18th Annual OKSCAUG Conference

OKSCAUG 2015

Ignite the Possibilities

Tuesday

September 22, 2015

The OKSCAUG Steering Committee

Welcomes you to the

18th Annual OKSCAUG Conference!

Join hundreds of your fellow GIS professionals on September 22nd for the 18th Annual OKSCAUG Conference. As geographic information plays a larger role in government, industry, and in daily life, GIS professionals are developing data and sharing more information than ever.

Our theme, *Ignite the Possibilities*, came about as OKSCAUG members discussed how diverse our industry is and how we would like to seek new means of expanding the use of GIS technology into other fields. As geographic information plays a larger role in government, industry, and in daily life, GIS professionals are developing data and sharing more information than ever.

To help ignite the GIS fire, we are striking up a relationship between our professional and social networking lives. Monday evening we will gather around the MNTC campfire. This social mixer is something we started last year and hope to continue. Tuesday we will be fanning the flames of GIS as we listen to the history of SCAUG, share kindling fires of the present and manage where to take GIS in the future. Wednesday and Thursday will be dedicated to carrying the flames of training into the next year.

Please share in our excitement and experiences. OKSCAUG strives to be the GIS resource for the state of Oklahoma. We welcome your thoughts, suggestions, and contributions. **You never know what possibilities you might ignite!**

— 2015 OKSCAUG Steering Committee

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Table of Contents

2015 OKSCAUG Steering Committee

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-City of Ardmore, Oklahoma

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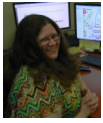

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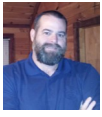

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2015 Conference Schedule

		Room
7:30 – 2:00	Registration	
7:30 – 8:30	Breakfast/Exhibitor Visit	Rotunda
8:30 – 9:30	Welcome & Keynote Address	Main Hall

Keynote Speaker: J. Scott Sires
Co-Founder of SCAUG

9:30 – 10:15 **Morning Break - Exhibit Hall**

User Presentations

10:15 – 10:45	**Room**
Using GIS to Prioritize Regional Pedestrian Improvements	109/110
Implementation of Organizational AGO in a State Agency	111/112
Utilizing GIS in the Oklahoma Agricultural Land Valuation Methodology for County Assessors	205
Using GIS to Support Midwest City's Water Meter Change-Out Project	206
OKMAPS Data Clearinghouse and Regional E-911 Project	207
How and Why to Use the ArcPy Module Instead of ArcMap	210

2015 Conference Schedule

User Presentations

10:50 – 11:20	**Room**
Local Government Information Model Lessons Learned	109/110
ODOT Web Mapping: An Agency in Transition	111/112
Spatial Clustering of False Ring Anomalies in Juniperus Virginiana of the Oklahoma Crosstimbers	205
Modernization of the City of Universal City Water and Sewer System Maps	206
Collision Reduction Project	207
All the Right Data in All the Right Places: Basics of Coordinate Systems and Projections	210

11:25 – 11:55	**Room**
Extending GIS to the Public with the My Government Services Application	109/110
Configuring the Esri Platform for a Bridge Inspection Solution	111/112
A Geospatial Solution for Environmental Justice Reviews	205
Mapping Utilities on a Budget	206
Winston County, MS (Louisville Tornado)	207
What's New with the USGS National Geospatial Program?	210

2015 Conference Schedule

12:00 – 1:00 Lunch - Poster Competition - Exhibit Hall

Afternoon Exhibitor Showcase

1:00 – 1:45 **Room**

Asset Management and Condition Inspections Using GIS and Mobile Devices — *Brent Wilson & Blake Mize, Cityworks* 109/110

1:00 – 1:20 **Room**

Hosting GIS in the Cloud—Debunking the Myths 111/112
— *Laura Carr, GISP, NewEdge Services, LLC*

Local and Regional GIS Data Sharing Made Simple for Emergency Purposes — *Matthew Knight, Spatial Data Research, Inc.* 206

GNSS What Happened to My GPS?: Explanation of Multiple Satellite Systems — *Cody Cantrell, Western Data Systems, Inc.* 210

1:25 – 1:45 **Room**

Data Editing and DXF Exporting 111/112
— *Nick Tonias, The CEDRA Corporation*

New Technology to Accurately Build, Maintain and Classify HCA's (High Consequence Areas) — *Trent Casi & Jonathan Ballard, Pictometry* 206

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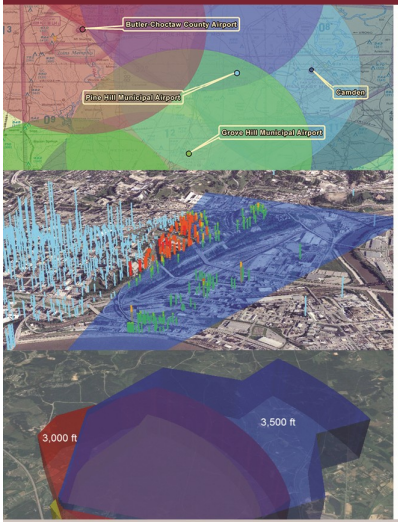

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For more information, contact

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2015 Conference Schedule

Esri Technical Sessions

1:45 – 2:30	**Room**
Esri: ArcGIS Pro —*Jennifer Kuntz*	109/110
Esri: ArcGIS Online and Living Atlas —*Pam Kersh*	111/112
Esri: Apply Geography — *Ed Crane*	206
Esri: AppStudio Survey & Survey123—*Brig Bowles*	210

2:30 - 3:15 Afternoon Break — Exhibit Hall

Esri Technical Sessions

3:15 – 4:00	**Room**
Esri ArcGISPro — *Jennifer Kuntz*	109/110
Esri: Web Appbuilder —*Pam Kersh*	111/112
Esri: The Esri Software Licensing Model & How You Can Best Implement It — *Veronica Schindler*	206
Esri: Open Data — *Brig Bowles*	210

4:00 – 4:30 Closing Remarks/Door Prizes Main Hall

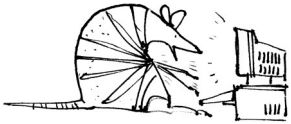
Keynote Address

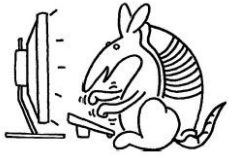
8:30 a.m.

J. Scott Sires

Co-Founder of SCAUG

Responsible for designing, creating and administering Brookhaven's geospatial technology program, J. Scott Sires has worked since 1985 in the geospatial technology industry, including spatial documentation and GIS training and applications. During his career, he has worked with telecommunications, local government, state government and commercial clients to offer training and expertise in a full range of GIS services. His career experience includes serving as: an independent GIS consultant; director of technical services for GeoMarine Inc. of Plano, where he developed technical support and managed the GIS staff for seven national offices' federal military projects; vice president of GIS for PFQ Computing in San Antonio; a senior GIS consultant for Berger and Co. of Dallas; and founding president and consultant of GBS Inc., providing GIS oversight and management level studies to local Texas governments. He has also been a senior GIS programmer analyst for the Texas State Comptroller's Office in Austin and a senior GIS engineering technician for the city of Denton. He earned a CAD technical diploma from Elkins Institute in Dallas; holds an associate degree from Brookhaven College; and attended the University of North Texas, where he took the university's first GIS course in 1988.





User Presentations
10:15-10:45 a.m.

Room 109/110

Using GIS to Prioritize Regional Pedestrian Improvements

Jennifer Sebesta & Kate Brady, Association of Central Oklahoma Governments (ACOG)

From the 1930s through the 1980s, Central Oklahoma developed largely its transportation network for automobiles exclusively. As walkability becomes more desirable for cities everywhere, communities in the region have begun retrofitting sidewalks where none were built originally. Because financial resources are limited, there's a need to focus resources strategically in areas of greatest regional need. To do that the region needed to figure out where those needs are.

Staff from the Association of Central Oklahoma Governments will describe the GIS analysis they developed, loosely following one from the Metropolitan Planning Organization in Albuquerque. ACOG searched for regional data sets that would indicate areas where one might find high numbers of people walking (pedestrian generators) and areas that might discourage getting around on foot (pedestrian deterrents). Regional partners selected the highest priority indicators, which were analyzed and then summed to create generator and deterrent scores. On their own, these scores help us better understand the region, and then combined they become a Pedestrian Composite Index, an indicator of the highest priority areas for investment across the region.

User Presentations
10:15-10:45 a.m.

Room 111/112:

Implementation of Organizational AGO in a State Agency

Mike Sexton & Leslie Crofford, Oklahoma Department of Commerce (ODOC)

The Oklahoma Department of Commerce started working with the public (free) version of AGO in late 2013. In early 2014, ODOC began incorporating various AGO maps into its website providing basic information on many of its programs to the public. One benefit was to significantly reduce the time staff spent answering information calls. This year, to further these efforts and leverage the existing AGO mapping, Commerce has moved to an AGO compatible platform for LocateOK, its buildings and sites application and selected a new Esri Business partner Exhibitor for development. Today, ODOC has an organizational level AGO account that allows multiple users access to agency maps, mapping tools & data through Community Analyst.

Room 205:

Utilizing GIS in the Oklahoma Agricultural Land Valuation Methodology for County Assessors

Joel Foster & Chelsea Slape, Canadian County

County Assessor Offices are required to map agricultural land use as part of the annual performance audit administered by the Oklahoma Tax Commission. How can the Assessor's Office create this geographic data and turn it into accurate values that follow the valuation methodology set forth by statute? Canadian County will discuss the approach they used to create preliminary agricultural land use data for the county, the approach used to transform those datasets into values, and lessons learned along the way.

User Presentations
10:15-10:45 a.m.

Room 206:

Using GIS to Support Midwest City's Water Meter Change-Out Project

Kathy H. Spivey, City of Midwest City

Midwest City is completing a citywide change-out project of over 20,000 water meters, upgrading from manual read to an automated meter reading and remote disconnect system. GIS has been involved from the beginning to the end of the project - providing pre-bid information, providing meter replacement status maps and time-lapse video, confirming accurate data input into the City's legacy billing system, providing MapViewer application for field crews performing installs and repair, creating QA/QC exception reports to confirm all map and attribute data is synchronized between the legacy billing system and the automated meter reading system, and providing other maps and analyses as needed to support decision making before, during and after the project. This presentation will discuss the entire water meter change-out project from the GIS point of view and the support GIS was able to give to the Utility Billing and Water Departments throughout the project.

User Presentations
10:15-10:45 a.m.

Room 207:

OKMAPS Data Clearinghouse and Regional E-911 Project

Shellie Willoughby, GISP & Charles Brady III, GISP; OK Office of Geographic Information & City of Ardmore, respectively

OKMAPS is a collaborative effort of many state and local agencies to provide geospatial data to the public through an on line mapping application. The Office of Geographic Information maintains and updates the OKMAPS project with grants through the OK Department of Homeland Security. As a result of this project 9 counties in southern Oklahoma have come together to develop an E-911 collaboration. This collaboration has worked to import their E-911 data into OKMAPS. This presentation will highlight the functionality of OKMAPS as well as the E-911 initiative.

Room 210:

How and Why to Use the ArcPy Module Instead of ArcMap

Clay Barrett, OSU Cartography Services

During the course of my thesis research the image processing tools in ArcToolbox were unable to get me the results I needed. This led to learning how to leverage the ArcPy module through Python to control work flow, customize tools to fit my needs, and get the information necessary to diagnose the inevitable problems. This talk focuses on the merits of using Python to extend the user's GIS capabilities rather than replace ArcMap. What I found is there are times when leaving ArcMap closed reduces processing time, reduces frustration, and is the most efficient workflow if you don't mind a little programming. Procedures like batch clipping and repetitive raster calculation tasks like image processing are especially suited to this approach.

User Presentations
10:50-11:20 a.m.

Room 109/110:

Local Government Information Model Lessons Learned

Clifford Montgomery, City of Broken Arrow

The City of Broken Arrow has more than 100 square miles in its fence line and 56 square miles in the city limits. Trying to manage land and infrastructure can be a challenging task; with the implementation and integration of Local Government Information Model we have improved the flow of information here at the City greatly. When the City created its geographical information system (GIS) database it tried to determine what information it needed to enter for storage in it and for years it felt like something was missing. Along came ArcGIS for Local Government. A set of focused maps and applications that help leverage your geographic information with the ArcGIS Platform to improve government activities and enhance citizen services. The City has been using Esri Local Government Information Model for about three years now and there are lessons we have learned. Our main data repository is the SunGard system for government at the time we started the implementation of GIS. It was the only information system the City used. The beautiful, easy to use maps have allowed the GIS Department to promote a standardized and practical application of GIS to the diverse work groups within the City of Broken Arrow. It has also served as a vehicle to improve services provided to the public with easy to use spatially enabled tools. Now the City is using a web dispatch mapping system 24/7 and mobile tracking in the public safety vehicles. The City's GIS Department is starting to show its presence in the City of Broken Arrow.

User Presentations
10:50-11:20 a.m.

Room 111/112:

ODOT Web Mapping: An Agency in Transition

Jeremy Planteen, Oklahoma Department of Transportation (ODOT), Strategic Asset & Performance Management Division

The Oklahoma Department of Transportation has long relied upon PDF maps and desktop-based GIS software for many tasks. Recently, we have begun to shift away from these static maps and software options to simple, directed, web-based solutions. As a result, productivity has increased and demand has grown for dynamic, easy to use solutions. ODOT utilizes ArcGIS Online and ArcGIS for Server and is currently building a custom roadway inventory viewer.

User Presentations
10:50-11:20 a.m.

Room 205:

Spatial Clustering of False Ring Anomalies in Juniperus Virginiana of the Oklahoma Crosstimbers

Carson Bode, Oklahoma State University, Department of Geography

This study counted false rings in Eastern Red Cedar samples to track growing conditions in the Crosstimbers of Oklahoma. Using ArcGIS, this study expands on previous research that used comparison between two sites and examines trends across the Crosstimbers region of central Oklahoma. Kriging analysis was used to compare atmospheric data from the Oklahoma Mesonet to tree core data. False rings are a type of growth anomaly that occurs in certain species of trees, particularly evergreens. These anomalies result from periods of water stress that cause the tree to begin forming late wood, followed by late season precipitation that causes the tree to revert to its normal growth pattern. False rings can indicate areas prone to a high degree of climatic variation. The highest occurrence of false rings was found on the boundary between the driest and wettest regions. These areas were not subjected to prolonged periods of drought, but did experience some degree of water stress. This may be useful in identifying areas prone to sudden shifts in growing conditions and providing greater seasonal resolution of dendroclimatic models. This trend was the strongest with vapor deficit, where the highest and lowest levels produced almost no false rings, but the mid-range levels produced large quantities of false rings. False ring probabilities were tracked using 553 samples from eastern red cedars growing in eleven sites throughout central Oklahoma. The false ring records counted in these cores were compared to weather records collected through the Oklahoma Mesonet. Maps of weather averages were constructed using Kriging analysis on records from 1994 to 2008.

User Presentations
10:50-11:20 a.m.

Room 206:

Modernization of the City of Universal City Water and Sewer System Maps

Wesley Keller , City of Universal City

The City of Universal City initially converted its water and sewer system utility maps into an Esri GIS in 2001. The digital maps were digitized from georeferenced images of the hard copy water and sewer system maps created in the 1980's. The initial digitization did not make use of as-built plans or construction drawings. The initial GIS data suffered from positional and attribute errors related to the hard copy maps. In 2012, The City partnered with Pape-Dawson Engineers to modernize the maps. The goals of the program are to 1) improve the positional accuracy of system features with GPS surveys, 2) make use of as-built and construction drawings to improve attribute data, and 3) make the data accessible to Public Works crews using a suitable web-mapping technology. Modernization has begun with locating above-ground utility features with survey-grade real-time kinematic GPS using a bulk collection over five years. The line-work is being corrected to match the surveyed locations of valves, water meters, fire hydrants, blow-offs, and sanitary sewer manholes. The City is now in the second year of the project. This presentation discusses the work performed thus far and plans for the future.

User Presentations
10:50-11:20 a.m.

Room 207:

Collision Reduction Project

Christopher L. Rogers, Department of Public Safety, OKC

Background:
Fatality and Major Injury Collisions are a major concern across our Nation. Causes range from poor human behavior and/or weather related issues while others are attributed to roadway engineering problems. Some are even due to a combination of these elements however many are preventable! If we can predict, through the utilization of spatial and temporal information, how, when, and where these collisions will occur and place focused traffic enforcement in these areas we can effect change and reduce the Collisions in our State whereby saving countless lives and reducing the impact to everyone through insurance and healthcare costs.
Teaching Points: This presentation covers the use of Esri and Microstrategy solutions towards Intelligence-led policing (ILP) and Predictive Analytics in support of the Oklahoma Department of Public Safety's Collision Reduction Project.
1. The use of GIS data within Intelligence-led policing (ILP) – Intelligence-led policing (ILP) is a policing model built around the assessment and management of risk. Intelligence officers serve as guides to operations, rather than operations guiding intelligence.
SOURCE: https://en.wikipedia.org/wiki/Intelligence-led_policing
2. The use of GIS data within Predictive Analytics – Predictive analytics is the practice of extracting information from existing data sets in order to determine patterns and predict future outcomes and trends. Predictive analytics does not tell you what will happen in the future. SOURCE:www.webopedia.com/TERM/P/predictive_analytics.html
Summary:
The defining functional effect of this approach is that predictive analytics can provide a predictive score (probability) identifying where future collisions are likely to occur. This information can be used to effectively determine and influence traffic enforcement planning processes and activities. This helps to reduce future collisions and/or the severity of future collisions within high probability areas. Bottom line we can put Cops on Dots or more importantly where future Dots may occur. GIS solutions such as those from Esri and Microstrategy can great enhance our Predictive Analysis and Traffic Enforcement Activities to reduce costs and save lives.

User Presentations
10:50-11:20 a.m.

Room 210:

All the Right Data in All the Right Places: Basics of Coordinate Systems and Projections

Marcus Arreguin, Rogers County Assessor's Office

Handling coordinate systems and projections properly is a crucial part of creating accurate and aesthetically pleasing maps. However, many GIS users have a rudimentary understanding at best of the basics of this. The presenter will cover the basics of datums, coordinate systems, and projections in an accessible manner. He will also discuss some rules of thumb when handling coordinate systems and projections, mention how to avoid common pitfalls, and show examples of how to set up projections in ArcGIS.

User Presentations
11:25-11:55 a.m.

Room 109/110:

Extending GIS to the Public with the My Government Services Application

Brian O'Keefe, City of Tulsa

The City of Tulsa spans over 200 sq. miles and offers a wealth of services and places to visit. An easy to use GIS application was needed to provide the public with one click access to relevant information about services. Tulsa's GIS Department utilized Esri's Local Government Information Model (LGIM) in the past as a successful pilot project to modernize the Park's Department data and maps. Looking once again to the LGIM, the ArcGIS for Local Government, My Government Services application has allowed the City of Tulsa to further transform existing city paper maps and data into an information rich application. The beautiful, easy to use map has allowed the GIS Department to promote a standardized and practical application of GIS to the diverse work groups within the City of Tulsa and has served as a vehicle to improve services provided to the public with easy to use spatially enabled tools.

Room 111/112:

Configuring the Esri Platform for a Bridge Inspection Solution

Mike Kallas, TranSystems Corporation

This presentation runs through the process of creating an MXD via ArcGIS Desktop for Collector, making feature services, creating Maps on ArcOnline, and configuring, configuring, and configuring Arc Online, until you get what you expect on Collector. This runs through the entire process of bridge inspection and how the Esri software platform has aided in bridge inspections and improved data integrity and the final reporting process back to the DOT. Pros/Cons in the office and in the field, plus gotcha's and tracking progress through Web App Builder.

User Presentations
11:25-11:55 a.m.

Room 205

A Geospatial Solution for Environmental Justice Reviews

Rachel Turney-Work, ENERCON

In 1994, President Clinton signed Executive Order 12898 directing each Federal Agency to consider environmental justice (EJ) by identifying disproportionate and adverse health or environmental effects of its activities on minority and low-income populations. Subsequently, all projects requiring a NEPA analysis must also include EJ reviews. To comply with this requirement, GIS has been implemented as an effective tool to combine demographic, American Community Survey, and regional data to effectively and quantitatively assess potential impacts to the

identified minority and low-income populations. This in turn allows for the identification of mitigation measures to reduce or prevent impacts and also reduces the risk for contentions and project impacts. In short, GIS has provided the perfect tool to combine socioeconomic impact analyses with a geographic component in an effective, repeatable and defensible process. All of which are necessary when working on projects that receive a high degree of scrutiny and review.

Room 206:

Mapping Utilities on a Budget

Rhonda Baber, Larry Setters , & Michael Richardson, Tahlequah Public Works Authority

Tahlequah OK is a community in Cherokee County of approximately 16,000 people. Tahlequah Public Works Authority provides Water, Sanitary Sewer, and Electric utilities to its approximately 8,000 customers. Prior to 2012, the last updated map or atlas of the city's utility system had taken place in 1986. The system was badly in need of updating, so TPWA hired two mapping technicians. Since that time, we have done field verification of our entire system, including water lines, valves, meters and fire hydrants, sanitary sewer lines and manholes, and overhead and underground electric services. We then created poster maps and atlas books for our service crews to have in the field. We are in the planning process of obtaining mobile devices for our service crews, which will require our maps. Our presentation will talk about the processes we've gone through on the very limited budget we have to work with, being a Trust of the City of Tahlequah.

User Presentations
11:25-11:55 a.m.

Room 207:

Winston County, MS (Louisville Tornado)

Capt. Scott L. Trapolino, GISP, DeSoto County

An EF-4 Tornado touched down outside of Winston County, MS at 3:51 PM on April 28, 2014. This EF-4 tornado ran for a length of 35 miles, maximum span of 3/4 of a mile in width, wind speeds reaching 185 mph, 647 damaged structures (including the only county hospital), 10 fatalities and unknown injuries. This presentation will include key elements used in Primary Damage Assessment and simplistic analysis examples that can be used by GIS Professionals to assist State and Federal Emergency Management Official's in Damage Assessment and Basic Decision Making. The data collection and analysis for this natural disaster would have not been possible without quality GIS data provided by Golden Triangle Planning and Development District. "The real value of GIS is NOT in the response phase, by then it's too late…"

Room 210:

What's New with the USGS National Geospatial Program?

Claire DeVaughan, US Geological Survey (USGS)

This presentation will provide a wide range of quick updates on current activities of the USGS National Geospatial Program. Topics will include the 3D Elevation Program (3DEP), National Hydrography Dataset (NHD), The National Map (TNM) data download functions, TNM services for mobile mapping efforts, US Topo, and TopoView.

Exhibitor Showcase
1:00 – 1:45 p.m.

Room 109/110

Asset Management and Condition Inspections Using GIS and Mobile Devices

Brent Wilson & Blake Mize, Cityworks

Cityworks is a GIS-Centric asset management system that uniquely and directly leverages the GIS. This presentation will show the benefits of directly connecting a GIS to an asset management as related to doing inspections. Using multiple devices in the field with real time updates. From the office, GIS spatial analysis and other Cityworks tools can then be used to manage assets using historical maintenance and condition scores. A pavement management and ROW street asset scenario will be demonstrated.

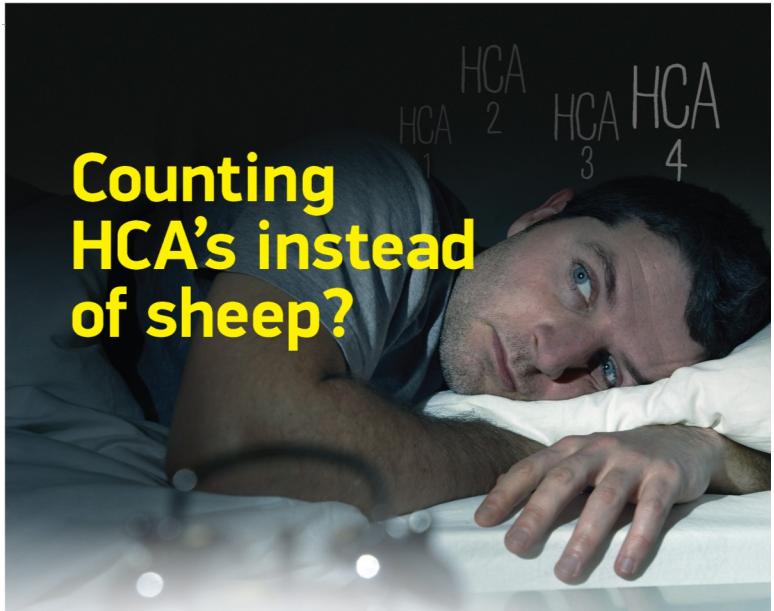
Exhibitor Showcase
1:00 – 1:20 p.m.

Room 111/112

Hosting GIS in the Cloud – Debunking the Myths

Laura Carr, GISP, NewEdge Services, LLC

NewEdge Services has offered hosting services for GIS and work order management software for four years. In this presentation we will review our hosting services model and our client success stories. We will also go over some of the "myths" of cloud hosting – such as security, cost and accessibility of data.



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Exhibitor Showcase
1:00 – 1:20 p.m.

Room 206

Local and Regional GIS Data Sharing Made Simple For Emergency Purposes

Matthew Knight, Spatial Data Research, Inc. (SDR)

In today's environment sharing your GIS data becomes extremely important to 9-1-1 and emergency responders. In eastern Oklahoma they have developed a solution with a partnership with SDR to not only share the data, however to put it to use in a variety of ways for dispatch and responders. Emergencies cross municipal boundaries and therefore locally maintained GIS data is important on a regional or state-wide basis. See how this solution is used for local and regional groups today.

Room 210

GNSS What Happened to My GPS?: Explanation of Multiple Satellite Systems

Cody Cantrell, Western Data Systems, Inc.

An explanation of what GNSS means and short history about global navigation systems and the components that make it up. Focus on how end user hardware advances have made use of the latest technology and what to expect in the future.

Exhibitor Showcase
1:25 – 1:45 p.m.

Room 111/112

Data Editing and DXF Exporting

Nick Tonias, The CEDRA Corporation

Two common tasks ArcGIS users are faced with involve editing data and creating DXF files. Obviously native ArcMap functionality provides this capability, however, our experience has shown that users require more functionality than what is offered in core ArcMap. This presentation discusses the CEDRA-DataEditor and CEDRA-DxfExport products which takes editing data and DXF file creation within ArcMap to the next level. The CEDRA-DataEditor software offers the user the ability to create custom dialog boxes with no programming in a desktop or server environment. Single column and Multi-column dialog boxes with user-defined labels can be quickly created via configuration file. Custom drop-down lists and Excel like equations can be defined for efficient and high quality data specification. The CEDRA-DxfExport software enables the user to create a DXF file for all visible layers, including annotation features, in Data or Layour view. Configuration files can be established to ensure proper color and linestyle mapping during the export process.

Exhibitor Showcase
1:25 – 1:45 p.m.

Room 206:

New Technology to Accurately Build, Maintain and Classify HCA's (High Consequence Areas)

Trent Casi & Jonathan Ballard, Pictometry

Attendees will learn how the latest advances in aerial imaging technology will play an important role in every HCA classification program. Technology has advanced to the point that ultra-high-resolution, metric oblique images can be used to establish critical foundational datasets, monitor change detection and provide visual intelligence for pre-field inspections. Use cases will be reviewed that demonstrate problems faced, review workflows and examine outcomes utilizing the new technologies. A firsthand look at the tools and technology will include a review of web-based deployment options, integrations with ArcMap and an overview of enterprises uses and capabilities.

This presentation is relevant for individuals working in GIS or integrity management in the utility/oil/gas market.

Esri Technical Sessions
1:45 –2:30 p.m.

Room 109/110
ArcGIS Pro
Jennifer Kuntz, Esri

ArcGIS Pro, a new application in the ArcGIS family, makes the GIS functionality you most often use easy to access so you can get your work done faster without a learning curve. It is the essential application for creating and working with spatial data on your desktop that provides tools to visualize, analyze, compile, and share data. In this session we will highlight many of the great new features available in ArcGIS Pro, and see the brand new interface and application.

Room 111/112
ArcGIS Online and Living Atlas
Pam Kersh, Esri

ArcGIS Online provides access to a diverse and growing set of content to enrich the ArcGIS user experience. This content represents a living atlas of the world with beautiful and authoritative maps on hundreds of topics. This includes a rich set of online maps and layers as well as related capabilities (e.g., geocoding, routing, geoenrichment) that may be accessed for free or through a subscription for use in desktop, server, mobile, and web mapping applications. This session will provide details on the variety of ArcGIS Online content and capabilities that is available today and demonstrate how ArcGIS users can leverage them in their work. Learn what ArcGIS Online services are available to you now and get an early preview of new content that is planned for the coming year.

Esri Technical Sessions
1:45 –2:30 p.m.

Room 206
Apply Geography
Ed Crane, Esri

Location-based data, maps, and apps play prominent roles in everyone's lives today. Due to this trend, it is an amazing time to be a GIS professional because people across your organization want to use mapping and spatial analysis in their work. During this session, we will explore a new approach to deliver and sustain maps and apps that empower everyone in your organization to apply geography.

Room 210
AppStudio Survey & Survey123
Brig Bowles, Esri

Build native GIS apps faster. That's what AppStudio for ArcGIS is about. Why would you build a native app anyways? Well, because native apps give the best user experience and that matters quite a bit, particularly in small phones and tablets. Native apps can also run beautifully even while disconnected from the network, and that is important when you are on the run. Finally, native apps can be published into the Google Play and Apple app stores and that is not only cool but actually a big deal if you want reach out to the general public. Can you imagine your own branded mapping app in the app stores?In this session we will introduce to you AppStudio for ArcGIS. You will be amazed how easily, and quickly, you can assemble fully functional mapping apps and run them pretty much anywhere... in a smartphone, in a tablet and even on your own Windows or Mac. We will explore how to distribute your own apps within the enterprise as well as in the public app stores. Finally, we will briefly touch on how to use QML and JavaScript to start developing your own apps from scratch.

Esri Technical Sessions
3:15 –4:00 p.m.

Room 109/110
ArcGIS Pro
Jennifer Kuntz, Esri

ArcGIS Pro, a new application in the ArcGIS family, makes the GIS functionality you most often use easy to access so you can get your work done faster without a learning curve. It is the essential application for creating and working with spatial data on your desktop that provides tools to visualize, analyze, compile, and share data. In this session we will highlight many of the great new features available in ArcGIS Pro, and see the brand new interface and application.

Room 111/112
Web Appbuilder
Pam Kersh, Esri

Esri's new ArcGIS Web AppBuilder is a pure HTML5/JavaScript-based application that allows you to create your own intuitive, fast and beautiful web apps without writing a single line of code. The app uses new ArcGIS platform features and modern browser technology to provide both flexible and powerful capabilities such as 3D visualization of data. In addition, developers have an opportunity to create custom tools and app themes through the extensibility framework. Come to this session to learn how you can:• Configure workflow-driven GIS apps that run seamlessly across all devices.• Create both ready-to-use apps and ArcGIS web app templates for ArcGIS Online or ArcGIS Portal • Create custom widgets

Esri Technical Sessions
3:15 –4:00 p.m.

Room 206

The Esri Software Licensing Model & How You Can Best Implement It

Veronica Schindler, Esri

The Esri licensing model can be both easy and challenging when working in an enterprise setup. In this session we will go over options that will help you overcome some of these obstacles and show how to better manage you licenses yourself through the Esri customer portal.

Room 210

OpenData

Brig Bowles, Esri

While Open Data itself can be about transparency, at a greater scale it's about building a better and more informed society. Come learn how organizations around the world engage with their communities to turn data into knowledge, after unlocking the data they work with everyday.

Poster Presentations

Columbus's Four Voyages: A Detailed Look
Jason Kleps, Meshek & Associates, PLC

This poster takes a day by day look at each of Christopher Columbus' four voyages to the New World. Data was created by referencing both Columbus' own log ("The Four Voyages: Being His Own Log-Book, Letters and Dispatches with Connecting Narratives"; Penguin Classics; ISBN 0140442170) as well as Samuel Eliot Morison's magisterial history of the explorer ("Admiral of the Ocean Sea: A Life of Christopher Columbus"; Little, Brown, and Company; ISBN 0316584789). Additional layers such as archaic place names and original tribal boundaries provide supporting context to the voyages themselves. With this poster I hope to generate increased interest in Historical GIS.

Mapping Utilities on a Budget
Rhonda Baber & Larry Setters & Michael Richardson, Tahlequah Public Works Authority

Tahlequah OK is a community in Cherokee County of approximately 16,000 people. Tahlequah Public Works Authority provides Water, Sanitary Sewer, and Electric utilities to its approximately 8,000 customers. Prior to 2012, the last updated map or atlas of the city's utility system had taken place in 1986. The system was badly in need of updating, so TPWA hired two mapping technicians. Since that time, we have done field verification of our entire system, including water lines, valves, meters and fire hydrants, sanitary sewer lines and manholes, and overhead and underground electric services. We then created poster maps and atlas books for our service crews to have in the field. We are in the planning process of obtaining mobile devices for our service crews, which will require our maps.

Poster Presentations

All the Right Data in All the Right Places: Basics of Coordinate Systems and Projections

Marcus Arreguin, Rogers Count Assessor's Office

Handling coordinate systems and projections properly is a crucial part of creating accurate and aesthetically pleasing maps. However, many GIS users have a rudimentary understanding at best of the basics of this. The presenter will cover the basics of datums, coordinate systems, and projections in an accessible manner. He will also discuss some rules of thumb when handling coordinate systems and projections, mention how to avoid common pitfalls, and show examples of how to set up projections in ArcGIS.

Using Lidar and the National Land Cover Database to Reveal Urban Abandonment in Detroit

Emily S. Thompson & Kirsten de Beurs, Department Geography and Environmental Sustainability, The University of Oklahoma

The urban population in the United States increased by 12.1% from 2000 to 2010, but this change is not uniform for all urban areas. While many studies are devoted to changing urban land cover patterns as a result of population growth, this study specifically investigates the changes of a shrinking city. Detroit reduced from a peak population exceeding 1.8 million in 1950 to 714 thousand in 2010, a decline of 61.4%. Between 2000 and 2010, Detroit shrank by 24% from 951 thousand to 714 thousand people. This study uses the ArcGIS software to investigate the relationship between percent population change and land cover changes experienced by the Detroit Metropolitan region between 2001 and 2011. For this study, I use the 2001 and 2011 National Land Cover Dataset's Land Cover, Percent Impervious Surface, Percent Tree Canopy and Lidar data. I also use the 2000 and 2010 US Census Bureau population data.

Poster Presentations

Oklahoma Biological Information System

Bruce Hoagland & Dan Hough & Todd Fagin, Oklahoma Biological Survey

Informed and accurate conservation planning relies on access to current, spatially explicit data on the occurrence of species. In Oklahoma, the Oklahoma Natural Heritage Inventory (ONHI), a program of the Oklahoma Biological Survey (OBS), is the designated centralized repository for biodiversity data. The OBS enabling legislation requires ONHI to "acquire, archive, process and disseminate information on biological resources and natural areas that is or could be of value to policy and decision makers in the state (§70 3314)." To achieve this mandate, the OBS and ONHI maintain a collection of databases related to the biodiversity of Oklahoma. These data are provided to interested state and federal agencies, NGOs, consulting firms, and the public. However, these databases offer different degrees of accessibility and functionality. In order to overcome these limitations, OBS staff, in conjunction with staff from the University of Oklahoma Information Technology Department, is now working to integrate these disparate databases into a single, integrated, web-based data management system, tentatively called the Oklahoma Biological Information System (OBIS). This poster is designed to give an overview of this ongoing development project.

Utility Data Management and Mapping in the Noble Foundation

Kushendra N. Shah, The Samuel Roberts Noble Foundation Inc.

Migration of CAD based utility data and drawings into enterprise GIS is important in many ways for mapping of assets, outage response, field survey and tracking, and updates and distribution. GIS system and capabilities offer maximum advantage for organizing and managing data in effectively and timely fashion. Spatial Technology Services at Noble Foundation brought all the historical CAD files to facilitate Noble Foundation's Facility Department

into GIS system. At first, the geo-data development and model were created in order to perform versioned edits on the databases for specific users. This helps to manage, organize, and keep tracks of any updates that has been newly added from the field. The data were then attributed with pertinent information and geometrically corrected in order to enhance better accuracy and preserve spatial information. In addition, quality control and assurance was done on the data using Esri's ArcGIS data reviewer tool that helps to set procedures and standard to review, correct, and validate the data. The data were further published as GIS services in ArcGIS for Server to create and deploy web applications in ArcGIS for Windows Mobile for field data collection, updates, and synchronization.

Using GIS to Honor America's Veterans

Jacob Shipman, Meshek & Associates, PLC

Every Memorial Day volunteers across the country place flags on the graves of American veterans. With the help of GIS this daunting task can be made easier. Using ArcGIS Online and the ArcGIS Collector App I was able to collect GPS points of veterans buried in the Bixby Cemetery. After the data is processed it will be added to a web map for the city and public to access. Once the public has access to this data, volunteers will easily be able to find gravesites of veterans in Bixby Cemetery. This will reduce the time volunteers spend searching for graves, and increase the number of flags that can be placed by the volunteers.

Poster Presentations

Mapping New Orleans Flood Risk Using LiDAR Data

Kyndra Hanson & Chloe Magee, Department of Geography and Environmental Sustainability, University of Oklahoma

Coastal cities are especially vulnerable to storm surge and flooding from a tropical cyclone. In particular, New Orleans, Louisiana presents a unique example due to the city's vulnerable location between Lake Pontchartrain to the North and the drainage of the Mississippi River into the Gulf of Mexico. Additionally, the city's elevation rests lower than the majority of the state - even below sea level in multiple areas. By conducting a comparative analysis of New Orleans' pre-hurricane geography to post-storm devastation, problematic areas in the land can be identified for future mitigation. LiDAR data provides a digital perspective of the coastline for an interdisciplinary analysis of population density variation, elevation and geographic features. The proximity of each of these features to one another will indicate the types of vulnerability experienced in New Orleans. A flood inundation map was created using land cover classification and a digital elevation model. Moving forward, mitigation techniques will be suggested based on findings with emphasis on the understanding of susceptibility to risks based on geographic location.

Oklahoma Wind Energy

Dawn M Sowinski, GISP, Meshek & Associates, PLC

Oklahoma's energy production is primarily composed of petroleum and natural gas. Coal, hydroelectric power and wind energy, among others, also share in energy production. The purpose of this poster is to provide information on the existing state of wind power in Oklahoma, and to emphasize the potential for future development based on geographic factors.

Poster Presentations

Flood Database for Oklahoma: A Web-Mapping Application for Historical Flood Information Organization and Access

S. Jerrod Smith, US Geological Survey

Historical peak-streamflow and peak-stage (flood) information is vital for the design of stream-related infrastructure such as bridges and dams. The U.S. Geological Survey (USGS) annually publishes these data from gaged sites, and the Oklahoma Department of Transportation (ODOT) conducts peak-stage surveys at selected sites during periods of flooding. This historical flood information often is underutilized because of a lack of knowledge of the existence, location, and usefulness of archived records. In cooperation with the ODOT, the USGS developed (1) a digital database of historical flood information, and (2) a web-based mapping application interface to facilitate access to this valuable information.

Data records in the Flood Database for Oklahoma were organized using a two-table, one-to-many, site-has-events database schema. Sites were georeferenced to an accuracy of at least 1,000 feet and attributed using standardized datasets including the Geographic Names Information System (GNIS), the National Hydrography Dataset (NHD), the National Bridge Inventory (NBI), and U.S. Census Bureau political boundaries. Event records include hyperlinked references to original data sources, which were digitized as necessary. At last update (2013), the Flood Database for Oklahoma contained flood information from 1891 to 2013 for 22,377 events at 3,676 sites; following statewide and historic flooding in May–July 2015, the next update (2015) is expected to add many records to the database.

The web-mapping application includes simple tools for spatial and attribute queries and a tool for exporting selected data in a non-proprietary format. Selected photos and newspaper clippings also are available for download from the web-mapping application. The Flood Database for Oklahoma will support structural design near waterways and improve understanding of floods by providing engineers and scientists with simplified digital access to previously obscure or unavailable historical flood information.

Poster Presentations

Spatial Analysis of Opioid Mortality and EMS Administration of Naloxone in Oklahoma

J. L. Gilpen, MS, NREMT-I, K. E. Stewart, PhD, M. Q. Lansdale, MPH, & Y. Wan, PhD, Emergency Systems, Oklahoma State Department of Health, Oklahoma City, Oklahoma

Objective:
Identify high-risk areas of opiate overdose using GIS to compare opiate-related overdose mortality data and EMS naloxone administration data.

Background:
On 06/14/2014 House Bill 1782 took effect providing statutory revisions to Administration of opiate antagonists (§ 63-1-2506.1) allowing all first responders to administer naloxone.

Methodology:
Patient-level data from the Oklahoma EMS Information System and vital statistics death data were used in conjunction with GIS techniques and spatial scan statistics to generate risk maps for areas with lower-than-expected naloxone use.

Results:
Between 01/01/2011 and 06/03/2014, 13,064 instances of naloxone administration were reported. Four clusters of statistically significant, higher-than-expected naloxone administration were identified ($1.01<RR<9.0$, $P=.001$). Analysis revealed 19 clusters of lower-than-expected naloxone administration. The clusters of lower-than-expected usage correlated with basic and intermediate licensed EMS agencies.

Poster Presentations

Conclusion:
Analysis of spatial risk distribution may be useful identifying EMS agencies that would benefit from the Naloxone Training and Administration for EMS Personnel Program.

Helping Emergency Services Help Others—GIS in Public Safety
Kathy H. Spivey, City of Midwest City

GIS at Midwest City has developed a wide range of tools to support all of the City's Emergency Services departments - with their day-to-day operations and emergency response activities. This poster highlights the range of data and applications, desktop to mobile, created specifically for the Midwest City Police Department, Fire Department and Emergency Operations Center for daily use as well as for use during a crisis.

ACCESSGEOGRAPHIC

IMAGERY - LIDAR - MAPPING - GIS - HOSTING

Access Geographic serves local industry and government agencies across Oklahoma, Texas, Louisiana and Mississippi by using innovative geospatial technologies without losing sight that care and detailed craftsmanship still drives quality results. The AGL team is passionate about working with geography, and is continually inspired to make it an accessible and useful resource through discipline, creativity and respect for our clients. From aerial mapping to terrestrial LiDAR, Access Geographic works hard to find the appropriate solution for your geospatial goals.

AOS GIS EXPECT THE BEST

For over 20 years Alexander Open Systems (AOS) has been a leading technology provider in the Midwest. AOS has nineteen offices in ten Midwestern states. We provide total technology solutions for every partner-customer to meet their dynamic needs including; telecommunications, data center, GIS, physical security, data security, cloud services and wireless. Knowing each customer has specific needs; AOS creates a custom solution to meet the business needs of each partner-customer. A full-service provider, AOS designs, installs and supports each technology solution. At AOS we're in the business of assisting ESRI customers with maximizing their investments in the areas of educational administration, school safety and government. AOS offers specialized experience in staff augmentation, needs assessment, strategic planning, custom desktop training and development, and web mapping development, including ArcGIS Online. We take a holistic approach to helping our customers achieve their goals. Professional services are the most integral aspect of the work we do and we strive to maintain a people-direct business philosophy, focusing on our clients and our communities. **Industries Served:** Agriculture, Community Development, Education, GIS, Health & Human Services, Highways & Roads, Homeland Security, Information Technology, Land Records, Public Safety

With more than thirteen years experience in Trimble GPS sales and training, Benchmark GPS can help you with your data collection needs. Benchmark GPS offers the full line of Trimble mapping and GIS data collection products. In addition, we offer customized on-site training for our customers. We pride ourselves in providing the best service possible and we work to make sure our customers stay on the cutting edge of GPS technology. We specialize in fast turnaround of orders and are just a phone call away for answers to your specific GPS-related questions. Contact Benchmark at 405-641-6136 or bspringer@benchmarkgps.net.

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Providers of
ArcGIS® and ArcView® GIS Software Extensions

The CEDRA Corporation, offers ArcGIS based software for CAD, surveying, COGO, roadway and site design, tax mapping, land parcel management, sewer modeling, water distribution modeling and data entry/maintenance applications. Complementing CEDRA's software development services is its consulting division which specializes in developing, populating and maintaining GIS databases, data conversion, custom application development and providing routing services.

CEDRA's consulting services division, comprised of a number of civil engineers, is highly specialized in developing water, wastewater and storm sewer databases and converting existing information (digital and non-digital) into ESRI's GIS format. CEDRA also has experience in developing databases for other types of utilities such as electrical. oil and natural gas pipeline facilities.

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

Cityworks®

Since 1986, Azteca Systems Inc. has been providing Cityworks GIS-centric software to public agencies that own and care for infrastructure and property. Built exclusively on Esri's ArcGIS technology, Cityworks® is a powerful, scalable, and affordable platform for asset management, permitting, licensing and more.

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Since 1969, ESRI® 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 Exhibitor that provides complete technical solutions for desktop, mobile, server, and Internet platforms. Visit us at www.Esri.com.

GARVER

Established in 1919, Garver is a multi-disciplined engineering, planning, and environmental services firm committed to quality practices, progressive methods, and honorable relationships. Our clients' trust is the cornerstone of our business, and we adopt their visions to deliver projects founded on sound designs, creative solutions, cost-effective services, and first-class customer care.

Geomatic Resources is the premier Leica Geosystems dealer for Oklahoma, Arkansas and North Texas. Our firm was founded in 2005 with an eye towards bringing value to the product by staffing with measurement and technical professionals. Colin Fletcher has over thirty years of measurement, construction and mapping experience.

We are proud to have a staff that includes two Professional Land Surveyors and a combined 100+ years of industry experience in Surveying, Construction, GIS, Machine Control, HDS, and software solutions. We don't just provide the best products, we provide superior solutions. We are professionals backing professional products and we are proud to be a part of SCAUG!

GRI has been in business since 1987 and thus are celebrating 27 years in 2014. We have 17 stores nationally: Oklahoma City & Tulsa, OK - Dallas, Fort Worth, Austin, San Antonio, & Houston, TX – Tempe, AZ – Irvine, San Jose, & San Francisco, CA – Chicago, IL – Minneapolis, MN & Atlanta, GA. GRI works with a wide variety of customers in different fields such as Architecture, Engineering, Construction, Manufacturing, Oil & Gas, Federal/State/Local Govt., etc. Some our core services include digital printing, copying, scanning, document management and equipment sales. GSI sells large format copying, printing and scanning equipment and are also GSD Resellers for HP.

The GIS Certification Institute (GISCI) is a tax-exempt not-for-profit organization that provides the geographic information systems (GIS) community with an internationally-recognized, complete certification program. GISCI offers participants from the first early years on the job until retirement, a positive method of developing value for professionals and employers in the GIS profession. There are currently over 5500 active GISPs located throughout the world.

The current GISP Certification process consists of an application that describes an applicant's background in Ethics, Education, Experience, and Contributions to the Profession. That application, accompanying documentation, and payment are submitted, and the review generally takes from 30 to 45 days for approval.

An exam is now being developed, to be added to the current process by the first half pf

2015. Selected GISPs are performing groundbreaking work in the process of creating the exam based on the Geospatial Technical Competency Model (GTCM) approved by the Department of Labor in 2010.

GISi is an award-winning GIS professional services firm located in Birmingham, Ala., with offices throughout the United States. GISi has a passion for delivering customer driven location technology solutions to federal, state and local governments, and commercial organizations.

The MidAmerica GIS Consortium, Ltd. is a nonprofit educational organization established to foster the applications of geographic information systems (GIS) and related spatial technologies in the mid-continent region.

In addition to sponsoring the biennial MidAmerica GIS Symposium, the Consortium also sponsors important GIS projects around the region. Projects can be industry specific, such as emergency management, remote sensing and addressing, or they can be related to GIS policy, standards and architecture.

MAGIC provides a focus for: • Establishing linkages between GIS users having similar application interests • Facilitating communication and data sharing across levels of government and between government, industry and academia • Promoting spatial data standards and land records modernization • Promoting collaboration and advancement of geospatial technologies

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Meshek & Associates GIS division, founded over 15 years ago, has assembled an exemplary staff with four certified GISPs, two Masters Degrees, and over 70 combined years of GIS experience. We stand behind our proven track record for successful GIS project design and implementation.

Whether it be converting existing records, maps, and reports into an integrated GIS, delivering Web-based GIS services and applications, or performing GPS surveys of infrastructure and environment; Meshek & Associates GIS is poised to deliver cutting edge solutions custom tailored to meet our client's needs. Meshek & Associates provides more than just the nuts and bolts of GIS. Through our attention to detail and focus on data visualization and cartographic design, we ensure that the true potential of the data and maps are realized. Meshek & Associates is an Oklahoma based company that, as always, remains committed to exceeding our client expectations and project goals on every job.

MIDLAND GIS Solutions

Midland GIS Solutions is an industry-leading, Geographic Information System (GIS) firm serving state and local governments and private industries throughout the Country. Midland provides GIS data development and conversion services, digital cadastral mapping and maintenance, innovative web-based and mobile GIS services, and various other GIS-centric solutions for editing, maintaining and managing geospatial data.

NewEdge SERVICES, LLC
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NewEdge Services, LLC is focused on implementing GIS, Asset/Work Management Systems, Cloud Hosting, and Related Services. NewEdge provides clients with turnkey solutions for a wide variety of needs and can provide additional resources for clients on specific projects. Our experience demonstrates our abilities, which include: Database design, implementation, and management (Oracle, SQL, ArcSDE) • Custom web and mobile applications • Hosted cloud solutions • GIS data creation • GIS analysis • Hard copy map/plan inventory, cataloging, and georeferencing • System integration • Asset/Work management system implementation and integration • Permitting system implementation and integration • User training and support • And much more…

NewEdge has strategically aligned with multiple business partners to provide our clients with implementation services for products that are leaders in their perspective fields. Our long standing business partner relationships include: Amazon Web Services, CitySourced, Cityworks, Esri, Freeance, Geocortex by Latitude Geographics. The NewEdge team has all of the knowledge, experience and

expertise needed to successfully implement all GIS related projects. Our team has been working together since 2008 and has over 100 years of combined experience in working with multiple types of data, software, and technologies that will be critical for a successful project.

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As the innovator and leader in all types of aerial imagery, Pictometry invented the capture of high-resolution oblique images that, unlike traditional orthogonal (top-down) images, show each side of every structure, roadway and other outdoor objects, with views from all four cardinal directions. Since each pixel is individually geo-referenced, users can quickly and precisely measure geographic position, height, distance and altitude directly on the images in real-time. This innovation changed the GIS world in 2002. Today, the professional-quality, high-resolution aerial imagery is stored in the cloud, eliminating the need for local, manual management of imagery. Simply upload location-based data sets and the information is layered on the images alongside proprietary measurement and analytic tools to deliver unparalleled visual insights. The image library currently contains more than 300 million images captured by a fleet of 79 aircraft utilizing the only oblique camera system to receive USGS certification. Pictometry, an EagleView Company, continues to innovate with leading research and product delivery in all types of aerial imagery capture, data analytics and GIS solutions that serve the commercial, government, oil/gas and public utility sectors. Pictometry engineers continue to lead the market with innovation, research and development providing unmatched delivery of products into multiple markets supported by excellence in imagery and web-based solutions. Pictometry is the largest aerial solutions company in the world witch ensures rapid collection times of aerial imagery.

RazorTek
Sharpen Your Technology

RazorTek was established in 2002. We are a GeoSpatial data provider specializing in data development, data conversion, feature extraction, map production, Georeferencing paper maps, on-site GIS training, custom GIS programming, web application, MrSid image processing, and Project Management. In

addition, RazorTek is a software reseller for a variety of Exhibitors (ESRI, LizardTech (GeoExpress) and RapidEye), a provider for high resolution satellite imagery (RapidEye and Digital Globe), aerial photography and LiDAR. At RazorTek, we pay attention to all of the details that go into all of our GeoSpatial projects, providing you the quality, performance and pricing you expect and deserved We use the latest computer technologies, with industry standard computer applications such as ESRI, LizardTech, MicroStation, ERDAS and Microsoft Office Suite applications and many more.

In today's environment sharing your GIS data becomes extremely important to 9-1-1 and emergency responders. In eastern Oklahoma they have developed a solution with a partnership with SDR to not only share the data, however to put it to use in a variety of ways for dispatch and responders. Emergencies cross municipal boundaries and therefore locally maintained GIS data is important on a regional or state-wide basis. See how this solution is used for local and regional groups today.

Surdex Corporation is one of the largest geospatial data and services providers in North America. For over a half-century we have served federal, state, and local governments as well as private, engineering, and defense mapping clientele. We are one of the very best at acquiring aerial data, whether it is digital imagery, film photography, or LiDAR data. Our fleet of eight (8) aircraft is supported by our own inspection, maintenance, repair, and customization facility–ensuring maximum productivity and availability of these precious resources. Our aerial sensors include: 3 Intergraph Digital Mapping Cameras (DMC) – one of the largest such installations in the world · A Vexcel Imaging UltraCam Xp/WA camera providing cost-effective imagery capture · A Leica ALS-50-II LiDAR with Multiple-Pulse-in-the-Air technology for cost-effective and accurate capture of elevation data · 4 film cameras supported by in-house scanning.

Transglobal Services, LLC (TGS) is a full service field service provider in the energy industry that serves all areas of the United States. Combined the TGS Management Team has over 50

years of experience in all aspects of Right-of-Way, Seismic, Mapping, Pipeline, and Land projects. We pride ourselves in providing our clients with the best service and final product available in the industry today. Transglobal Services, LLC was formed by a dedicated group of individuals working in the Barnett Shale area in Fort Worth, Texas. The members felt they could combine their knowledge and skills to create an elite full service company with the intent to provide clients with a turnkey operation that delivered an unmatched final product. TGS currently has offices in Fort Worth and Midland, Texas to provide our valued clients with their industry needs.

United Geo Technologies, LLC

United Geo Technologies, LLC, your geospatial service provider, offers a wide range of services such as photogrammetry, orthophotography, parcel mapping, and geographic information systems. This small, woman owned business has extensive experience in the geospatial disciplines and our personnel includes a Certified Photogrammetrist. UGT's personnel have extensive experience in the following areas:

Aerial Imagery Acquisition (both analog and digital) ˙ Airborne GPS ˙ Aerial Film Scanning ˙ CAD (MicroStation and AutoCAD) ˙ Contour Generation ˙ Digital Aerial Triangulation ˙ Digital Elevation Models (DEM) ˙ Digital Terrain Models (DTM) ˙ Digital Orthophotography (TIFF) ˙ LiDAR DTM and Contour Integration ˙ Parcel Mapping ˙ Geographic Information Services (ESRI) ˙ Plan and Profile ˙ Planimetric Feature Extraction˙ UAV / Drone Image Processing ˙ Volume Computations

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Weather Decision Technologies, Inc. is the industry leader, providing organizations with weather decision support on a global scale. WDT offers specific expertise with big data as it applies to hazardous weather detection and prediction, forecast modeling, decision analytics, GIS, mobile apps and interactive mapping. WDT employs the world-renowned WeatherOps forecast team, staffed by experts who provide global asset projection and commodities trading decision support. WDT maintains operational offices in Norman, Oklahoma and Houston, Texas.

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

1. We are a direct seller of Trimble GPS products in Texas and Oklahoma. We supply the entire Trimble line of Optical / GPS Survey, Mapping, Marine and Seismic Products. Training, Technical Support and all Accessories your crew might need. With offices in DFW, Houston, San Antonio, Austin, McAllen and Edmond OK, 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.

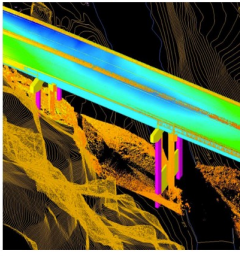
3. We offer spatial measurement items including Lasers, Laser Scanners, GPS cameras, Bar Code scanners, Ground Penetrating Radar, Pipe Locators, Tablet PCs and much more. Also multiple software options to fit your application needs.

4. We have one of the largest Trimble GPS rental pools in the world. This equipment is available to a worldwide customer base. If your rental needs are for 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 the amount of equipment we have available with the technical support we can and do provide our customers.

5. Full Service centers for all the Trimble products we rent and sell.

6. Western Data Systems manages the largest private VRS network in the world. The network is available to both the survey & mapping communities. www.rtknet.com

Check out our website for the office nearest you. www.wds-us.com



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Congratulations OKSCAUG 2015 Scholarship Recipients

Lauren Wood

—Oklahoma State University

Tiffany Verlander

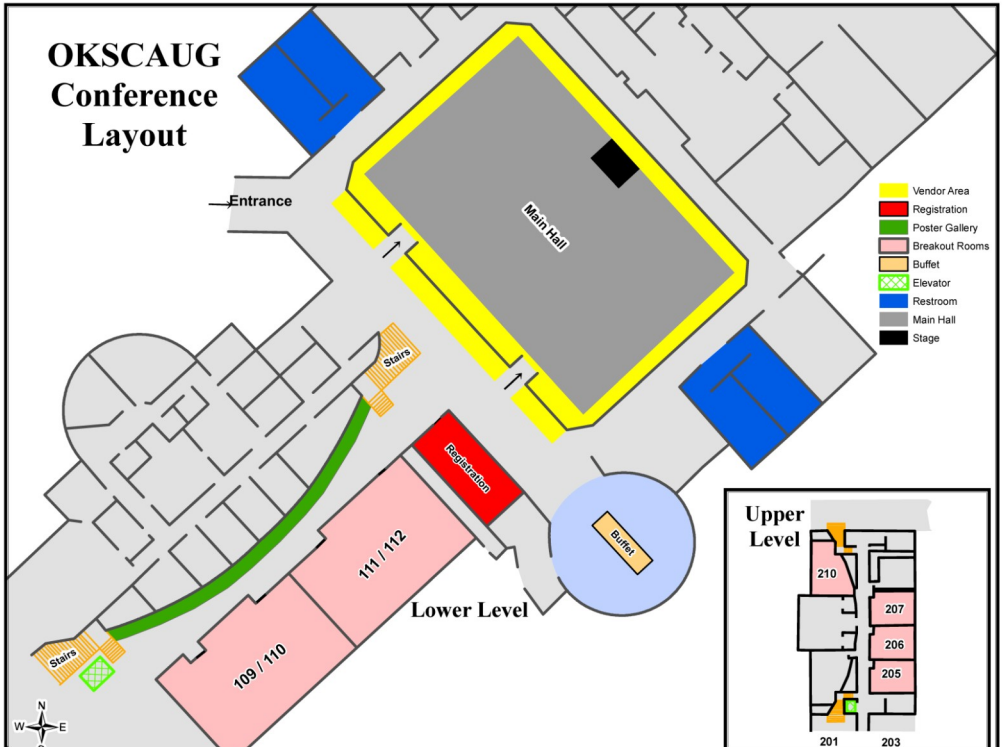
—Tulsa Community College

Each grantee received a $500 OKSCAUG Scholarship funded by OKSCAUG professionals.

Additional Workshops and Training Locations

Workshops: Monday, Sept. 21		**ROOM**
Legal Descriptions 101	8:30 am – 12:00 pm	111
GISP: The Road to an Exam	8:30 am – 12:00 pm	112
ArcGIS Tips and Tricks	8:30 am – 12:00 pm	201
Getting Your ArcGIS Online Up and Running	8:30 am - 12:00 pm	203
Knowing Spatial Reference and Misidentified Ice Cream	1:00 – 4:30 pm	112
ArcGIS Tips & Tricks II	1:00 – 4:30 pm	201
Spatial Statistics in ArcMap	1:00 – 4:30 pm	203

Training Courses: Wednesday, Sept. 23 – Thursday, Sept. 24		**ROOM**
Intro to ArcGIS Pro for GIS Professionals	8:30 am – 5:00 pm	207
ArcGIS4: Sharing Content on the Web	8:30 am – 5:00 pm	200
ArcGIS Basics II	8:30 am – 5:00 pm	201


OKSCAUG
Conference
Layout
Entrance
Main Hall
Vendor Area
Registration
Poster Gallery
Breakout Rooms
Buffet
Elevator
Restroom
Main Hall
Stage
Stairs
Registration
Buffet
111 / 112
109 / 110
Lower Level
Stairs
N
W
E
S
Upper
Level
210
207
206
205
201
203

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2015 Oklahoma SCAUG GISP Credit Checklist

Description	Classification	Credit	Recert. Credit	Credits Earned
Workshops (4 hour) *(Workshop Certificate required for documentation credit.)*				
Legal Descriptions 101 (4 hours)	EDU	0.1	0.67	
GISP: The Road To An Exam (4 hours)	EDU	0.1	0.67	
ArcGIS Tips & Tricks (4 hours)	EDU	0.1	0.67	
Getting Your ArcGIS Online Up & Running (4 hours)	EDU	0.1	0.67	
Knowing Spatial Reference and Misidentified Ice Cream (4 hours)	EDU	0.1	0.67	
Spatial Statistics in ArcMap (4 hours)	EDU	0.1	0.67	
ArcGIS Tips & Tricks II (4 hours)	EDU	0.1	0.67	
1 Day Training Instructor _____	CON	3	9	
SCAUG CONFERENCE (8 hour)				
Attendee	EDU	0.2	1.33	
Presenter	CON	1	3	
Poster Presenter	CON	1	3	
Poster Award Winner	CON	2	6	
2 Day Training (16 hour) *(Training Certificate required for documentation credit.)*				
Intro to ArcGIS Pro for GIS Professionals (Esri 2 Day)	EDU	0.4	2.67	
ArcGIS 4 - Sharing Content on the Web (Esri 2 Day)	EDU	0.4	2.67	
ArcGIS Basics II	EDU	0.4	2.67	
2 Day Training Instructor _____	CON	6	18	
			Total GISP Points Earned	