



Oklahoma South Central Arc User Group OKSCAUG Dear SCAUG Members,

On behalf of the Oklahoma SCAUG Steering Committee, we would like to welcome everyone to the 11th annual Oklahoma SCAUG conference. We are very excited to have a banner year at Oklahoma's premier GIS conference with helpful workshops, an amazing group of vendors, GIS training, great panel discussions, and new presentations demonstrating the latest and greatest in GIS technology application.

We want to thank everyone who has contributed to making GIS so successful in Oklahoma as well as all the vendors for their continued support of OK SCAUG. Be sure to spend some time in the vendor expo throughout the day to see some of the great products and services they offer.

Lastly, enjoy yourselves as we make this the best Oklahoma SCAUG conference ever!!

Respectfully,

2008 Oklahoma SCAUG Steering Committee



Front: Katy Rich, OK State Department of Health, Carrie Landgraf, Benham, Shellie Willoughby, OK Conservation Commission, Cliff Montgomery, City of Broken Arrow

Back: Robert Stokes, Topographic Mapping Company, Thomas Tollett, Chesapeake Energy, Charles Brady, City of Ardmore, Chuck Sloan, Crusader Energy Officers not pictured: Sohail Hasanjee, OK Department of Commerce and Suzanne Armstrong, WIT Consulting Group

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Oklahoma South Central Arc User Grou

SCHEDULE

7:30 am - 8:25 am	Registration opens with Vendor Exhibits
8:30 am - 9:30 am	Welcome - Main Conference Hall (MCH)
	Opening Keynote Breakfast With Samantha Ephgrave - McClain County 4-H
9:30 am - 10:15 am	Vendor Break (Visit with Vendors and Vendor Bingo)

User Presentations

Using Sampling, GIS and HEM to Locate Water Salinity Room 109/110 Problems in South OK Oilfields Mapping Oklahoma's Sex Offender Registration Act Room 111/112 Tips and Tricks for Customizing Color in ArcMap Room 210 10:50 am - 11:20 am 2006 Traffic Crashes Data Linkage Results Among Room 109/110 Oklahoma Teens 16 to 19 Years of Age How to Gain Support for Technology without Gobbledygook! Room 111/112 Improving Communication and Coordination with Room 210 Cityworks and GIS 11:25 am - 11:55 am The Oklahoma One-Call System Room 109/110

4-H: Taking GIS to the Millennial Generation Storm Water Management System Data Collection,

Inventory and Assessment – Year One

10:15 am - 10:45 am

Room 111-112 Room 210

Oklahoma South Central Arc User Group

SCHEDULE

12:00 pm - 1:00 pm Lunch/Poster Competition

MCH

MCH

Panel Discussions

1:00 pm - 2:00 pm

GIS and IT: How Not Huy Tran, Austin Ive Ed Eckenstein	to Kill Each Other y, Mike Morrison, James Mallory,	Room 109
Planning GIS Charles Brady, Jame	s Allen, John Sharp	Room 111/112
Hot Topics in GIS Ed Stacia Canaday, May	ucation Yuan, Kelly Allen	Room 210
2:00 pm - 2:45 pm	Afternoon Break with Vendors	МСН
2:45 pm - 5:00 pm	ESRI 9.3 Seminar	МСН

5:00 pm - 5:30 pm Closing Remarks and Prize Giveaways



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KEYNOTE ADDRESS

Youth as GIS Partners

GIS user audiences are ever-broadening in their use of GIS and in the audience demographics. The McClain County 4-H Geoclovers are one such example. This 4-H youth club works with community partners to address GIS and mapping needs within the county, assisting local and county emergency management officials with emergency mapping and local infrastructure needs. The youth involved in this project are learning valuable life and job skills while proving they are worthy assets as GIS community partners.

Attending the conference will be Rylee Ellyson, 15, from Purcell; Isaac Wallace, 15, from Washington; Morgan Bookout, 14, from Dibble; and Abe Wallace, 13, from Washington, along with Samantha Ephgrave, McClain County Extension Educator for 4-H Youth Development.



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10:15 - 10:45

Using Sampling, GIS and HEM to Locate Water Salinity Problems in South OK Oilfields

Patricia Billingsley, Oklahoma Corporation Commission Bruce Smith, USGS

The Oklahoma Corporation Commission, with OWRB and Oklahoma Conservation Commission assistance, began in 1998 to monitor streams in old oil and gas fields in Oklahoma. By 2002 we knew that Rush, Wildhorse, and Caddo Creeks, the three main streams in a 33X34 mile (~1,000 square mile) area in Garvin, Grady, Stephens, and Carter Counties, were salinity impaired (exceeded state water quality salinity standards). In 2005 the Conservation Commission GPS located all locations in the area where a county or state road crossed a stream or tributary, and began sampling streams at 298 of these locations for us every other month. The sampling locations and stream sampling analyses results were mapped using GIS to determine which streams and tributaries were impaired.

Additional locations upstream to elevated salinity locations were then sampled to help locate salinity sources. Next, several hundred square miles within the watersheds of identified salinity impacted streams have to be searched for the contributing surface and subsurface salinity sources, to locate and when possible eliminate them. In old oilfields these sources can include pre-1970 "evaporation pits", improperly plugged wells, malfunctioning injection wells, and both historic and recent produced water spills.

To determine if geophysics would help us to locate the sources and any related groundwater pollution, Corp Comm pilot tested a USGS-directed Helicopter Electro-Magnetic (HEM) survey over a 25 square mile area with many impaired tributaries. The helicopter and geophysical "bird" were both equipped with altimeters and GPS. Georeferenced maps and subsurface cross sections made from the HEM data show surface and subsurface sources, and related aquifer pollution that can seep into streams. These maps and subsurface cross sections are being imported into Corp Comm's GIS system.

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Mapping Oklahoma's Sex Offender Registration Act

Bob Post, City of Norman Police Department Scott Woodruff, City of Norman GIS

The Sexual Offenders Registration Act (57 O.S. § 590 (OSCN 2008)) states that:

It is unlawful for any person registered sex offender to reside within a 2,000 foot radius of any public or private school site, educational institution, a playground or park that is zoned by city, county, state, federal or tribal government, or licensed child care center as defined by the Department of Human Services.

The responsibility of implementing this law falls on local law enforcement agencies like the City of Norman Police Department. These agencies must determine where registered sex offenders can and cannot reside.

The City of Norman Police Department used ESRI ArcGIS to select all the parcels within 2000 feet of a park, school, or day-care center, and to create a GIS layer

showing where registered sex offenders are prohibited from residing. Model Builder was used to create a GIS Model that automates the process of creating layers, buffering layers, and selecting parcels.

The final product is a "Sex Offender Prohibited Parcels" layer that can be quickly referenced to confirm that registered sex offenders are complying with the law.

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Tips and Tricks for Customizing Color in ArcMap

Carrie Landgraf, The Benham Companies, LLC Tracy Scopel, The Benham Companies, LLC

When dealing with different data types and many layers in a map, it is often a struggle to find the best way to show all the information. This presentation focuses on exploring out-of-the-box tools for managing raster data symbology and tricks for manipulating color in ArcMap in order to create a professional looking map.

10:50 - 11:20

2006 Traffic Crashes Data Linkage Results Among Oklahoma Teens 16 to 19 Years of Age

Elizabeth Kruger, Injury Prevention Service, Oklahoma State Department of Health

Motor vehicle travel is the primary means of transportation in the United States (U.S.), and traffic crashes are the leading cause of injury and death for U.S. teens, accounting for more than one in three deaths. The Oklahoma Traffic Data Linkage Project is a joint effort between the Oklahoma Department of Health and the Oklahoma Highway Safety Office to obtain and analyze comprehensive information on traffic crashes by linking data from multiple data sources, and to develop and evaluate traffic injury prevention programs. Reports related to specific topics, such as teen drivers, senior drivers, motorcycle collisions, safety equipment use, rural versus urban traffic collisions, medical charges among uninsured versus insured persons, and others will be generated from the linked data.

Statewide databases on traffic crashes, deaths, and hospital discharges were electronically linked. Types of injuries, medical charges, drivers' behavior, location of events, and crash characteristics were examined. Information on alcohol involvement, seat belt use, and cellular telephone use were also included. Using the GIS mapping software, locations of traffic crash events for the 2006 teen-related traffic crashes were mapped. Vehicles miles of travel were used to generate county rates for traffic crash injuries determined among these teens and the results were mapped. Preliminary OKSCAUG analytical results of the 2006 teen-related traffic crash data showed

that failure to yield, inattention, and unsafe speed seemed to be the leading cause of injuries/deaths among Oklahoma teen drivers in 2006. Inclusion of multiple years of data for this work will provide more comprehensive information associated with the risk of traffic crashes among Oklahoma teens.

How to Gain Support for Technology without Gobbledygook!

Larry Stein, Chief Deputy, Oklahoma County Assessor's Office

You've got some great ideas and plans for GIS, but every time you explain things to higher ups, their eyes glaze over. This presentation will help you shelve the Techno-Gobbledygook and use different words and speak in plain English to help your organization understand the importance of Geographic Information Systems (GIS). Tips include how to write and communicate your ideas to gain the funding necessary to ride the technology wave to better serve your customers.

Biography:

Larry Stein is an internationally recognized presenter and consultant on communications and strategic planning. Stein has earned national, state and local awards for investigative journalism, editorial writing, radio advertising and photography. He's worked as a newspaper reporter, a radio reporter, television host, radio talk show host, and currently is the chief deputy for Oklahoma County Assessor Leonard Sullivan and helps manage 82 employees and a \$5 million budget.

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Improving Communication and Coordination with Cityworks and GIS

Brent Wilson, Azteca Systems

Today's municipalities are under pressure more than ever to perform more efficiently. In order to achieve a higher level of efficiency, coordination between departments and communication between management and staff is a must. Cityworks work order management, permitting and ESRI GIS can help supply the coordination and communication needed to accomplish a greater efficiency. Cityworks and GIS can help improve operational awareness, customer service as well as fiscal management.

11:25 - 11:55

The Oklahoma One-Call System

Leslie Carter, GIS/IT Liaison, OK One Call Systems, Inc. Naomi Martinez, GIS Coordinator, OK One Call Systems, Inc. Ben Cowart, GIS Analyst, OK One Call Systems, Inc.

Oklahoma One-Call Systems, Inc. (Call Okie) is a non-profit corporation funded by underground facility owners working together to provide safety to excavators in UG Oklahoma. We will demonstrate the benefits of detailed mapping by following the

life cycle of a locate request from initial excavator contact to delivery of the request to the facility owner.

4-H: Taking GIS to the Millennial Generation

Jeff Sallee, Assistant Professor and Extension Specialist, STEM, 4-H Youth Development, OSU

Geospatial Technologies have quickly spread throughout the Oklahoma 4-H community.

Currently, there are 12 4-H community-mapping teams, which have identified and are addressing important local issues including emergency preparation and management, environmental stewardship, and health and fitness. Teams are also celebrating the Oklahoma Centennial by developing projects, which highlight important events and locations in Oklahoma history. The geospatial project information presented in this workshop will define the educational methods and techniques we are using to explore the world of geospatial technology. Most of what we do requires partnerships from people like you. We need your help to prepare teams to create and develop successful community mapping projects. Come learn about us and decide if you would like to help us teach the next generation how to think spatially.

Storm Water Management System Data Collection, Inventory and Assessment – Year One

Teri Landrum, GISP, Jacobs Engineering Group

Jacobs Engineering Group (Carter & Burgess, Inc. is now part of the Jacobs family of companies) has been chosen to develop a Storm Water Management System (SWMS) for a city that is responsible for managing 720 watersheds. The goal of this project is to have a comprehensive GIS database of the storm water conveyance system and the drainage-related assets that will integrate, improve and support asset management, asset maintenance, emergency response, hydraulic modeling, watershed studies, discharge monitoring, condition assessment, surveying and storm water management. A Quality Management Plan (QMP) will be established to define how the project team will manage and assure the delivery of products that meet the City's goals and expectations. The GIS will be designed and developed to support the City's current and future needs as well as the needs of at least 20 other entities that will benefit from the system. There are seventeen major tasks that will be completed on each watershed before it becomes part of the SWMS. In the first year, ninety watersheds will be developed to various levels of completion in phases by task. The top five priority watersheds will be fully developed and integrated into the SWMS to support ongoing watershed planning study efforts and provide deliverables that can be utilized and tested prior to the development of the rest of the system. The GIS will also support the development of an InfoWorks hydraulic model dataset. The GIS development portion of the project is expected to be completed in three years with the condition assessment and hydraulic model tasks extending into a fourth year.

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Advanced labeling in ArcMap with VBScript FindLabel

Chad Cooper, GIS Analyst, Southwestern Energy Company

Have you ever needed to do just a little bit or perhaps much more to label a feature class in ArcMap than the standard ESRI or even MapPlex labeling engine would allow? Me too. Lucky for us, with the release of ArcGIS 8.1, ESRI introduced "advanced" labeling to all licensing levels using the FindLabel function and your choice of two scripting languages: VBScript and JScript. Advanced labeling along with the FindLabel function provides a way to programmatically define the text that displays when labeling features. Through the use of code examples, we will focus on using VBScript and FindLabel functions to do advanced labeling of features by incorporating scripting functionality such as conditional logic, arrays, and regular expressions. With a little (or sometimes a lot) of code, users can either simplify or add complexity to their feature labels without having to modify the underlying data, create temporary datasets for the sole purpose of labeling, or convert labels to annotation and - oh, the horror manually arrange labels by hand.

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An Historical Reconstruction of Downtown Edmond, Oklahoma Prior to Statehood

Cody Lathrop, University of Central Oklahoma

Using Sanborn Fire Insurance Maps, I have digitally reconstructed downtown 1894, 1901, and 1903 Edmond, Oklahoma. A dynamic database was created with the integration of archival research to show structural footprints, land-use patterns, and their changes through time. Extrusion of mapped features to 3-D was performed to augment the visualization of certain historic areas.

Building a Geodatabase to Track Development in TIF Districts

Kindsey Maxwell, GIS Intern, City of Ardmore & East Central University

This poster will describe the creation of a geodatabase to assist the Development Services Department in the City of Ardmore. The database is used to keep track of development in the Tax Increment Finance (TIF) districts. With this database GIS users can search for things such as: how many pools there are or how many homes have been built in the districts and their cost. It can also identify what school district these things are located in.

Carter County Parcel Update

James Allen, GIS Coordinator, Carter County

Carter County parcel data has been generated and updated through many different types of mapping software over the course of several years. This has led to inaccuracies in the parcel data. Carter County is in the process of creating a subdivision layer to serve as a base for updating and correcting all parcels within Carter County. Control for this process has been obtained off section corners that have been GPS'd within 1 to 3 feet of accuracy as well as existing control from various sources. Once the subdivision layer is completed, the existing parcels that are within a subdivision will then be adjusted and corrected to it. The parcel

correction will also include parcels for the City of Ardmore based on the existing subdivision layer provided by the City of Ardmore.

ConocoPhillips Well Emergency Contact System

Daniel Whitworth, Geospatial Data Analyst, ConocoPhillips

ConocoPhillips has been working with 3rd party companies and Government Officials to develop an emergency response system for one of the oil fields in east Texas. These wells contain hydrogen sulfate gas that is deadly if inhaled. In order to drill these wells, extra safety steps were taken. A geospatial system was developed that contains all of the home owners and their contact information. This ownership information along other layers such as School Bus Routes, individual Well Locations, and other cultural data can be used to effectively identify individuals who may be affected in the event of an accident. This geospatial data can also be integrated into other systems including the Counties 911 System. While the system has only been used for test scenarios, it stands ready if ever needed and is an excellent example of integrating private and public Geospatial Information into a system that serves the public at large.

FEMA Flood Map Modernization – Mapping the Risk

Jackie D'Amico and Kathy H. Spivey, Community Development Department, City of Midwest City, Oklahoma

Flooding is one of Midwest City's most costly natural disasters. Water flow and drainage patterns continuously change due to soil erosion, changes in land-use, and natural forces. With the base information in some areas being over 23 years old, existing City flood maps no longer reflect the current flood risks. New digital mapping technologies produce more detailed, reliable, and accessible data. This poster was created to allow City staff to evaluate updates proposed to the FEMA flood maps and to help educate and inform the City of Midwest City citizens of risks to lives and property from potential flooding within the municipal limits of Midwest City.

Georeferencing Plats and Photos

Robert Rothell, GIS Intern, City of Ardmore & East Central University

City of Ardmore GIS staff has been working on scanning and georeferencing plats and photos. This poster will cover the scanning process including what to look for when scanning. It will also include information about RMS error, what the numbers mean, and what might go wrong with georeferencing. Finally, the poster will discuss the importance of georeferencing plats and photos.

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GIS Facilitates More Effective and Focused Tobacco Use Prevention

Lenae Clements, Stephanie Isaac, Ray Bottger, and Krista Rhoades, Oklahoma Department of Mental Health and Substance Abuse Services communication of the

A key component for the Oklahoma Department of Mental Health and Substance CAUG Abuse Services (ODMHSAS) is the prevention of underage alcohol and tobacco

use. GIS is especially important in displaying outcome data and serving as evidence to the effectiveness of prevention. In addition, maps using multiple data sources help preventionists to know how their communities are doing in relation to other Oklahoma communities and what areas are in greatest need of prevention services.

Introducing the Oklahoma GIS Helpdesk Website

Naci Dileki, University of Oklahoma Center for Spatial Analysis; Greg Summers, OK Fishery Research Laboratory, OK Department of Wildlife Conservation

Spatial analytics has become an integral part of many state agency functions and programs. Faced with the absence of an agency GIS coordinator, the Oklahoma Department of Wildlife Conservation chose to develop a web-based, interactive helpdesk that would allow its staff to find information on GIS "howto" topics. Designed by the Center for Spatial Analysis (CSA), the web site was developed in a question/answer format using PHP and a MySOL database (http://129.15.97.18/helpdesk). There are three open source components that are embedded into Oklahoma GIS Helpdesk website: a user friendly authentication tool, a tree structure interface for selection of question/answer categories, and a web-based HTML text editor with powerful formatting capabilities. Password protected users can submit questions with attached images to a site "operator", currently part of the CSA staff. The answers then become stored in the database and can be accessed by anyone going to the site. Questions and answers can be searched using previously assigned ticket numbers or by keywords in title or body of the question/answer. The Oklahoma GIS Helpdesk website differs from similar websites in terms of its organization of information. Its design allows the administrator to put the same information under multiple categories when a question is answered. The question/answer browse structure is particularly useful in that it allows users to access help in numerous areas found under three main categories based on functionality, software and industry.

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Pinon Buffer Map

Sean Murray, SandRidge Energy & East Central University

The "Pinon Buffer Map" is actually a series of maps designed to increase communication between the drilling and midstream departments of SandRidge Energy. The issue at hand is the coextensive nature of a pipeline system that sits atop a vast reservoir of natural gas and a constant need to drill.

Upon visiting the field, the chief pipeline inspector revealed numerous examples of drilling operations that were sufficiently close to gathering lines to warrant the relocation of those lines. There were also examples of gathering lines fitted with clock springs in places where nearby blasting had damaged the pipe.

The map project is comprised of four buffer types. There is a right of way buffer layer, which is fifteen feet on either side of any gathering line. There is a blasting buffer of 300 feet on either side of any pipeline type, including gathering, flow, suction, and discharge lines. A jurisdictional buffer of 660 feet was added to all pipeline that is regulated. Finally, a potential impact radius buffer was added. CAUG With this buffer, a separate field had to be added, including the formula that determines the potential impact radius should a leaking pipe lead to an explosion.

The formula is the square root of a heat of combustion coefficient of .69 times the square of the diameter times the maximum allowable operating pressure.

The poster displayed at this conference shows the four buffers displayed with 50% transparency on top of an aerial image of the field. In addition, four inset maps of the individual buffers are shown.

The Role of GIS in the Murray County Fire Plan

Stephanie Davidson, GIS Analyst, Southern Oklahoma Development Association

Wildfires threaten hundreds of homes each year and cause millions of dollars in damages. Many of these wildfires cannot be prevented from occurring. However, actions can be taken to reduce the impact of these fires. Wildfires need fuel to gain strength and power. These fuels are often in the form of overgrown fencerows and fields, or empty lots overgrown with Eastern Red Cedars in or near a housing addition. These high fuel areas are part of the WUI or Wildland-Urban Interface.

SODA and Murray County Oklahoma, with financial assistance from the National Park Service, worked together to create the Murray County Fire Plan. This plan used GIS to identify and prioritize information gathered from many sources including: Murray County 911, Utility Companies, USDA, Municipalities, and the National Park Service. The information gathered was used to build a community base map consisting of layers of data designating WUI zones for fuel reduction. These maps were then assembled into a book to be given to every fire department, emergency agency, and municipality in the county. The recipients were instructed how to use the maps to educate the community on steps to reduce WUI zones hazards and how to prepare their homes for wildfire season. The poster presentation will illustrate a sampling of the information used in this project.

Putting Pawhuska On The Map: Assisting a small rural town with GIS technology

James Hollan, OSU Department of Geography; Eli Hines, OSU Department of Geography; Michael Larson, OSU Cartography Services, Department of Geography

In an ever-increasing technical society, smaller rural towns are finding themselves at a greater disadvantage. As the cost of technology rises, many of these towns lack the funds to be able to build or buy the technical information needed for everyday municipal business. As a class project, students of the fall 2007 Field Techniques class partnered with the city of Pawhuska, Oklahoma, Public Works Department to develop a geospatial database focusing on the existing city sign inventory. The sign data was obtained using Trimble GeoXH GPS units, differentially corrected, and exported to shapefiles. The data for the sign inventory includes a description of the sign, location, and a visual assessment of the condition of each sign for possible sign replacement at a later date.

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Residential Suitability Analysis

Kathy H. Spivey, Community Development Department, City of Midwest City, Oklahoma

The City of Midwest City has just adopted a new Comprehensive Plan to act as a long-range planning tool for many aspects of city growth and development. As part of the planning process, an analysis was undertaken to better define the suitability of existing land for future residential development in the City. Criteria that affected suitability included parcels that can easily be assembled into two acres or more, current zoning on that land, slope of the land, floodplain location relative to that land, and amount of significant tree canopy in the area. Spatial analysis helped identify locations within the City that are potentially developable. This poster presents the analysis and findings of that study.

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Who's In? Who's Out? Floodplain Mapping in the City of Norman

GIS Services Division, City of Norman

In September 2006, the Federal Emergency Management Association (FEMA) issued a preliminary nationwide release of the new Digital Flood Insurance Rate Maps (DFIRM) and requested public comment. The City of Norman recognized immediately that this new dataset had been developed using outdated information, and set about determining the potential impact this release might have on the City as a whole. As a part of the Stormwater Master Plan, the City was already in the process of acquiring LiDAR derived contours. This new information was provided to FEMA to assist in the production of a more accurate flood dataset for the City of Norman. Throughout the last year, City staff has worked extensively with FEMA officials to review each individual affected area, and in many cases the recent contour data was used to substantiate significant changes to the earlier release. FEMA reissued the final DFIRM maps for Norman in April 2008, and on August 12, 2008, the Norman City Council voted to approve the use of the newly updated data.

PANEL DISCUSSIONS

GIS and IT Interactions: How Not to Kill Each Other Panel Members: Ed Eckenstein, Austin Ivey, James Mallory, Mike Morrison, Huy Tran

Panelists will present what they think are the 3 most effective things GIS professionals can do to interact successfully, and civilly!, with their IT counterparts. The panelists represent viewpoints from private industry, County government and State Government. After the introductions, the audience is invited to ask questions and engage in a discussion with the panel and general audience.

Planning GIS Panel Members: James Allen, Charles Brady, John Sharp

Panelists will present what they think are the 3 most important things to consider in planning a GIS system. The panelists represent viewpoints from City, County and Regional governments. After the introductions, the audience is invited to ask questions and engage in a discussion with the panel and general audience.

Hot Topics in GIS Education Panel Members: Kelly Allen, Stacia Canaday, May Yuan

Panelists will present what they think are the 3 most important things to consider in obtaining GIS education in today's world. The panelists represent viewpoints from Career Tech, Universities and ESRI Education. After the introductions, the audience is invited to ask questions and engage in a discussion with the panel and general audience.

ESRI 9.3 SEMINAR

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ArcGIS 9.3 provides new ways to access and share data within and outside your organization. You'll learn firsthand from ESRI staff how ArcGIS 9.3 improves your entire GIS workflow. The presentation will focus on managing your data more efficiently, making better maps, new tools for advanced planning and analysis and improved mobility solutions. The presenter will demonstrate techniques for creating production-quality maps and using sophisticated modeling tools to ensure you get more answers from your data. You will also see how ArcGIS 9.3 advancements help you disseminate information and ensure data accuracy while on the move.

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ArcGIS Solutions

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The CEDRA Corporation

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CEURA-DataEditor⁴⁵ facilitates the editing of feature attribute data. It is an ideal tool for those involved with facility maintenance and/or data captor applications, or these that desire to enhance the astive attribute entry and editing four timolity of ArcGS. It is included in all other CEORA products.

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CEORA-OntExpert²⁴ enables the user to costs (DXF files of all visible layers of shapefiles, personal and enterprise geoduliness and coverages, inchoing anostation features and text elements. It is included in all other CEORA products.

CEDRA-AYongs²⁰ expands the guarantic editing functionality of CEDRA-AVout by providing over 60 specialized geometric construction tesls. Includes CEDRA-AVout.

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The CEURA Companying

CEDEA-AVIant²⁴ assists engineers in the performance of surveying, COGO, contauring, traverse adjustment, statement, card, and subdivision, design, earth work, and other related operations. Includes CEDEA-Al/and, and CEDEA-AV/cogo. Pacifies generated by CEDEA-AV/ander may be overlaid open profiles generated by CEDEA-AV/and. CEDEA-AVantes^{we} embles the engineer to define the geometric configuration of a water distribution system, establish materials increasing, introduce supply and demand lands, perform analyses, display pertiment results in graphic and thutor formets, and generate profiles. It includes CRERA-AVant and the RPANET medeleciate form (Versions 1.8.2).

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For over a decade, Geodynamic Solutions, Inc (GSI) has specialized in the design, development, implementation and training of enterprise-wide geospatial applications built upon the full suite of world-leading geographic information system (GIS) technology from Environmental Systems Research Institute, Inc. (ESRI).

- Enterprise and Desktop Products
- Custom Application Development
- Consulting Services
- Strategy & Planning
- Map Development Services (Over 30 mappers on staff)
- Training
- Staff Augmentation





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WWW.ACEAERIALPHOTO.COM



Full-Service Aerial Full-Service Aerial Photography & Photogrammetry

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Aerial Data Service, Inc. 1-800-888-9163



an SAIC company



GIS - Centric Asset Maintenance Management Solutions

For more information, visit www.cityworks

UG



Visit the ESRI booth to view demo theater presentations

9:30 a.m.—ArcGIS® Desktop 9.3 Usability Tips and Tricks 10:00 a.m.—ArcGIS Explorer and ArcGIS® Online

10:30 a.m.—Authoring Web Applications with ArcGIS Server 9

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geo technologies





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Ace Aerial LLC sreving Oklahoma's aerial mapping needs since 1947. In September of 2006, Gulf Coast Aerial Mapping Co located in Baton Rouge, LA purchased Ace Aerial Photography. Both companies offer full phtoogrammetric capabilities. Color digital ortho photos, topographic mapping, digital terrain models and other GIS data. Both offices have image archives dating back to the

early 1950's, stereoscopic coverage is availabe in many areas.

Ace Aerial LLC purchased a NEW Leica RC-30 mapping camera, GPS/computer controlled flight management system providing precision aerial photography and aerial survey. Airborne GPS capabilities were implemented in August of 2008.

Company capabilities include -

- 2 Cessna 206 aircraft
- · 2 Leica RC-30 stabilized mapping cameras
- ASPRS certified photogrammetry
- 2 Vexcel photogrammetric scanners
- ESRI Business partner
- GIS Software programming



Aerial Data Service is the largest full-service photogrammetric firm in the State of Oklahoma. With offices in Tulsa, Oklahoma, and Austin, Texas, ADS provides aerial photography and photogrammetric mapping to hundreds of engineering firms and

governmental agencies across the country.

ADS is dedicated to providing quality work and using the most sophisticated technology available in the industry. Established in 1964, ADS became incorporated in 1973 and a 100-percent woman-owned firm in 1984. ADS currently employs a staff of 36, including three American Society of Photogrammetry and Remote Sensing (ASPRS) Certified Photogrammetrists, two American Society of Photogrammetry and Remote Sensing (ASPRS) Certified Technologists, one Geographical Information System Professional (GISP), one Registered Land Surveyor and two ATP Rated Professional Pilots, who together comprise over 100 years of cumulative experience.



The Benham Companies, Inc. (Benham) was established in 1909 as an engineering firm. Since that time, Benham has grown and diversified to become a fully integrated design build company, embracing all elements of design, technology

integration and environmental stewardship. Benham's services include: architectural and engineering, environmental consulting, systems engineering and integration, advanced communication systems, GIS services, and a variety of specialized consulting services. Our approach is to develop scalable, client-focused geographic solutions. On August 1, 2007, Benham became a wholly owned subsidiary of SAIC. This acquisition affords Benham the considerable technical expertise and capabilities of SAIC. If you would like additional information regarding Benham or SAIC, please do not hesitate to call us at 405-321-3895.

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The CEDRA Corporation

The CEDRA Corporation provides ArcGIS software

extension solutions for public works agencies, tax assessors, engineers, surveyors, pipelines, utilities and others for querying, analyzing and maintaining geographic data bases. In addition to providing software, CEDRA also offers consulting services for data capture, database management and custom software application development.

CEDRA's AVseriesTM software bridges engineering and GIS by addressing a wide range of applications including CAD, surveying, COGO, roadway and site design, tax mapping, land parcel management, sewer modeling and water distribution modeling. CEDRA users can create engineering databases of water distribution and sanitary/storm/ combined sewer systems, and/or model and maintain them all within any of ESRI's software in a tightly integrated environment.

CEDRA is located in Pittsford, New York and is an ESRI Authorized Developer and Reseller.



Since 1986, Azteca Systems has been helping agencies effectively manage capital assets, infrastructure, and property. As an exclusive

ESRI business partner and a proven industry leader, Azteca developed the Cityworks suite of applications ñ the only GIS-centric asset and maintenance management solution. Cityworks is powerful, flexible, and affordable, and is used by a wide array of industries to help agencies respond to customer needs and manage the assets they care for using workflow they are accustomed to. Scalable, easy-to-use, and based on open technology, Cityworks has been successfully deployed at hundreds of sites around the world, increasing productivity, improving customer service, and lowering operational costs.

Coordinate Solutions, Inc. offers a full line of GIS consulting and software development services. With over twenty years experience

in the GIS profession, we are dedicated to wise use of resources, appropriate design, and turnkey operations. We have successfully designed and implemented custom GIS solutions for a number of organizations, both large and small. Recently, Coordinate Solutions partnered with LSG Solutions to provide GIS data services to Oklahoma government entities via State Contract SW60715. This statewide contract allows Coordinate Solutions to provide a range of GIS-related services to all state agencies, tribal entities, counties, school districts, municipalities, and institutions of higher education. OKSCAUG



Since 1969, ESRIÆ has been giving customers around the world the power to think and plan geographically. The market leader in GIS, ESRI software is used in more than 300,000 organizations worldwide including each of the 200 largest cities in the United States, most national governments, more than two-thirds of Fortune 500 companies, and more than 7,000 colleges and universities. ESRI applications, running on more than one million desktops and thousands of Web and

enterprise servers, provide the backbone for the world's mapping and spatial analysis. ESRI is the only vendor that provides complete technical solutions for desktop, mobile, server, and Internet platforms. Visit us at www.esri.com.



FUGRO EARTHDATA, INC.

For more than 50 years, Fugro EarthData has crafted mapping and GIS solutions for natural resource management, urban planning, national

defense, and engineering customers, among others. Our acquisition-toproduction resources and continual technology investments enable us to efficiently deliver state-of-the-art geospatial products and services on time, first-time right. As a member of the international Fugro group of companies, we also have the unique ability to combine our core offerings with an expanded range of onshore and offshore surveying services. Working with customers across the globe, Fugro EarthData is turning spatial data into knowledge. www.fugroearthdata.com



For over a decade, Geodynamic Solutions, Inc (GSI) has specialized in the design, development, implementation and training of enterprise-wide geospatial applications built upon the full suite of world-leading geographic information system (GIS) technology from

Environmental Systems Research Institute, Inc. (ESRI). This experience has led to the development of several commercially available off-theshelf products and literally hundreds of custom application solutions and consulting engagements contributing to our client's successes. Support extended to industry and governmental agencies required to manage large volumes of assets include oil and gas, pipelines, electric/ gas utilities, city/county development, water and irrigation districts, telecommunications, forestry, transportation and mining. GSI is an authorized ESRI Business Partner, Developer and Training Center.



Green Point Technology Services (GPTS) is a leading US firm that specializes in GIS Support Services.

We offer high quality services in GIS Data

Conversion, Migration, Maintenance, Work Order Posting, Land base Conflation and Programming for Utility Companies and Local / State Governments. Working as an extension of your office, Green Point can help you to complete your project in a timely manner with quality / on time delivery service.

Our skilled GIS staff have years of experience with various maps, standards and specifications. We can quickly respond to your requirements by using our expert staff and multi-shift operation. Our quality team follows the guidelines of procedure and quality checking to ensure an error-free final output. The combination of on site-offshore delivery models affords our clients a cost-effective competitive advantage.

Green Point's professional technicians are experienced in a wide range of software from major vendors including ESRI, Intergraph, Smallworld, Bentley and AutoDesk, with many successful projects completed for Government Agencies and Utility Companies.

We welcome the opportunity to learn more about you and to support the fulfillment of your GIS objectives.

ICM, Inc. is dedicated to providing contractors and municipalities with the best underground, aboveground and survey (CPS construction equipment

IMPROVED CONSTRUCTION METHODS survey/GPS construction equipment available. The company has been in business since 1970 and has built a reputation based on reliability and service. ICM has grown to include 14 branches in eight states including Arkansas, Alabama, Tennessee, Mississippi, Oklahoma, Texas, Louisiana and Missouri while continuing to maintain its "customer first" business strategy on the local level. Our sales team concentrates on delivering quality products to the job site, and supports those products with a personal commitment to ensure that customers get the quality they deserve.

Intermap TechnologiesTM is a digital mapping company creating uniform 3D digital models of the earth's surface

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and building a library with affordable and accurate digital elevation data and geometric images. The Company enables a variety of innovative geospatial applications within the GIS, engineering, automotive, insurance risk management, and PND markets.



We bring people and technology together IT Nexus is the maker of ITN Solution Templates – COTS software products that leverage the power of ArcGIS Server and Microsoft's Virtual Earth to provide highimpact, Enterprise-GIS solutions. Come see Map Viewer for ArcGIS Server and Map

Viewer for Virtual Earth to learn how these server products provide an organization-wide solution that supercharges your ESRI GIS data.

IT Nexus is a Texas-based provider of web-GIS products and services. We've been helping cities, counties, regional and state agencies implement world class enterprise GIS systems since 1999. Our focus is on making you and your GIS program a resounding success. IT Nexus is an ESRI Business Partner and an Azteca Systems Business Partner, certified by Azteca to implement their GIS-centric maintenance management system product Cityworks.



Meshek & Associates, PLC has 20 years of experience in general civil and water resource engineering, storm sewer and open channel system design, floodplain

analysis, and roadway/water/sewer project design. For the past 10 years, we have also provided GIS services for stormwater management, municipal GIS asset/utility mapping, and internet mapping. Our municipal clients include the cities of Tulsa, Enid, McAlester, Ponca City, Jenks, Muskogee, Owasso, Bixby, Sand Springs, Sapulpa, Bartlesville, Miami, as well as Tulsa County, FEMA, Corps of Engineers and ODOT. Our firm employs 23 people; 6 PE's, 5 GIS Specialists (2 GISPs), 1 GIS Technician, and 2 CADD/Engineering technicians.



Since 1956, Midwest has provided service, support and solutions to surveyors, architects and engineers in north Texas and Oklahoma. Our goal is to be theleading source for geospatial hardware, software and data management solutions in our markets. As a ivalue-added reselleri, Midwest A&E offers several ESRI technologies including ArcGIS, ArcPad and Application Builder.

Our knowledge of positioning and measurement applications, combined with our experience in GPS hardware, mapping software and services, enables us to provide complete solutions to our clients. By identifying an organization's uniquechallenges with field data capture, validation and asset management, we define and implement a process improvement, which creates a positive financial results for clients in the private and public sectors.

Pictometry International's patented aerial imaging process captures georeferenced, high-

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resolution oblique (at an angle for a 3D-like view) and ortho (straight down) Intelligent Images® of counties and states. Combined with the company's interactive software solution, users can see everywhere, measure anything, and plan everything. The company has a growing customer base exceeding 400 counties, the State of Connecticut, the State of Massachusetts, the State of Rhode Island, federal government organizations, as well as private business users. Major metropolitan areas using Pictometry® include Atlanta, Baltimore, Boston, Houston, Indianapolis, Jacksonville, Los Angeles, Minneapolis, New York City, Philadelphia, San Francisco, and Washington, DC. Applications include 9-1-1, appraisers, assessors, emergency management agencies, engineering, financial institutions, fire departments, GIS, golf communities, homeland security, insurance, law enforcement, planning officials, real estate, transportation, and utilities.

Intelligent Images"

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Pinnacle Mapping Technologies, Inc., a womanowned and veteran-owned small business, provides a broad range of photogrammetric and GIS services to clients in the private and public sectors. Our biggest strength is our people. Nearly half of Pinnacle's staff has served in senior management at larger mapping companies across the United States . We have seen

what works and what does not; what emerging technologies to embrace and which ones to avoid. The net result is a small, dynamic company that can change its production very easily without distraction from corporate objectives or bureaucracy. At Pinnacle, we bring together our large company technical knowledge base within a smaller organization. Our customers feel like they are working with a large company that is in tune with quality assurance and customer satisfaction, they receive firstrate mapping products and they spend only a fraction of the cost a large company would charge for those services.

Pinnacle's staff includes ASPRS Certified Photogrammetrists, GISCI Certified GIS Professionals, Professional Land Surveyors, as well as numerous experienced Stereoplotter Compilers, Digital Orthophoto Technicians, Digital Cartographers, GIS/CAD Analysts and most importantly, a team dedicated to product Quality Assurance. Our staff is committed to customer satisfaction in every regard and to delivering high quality, easy-to-use geospatial data products.



Red Plains Professional, Inc. is a 100% Indian-owned Civil Engineering, Planning, and GIS Company that INC. was founded in 1997. We are staffed with individuals with over fifty years

of experience. Our project experience is very broad, having completed projects in several states for municipalities, federal and state agencies, private developers, and over twenty different Tribes. These projects includes roadway and bridge design, long-range transportation planning, master planning, residential developments, site planning, environmental assessments, and GIS training classes.

Red Plains' main office is located in Edmond, Oklahoma and we have recently opened new offices in Tulsa, Oklahoma; Albuquerque, New Mexico; and St. George, Utah. We are excited about this expansion and the opportunities it will provide for Red Plains and the clients that we serve.



Stewart Geo Technologies, Inc. (SGT) is a professional services organization dedicated to providing geospatial solutions to agencies engaged in the design, construction and management

of public infrastructure systems. Structured to accommodate time-critical and technically demanding projects, SGT supports its clientele with a broad range of geospatial technologies encompassing photogrammetry and geographic information systems.

A wholly owned subsidiary of Stewart Title Company, SGT has provided mapping services for more than a half century. SGT offers the following services:

Aerial Photography **Digital Orthophotography GIS** Application Development Vector Land Base Mapping

Aerial Triangulation Digital Terrain Modeling **GIS** Database Creation Parcel Mapping

Contours Digitizing Image Plots Scanning

Surveying • Mapping • GIS • GPS

POGRAPHIC Whether your GIS project requires highly accurate data or exceptional products and services, delivered at an affordable cost, look to Topographic.

Topographic Mapping Company is one of the four companies under the Topographic, Inc. umbrella. GIS services, data development, and software are our specialties and have been since 1985. We provide high-quality GIS data to meet your needs including: cultural/physical data, digital land grid, contours, USGS digital raster graphics, aerial photography, and the Oklahoma Digital County Map Book. CAD services are also available along with on-site scanning and digitization. Find out more about the company that helped build Oklahoma's GIS from the beginning and continues today.



Western Data Systems is an Authorized Trimble Dealer and our only business is supplying GPS and GPS related products. We do this in several ways.

1. We are a direct seller of Trimble GPS products in Oklahoma, Texas, and Arkansas. We can supply the entire Trimble line of GPS Survey, Mapping, Machine Control and Seismic Products. Training, Technical Support and all Accessories your crew might need. With offices in Edmond OK, Dallas, Houston, San Antonio and Austin, you have a GPS professional within close proximity to you at all times.

2. We offer fully integrated GPS based Hydrographic systems anywhere in the United States, complete with training and support.

3. We have one of the largest Trimble GPS rental pools in the world. This equipment is available to a worldwide customer base. f your rental needs arwfor as little as one day or as long as one year, Western Data Systems can meet your needs. There are no other GPS rental companies that can combine theamount of equipment we have available with the technical support we can and do provide our customers.



Exploration and Production

Williams is making responsible natural gas development a reality every day as we work to produce the natural gas that our nation needs. We specialize in developing unconventional reserves, includ-

ing tight-sands gas, coal-bed methane and shale.

Over the past decade, we have increased our natural gas production by more than eight-fold. We now produce enough natural gas to meet the energy needs of almost four million homes per day.



Wind Environmental Services, LLC provides complete GIS Mapping solutions® to their clients, providing hardware, software, training, and support. They are an ESRI Authorized Business Partner, Consultant and Reseller; they also have an ESRI Authorized Instructor

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on staff. In addition they are resellers for Ricoh Geo-Imaging, Magellan Professional, Laser Technology, LizardTech, and Juniper Systems. They also produce Wind Image[™] Suite of products that provide image integration into ESRI ArcPad, and ArcMap software. In addition they proved ArcPad customization and custom application development. With their wide variety of products and services they can truly provide solutions to meet the need of any GIS or Mapping project. For more information about any of their products or services stop by and visit their booth.

2008 OKLAHOMA SCAUG CONFERENCE GISP CREDIT CHECKLIST

¹/₂ Day Workshops (4 hours)

Description	Classification	Credit	Credits Earned
Open Source GIS	EDU	0.1	Terrer and
The GISCI Certification Program for GIS Professionals	EDU	0.1	
APDM/PODS	EDU	0.1	
Floodplain GIS (OFMA/DFIRM)	EDU	0.1	

(Workshop Certificate required for documentation credit)

SCAUG Conference (8 hour)	Classification	Credit	Credits Earned
Attendee:	EDU	0.1	
Presenter:	CON	1.0	
Poster Presenter:	CON	1.0	
Poster Award Winner	_ CON	2.0	
1 Day Training (8 hour)			
Introduction to GPS	EDU	0.1	
(Training Cartificate r	auirod for dooum	ontotion	orodit)

2 Day Training (16 hour)	Classification	Credit	Credits Earned
Intro to ArcGIS Server	EDU	0.4	
(Training Certificate rec	uired for docum	entation	credit)

3 Day Training (24 hour)	Classification	Credit Credits Earned
Building Geodatabases	EDU	0.4
Introduction to ArcGIS I	CON	0.4

(Training Certificate required for documentation credit)

Total GISP Credits Earned:



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