads

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## Next Regional SCAUG Conference!

Radisson Plaza Hotel Fort Worth, February 16-22, 2002.

Betsi Chatham - SCAUG Conference Coordinator

### BULLETIN!

The regional SCAUG newsletter, ARC FILES, is in search of articles for the upcoming newsletters. If anyone is interested in sharing with SCAUG members about a project or a story dealing with GIS please submit an article. Please contact Kevin Koon and he will send the articles to Publications Coordinator - Duane Dankesreiter

Contact:  
Kevin Koon  
Oklahoma Water Resources Board  
405-530-8800  
kqkoon@owrb.state.ok.us.

## User Poster Presentations

**Title: Using GIS to Quantify Landscape Level Vegetation Change:  
An Example from Pontotoc Ridge and Surrounding Area 1871-1995**

Category: Analytical

Software Used: ArcInfo 8.0 and 8.1 (switched when new version released),  
ArcView 3.2, Patch Analyst 2.2

Todd Fagin\* and Bruce Hoagland\*\*

\* University of Oklahoma, Department of Geography tfagin@ou.edu 405-325-9008

\*\* University of Oklahoma, Department of Geography and Oklahoma Biological Survey  
bhoagland@ou.edu 405-325-0562

### Abstract

The ecological consequences of changes in landscape level vegetation structure are of great interest in conservation and plant community research. In order to assess these effects, it is necessary to establish a baseline from which subsequent change can be gauged. In this study, we analyze historic data in order to understand landscape structure on The Nature Conservancy's Pontotoc Ridge Preserve and surrounding area, located in south-central Oklahoma. We accomplished this by digitizing 1871 and 1897 General Land Office survey plat maps, 1940 and 1960 USDA aerial photographs, and 1995 digital orthophotograph quadrangles using ArcInfo 8.0 and 8.1. We generated generalized vegetation coverages, as well as roads, settlement, and hydrology coverages. We then analyzed the landscape structure for each historic snapshot using Patch Analyst 2.2.

**Title: "Census 2000: A 3-D Perspective"**

Oklahoma City examined Census 2000 and Census 1990 data using ArcGIS 3D Analyst 8.1 and ArcMap 8.1. This analysis compared population, population density, and population change by census tracts from decennial censuses. ArcGIS 3D analyst provided unique ways of viewing the data in comparison to the usual 2D maps and charts.

Bob Sweet, City of Oklahoma City  
Information Technology, Geographic Support  
Bob.sweet@ci.okc.ok.us  
Phone: (405) 297-2616  
Facsimile: (405) 297-3007

# User Presentations

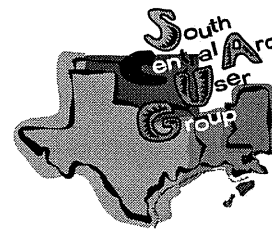
## Title: Tulsa Police Department Crime Mapping Project

Abstract: Corporal Tom Vallely and Officer Neal Walters of the Tulsa Police Department Crime Analysis Unit will present a short synopsis of the crime mapping project initiated last year. They will discuss the need for the project, what has been accomplished and how the project was accepted by the public and the officers of the department.

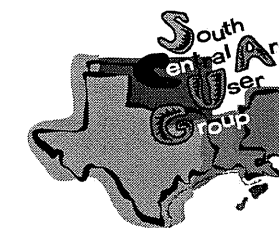
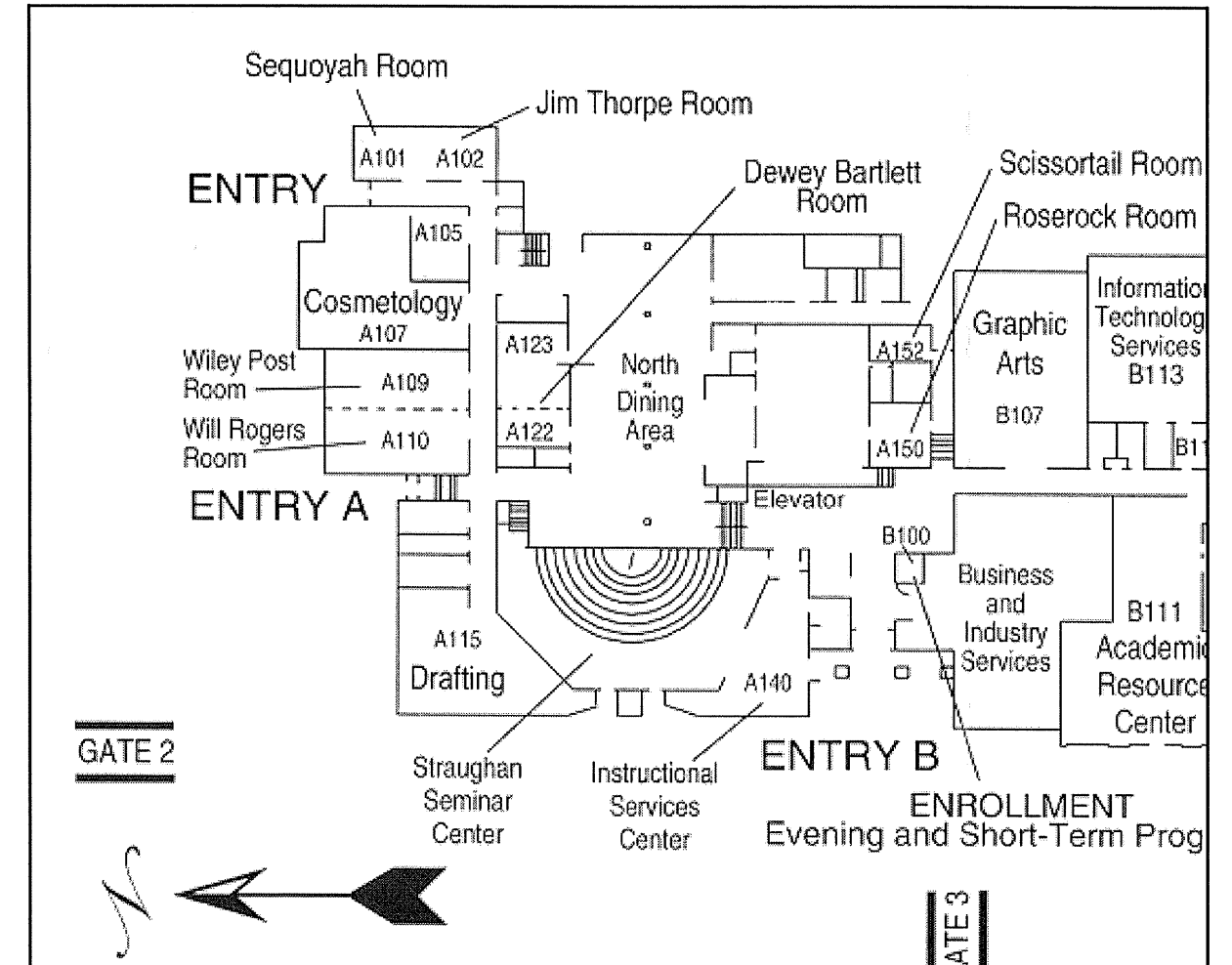
They will demonstrate the public and internal crime mapping sites and answer questions about the project.

Presenters will be Cpl. Tom Vallely Tulsa Police Crime Analysis Unit  
email: [tvallely@ci.tulsa.ok.us](mailto:tvallely@ci.tulsa.ok.us)  
Phone: (918) 596-1352  
Officer Neal Walters Tulsa Police Crime Analysis Unit  
email: [nwalters@ci.tulsa.ok.us](mailto:nwalters@ci.tulsa.ok.us)  
Phone: (918) 596-9121  
600 Civic Center Room 103  
Tulsa, OK 74103

Cpl. Tom Vallely  
Crime Trend Analysis Group  
Office: (918) 596-1352  
Fax: (918) 596-0799  
<http://www.tulsapolice.org>



## Conference Area Layout Moore Norman Technology Center



# Agenda

8:00	Registration opens with Vendors Exhibits		
8:30 - 8:50	Welcome Seminar Center		
9:00 - 11:30	ESRI Doctors Office Dining Area		
	Seminar Center		Jim Thorpe Room
9:00- 9:50	Strategic Consulting International (SCI)	9:00-9:25	Lori Manley, Locarta Vehicle Tracking for the ESRI User
		9:25-9:50	Kevin Koon, Mike Sughru Oklahoma Water Resources Board Bathymetry: New Technologies in Lake Contour Mapping
10:00-10:25	John Peterson Lizard Tech Compression & Data Mgt. of Documents & Digital Imagery	10:00-10:50	Sara Cobb, City of Edmond GIS in the City of Edmond
10:25-10:50	Cpl. Tom Vallely, Officer Neal Walters Tulsa Police Department Crime Mapping Project		
10:50-12:30	Poster Competition/ Lunch North Dining Area		
12:45 - 1:45	Keynote Seminar Center	David J. Maguire, Ph.D. (ESRI) Director of Products, Solutions & International	
1:45-4:15	ESRI User Recap of the ESRI User Conference which was held this past July in San Diego. See new advances in ESRI software and listen to ESRI discuss the future of ESRI software.		
User Poster Presentations			
	Oklahoma Water Resources Board	Vieux & Assoc., Inc	City of Oklahoma City
	Meshek & Associates		Dept. of Botany, Oklahoma State University
4:15	Closing Seminar Center		
	Conference Survey Awards Door Prizes		


# User Presentations

THE LOCARTA 2020 FOR ARCVIEW TRACKING ANALYST  
VEHICLE TRACKING FOR THE ESRI USER  
LORI MANLEY, LOCARTA TECHNOLOGIES, INC.


The Locarta 2020 for ArcView Tracking Analyst is a vehicle location solution that combines GPS, a micro-controller and a CDPD transceiver to communicate with ESRI's ArcView Tracking Analyst using an Internet connection. Through the easy-to-use Locarta 2020 in-vehicle hardware and Locarta Dashboard software, Tracking Analyst displays your vehicles in ArcView in real-time.


The Locarta 2020 hardware device measures only 5"x5"x1". It easily fits under car seats or in other out-of-the-way spaces in the vehicle. The Locarta Dashboard software that is included with the Locarta 2020 package controls the many features associated with the 2020 unit. Fully customizable and compatible with any ArcView data including Street Map, the Locarta 2020 vehicle tracking system is the affordable solution for the ESRI User.

The presentation will demonstrate how the Locarta 2020 for ArcView Tracking Analyst can benefit your company or agency. Save time, money and effort in creating maps and routes and use data that you can create and control yourself. The road ahead for Tracking Analyst will be discussed as well and how the Locarta 2020 will be affected.



Locarta Technologies, Inc.  
6709 North Classen Blvd.  
Oklahoma City, OK 73116  
405/841-2020  
www.locarta.com






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- ✦ Easy-to-Use and Affordable

Vehicle Tracking for the ESRI User





# User Presentations

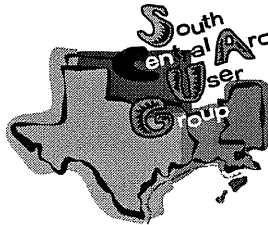
**Title:** Bathymetry: New Technologies in Lake Contour Mapping

**Software:** ArcView 3.2, ARCINFO, GRID, Coastal Oceanographics Hypack 9.0, Hypack Max  
**Hardware:** Raytheon Fathometer, Trimble Ag122GPS,

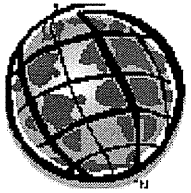
The Oklahoma Water Resources Board bathymetric mapping program began in 1999, when the agency contracted with the City of Oklahoma City to map their water supply reservoirs. This project included Lakes Atoka, Hefner, McGee Creek, Overholser, and Stanley Draper. The Water Board has also completed bathymetric studies for the City of Tulsa on Lakes Eucha and Spavinaw, and for the City of Fredrick on their water supply reservoir. Bathymetric studies were also performed on Lakes Sardis and Hugo for the Kiamichi River Development Project. The OWRB is currently under contract to perform future surveys on Lakes Murray, Thunderbird, and Wister.

This presentation will present the steps taken to obtain a final coverage, which includes location and depth information for each collected point. Presentation topics will focus on GPS data collection techniques, preparation of data prior to field collection, editing collected data, converting over to GIS, GIS analysis of the data, and final map production of bathymetric maps. Using the point coverage, a grid can be created showing the lake bottom surface. Contours and volume calculations can then be derived from the surface grid. This new technology provides updated information on the status of our reservoir volumes, and creates baseline data for future sedimentation rate determinations.

**Presenters:** Mike Sughru; Kevin Koon  
**Organization:** Oklahoma Water Resources Board  
3800 N. Classen Blvd  
Oklahoma City, OK 73118  
Kqkoon@owrb.state.ok.us  
Mpsughru@owrb.state.ok.us  
405.530.8800



# Keynote Speaker



**David J. Maguire, Ph.D.**  
Director of Products, Solutions and International  
Environmental Systems Research Institute (ESRI)

## Specific Responsibilities

Responsibility for coordinating company-wide product development, GIS solutions and international business. Joined ESRI in 1990.

## Past Experiences

Formerly Technical and then Managing Director of ESRI (UK). Prior to joining ESRI, Lecturer in GIS at the University of Leicester, UK.

## Educational Information

BSc in Biology and Geography, University of Leicester, UK  
PhD in Geography, University of Bristol, UK

## Publications

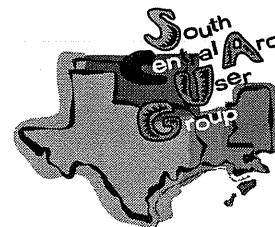
Author (with Paul Longley, Mike Goodchild and David Rhind)  
Geographic Information Systems and Science. John Wiley, 2001.

Editor (with Paul Longley, Mike Goodchild and David Rhind)  
Geographical Information Systems: Principles, Techniques, Management and Applications. John Wiley, 1999.

Editor/author of 4 other books and over 70 papers on GIS.

# ESRI Session Description

*This year ESRI will be presenting a recap of the ESRI User Conference which was held this past July in San Diego. This event is designed to provide highlights of the conference for those who were unable to attend. Come see new advances in ESRI software and listen to ESRI discuss the future of ESRI software.*



## User Presentations

**Title:** GIS in the City of Edmond

Software: ArcView 3.1, Cityworks, Permits Plus, Oracle

Abstract: The City of Edmond is continuing to make progress in implementing its GIS goals of a city-wide, enterprise wide GIS with maintenance management system and permitting system. In 5 years, the City of Edmond has worked on obtaining an accurate street addressing map, as well as with the help of The CEDRA Corporation and North Fork Surveying, has collected a majority of its infrastructure. The City has also updated parcel data originally from Oklahoma County to use as a base for addressing and planning and zoning layers. The City of Edmond is currently working on conflating Census data.

This session will present the different data layers that the City of Edmond has collected, including water, sewer, storm, electric infrastructure data and pilot data collected from aerial photography flown this spring. This session will also cover the successes, trials and tribulations of the continuing implementation of the work order system (Cityworks) and permitting system (PermitsPlus) as well as what is ahead for the City of Edmond.

Presenter: Sara Cobb

Organization: City of Edmond

100 E 1st St

Edmond, OK 73034

sara.cobb@ci.edmond.ok.us

405.359.4517

**Title:** Compression and Data Management of Documents & Digital Imagery:  
A Perfect Solution for GIS Users & IT Managers

Abstract: With the acceptance and proliferation of Digital orthophotography and satellite data for use in planning and other GIS based applications and the increasing need for archiving and accessing documents on-line, the issues surrounding the management of such enormous amounts of data are becoming the next challenge of users of these types of data sets. We will present revolutionary solutions to reduce file sizes at the same time allowing a user to work with whole data sets (Multiple Giga-byte sized) that can be accessed for display, instantaneously. Other impressive features of state of the art compression, storage, related plotting tools, and dissemination software will be discussed and demonstrated that will be of benefit to all.

Presenter: John Peterson

Organization: LizardTech Inc., 505-821-4492

jpeterson@lizardtech.com