16th Annual OKSCAUG Conference
Tuesday, September 24, 2013

GIS: Return on Investment

The OKSCAUG Steering Committee

Welcomes you to the

16th Annual OKSCAUG Conference!

On behalf of the 2013 Oklahoma SCAUG Steering Committee we cordially welcome you to the 16th Annual OKSCAUG Conference. With ever increasing pressure to do more with less, GIS provides an excellent resource to make better decisions faster and more accurately than ever before.

Oklahoma is fortunate to have such a diverse yet cohesive GIS community, but how can we best focus on what the GIS professional needs? How can the GIS community benefit from the resources we have available? These questions, as well as a conversation in the rotunda at GIS Day at the Capitol this year, fostered the concept of *Return on Investment* as this year's theme.

Whether you are making a full week of the workshops, conference, & training or simply attending the main conference, we encourage you to continue to be an integral part of this network. Visit with old friends, and please make a special point to establish some "new" old friends for upcoming years.

This year OKSCAUG attempted to incorporate as much professionally diverse content as possible into Oklahoma's single largest annual GIS conference. Please share your opinions throughout the day regarding your experiences at the conference and with OKSCAUG in general. We welcome your input. OKSCAUG hopes to be the instrument that continues to help you sharpen your professional edge.

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Oklahoma Department of Transportation,
Director for Tribal Coordination

9:30 – 10:15	**Morning Break - Vendor Exhibits**

User Presentations

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2013 Conference Schedule

2013 Conference Schedule

12:00 – 1:00   Lunch - Poster Competition - Vendor Exhibits

**1:00 – 1:45   Lunch - Special Keynote : Jon Hansen,
                Oklahoma Council on Firefighter Training**

ESRI Technical Sessions & User Presentations

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1:45 – 2:30	
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Using the Leica Zeno Implementation of ArcMap & ArcPad to Preserve Accuracy Metadata	207
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2:30 - 3:15   Afternoon Break and Vendor Exhibits

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ESRI: Location Analytics —*Pam Kersh*	111/112
Upgrading Asset Management Systems: Cityworks Desktop to Cityworks Server	207
ESRI: Administering your Enterprise GDB —*Brig Bowles*	210

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

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2013 OKSCAUG Steering Committee

Charles Brady III, GISP –OKSCAUG Chair; Regional SCAUG President

>   *-City of Ardmore, Oklahoma*

Shellie Willoughby, GISP –OKSCAUG Co-Conference Coordinator, Regional SCAUG Vice President

>   *-Oklahoma Conservation Commission*

Willard Gustafson, GISP –OKSCAUG Co-Conference Coordinator

>   *-Meshek & Associates PLC*

James Allen –Regional SCAUG Treasurer

>   *-Carter County, Oklahoma*

Talia Gammill –OKSCAUG Secretary

>   *-Cotton Electric Cooperative*

Sohail Hasanjee, GISP –OKSCAUG User Group Meeting Coordinator

    -Oklahoma State Department of Health

Pamela D. Jurney, GISP -OKSCAUG Outreach Coordinator

    -Cross Timbers Consulting

Brad Nesom, GISP –OKSCAUG Vendor Coordinator

    -Hiland Partners

Darryl Williams -Regional SCAUG Representative

    -United States Geological Survey (USGS)

Elizabeth Montgomery-Anderson, GISP –OKSCAUG Publications Coordinator

    -Cherokee Nation GeoData

Keynote Address
8:30 a.m.

Jay Adams

Oklahoma Department of Transportation Director for Tribal Coordination

Jay Adams studied Geography at the University of Oklahoma and began his career with the Oklahoma Department of Transportation in 1985. Through his 28 years with OKDOT, he has worked in Roadway Design, Maintenance and was the Assistant Director for Planning & Research Division where he managed the GIS Operations for OKDOT, Road & Traffic Data Collections, and Long Range Corridor Planning.

Mr. Adams is currently the Director for Tribal Coordination for OKDOT, working with all 38 Federally Recognized Tribes in the State of Oklahoma. He is also the Executive Sponsor and Project Manager for the Oklahoma Permitting & Routing Optimization System Project and the Oklahoma Transportation Asset Browser Project. He was the former manager of OKDOT's GIS Operations, member of the State GIS Council and former Chairman of the National GIS for Transportation Task Force.

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

<u>**Room 109/110**</u>
The Role of ESRI GIS Technology in the City of Oklahoma City's Response to the May 2013 Tornado and Flooding Events
Chris Ksepka, City of Oklahoma City

ESRI's GIS technology plays a key role in each phase of Oklahoma City's emergency operations. The integration that exists among the systems Oklahoma City staff use to plan, respond, and recover from disasters originates from GIS software and data. Collection and distribution of key information occurs during each phase of the response process. Much of that information has a spatial component. This presentation will highlight some of the systems, data, and processes Oklahoma City has in place to help staff respond to an event like the May 2013 tornado and flooding outbreak.

<u>**Room 111/112:**</u>
Data Driven Approach to Crime and Traffic Safety: Utilizing Limited Law Enforcement Resources
Jason Redden and SGT Gary Schmidt, Norman Police Department

The City of Norman Police Department has been utilizing the Data Driven Approach to Crime and Traffic Safety (DDACTS) model to apply the concept of high visibility enforcement techniques with the usage of hot spot policing and GIS techniques to target key locations and time periods to make the most impact with current limited resources. Two target zones with areas of approximately one square mile were selected to apply the DDACTS concept to reduce crime and improve the traffic safety in the area. Crime data and crash data was extracted from the Record Management System and used to develop DDACTS products to direct resource allocation and enforcement operations. A GIS Python tool was developed to spatially distribute crash locations at intersection to better identify crash patterns for traffic enforcement. Contributing causes, time

of day and day of the week were extracted to aid the traffic enforcement process. Kernel density analysis methods were utilized to determine high crime and crash locations in the City boundary and the DDACTS Zones. Weekly overview reports were developed for police personnel to display the current crime locations and reconnaissance packets were develop to determine possible future crash and crime locations based on the previous five years of crash and crime data available. Current crime and crash patterns are utilized to fine tune resource deployments in focused operations. The general overview of the Norman DDACTS program is to provide crime and crash information to law enforcement officer through the weekly reports for current situational awareness, crash and crime trend analysis for tactical deployments and reconnaissance research for strategic planning and operations of police resources.

The current DDACTS program has been successful in reducing crime and has shown to have an impact on traffic accidents in the areas of high visibility enforcement. The City of Norman experienced a 20% crime decrease in Larceny from Vehicle from 2011 to 2012. During May 2013 the Norman Police Department applied department resources to an identified accident hotspot area along 12th Ave which resulted in a significant decrease in the crashes experienced for the month and also had an observable reduction in crime in the surrounding area.

Room 206:
Oklahoma Oilfields from the Air: Historical Aerials and LiDAR
Madeline Dillner, Kellie Duncan, Charles Lord and Jeff Myers, OK Corporation Commission

There are two tools that the Corporation Commission uses more than others to keep track of oil and gas well locations over time, across the state: historical aerial photos and LiDAR. By showing us how a well site's condition progressed over time, historical aerial photos allow us to track

leaks, spills and potential pollution and find the correct responsible party for pollution cases. The extremely high-resolution hillshade/DEM combination LiDAR will show both active production and injection sites which may be hidden (by vegetation etc.) in aerial photos, and the topographic evidence of past oil and gas field operations. By using a combination of these aerial systems, the Corporation Commission is better able to watch over oil and gas E&P activities across the state and respond swiftly and accurately to both recent spill complaints and discoveries of historic pollution.

This presentation will explain the production of historical aerial photos and their acquisition, georectification, and use at the Corporation Commission. The Commission is attempting to acquire for GIS use all aerial photos across the state since 1937, and will make this information available to others. We will also show examples of LiDAR use.

Room 207:
Address Standards Progress and OKMAPS E-911 Project
Charles Brady, III, GISP and Shellie Willoughby, GISP, City of Ardmore and OK Office of Geographic Information respectively

Two years ago the State GI Council developed a workgroup to create Address Standards for the State of Oklahoma. With the help and input of the OK GIS Community a draft version of the OK Address Standards are out for community review. 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 address standards as well as the E-911 initiative.

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

Room 210:
Selling GIS
Sheila McGinty Wilson, PhD, GISP, Select Engineering

GIS is a critical tool within any industry yet we struggle with how to effectively describe GIS and the importance of the people doing the work. This talk with explore and provide innovative ways to educate non-GIS people about GIS. Participants in this presentation will leave with ideas and tools in hand that can be used to communicate the extraordinary value of GIS and the people who know how to use it. Participants will be equipped to share GIS with colleagues, managers, and CEOs. We will be better prepared to promote GIS within our companies, in job interviews, sales, and marketing. The end goal of promoting GIS is to strengthen the industry and the people doing GIS, thereby increasing our value to our employers and other industries.

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

The GSI Tornado Website for Disaster Recovery
Bill Bean, GIS Web Application Developer, Manerd Gayler, Director, GeoSpatial Information, The Chickasaw Nation Department of GeoSpatial Information

In May of 2013, the National Weather Service reported more than 25 tornadoes that culminated in 200 miles of damage in Oklahoma from May 19 to May 31, 2013. Many Oklahomans were devastated by these tornadoes; several of which were Chickasaw citizens and employees. To aid and support the Chickasaw Disaster Relief and Recovery, the Chickasaw Nation's Department of Geospatial Information created an ESRI ArcGIS web application used at the Chickasaw Command Center. The Chickasaw Nation Emergency Management System (EMS) web application is based on the ArcGIS API for Flex 3.1 and allowed thousands of addresses to be geocoded. With the tornado path already projected, EMS efficiently located those Chickasaw citizens and employees affected by the tornadoes. Post-imagery of the May 20th, Moore tornado (provided by Bearingtree & Pictometry) was utilized to compare and assess the damage in specific locations. The post-imagery allowed a citizen or employee to view their location and help workers understand the extent of their damage. The EMS application allowed Chickasaw Nation volunteers to start the clean-up process for those homes affected.
EMS was also used to view possible damage to citizens affected by the Colorado wildfires in June. In the future, EMS could be used in Disaster Relief and Recovery efforts for Chickasaw citizens and employees affected by hurricanes, wildfires, and earthquakes.

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

Room 111/112:
City of Edmond, Oklahoma: Mapping the Gracelawn Cemetery
Christy Batterson and Ian Peebles, City of Edmond, Oklahoma

The City of Edmond maintains Gracelawn Cemetery which was established in the late 1800s. Since the early 1990's cemetery records were maintained in an old database and in paper records. There was a need to transfer existing cemetery records into a spatial referenced database. The city's GIS team began working with the city clerk's and cemetery staff to initiate a conversion project from an obsolete database to a GIS database and mapping solution. Goals within the project included transferring existing database records as well as hand written records, mapping cemetery blocks, lots and spaces, providing record searching capabilities and developing tools for maintaining and updating records. These tasks were accomplished utilizing several ArcGIS tools, GPS collection and analysis of existing data/plats. The final product included an ArcGIS Server application that is utilized by the city to support the public. This presentation explains the processes involved with the project, the results, challenges and future development of the cemetery application.
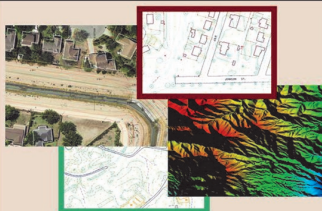
User Presentations
10:50-11:20 a.m.

<u>**Room 206:**</u>
Using GIS to Evaluate Groundwater Pollution Risks from Old Oilfield Areas
Patricia Billingsley and Madeline Dillner, Ok Corporation Commission

In the past 16 years the Corporation Commission has responded to many well water pollution complaints, and has taken over 2,000 ground water samples from wells, springs, borings, and monitoring wells across the state. We have found numerous groundwater pollution problems, most often related to old (first drilled pre-1980, often abandoned) oil and gas fields. Most of the groundwater pollution problems are related to petroleum or salinity, but there have also been occasional impacts from heavy metals, sulfate, and other pollutants.

Some of this pollution is just in the fairly shallow subsurface waters. However, in other cases deeper water wells and portions of aquifers have become polluted. In this talk we will show how we are using GIS to map and evaluate where different types (chemical signatures) of groundwater pollution has been found, the pollution depths, areas, aquifers impacted, and the proximity to the old oilfields.

<u>**Room 207:**</u>
Geospatial Acquisition Program for State and Local Governments
Kenny Legleiter, GISP, Sanborn

Accurate and current geospatial data is vital for business activities of state and local governments. Mr. Legleiter will discuss the necessity, requirements, and management of some of the key base layers that are critical for most geospatial activities. These include aerial imagery, LiDAR, oblique imagery, road centerlines, parcels and addresses to name a few. Some of these base layers will be discussed in this presentation and various models for acquiring these data that create efficiencies and lower

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

costs for everyone. Mr. Legleiter will explain how local and statewide data programs can be structured and be more suitable for maintaining these base layers versus ad hoc acquisition projects at the local level.

<u>Room 210:</u>
Business Practices Using GIS
Mark Zitzow—Research Coordinator, Eric Long—Research Economist, Greater OKC Chamber of Commerce

- Overview of The Greater Oklahoma City Chamber and the Economic Development division.
- Business Uses for GIS.
- Preview and uses for okcedis.com (commercial property, retail and primary job recruitment)
- Other GIS tools in our market (ESRI Business Analyst Online, ArcGIS and custom GIS Application).

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

Room 109/110:

Tomnod Crowdsourcing System and the Moore Tornado

Luke Barrington, Tomnod

In response to the tornado in Moore, OK on May 20, 2013, DigitalGlobe tasked its satellite constellation to capture imagery of the area as part of its FirstLook service. The high resolution WorldView-1 and GeoEye-1 satellite imagery revealed the vast extend of the damage caused to homes and buildings in Moore. The Tomnod crowdsourcing system was immediately deployed to engage the public's help in mapping the damage and converting the plethora of pixels to information. Users arriving at Tomnod.com were asked to view imagery and identify destroyed buildings, tarped roofs, and fallen trees. On the backend, we constantly analyze the CrowdRank score of each location and each member of our crowd. CrowdRank is a statistical reliability algorithm that combines the crowd's inputs to zero-in on the most accurate results. Within 60 minutes, we collected over 15,000 points of interest from the crowd and published a crowdsourced damage assessment map.

The Tomnod approach is most powerful in situations where rapid insight is required in order to enable fast decision making. Crowdsourcing reduces the time between data collection and decisions. Therefore, it is critical to distribute these results quickly and efficiently. The damage assessment map is immediately available in a variety of formats such as SHP, WFS, and KMZ. In the produced KMZ file we include an image chip of the location that had been damaged accessible in a lightweight package.

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

Room 111/112:
Modeling Obstructions in Controlled Airspace Near Randolph Air Force Base
Wesley Keller, City of Universal City, Texas

Construction of tall objects near an Air Force base or airport can be complicated by the fact that air space must be tightly controlled to prevent collisions between aircraft and obstructions. Air space is controlled through the implementation of virtual surfaces called "air space imaginary surfaces". The City of Universal City in an effort to create an additional revenue stream is considering leasing some publicly owned land to cellular communications companies. Site selection is difficult because Randolph Air Force Base imaginary surfaces completely overlap Universal City. Due to this fact modeling of cell tower heights in relation to these imaginary surfaces was required for site pre-selection and elimination.

Room 206:
Access Midstream: Chronology through Story Maps
JP Reynolds, GIS Intern, and Katy Rich, GIS Manager, Access Midstream

Story maps are incredibly useful in reaching out to, and educating, people who have little experience with GIS or custom web maps. While there is some additional backend and development work in creating a story map, the end product is something which is far more aesthetic and user-friendly than an MXD or PDF. The Access Midstream historical map is an example of the flexibility and power of story maps. It is based on the Esri "Playlist Story Map" template which draws the user into exploring an ArcGIS Online map service, which is supplemented with thumbnails, pictures, and a rich set of descriptive text about the company's history. This presentation will cover the steps involved in planning, creating and deploying the story map and attendees will see a demonstration of the end product.

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

<u>**Room 207:**</u>
The USGS National Geospatial Program: The National Map, Program Priorities and Emerging Trends
Darryl S Williams, USGS

The National Map (TNM) is the primary program of the U.S. Geological Survey's National Geospatial Program (NGP), and has come to be known as one of the primary sources of GIS related geospatial data within the U.S. Geological Survey. The presentation will provide you with an update about the new 2013 US Topo Map coverage for the State and other ongoing activities relevant to Oklahoma and the Nation. Included will be information on the evolving 3D Elevation Program (3DEP), crowdsourcing activities for the Structures data layer of TNM (how you can participate), and the transition to interfacing with focused Communities of Use (COU) as primary sources of requirements gathering and user feedback for the National Geospatial Program and TNM.

<u>**Room 210:**</u>
GIS in Education: Examples from Tulsa Community College
Kelly Allen, PhD, GISP, Tulsa Community College

The establishment of GIS in educational institutions has become quite common in the last 20 years. At Tulsa Community College students have the opportunity to earn a Certificate of Achievement in GIS. The certificate program provides students with a chance to gain technical knowledge and skills in GIS. The program is completed with students gaining experience by working on a community project. Examples of some of the student's work include mapping meth labs for the Tulsa Police Department, bathymetric mapping of a lake in Sand Springs, and flood plain analysis for the military.

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

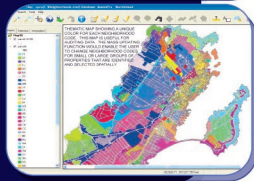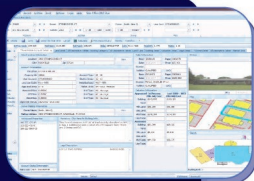Demand for geospatial skills and knowledge continues but there still remain challenges to institutions providing training and education in the geospatial field. TCC's GIS Certificate Program, initially developed as part of an ESRI grant, has gone through a number of changes in the past few years. Curriculum continues to be updated and the expansion of academic options for students is being developed.

ESRI Technical Sessions
1:45-2:30 p.m.

Room 109/110
Setting up AGO in your Organization —*Karen Lizcano, ESRI*

ArcGIS Online is a content management system for geographic information enabling you to share your content and to power many types of GIS-based applications and end-user websites. Getting started with these best practices will help you get the most out of your AGO subscription. This session will look at the different user roles , site setup, registering content, creating hosted services, sharing data, creating groups and discuss collaboration with maps.

Room 111/112
Mobilizing your GIS Data —*Mike Beavers, ESRI*

Mobile GIS extends the reach of ArcGIS to a broad range of mobile devices—including rugged Windows Mobile handhelds, Windows Tablet PCs, in-vehicle mounted systems, iPads, iPhones and iPod Touch devices, Android phones and tablets and Windows Phone devices. You can use a Mobile GIS solution on these platforms to view, collect, and update your geographic information. During this session we will look at and compare a few different options for your field GIS work.

Room 210
Using GeoEvents Server —*Brig Bowles, ESRI*

The GeoEvents Server extension allows you to connect with virtually any type of streaming data and automatically alert personnel when specified conditions occur—all in real time. GeoEvent Processor changes your everyday geographic information system (GIS) applications into frontline decision applications, helping you respond faster and with remarkable accuracy whenever and wherever change happens. During this session we will show how to set up the extension and some useful applications leveraging the technology.

User Presentations
1:45-2:30 p.m.

Room 207:

Using the Leica Zeno implementation of Arcmap & Arcpad to preserve accuracy metadata

Nathan E. M. Mayer, PLS, Geomatic Resources, LLC

GIS data can be valuable without being spatially accurate, however in certain cases its valuable is increased many fold by being spatially accurate and having spatial metadata proving its pedigree. This presentation will detail from beginning to end, the process of creating a project, sending it to the field, collection of data, importing data and producing a final map.
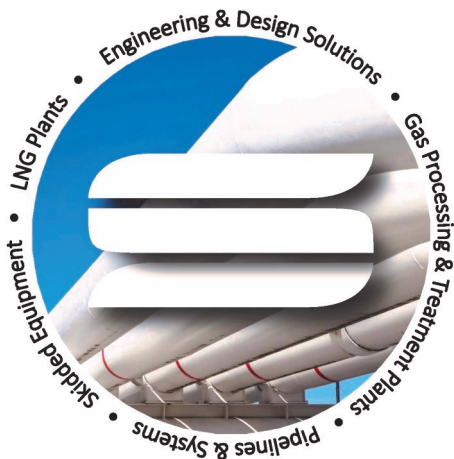
ESRI Technical Sessions
3:15-4:00 p.m.

Room 109/110
Telling your Story with Maps —*Mike Beavers, ESRI*

Using your existing GIS data to present a clear and interesting picture of your information can be done using story maps. Story maps combine intelligent Web maps with Web applications and templates that incorporate text, multimedia, and interactive functions. Story maps inform, educate, entertain, and inspire people about a wide variety of topics.

Room 111/112
Location Analytics —*Pam Kersh, ESRI*

Analyzing reports by location can reveal insights that drive decisions about what messages to feature where, how to geographically target marketing spend, and where to increase in-store promotions or sponsor events. As social media, texting, word of mouth, and offers delivered to smart phones have become important in the marketing mix, understanding location is even more important. Nearly 80% of apps are location aware. Location Analytics solutions from Esri can help harness the power of this new data. During this session we will look at Esri maps for Office, Cognos and SharePoint.

Room 210
Administering your Enterprise GeoDatabase —*Brig Bowles, ESRI*

Enterprise geodatabases are typically accessed by a large number of users. As a result, there is some administration required to make sure the geodatabase is set up properly. Some administration tasks can be performed using ArcGIS. In many cases, administration tasks are slightly different from one RDBMS to another. During this session we will explore some different scenarios and best practices.

User Presentations
3:15-4:00 p.m.

Upgrading Asset Management Systems: Cityworks Desktop to Cityworks Server

John McIntosh, Joyce Green, Larry Knapp, Rick Hoffstatter (City of Norman) and Jeremy White (Azteca Systems, Inc.)

The City of Norman manages and maintains 572 miles of water mains and 485 miles of sewer over a 73 square mile area. Until 2000, the City used a patchwork of methods including an in-house system to help manage the water and sewer facilities. Tasks such as needs assessments and analysis were difficult and time consuming with this ad hoc approach. In 2000, the City began using Azteca Cityworks®, an asset management system, to support management of the water and sewer facilities. Cityworks has provided a unified system that is well integrated with our GIS and facilitates management and analysis needs.

Cityworks is closely integrated with ArcGIS. Until earlier this year, we ran ArcGIS Server 9.2 and in recent years this has limited us to older versions of Cityworks. The City upgraded to ArcGIS Server 10.1 earlier this year and has been able to upgrade and deploy the latest server and browser based version of the Cityworks application. This has allowed us to take advantage of the product enhancements and to streamline administration and support for end users.

Changes in the functionality and interface between the older desktop version and the browser based version of Cityworks are significant from the perspective of the end users. To facilitate the upgrade, the primary users attended training sessions provided by Azteca as part of our upgrade process and the GIS division has provided individual assistance as needed. We have plans to expand use of Cityworks to our Street Maintenance Division. In this presentation, we will provide an overview of the Cityworks Suite and discuss issues relating to the City of Norman's deployment and upgrade to Cityworks Server and plans for expanded use.

Notes:

Notes:

Poster Presentations

Master Trails Plan
Brian Russell, Audrey Fitzsimmons; City of Yukon, OK

Recreational trail systems offer major economic, health and social benefits to cities and are a growing resource within the United States. The City of Yukon began its Master Trails Plan last year with technical assistance from the National Park Service through the Rivers, Trails and Conservation Assistance Program (RTCA). This project is supported by local business and organization leaders that have formed a task force to design and publish a Master Trails Plan by early 2014. Through the use of an interactive online mapping service and desktop GIS, a system has been set up to allow the task force members to create graphic and text notations on top of city trails data. These comments and suggestions can then be used to narrow and modify proposed trails as the project progresses. This interface also supports the task force's collaborative efforts by allowing members to view other's suggestions and comments between meetings. The poster presented here is the same poster that has been placed at community centers throughout Yukon to inform citizens and visitors about the Master Trails Plan and the desire for their input. It is used to not only tell them about the project, but to also direct them to a webpage that presents additional information, as well as a survey through which they can easily provide input.

Poster Presentations

Utilizing GIS in Right-of-Way Management

Faith Adams, Canadian Valley Electric Cooperative

GIS has allows us to improve our Right-of-Way department in key areas such as: accessibility to information, budgeting, planning, and decision making. Our accessibility to the information has been an enormous improvement. We have gone from files in a folder stored in a filing cabinet to all the information being tracked in ArcGIS. We collect information on type of ROW Maintenance, Contractor, Date, Amount, Footage, Sub, Feeder, and Work Order. It is now possible to view right of way information by any specific information. This has made the ROW data useful since it is all organized in a central location and is easily accessible. We track all the information in a geodatabase on a shared drive which allows multiple people to access the information if needed. This has helped tremendously in the budgeting and planning of our ROW program. We now have tools that allow for a better decision making process. We are now capable of printing color coded maps that are easy to read and easy to understand. Also, we are able to export our information out of ArcGIS and into a circuit model prioritization spreadsheet and it tells us which areas would be the most beneficial to spray or cut depending on how many customers are on a line and what the past outage history is for that line. This gives us a good start on what our budget should be for the year as well as plan on what areas would be most beneficial for our contractors should focus on.

Poster Presentations

Map of the Chickasaw Nation, "Unconquered and Unconquerable"
Manerd Gayler, Director – GeoSpatial Information, The Chickasaw Nation Department of GeoSpatial Information

The Map of the Chickasaw Nation features the Chickasaw Nation located in south-central Oklahoma. The map utilizes a 10 meter DEM and hillshade to highlight the geographic area that makes up the Chickasaw Nation. Also, included are hydrography, transportation and municipalities layers; along with the Chickasaw Nation boundary, legislative districts and points of interests. This aesthetically pleasing map is displayed in buildings and offices throughout the Chickasaw Nation. This map is more than beautiful, it's also an excellent reference guide to the Chickasaw world.

Poster Presentations

Using GIS to Illustrate the Evolution of the Oil Industry in Oklahoma
Kellie Duncan, Oklahoma Corporation Commission

From the first oil seeps discovered before 1900 to the explosion of exploration, Oklahoma's oil industry has made the state what it is today. With use of modern technology, we are able to show the fluctuations of the oil industry. The industry goes through high production phases, or Booms, for a short period and then drops back down. The industry has been slowly declining in the more recent years, with the exception of the early 2000's. GIS is a great tool to show these changes.

This poster will illustrate the changes in Oklahoma's oil industry over the past century. The maps are going to be broken down by decades ranging from pre-1900 through present day.

Poster Presentations

The City of Sand Springs River City Park Project

Sheila Wilson, PhD, GISP, Bruce Carson, Renee Dennison Carson, Clint Reichenberger, Jeremy Gardner, and Angela Butler; Tulsa Community College, GIS Practicum Course

The objective of this project was to map the facilities and areas of interest in the River City Park for the City of Sand Springs Parks Department. River City Park was established in 1971. It hosts a variety of activities including baseball, softball, soccer, disc golf, sand volleyball, horseshoes, rodeo, BMX track, boat dock, walking trail, and an annual Independence Day fireworks celebration. Facilities mapped include electricity, water, bathrooms, lights, sports fields, etc. Areas of interest include a bald eagle's nest with a pair of bald eagles, a memorial tree, and playgrounds. Location data was collected using GPS and aerial photography. Historical information about the park was collected from the City of Sand Springs, the Indian Nations Council of Governments (INCOG), and internet research. This poster and a final report were presented to the City of Sand Springs, providing them with the best facility information collected to date.

Making History: Using Story Maps to Educate New Employees

J.P. Reynolds, GIS Intern, Access Midstream

The Access Midstream historical map was created to use as a tool to educate new employees about the history of the company. It is based on Esri's "Playlist Story Map" template which draws the user into exploring an ArcGIS Online map service that is supplemented with thumbnails, pictures, and a rich set of descriptive text about the company's history. The Story Map will be served up to employees via the "Portal for ArcGIS" extension which allows for an internal content management system similar to ArcGIS Online. Employees will be able to explore the Story Map and also other GIS mapping resources available in the company.

Poster Presentations

Improving Access to GIS Data with Targeted Webmap Applications
John McIntosh, Joyce Green, Larry Knap, Rick Hoffstatter; City of Norman, GIS Division

The City of Norman implemented a GIS program in 1992. GIS has been managed using a traditional model with a GIS Services Division developing and maintaining data, preparing maps and providing analysis for most users. GIS users, outside the GIS Services Division, use desktop GIS applications to conduct relatively simple operations that do not require the power and flexibility of that tool. The increasing use of GIS and costs associated with supporting many users in a desktop environment combined with shrinking budgets has the GIS Services Division attempting to provide GIS data to its users more efficiently.

One promising approach is to provide users with focused GIS applications in a web environment so they can query data, conduct routine types of analysis, and prepare their own maps. These applications typically are easy to use and targeted to specific needs. They only include relevant layers, analysis capabilities, and mapping options. This approach has the advantage of providing users with limited GIS experience a means of appropriately using the data, using correct analysis tools and producing consistent map products. From a project perspective, targeted web maps can reduce time to generate maps by allowing the participants to use GIS and produce their own maps without needing to wait on the GIS division. The City recently upgraded to ArcGIS 10.1 server. The web applications have been developed using the JavaScript API using map services hosted on our own server. In this poster, we will provide examples of targeted GIS applications. Such applications include a police tool for quickly determining if a drug related crime occurred near a school or park, and a planning tool that shows parcels to be notified as required for areas around new proposals for zoning changes, preliminary plats, ordinance variances and other land use proposals.

Poster Presentations

GIS Analysis of Changes in Volume and Mass of Chat Piles in the Picher Mining District, Ottawa County, Oklahoma, 2005–10
S. Jerrod Smith, U.S. Geological Survey Oklahoma Water Science Center

From the 1890s through the 1970s the Picher mining district in northeastern Ottawa County, Oklahoma, was the site of mining and processing of lead and zinc ore. When mining ceased in about 1979, as much as 165–300 million tons of mine tailings, locally referred to as "chat," remained in the Picher mining district. Since 1979, some chat piles have been mined for aggregate materials and have decreased in volume and mass. Currently (2013), the land surface in the Picher mining district is covered by thousands of acres of chat, much of which remains on Indian trust land. The Bureau of Indian Affairs manages these allotted lands and oversees the sale and removal of chat from these properties. To help the Bureau better manage the sale and removal of chat, the U.S. Geological Survey used GIS analysis of LiDAR data to estimate the 2005 and 2010 volumes and masses of selected chat piles remaining on allotted lands in the Picher mining district and to estimate the changes in volume and mass of these chat piles for the period 2005 through 2010.

The 2005 and 2010 chat-pile volume and mass estimates were computed for 34 selected chat piles on 16 properties in the study area. The total volume of all selected chat piles was estimated to be 18.073 million cubic yards in 2005 and 16.171 million cubic yards in 2010. The total mass of all selected chat piles was estimated to be 20.445 million tons in 2005 and 18.294 million tons in 2010.

All of the selected chat piles decreased in volume and mass for the period 2005 through 2010. The total volume and mass removed from all selected chat piles for the period 2005 through 2010 were estimated to be 1.902 million cubic yards and 2.151 million tons, respectively.

Poster Presentations

A New Protected Areas Database for the State of Oklahoma
*Todd Fagin and Bruce Hoagland, Oklahoma Natural Heritage Inventory/
Department of Geography and Environmental Sustainability*

Though Oklahoma public lands account for less than 5% of the state's total
land area, there are many disparate governmental agencies, NGOs, and
private land owners tasked with managing these and other protected
areas in the state. Collating this information into a single database has
proven an arduous task, with the last statewide protected areas database
(PAD) developed in 2001 and updated in 2006. The Oklahoma Natural
Heritage Inventory (ONHI) is now in the process of finalizing a new
protected areas database for the state. The new database reflects changes
in boundaries and ownership since the last database was completed and
will incorporate additional protected areas not included in the previous
release. The updated database will be incorporated into the Protected
Areas Database of the United States (PAD-US) and will serve a vital role in
the protection and management of Oklahoma's biodiversity.

Building a Traffic Signal and Sign Inventory for the City of Edmond
Christy Batterson and Ian Peebles, City of Edmond, Oklahoma

Within the City of Edmond, traffic data is integrated into a variety of
mapping applications as well as used in the work order system. With the
need to comply with federal regulations and future implementation of ITS
(Intelligent Traffic System), the city had a need to take inventory of all
major traffic assets including traffic components and signs. Working with
various departments, the GIS team began updating the traffic data utilizing
GIS modeling, GPS data and various other ArcGIS tools to develop a
complete inventory that will be able to be maintained and utilized for
further development as needed throughout the city. This poster highlights
the processes involved in building the traffic data model and traffic sign
inventory.

Poster Presentations

Sand Springs Lake Project
Sheila Wilson, PhD, GISP, Jennifer J. Wilson, Ian McCune, Jonathan Lein, and Tyler W. Brooks; Tulsa Community College, GIS Practicum Course

A series of maps, tables, spread sheets, and reports of the Sand Springs Lake area was utilized. This includes historical changes over the last decade, the bathymetry of the lake, volumes and surface areas of the lake, risk assessment and mitigation for the dams, as well as, the area of the catchment basin. Bathymetry of the lake was field verified with a homemade depth gauge and volume and surface area of the lake were calculated. Information showing the full capacity of the lake when the dam was built in 1911 was also included. Topographic information provided by the USGS was used to construct a map of the full catchment basin and to calculate its area.

The results indicate that over the last 5 years there has been about a 12% loss in volume. When the dam was built in 1911 the volume was approximately 78 million gallons. Through the analysis it was determined that that the lake has lost an estimated 62% of its original volume.

In conclusion, the short term drought has had a significant impact on the current level and volume of the lake. However, over the long term sediments flowing into the lake from its catchment basin, with no way for them to flow out, is the biggest factor contributing to the loss of volume of Sand Springs Lake. It is recommend the City of Sand Springs take steps towards removing sediment from the lake, and/or take steps to mitigate the flow of sediments into the lake in order to fully preserve the lake for future generations of residents.

Mapping Fee Properties for Access Midstream's Right of Way Group
Miles Harris, GIS Intern, Access Midstream

In the oil and natural gas industry, knowing what you own and where it is located can be effectively managed using Geographic Information Systems. Access Midstream uses GIS to keep track of its company assets, including their fee properties. Fee properties are purchased properties accompanied with full ownership rights. They are used for permanent development sites, such as

Poster Presentations

field offices, compressor stations or other facility sites. This poster covers my summer intern project in which I used Esri's ArcGIS Desktop software and their COGO tool to map fee properties for Access Midstream, utilizing survey plats, deeds, purchase agreements and other documents associated with land acquisition. The poster will cover the basic process of mapping fee properties and highlight some of the difficulties I encountered with the software and various forms of land documentation. It will depict the 134 properties that I mapped and geographically referenced within Access Midstream's GIS environment contributing to the spatial integrity of the company's assets.

Progress report on a revised land cover map for the state of Oklahoma.

Bruce Hoagland[1,2], Dan Hough[1], Todd Fagin[1,2], and Kayti Ewing[1]
[1]Oklahoma Biological Survey and [2]Department of Geography & Enviromental Sustainability, University of Oklahoma

The Oklahoma Biological Survey (OBS), in conjunction with the Oklahoma Department of Wildlife Conservation (ODWC), Lanscape Conservation Cooperative (LCC) of the U.S. Fish and Wildlife Service (USFWS), and the Missouri Resource Assessment Partnership (MoRAP) are in the process of creating a revised land cover dataset for the state of Oklahoma. Improvements in both thematic (number of types mapped) and spatial resolution of the revised land cover dataset will enhance efforts to identify and conserve species, communities, and landscapes. Ideally, such land cover datasets should be continuous both spatially and thematically across state boundaries. In order to ensure continuity and uniformity between neighboring states, project partners are building on methods and results of the Texas Parks and Wildlife Department. Survey personnel have collected ground data at over 3500 points in all 77 counties for the project. These data have been used to create a preliminary land cover classification, which will be used to guide the finalized product.

Poster Presentations

Cluster Analysis of Cysticercosis in Pig Population of Boulkiemdie, Nayala, and Sanguie in Burkina Faso

Mr. Ram Poudel, Dr. Hélène Carabin, Dr. Sheryl Magzamen

Background: *Taenia solium* is a parasitic zoonosis transmitted between humans, the definitive and accidental hosts, and pigs, the intermediate hosts. In the intermediate and accidental host, the larval form of the parasite causes cysticercosis when establishing in tissues. In humans, larvae may migrate to the brain, causing severe neurological disorders such as epilepsy, severe chronic headaches, and sometimes death. To interrupt the life cycle of *Taenia solium*, it is essential to identify clusters for porcine and human infection.

Objective: To analyze clusters of porcine cysticercosis using GIS and spatial analysis.

Methods: This study is part of EFECAB, a randomized community trial evaluating the effectiveness of an educational program to control porcine and human cysticercosis in three provinces of Burkina Faso. A total of 60 randomly-selected eligible pig-raising villages located in 30 departments were sampled. After conducting a census of all concessions (a group of several households) in each village, a random sample of 10 sows were selected from concessions where sows were raised and a random sample of 30 piglets were selected from concessions where piglets were raised, with one pig sampled per concession. Longitude and latitude coordinates of each concession were measured using PDAs. The presence of current cysticercosis infection was measured with an ELISA to detect antigens in pigs' sera. Using ArcGIS 10.1, Moran's I Index was calculated for cluster analysis.

Results: Among the 2292 concessions included in the analysis, a total of 781(33.8%) were clustered. There were 279 (12.1%), 239 (10.3%), 153 (6.6%), and 110 (4.8%) concessions located within a high-high, low-low, high-low (area of high prevalence surrounded by low prevalence) and low-high (area of low prevalence surrounded by high prevalence) clusters,

respectively.

Conclusion: The presence of porcine cysticercosis infection shows some level of spatial clustering. More spatial analyses are required to explore reasons for this pattern.

Industrial Strength: MidAmerica Industrial Park Demographic & Workforce Report

Marcus Arreguin, The Innovation Center at Rogers State University

The MidAmerica Industrial Park is Oklahoma's largest industrial park, serving nearly 80 companies and set on 9,000 acres in Mayes County east of Tulsa. Marcus produced a 24-page statistical report at the Innovation Center. This report serves as a launching pad for developing a strategic plan to grow the park into a community where Oklahomans can live, work and play. This poster covers key demographic, economic, and workforce statistics found in the full report. The poster contains maps Marcus created of the study area, photos he took at the industrial park, and data he researched and calculated.

Marcus holds a master's degree in spatial analysis, a bachelor's degree in mathematics and geography, and an Economic Gardening certification as a GIS Specialist. The Innovation Center at Rogers State University in Claremore, OK fosters economic development in northeast Oklahoma with a variety of programs aimed at communities, startups, and growth companies.

COBB ENGINEERING

Cobb Engineering Company (Cobb) is a privately-held Oklahoma corporation and was founded in 1921 by the late Fred Cobb. In 1968, James D. Cobb, P.E., PLS, purchased the company from his father to continue the family's reputation for excellence. Cobb has grown to more than 150 strong, specializing in site design services, design build, transportation design, studies and planning, environmental assessments, detention design, hydraulics and hydrology design, survey services, bridge design, construction management and inspection, right-of-way, utility relocation coordination, airport planning and design, and water resources including stormwater and wastewater systems. Cobb believes in strong relationships with our clients, peers, industry consultants, and government entities, and has cultivated a reputation for client-based focus and ethical business practices.

With our roots firmly embedded in Oklahoma's red soil, Cobb is proud of the legacy that we have worked so hard to build. Our clients include numerous federal, state, municipal, tribal, county, government agencies and private organizations. Cobb is a multi-divisional company with the ability and resources to cover all projects simultaneously and on time. Cobb is committed to our clients and their project needs. We are there from the beginning to the end to ensure a successful project, not just for our clients but for the community as well.

As a full-service civil engineering firm, Cobb Engineering Company provides the full spectrum of engineering services. We offer both general and specialized services. Due to the nature of the company and the cross-training program of Cobb staff, many employees are knowledgeable in various areas of expertise.

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 vendor that provides complete technical solutions for desktop, mobile, server, and Internet platforms. Visit us at www.esri.com.

Automate processes, integrate software and improve workflow for streamlined operations, improved efficiencies and citizen engagement with EnerGov's permitting, licensing, asset management and citizen relationship government software solutions, powered by Tyler Technologies.

Geocortex software by Latitude Geographics, transforms how people design, build and maintain Esri ArcGIS Server applications. By taking advantage of off-the-shelf components and a supportable infrastructure you will be able to do more – faster, cheaper and better than otherwise possible. In fact, that is what hundreds of organizations around the world have done in choosing Geocortex when seeking powerful, intuitive web-based mapping solutions. In 2010, Latitude Geographics was named one of Esri's first Platinum Business Partners as well as 2010 Partner of the Year.

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. Nathan Mayer brings over a decade of land surveying experience, and a wealth of technical education, over 5 weeks of which being technical trainings he has attended in the last year alone. We are proud to have a staff that includes two Professional Land Surveyors and a combined 100+ years of industry experience in Surveying, Construction, Machine Control, HDS, and software solutions. We don't just provide the best products, we provide super solutions. We are professionals backing professional products and we are excited to be a part of SCAUG!

GRI has been in business since 1987 and thus are celebrating 26 years in 2013. 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.

IDCE — International Disaster Conference & Expo
JANUARY 7-10, 2014 — NEW ORLEANS

The purpose of IDCE is to create opportunities for public and private sector industry professionals across multiple inter-related disciplines addressing catastrophic events to convene. Participants are industry leaders whose actions and policies shape the landscape and methods in which industry professionals do their job. In a single location, the attendees can engage in dialogue regarding the challenges and experiences uniquely presented to each industry segment as well as geographic region, territory, country, state and community. The hope is information shared will lead to more effective policies and best practices, further mitigating losses from future catastrophic events.

- 4 Days of Conference Programs uniting the Public and Private Sector Professionals from Homeland Security, Emergency Management, First Response, Business Continuity, Resiliency, Security, Insurance, Finance, Emergency Medical and more
- 7 Major Plenary Sessions Presenting the most Internationally Recognized Leaders and Policy Makers
- Over 30 Breakouts of education, training, certification, and policy sessions.
- Multiple Open Forum Panel Sessions
- Top-Level Leadership Round-Table Sessions presented by Industry Associations, Agencies and Organizations
- 2 Days of dedicated exhibition time for an expo presenting over 200 companies displaying services and products, with demonstration stages and unified round-table discussions hosted by public-private tandems.
- Multiple Continuing Education Credits, Accreditation and Certification programs and Exams

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
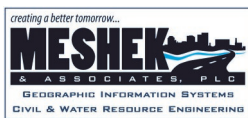
With over 50 combined years of experience in Geographic Information Systems (GIS), Meshek & Associates, PLC stands behind its proven track record for GIS project design and implementation.

Whether it be converting existing datasets, maps, and reports into an integrated GIS, delivering Web-based GIS services and applications, or performing GPS surveys of infrastructure and environment; Meshek & Associates, PLC is poised to deliver cutting edge custom GIS solutions tailored to our client's needs.

Meshek & Associates, PLC goes beyond the nuts and bolts of GIS with our attention to detail and focus on data visualization and cartography, thus ensuring that the purpose of the data and maps are realized through careful thought and design.

In addition, Meshek & Associates is committed to exceeding our client expectations on every project, and to exceeding project goals without sacrificing budgetary efficiency. Come talk to us, our doors are always open.

Patriot Properties' impressive *P*roperty *R*evenue *O*ptimization flagship product, *AssessPRO* has been successfully managing real and personal property for local governments for nearly 30 years and rapidly growing here in the SCAUG region. A proven CAMA solution that will exceed your expectations; our users are our best advocates. Full real and personal property valuation models, a tightly integrated geospatial-CAMA editing and analytical utility and a truly impressive integrated mobile drafting package called *SketchPro* that among its many features, includes using GPS to geolocate your sketched assets.

In fact, our *GISPro* was recognized by ESRI as one of the most innovative uses of Geospatial technology in the industry by incorporating the most fully embedded CAMA information management extension that provides unmatched visual data processing, editing and analysis - enabling owners to truly use GIS and CAMA like nothing else. It is so impressive, it even won Patriot a Partner of the Year award from ESRI and we continue to work closely with them as a business partner with results like no other.

Patriot prides itself in our phenomenal support and vast experience in the design, conversion, setup, installation and training for all of your needs from CAMA through Collections for revenue management. Patriot is fully committed to meeting your goals and our references can attest to Patriot's track record of being on time and on budget—with high marks for ongoing client satisfaction. Please call Jim Kiles at 704.771.3981 or go to our website www.patriotproperties.com for more information.

SAIC

Portions of SAIC to be renamed Leidos, Inc., subject to stockholder approval and consummation of a separation transaction if approved by SAIC board of directors.

leidos

SAIC is a FORTUNE 500® scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in national security, energy & environment, health and cybersecurity. Our understanding of technical, financial, and regulatory issues across industries helps our customers withstand political and economic volatility. We support a modern way of life by addressing global energy needs, considering the natural environment, and building infrastructure for energy, oil and gas, power generation, and water. With expertise in electric power, fuels and renewables, SAIC develops comprehensive strategies and establishes sustainable programs to deliver SAIC is a FORTUNE 500® scientific, engineering, and technology applications company that uses its deep domain knowledge to solve problems of vital importance to the nation and the world, in energy and the environment, national security, critical infrastructure, and health. SAIC's engineering business tackles important problems head-on – converging the best technology, consulting, system integration, and program management to engineer solutions that are right for today and years down the line. Portions of SAIC to be renamed Leidos, Inc. subject to stockholder approval and consummation of a separation transaction if approved by SAIC board of directors. Learn more at saic.com/leidos.

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Mr. Scott Hastings founded Select Engineering, Inc. in 1999 as a one man operation in a small office in Tulsa, OK. The company has grown to a total of 46 employees and has diversified its services to become a full EPCM company with a top rated reputation in the Industry. Inc. 500 awarded Select Engineering with "America's Fastest Growing Company" recognition in 2007, 2008, 2009 and 2013.

Our main services consist of Engineering and Design Solutions, Gas Processing & Treatment Plants, Pipelines & Systems, Skidded Equipment and LNG Plants. Select Engineering strives toward excellence by building working principles into everything the company delivers and into how Select Engineering works as an organization.

United Geo Technologies, LLC is a professional services organization providing all disciplines of softcopy photogrammetric mapping, digital orthophotography, GIS services including geospatial database architecture, raster/vector data layer production, CAD to GIS data integration, remotely updating of GIS layers and solution development embraced as an integral part of UGT's Geographic Information Systems expertise. As a small, woman-owned business (8M SBA Self-Certification), DBE certified and member-owned LLC, UGT supports its clientele by servicing:

- Aerial Imagery Acquisition (Film and Digital)
- Aerial Film Scanning
- Digital Aerial Triangulation
- Topographic Mapping
- Planimetric Feature Extraction
- Digital Terrain Models (DTM)
- Lidar Editing and Enhancements
- Contour Generation
- Digital Orthophotography
- Image Compressions (Sid, ECW, Jpeg2000)
- Centerline Mapping
- Volume Computations
- Geographic Information Services

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

2013 Oklahoma SCAUG GISP Credit Checklist

Workshops (4 & 8 hour)

Description	Class	Credit	Re-Cert	Earned
Beginner's Python (8 hr)	EDU	0.2	1.33	
ArcGIS Data Sourcing/Toolbox Tips &Tricks (8 hrs)	EDU	0.2	1.33	
Using GLO Maps & Surveys in Today's GIS (4 hrs)	EDU	0.1	0.67	
Evolution of FIRM Maps (4 hrs)	EDU	0.1	0.67	
Address for Success (4 hrs)	EDU	0.1	0.67	
Working with ArcMobile for Desktop (4hrs)	EDU	0.1	0.67	
1 Day Training Instructor	CON	3.0	9.0	

SCAUG Conference	Class	Credit	Re-Cert	Earned
Attendee (.1 x number of days)	EDU	0.2	1.33	
Presenter	CON	1.0	3.0	
Poster Presenter	CON	1.0	3.0	
Poster Award Winner	CON	2.0	6.0	

2 Day Training (16 hour)	Class	Credit	Re-Cert	Earned
Designing Maps with ArcGIS	EDU	0.4	2.67	
ArcGIS for Server: Sharing GIS Content on the Web	EDU	0.4	2.67	
ArcGIS Basics III	EDU	0.4	2.67	

(workshop or training certificate required for documentation credit)

Total GISP Points Earned

Congratulations OKSCAUG 2013 Scholarship Recipients

Mariah Towell

—Northeastern State University

Ying Zhang

—University of Oklahoma

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

Additional workshops and Training Locations

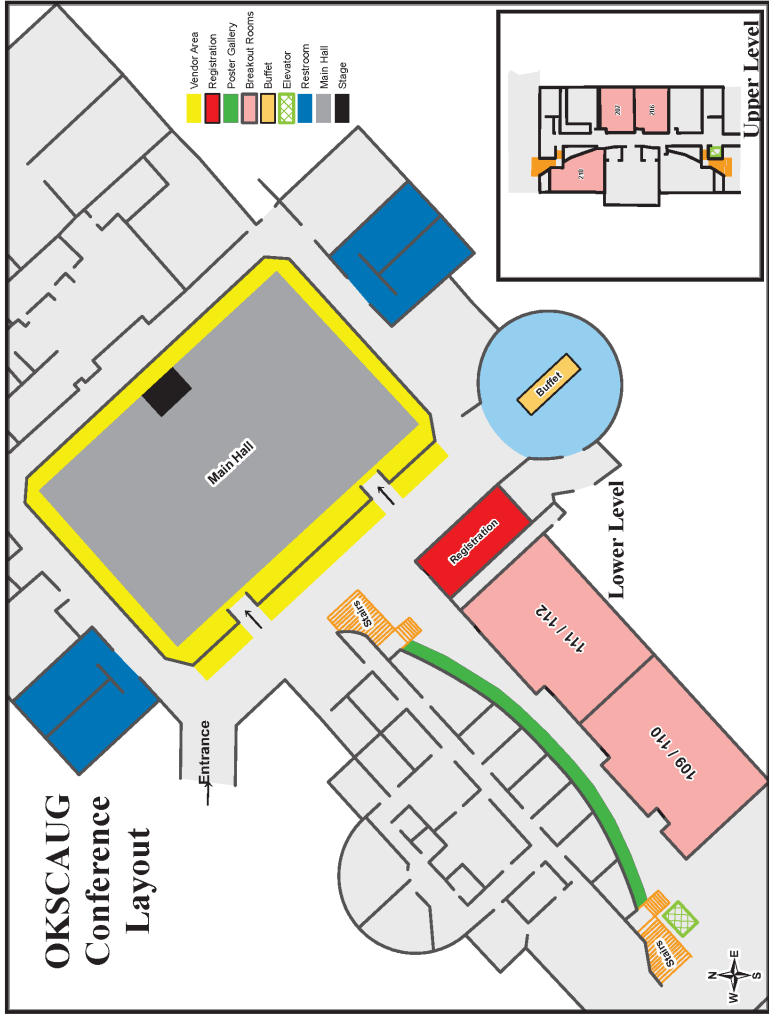| Workshops: Monday, Sept. 23		ROOM
Beginner's Python	8:00 am – 5:00 pm	203
ArcGIS Data Sourcing / Toolbox Tips and Tricks	8:00 am – 5:00 pm	201
Using GLO Maps & Surveys in Today's GIS	8:00 am – 12:00 pm	111
Address for Success: Better Addressing = Better Response:		
911 GIS Data Basics	8:00 am – 12:00 pm	112
Working with ArcMobile for Desktop	1:00 – 5:00 pm	111
Evolution of the Flood Insurance Rate(FIRM) Maps		
	1:00 – 5:00 pm	112

Training Courses: Wednesday, Sept. 25 – Thursday, Sept. 26		ROOM
Designing Maps with ArcGIS	8:30 am – 5:00 pm	203
ArcGIS for Server: Sharing Content on the Web	8:30 am – 5:00 pm	206
ArcGIS Basics III	8:30 am – 5:00 pm	201

OKSCAUG Conference Layout

Upper Level

Lower Level

Vendor Area
Registration
Poster Gallery
Breakout Rooms
Buffet
Elevator
Restroom
Main Hall
Stage

Main Hall

Buffet

Registration

111 / 112

109 / 110

Stairs

Stairs

Entrance

N
W E
S

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286

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