

OKSCAUG ANNUAL CONFERENCE

TUESDAY, SEPTEMBER 25, 2012



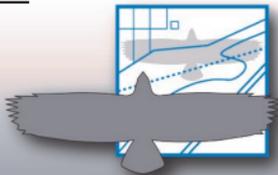
CELEBRATING 15 YEARS OF PROMOTING
GIS EXCELLENCE IN OKLAHOMA
SEPTEMBER 1997~SEPTEMBER 2012

**On Behalf of the OKSCAUG Steering
Committee,
Welcome To The 15th Anniversary of the
OKSCAUG Conference!**

GIS, as we all know, is a rapidly emerging and evolving discipline. As such, it is nearly impossible for an individual to keep up with the lightning quick pace of technological and methodological advances taking place. Since September of 1997, OKSCAUG has been helping to alleviate this by bringing together Oklahoma GIS professionals to share their successes and challenges with other GIS users. By providing a venue for the dissemination of the latest technologies and methodologies OKSCAUG has proved to be an invaluable resource for both government and private industries.

We at OKSCAUG would like to extend a hearty **“THANK YOU”** to the individuals who had both the foresight and wherewithal to assemble a small group of volunteers and create one of the greatest resources for GIS in the Great State of Oklahoma, the Oklahoma South Central Arc Users Group. We owe it all to you!

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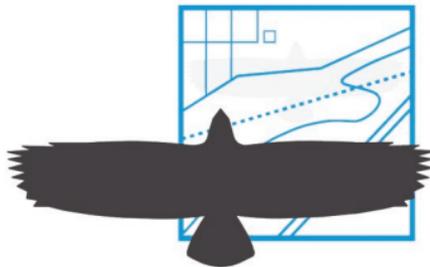
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OKSCAUG History

Jann Hook and Sara Cobb

When we were all just beginning with GIS getting our little systems going, there weren't a lot of users (relative to other states) so there were very few resources or people to learn from around here. It was the Oklahoma Water Resources Board's (OWRB) Data General Account Rep (their first GIS system came from an EPA grant with a DG workstation and ArcInfo) that put Jann Hook in touch with the Texas ArcInfo Users Group (TAIUG) president to inquire about crashing their annual conference. They were fine with it. It turned out to be beneficial and she could see that the GIS users in Oklahoma needed a similar organization here to connect users (plus it was a fun group!). It was at one of the first or second conferences that Jann attended that they started discussing TAIUG becoming a regional group and opening membership to other states in ESRI's San Antonio region. So far, only Oklahoma (Jann Hook with OWRB) had expressed interest but it was just a matter of time before the other states started catching up. Jann became the "semi-official" Oklahoma rep for the group.

There were two options: 1) start an Oklahoma ArcInfo users group, or 2) become part of a larger, regional group. The latter offered significant advantages in terms of having almost none of the organizational startup issues with the IRS, etc. However, we wanted to be sure Oklahoma users' needs were met and we did not get lost in the larger organization.

Obviously the decision needed to be made by those interested in becoming members. It was in conjunction with an ESRI short seminar in the fall of 1996 that Jann and ESRI tacked on an “AIUG organization interest” meeting. Leann Gilley, the TAIUG president came up to talk about TAIUG becoming a regional group and extended an invitation to join. It was a large turnout but attendees weren’t very vocal as Jann recalls and they decided to ask for volunteers to be on a steering committee to look at the options. (Sara Cobb from the City of Edmond remembers the meeting and believes the attendees were not allowed to leave until there were 4-5 volunteers.) Sara agreed to be on the steering committee with Jann Hook and so did John Pitts with Topographic Mapping, Rich Davis with City of Oklahoma City, Rachel Noon with Philips Petroleum, Al Rae with USGS and Jayne Salisbury from OSU. The steering committee developed and reviewed the charter and By-Laws.

The initial charter was the Oklahoma ESRI User Group (OEUG) chapter of the Texas ArcInfo Users Group. From there in early 1997, it turned into the Oklahoma Chapter of the South Central Arc User Group. The goal of the organization was to provide an exchange of information about ESRI and their software products. It was here in the charter that the group would hold at least one meeting per calendar year. Hence the inaugural 1997 Oklahoma ARC User Conference was held September 18th at Metro Tech in OKC.

15 Years of OKSCAUG Attendance

All 15 Conferences

Sara Cobb

Joyce Green

Larry Knapp

David Wheelock

We would like to thank these individuals for their consistent dedication to the GIS profession in the state of Oklahoma.

Their commitment has ensured we have what we call OKSCAUG today.

10+ Years of Attendance

Jun Gao	14
Rick Hoffstatter	14
Gary Orr	14
David Smith	14
Bob Springer	14
Sohail Hasanjee	13
Clifford Montgomery	13
Mike Sexton	13
John Sharp	13
Michael Sughru	13
Matthew Winston	13
Terry Faggins	12
Junior Garcia	12
Chris Hill	12
James Mallory	12
Rae Reese	12
Tresa Runyan	12
Tim Thummel	12
Shellie Willoughby	12
Charles Brady III	11
Kevin Koon	11
Angela Mead	11
Gary Smith	11
Robert Sweet	11
Sam Woodfork	11
Kate Burch	10
Stacia Canaday	10
Robert Sandbo	10
Scott Woodruff	10

15 Years of OKSCAUG Vendors

11 Year Vendors

ESRI

Cityworks

Topographic Mapping Company

Western Data Systems

5+ Year Vendors

Pinnacle Mapping Technologies, Inc.	8
United Geo Technologies, LLC	8
Strategic Consulting International	7
Surdex Corporation	7
IT Nexus, Inc.	6
M.J. Harden Associates, Inc	6
Meshek & Associates	6
SAIC	6
Aerial Data Service, Inc	5
Applied Field Data Systems Inc.	5
NTB Associates Inc	5
Sanborn Map Company, Inc.	5
US Geological Survey	5

Without the fresh ideas & technology these firms have provided Oklahoma over the years we would not have the opportunities we currently enjoy. Take a moment to stop by and thank these long time patrons of OKSCAUG.

2012 OKSCAUG Steering Committee

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

-City of Ardmore, Oklahoma

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

-Oklahoma Conservation Commission

James Allen –Regional SCAUG Treasurer

-Carter County, Oklahoma

Katy Rich –Regional SCAUG Secretary

-Chesapeake Midstream

Darryl Williams –Regional SCAUG Representative

-United States Geological Survey (USGS)

Pamela D. Journey, GISP -OKSCAUG Outreach Coordinator

-Red Plains Professional

Willard Gustafson, GISP -OKSCAUG Publications Coordinator

Meshek & Associates PLC

Brad Nesom, GISP -OKSCAUG Co-Vendor Coordinator

-Hiland Partners

Elizabeth Montgomery-Anderson -OKSCAUG Co-Vendor Coordinator

-Cherokee Nation GeoData

Talia Gammill -OKSCAUG Secretary

-Cotton Electric Cooperative inc.

Sohail Hasanjee, GISP -OKSCAUG User Group Meeting Coordinator

-Oklahoma State Department of Health

2012 Conference Schedule

		<u>Room</u>
7:30 – 2:00	Registration	
7:30 – 8:00	Breakfast Served	Rotunda
8:00 – 9:30	Welcome & Keynote Address	Main Hall

Keynote Speaker: Jon Hansen

Executive Director of the Oklahoma Council on Firefighter Training and a lead instructor for the Center for Safety and Emergency Preparedness, Oklahoma State University, Oklahoma City campus

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

User Presentations

10:15 – 10:45		<u>Room</u>
	New DEQ ArcGIS Viewer: How to use it and how we made it.	109/110
	Supporting Place-Based Policing with GIS	111/112
	GIS During Emergency Events: Think Decision Support	206
	AREA ONE: Oklahoma LiDAR Acquisition 2012	207
	Edmond Fire, Where's Your Emergency?	210

2012 Conference Schedule

10:50 – 11:20

Room

Water Resources and Public Safety using ArcGIS Online	109/110
Custom & Mobile (iPhone/iPad) Web App for Law Enforcement	111/112
Using GIS and Geospatial Analysis for Tornado Disaster Responses in Disaster Recovery Operations	206
The GISCI Certification Program	207
GIS Challenges for 911	210

11:25 – 11:55

Room

Utilizing GIS, Service Learning, and Landscape Architecture to Assist Oklahoma Communities	109/110
GIS in Law Enforcement – Norman, Oklahoma	111/112
Using GIS to Optimize Emergency Management Exercise (EME) Siren Coverage: A Case Study for Bartlesville Oklahoma	206
VIESORE: Visual Impact Evaluation System for Offshore Renewable Energy	207
Electric Emergency Response: Utilizing GIS to Improve Response to Electric Infrastructure Problems	210

2012 Conference Schedule

12:00 – 1:15 Lunch - Poster Competition - Vendor Exhibits

ESRI Technical Sessions

1:15 – 2:00

Room

How to make GIS more visible using ArcGIS Online
in your organization - *Pam Kersh*

109/110

What's New in 10.1 - *Karen Lizcano*

111/112

What is GIS: An Introduction - *Brig Bowles*

210

2:00 - 3:00

Afternoon Break and Vendor Exhibits

3:00 – 3:45 pm

Room

How to make GIS more visible using ArcGIS Online
in your organization - *Pam Kersh*

109/110

Migrating to the Local Government Information
Model - *Karen Lizcano*

111/112

ArcGIS as a System for Emergency &
Disaster Management - *Brig Bowles*

210

3:45 – 4:30

Closing Remarks/Door Prizes

Main Hall

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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.

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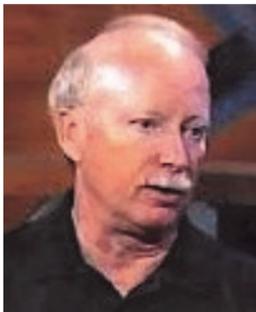
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Keynote Address

8:00am



Jon Hansen served 27 years on the Oklahoma City Fire Department where he rose through the ranks to Assistant Chief.

Hansen served on the Incident Management team during the 1995 Murrah Building Bombing. In addition to his Command Team responsibilities, he also served as the media point of contact. When the F5 - F6 tornado (with the highest wind speeds ever recorded) devastated much of central Oklahoma, Hansen helped establish the Incident

Management team to handle this which was once again, a major disaster.

He also responded to assist at the World Trade Center and to Hurricanes Charley, Ivan and Katrina. Because of his first-hand experience with large-scale natural *and* man-made incidents, Hansen was President Bush's nominee for U.S. Fire Administrator, the highest position in the fire service, in 2000. He commuted to and from Washington, DC several months as a special consultant to the FEMA Director and testified before Congress, until family obligations caused him to return to Oklahoma.

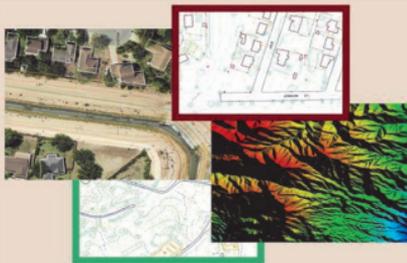
Chief Hansen is currently the Executive Director of the Oklahoma Council on Firefighter Training and is a lead instructor for the Center for Safety and Emergency Preparedness, Oklahoma State University, Oklahoma City campus. He is a graduate of the National Fire Academy's Executive Fire Officer Program.



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Roger L. Stack,
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User Presentations

10:15-10:45am

Room 109/110

New DEQ ArcGIS Viewer: How to use it and how we made it.

Amy Brittain, Heather Mallory, and Chris Monk -Oklahoma Department of Environmental Quality and Oklahoma Office of Enterprise and Management Services

In June 2012, the Oklahoma Department of Environmental Quality placed a new ArcGIS Viewer into production on its website. (<http://gis.deq.ok.gov/flexviewer>) The Viewer has been developed with ArcGIS Viewer for Flex 2.5. The new Viewer was designed to replace the original ArcIMS DEQ Data Viewer. This presentation will demonstrate what data layers and functionality are available in the new Viewer. A description will also be provided on how the Viewer was developed.

Room 111/112:

Supporting Place-Based Policing with GIS

Francis Graf, and Scott Stafford-Veale, Latitude Geographics Group Inc.

Police and public safety organizations are traditionally focused on people, responding to crimes and identifying offenders. Challenges with people-centered crime prevention include difficulty in prediction of who is likely to offend and the type of offense, compounded justifiably by the legal and ethical implications of targeting past offenders. Place-based crime prevention aims to circumvent these dilemmas, through the use of GIS tools to shift policing focus from people to places. This presentation will look at some of the theories and research around place-based crime, and suggest strategies for policing in an analytic and methodical

User Presentations

10:15-10:45am

approach, supported by communication channels, GIS tools and reporting. We'll examine GIS systems that tie in community involvement with public safety infrastructure and police resources. The types of crime maps will be introduced and interpreted, and results will be presented that demonstrate that place-based policing reduces opportunities for crime to occur, develops safer communities while increasing livability of communities, and decreases overall costs for security.

Room 206:

GIS During Emergency Events: Think Decision Support

*Bill Smiley, Chief of Emergency Management and Security, Tulsa District
US Corps of Engineers*

This presentation will discuss USACE use of GIS systems for Tornado and Hurricane event modeling and damage assessments.

Room 207:

AREA ONE Oklahoma LiDAR Acquisition 2012

Brian Stinson, Surdex

Surdex Corporation was contracted by URS to perform airborne mapping services covering approximately 11,100 square miles of various watersheds in Oklahoma in support of the US Department of Agriculture's Natural Resources Conservation Service (USDA-NRCS). The purpose of this project was to generate digital elevation models and contours for use in hydraulic/hydrologic models. Surdex was tasked with services including data acquisition, processing, and the generation of various geospatial data products.

User Presentations

10:15-10:45am

Room 210:

Edmond Fire, Where's your Emergency?

Mark Voyle, Edmond Fire Department

Geographic Information Systems have/has become an essential tool for providing accurate and timely public safety response to the citizens of Edmond. Edmond Fire Department's use of GIS begins with their Fire Prevention Plan Review Team and continues through to the Fire Fighter in the truck. Discover how Edmond Fire uses GIS throughout their organization daily.



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User Presentations

10:55-11:20am

Room 109/110:

Water Resources and Public Safety using ArcGIS Online

Jon Phillips, Matt Rollins, and Michael Sughru, Oklahoma Water Resources Board

The OWRB is developing new interactive mapping applications using ESRI's ArcGIS Online to help disseminate water resources data in Oklahoma. This presentation will focus on two of the new viewers dealing with public safety. The Floodplain and Dam Inventory viewers are being used to help floodplain managers, dam safety professionals, and the general public to locate areas of potential hazard during flooding conditions. These applications developed using ArcGIS Online are providing access to critical data in a free (to the user), reliable, and easy-to-use format.

Room 111/112:

Custom & Mobile (iPhone/iPad) Web App for Law Enforcement

Cassandra Gore, GIS System Administrator, The Chickasaw Nation Department of GeoSpatial Information

Tribal jurisdiction can be a major issue with all tribal police departments. The Department of GeoSpatial Information (GSI) has simplified jurisdictional issues with the creation of a custom Lighorse Police web application. The application not only provides officers with tribal boundaries and jurisdictions, they are also able to view tribally owned/allotted lands, facilities with pictures and floor plans, area emergency management services, and high resolution imagery.

This presentation will demonstrate how GSI plans to give the

User Presentations

10:55-11:20am

Lighthorse Police officers the same capabilities of the custom web application in a real-time app for the iPhone/iPad. This will also give them the ability to collect locations of incidents in the field for future crime analyst.

Room 206:

Using GIS and Geospatial Analysis for Tornado Disaster Responses in Disaster Recovery Operations

Steven Klapp, Disaster Assessment Manager ,American Red Cross of Central and Western Oklahoma

When disasters strike, the American Red Cross springs into action, as mandated by Congress, by providing disaster relief to the American people. The sooner information about the disaster can be collected and processed, the sooner decisions can be made about the type of disaster relief operation, service delivery plans can be made and the healing process can begin. Today with the use of WDSS-II (Warning Decision Support System - Integrated Information) by the National Severe Storms Laboratory of NOAA, GIS plays an important role in tornado relief operations by cutting the disaster assessment process by 80%.

Come and see how this state-of-the-art software application and GIS has made a difference in disaster recovery operations in Oklahoma and been recognized by the Red Cross in Washington D.C. and across the country.

User Presentations

10:55-11:20am

Room 207:

The GISCI Certification Program

Sheila Wilson, GIS Certification Institute

This session will detail the GISCI Certification Program for GIS Professionals. Started on January 1, 2004, this is a recognition program for established GIS professionals. It is a non-examination, portfolio-based system. Strategies for filling out the application as well as detailed information about the history of the effort and the Institute will be provided. Information about the addition of an exam and certification in relation to licensure and state endorsements of the program will be offered as well.

Room 210:

GIS Challenges for 911

Marty Kimble and Rod Neal, Cherokee County 911, Ottawa County 911

Emergency Responders face a distinctive set of challenges with GIS applications. Two self-taught GIS users will discuss the pros and cons of their experiences with their individual GIS platforms, contracting data versus creating it in-house, 911 naming conventions, data interoperability, and searchability. Marty Kimble from Cherokee County 911 office will explain Cherokee County's 911 process and examine special issues that emergency responders can address with GIS. Rod Neal will discuss Ottawa County's Go2It system and the challenges of working in areas with multiple jurisdictions.

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User Presentations

11:25-11:55am

Room 109/110:

Utilizing GIS, Service Learning, and Landscape Architecture to Assist Oklahoma Communities

Leehu Loon Associate Professor and Graduate Liaison Division of Landscape Architecture College of Architecture The University of Oklahoma

Service learning is a unique, dynamic, and powerful framework for student learning and landscape architecture is a diverse profession which requires a multi-faceted educational approach. This presentation will illustrate the importance of a recent service learning project that was conducted by graduate students and faculty in the Division of Landscape Architecture at the University of Oklahoma utilizing Geographic Information Systems. The Kessler Atmospheric and Ecological Field Station is a 350-acre site that was donated to the University of Oklahoma for research and teaching. As the Kessler Field Station's research areas continue to unfold, a master plan for the site was needed to manage current and future research. This project provided the Kessler Field Station with a variety of master plan options that could be implemented in phases over time. Additionally, this project provided the framework to accomplish the integration of GIS software (ArcGIS 10 and ArcGIS Online) into the landscape architecture curriculum, as well as meeting the course goals and objectives. The results of this project show that introducing GIS concurrently with principles of design had beneficial outcomes for the Kessler Field Station and the students involved. Highlights of the project will be discussed and shown as well as projections for future projects that incorporate GIS, service learning, and landscape architecture.

User Presentations

11:25-11:55am

Room 111/112:

GIS in Law Enforcement – Norman, Oklahoma

Sgt Gary Schmidt – Crime Analyst , Norman Police Department

Discussion will include the various law enforcement data sources (911, Incident, Collisions, Citations, and others), the data processes (Geocoding, Models, Python Scripts), and outputs the Norman Police Department produces for specific applications.

Room 206:

Using GIS to Optimize Emergency Management Exercise (EME)

Siren Coverage: A Case Study for Bartlesville Oklahoma

Willard Gustafson, Meshek & Associates PLC

Most of us in our part of the country are familiar with EME Sirens and many of us have even experienced them live. Originally developed during the Cold War for civil defense purposes, today they are primarily used as a warning of approaching tornados, large hail, etc. As such they are a critical piece of the Public Alert System (PAS) infrastructure and integral to overall public safety. In this presentation I will discuss a recent GIS analysis of EME Sirens for Bartlesville, OK to illustrate the basic concepts of EME Siren placement, factors to consider when determining EME siren coverage, and how GIS can be utilized to optimize EME siren coverage.

User Presentations

11:25-11:55am

Room 207:

VIESORE: Visual Impact Evaluation System for Offshore Renewable Energy

Chad Cooper, Jackson Cothren, Malcolm Williamson, Snow Winters and Robert Sullivan

In the fall of 2010, the Bureau of Ocean Energy Management entered into an interagency agreement with the US Department of Energy's Argonne National Laboratories to sponsor the development of a geographic information system-based tool for creating spatially accurate and realistic visualizations of offshore wind facilities. The development of the Visual Impact Evaluation System of Offshore Renewable Energy (VIESORE) tool is a collaborative research effort between the Bureau, Argonne National Laboratories and the University of Arkansas. VIESORE is a ArcGIS 10.0 desktop-based application that allows a user to design the spatial layout of a facility; import, prepare, and process accurate GIS data for the study area; run a series of visual analyses; define atmospheric, lighting, and wave conditions; and then generate, through the 3D visualization software package Vue 10.5 Infinite, realistic visualizations of the proposed facility as it would be seen from any number of viewpoints defined by the user. Through VISEORE, BOEM staff will be able to verify the accuracy of visual impact simulations of offshore renewable energy facilities prepared by other parties; prepare simulations for use in public involvement activities; and rapidly develop simulations for in-house use to evaluate visual characteristics of hypothetical or proposed offshore renewable energy facilities.

User Presentations

11:25-11:55am

Room 210:

Electric Emergency Response: Utilizing GIS to improve response to electric infrastructure problems

Michael Ottinger and Talia Gammill, Cotton Electric Cooperative Inc.

Electric utilities face many challenges in day to day activities. These challenges increase in complexity during emergency situations. With the aid of GIS and the ability to integrate between multiple software platforms many of these challenges can be better managed and potentially in some cases can be avoided. This presentation will demonstrate the way that Cotton Electric Cooperative has utilized GIS in combination with other software platforms to manage and possible prevent emergency situations on the electric distribution system. Discussion will include both day to day operations, as well as, major disasters that have affected the Cotton Electric Cooperative system.

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ESRI Technical Sessions

1:15-2:00pm

Room 109/110

How to make GIS more visible using ArcGIS Online in your organization *Pam Kersh, ESRI*

ArcGIS Online is a place to web-enable your maps and related geographic information and to share them with your users. It 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. During this session we will look at the different user roles and custom site setup, as well as how we can embed different maps and apps into your websites. We will also look at feature services and leveraging ArcGIS Online for data editing and geocollaboration.

Room 111/112

What's New in 10.1 *Karen Lizcano, ESRI*

The release of ArcGIS 10.1 signals a major development in the way geographic information will be accessed and managed by GIS professionals and their organizations in the years to come. We will look at how this new release gives GIS professionals a complete GIS that further integrates desktops and servers, as well as mobile and web applications.

ESRI Technical Sessions

1:15-2:00pm

Room 210

What is GIS? - An introduction *Brig Bowles, ESRI*

A geographic information system (GIS) helps you answer questions and solve problems by looking at your geographic data in a way that is quickly understood and easily shared. During this session we will look at basic navigation in ArcGIS and how we can use our data to solve and answer questions about our data.

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Highway Transportation Mapping
Impervious/PerVIOUS Mapping
National Hydrography Data (NHD)



ESRI Technical Sessions

3:00-3:45pm

Room 109/110

How to make GIS more visible using ArcGIS Online in your organization *Pam Kersh, ESRI*

ArcGIS Online is a place to web-enable your maps and related geographic information and to share them with your users. It 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. During this session we will look at the different user roles and custom site setup, as well as how we can embed different maps and apps into your websites. We will also look at feature services and leveraging ArcGIS Online for data editing and geocollaboration.

Room 111/112

Migrating to the Local Government Information Model *Karen Lizcano, ESRI*

One of the major initiatives from ESRI for more effective government is the Local Government Information Model. In this session you will learn about how you can use the Local Government Information Model to build your own local government geodatabase. We will talk about why this model is so comprehensive and important, as well as some of the migration techniques, and the templates that are available to use with the data model. There are options for implementing this model that we will cover, as well as business partners who specialize in helping their customers migrate their data.

ESRI Technical Sessions

3:00-3:45pm

Room 210

ArcGIS as a System for Emergency/Disaster Management *Brig Bowles, ESRI*

GIS is an essential technology for all phases of emergency management. GIS aids local, state, and federal agencies with technology that supports collaboration between multiple agencies. In this session we will find out how GIS provides a foundation for comprehensive emergency management using ArcGIS. ArcGIS provides a system for emergency/disaster management that supports all facets of the mission including preparedness, mitigation, response and recovery. Esri provides templates to accomplish all of these missions and this session will cover many of the templates and how to implement them in your organization.



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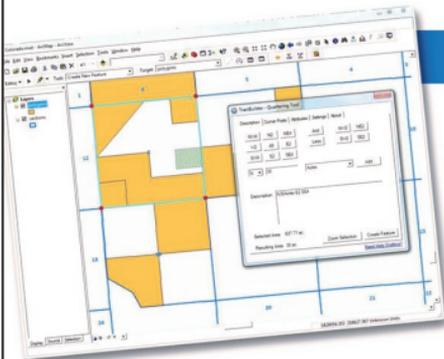
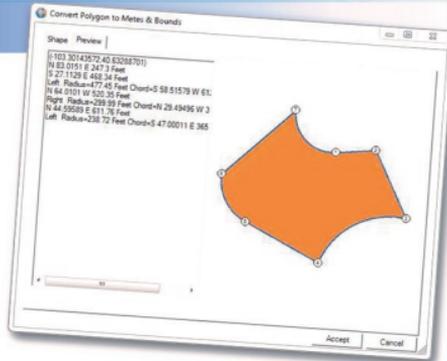


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Property Development Map at Tulsa International Airport

Janelle Williams, Tulsa Airport Authority

The Property Development map identifies sites currently used by commercial aviation industries and potential development sites as they relate to airport expansion and development. Mileage is calculated from the Port of Catoosa to Tulsa International Airport to determine which tracts will be beneficial to lease by potential tenants.

Oklahoma Broadband Initiative-Using GIS to Identify Broadband Availability and Assist in Planning and Outreach for Expansion

Ying Zhang, Marguerite Keese, and May Yuan, Center of Spatial Analysis, University of Oklahoma; Oklahoma Office of State Finance; OneNet; Oklahoma Office of Geographic Information; Oklahoma Department of Transportation; Sanborn Map Company

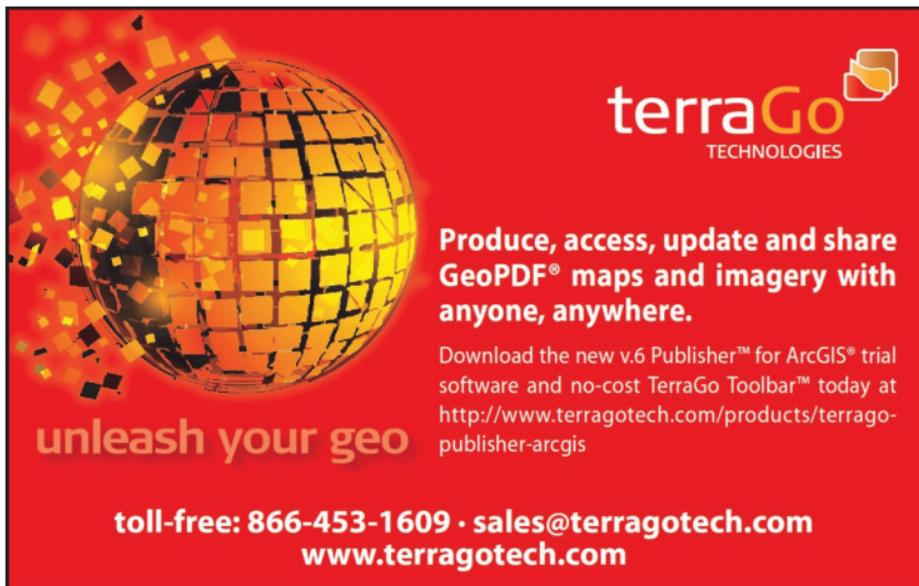
The Oklahoma Broadband Initiative is dedicated to expanding the availability of broadband high speed internet services to citizens, community anchor institutions and businesses across the state. The broadband initiative consists of three key projects: mapping, Oklahoma Community Anchor Network (OCAN) project, and outreach. GIS technology is used to map broadband coverage based on data from internet service providers and to spatially validate the service coverage based on survey data collected throughout the state. The goals are to identify served, unserved and underserved areas through mapping, strengthen broadband accessibility in communities across the state, and improve public understanding of broadband utilities through outreach. The three goals synergistically identify challenges and opportunities to further the expansion of broadband benefits on education, public safety, healthcare, and economic development throughout the state.

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Partners in Safety: Leveraging GIS for Emergency Response with Public Private Partnerships

Jennifer McCanne and Eric Williams, Access Midstream Partners

Access Midstream Partners started an outreach project to provide better data on our systems, and provide some GIS resources, to local fire departments. The focus has been to provide support to local volunteer fire departments due to their funding resources and manpower. The pilot project is with the Bridgecreek Fire Department. We have provided help with storm shelter locations, assessing GIS data needs, and providing a web application through ArcGIS online for collaboration. We are working towards creating a web application that will meet the needs of fire departments when responding to an emergency – what is the emergency, where is it, how do I get there, where is the water, and are there any obstacles.



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Cherokee Nation GeoData

Eliz. Montgomery-Anderson, Cherokee Nation GeoData

Cherokee Nation is a tribal government with a number of data needs. Cherokee Nation GeoData not only makes display maps, but also helps manage cadastral data, demographic information, and cultural resources. GeoData staff are involved in inter-departmental and inter-agency projects revolving around historic preservation, food policy, emergency management, natural resource management, and health. Our poster presents snippets of a few projects CN has been involved in this year.

Oklahoma Highway Patrol Field Troop F

Corey Gillum, The Chickasaw Nation

The Chickasaw Nation's Department of GeoSpatial Information (GSI) is committed to assisting and enhancing every element of emergency management services that operate within the Chickasaw Nation. Detailed maps of the service area in South Central Oklahoma are vital tools for the Chickasaw Nation's Lighthouse Police (LPD), the Chickasaw Nation Search and Rescue team and Bureau of Indian Affairs (BIA) firefighters. All offices that fall under Chickasaw Nation Emergency Management Services (EMS), as well as Federal Emergency Management Agency (FEMA) and local county fire and police departments, benefit from maps and data provided by the GSI department. Hard-copy maps and map books of cross-deputized police and sheriff jurisdictions, zoning districts and floodplains are a few of the key products the GSI produces for these offices.

A recent endeavor was a map for Oklahoma Highway Patrol. The

Poster Presentations

actual map size of 48" x 60" features all Oklahoma counties and includes all Oklahoma highways, Troop Headquarters and an inset map of all Field Troop jurisdictions providing a great visual for locating Troop boundaries. The map also includes contact information for all Troops in Oklahoma, as well as, Special Emphasis Troops throughout the state. The map was requested by OHP Major Berry Ross and is utilized at OHP Headquarters in Oklahoma City, OK. Providing quality detail maps to any emergency management entity contributes to the safety and well-being of not only Chickasaw citizens, but all citizens living within the Chickasaw Nation.



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Health Centers in Tulsa County:

Kiran Duggirala, Tulsa City-County Health Department

Health centers play an important role in delivering health services to medically underserved population. Mapping the locations of health providers, free clinics, Federally Qualified Health Centers (FQHC) and HRSA identified Medically Underserved Areas (MUA) provide a visual picture of how these locations are spread throughout the County. This information helps in planning and site analysis while identifying sites for new clinics in the target communities.

The Spillover Effect of Oklahoma State Park Lodges: A Geographical Market Perspective

Grace Chang, Lowell Caneday, & Hungju Chien, Oklahoma State University

The hospitality properties of state lodges are an important economic drive for Oklahoma local communities. To promote such economic drive, the state lodges often need to precisely implement effective marketing strategies. The prerequisite among those marketing efforts is to determine the actual markets from which guests are drawn to the lodges. The subjects of this research included three properties: Sequoyah State Park Lodge, Lakeview Lodge at Beavers Bend State Park, and Lake Murray State Park Lodge. The research staff reviewed reservation data and recent guest history for each property. The sample data yielded more than 2,000 guests per lodge. From the reservation and recent guest history, a pattern of points of guest origins by zip codes for each property was developed based on the Census 2010 data file using the Jenks Optimization methods. The results suggested the primary, secondary, and, if applicable, the tertiary market for each property.

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Although jurisdictional boundaries are often used to geographically divide many governmental policies and responsibilities, the state lodge markets presented a spillover effect by bringing out-of-state guests from mainly Texas, Kansas, Missouri, and Louisiana beyond the jurisdictional boundaries of Oklahoma, attracting 'new money' into Oklahoma communities. The market extent of the out-of-state locations cannot be overlooked. In addition to the in-state promotion as conducted, strategically targeting at the identified locations in other states can effectively promote state lodges and Oklahoma local economy.

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Preparing for Disaster: A GIS Perspective

Jacob Cantrell, Muscogee (Creek) Nation Geospatial Department

With time being a limited resource, preparedness is vital to a successful response to an emergency situation. The Muscogee (Creek) Nation Emergency Management oversees these efforts in the 11 counties that lie within our jurisdiction. Emergency situations *can* happen anywhere, but analyzing past disaster data can give insight into probable high risk locations. Using several different emergency situations (i.e. winds, tornadoes, etc.) potential problem areas can be highlighted within our boundaries. Preventive measures such as additional trainings for local populations, emergency manuals for area MCN facilities, or even pre-planned locations for a command center can be derived from such analysis.

Love County 1899

Dustin Holt, Oklahoma State University

This map of Love County Oklahoma is an off shoot of my senior project on land cover change while attending East Central University in Ada Oklahoma. It is currently on display at the Love County Pioneer Museum in Marietta Oklahoma. It was constructed by taking individual Government Land Office township surveys (6 x 6 miles) and combining them together to depict the entire county. The process in creating a raster mosaic for Love County starts with the original surveys that can be obtained the GLO website. The surveys were then cropped, and then imported into Arcmap as a TIFF where they were georeferenced. This project required 21 individual townships to complete. The purpose of the project was to demonstrate the enormous amount of information and data that historical cartography can offer. Through the use of modern software and technologies historical cartography can be transformed

Poster Presentations

from an aged document into a contemporary tool. This tool can be used by researchers from all disciplines to help find ways of bridging the gap between the current historical record and the past.

The map has been displayed at 24,000 scale, which is the same as the standard USGS 7.5 min Quad map and provides a good standard scale for the historical data to be displayed in. Because this map is at such a high resolution every detail drawn by the surveyor is visible. The resolution combined with the mosaic effect can reveal patterns and trends never before seen as a whole. A short list of the many areas of potential study would include cultural and historical geography, geology, hydrology, genealogy, transportation, agriculture, settlement patterns and many more. Also when you add in the fact that all surveys have accompanying field notes that describe the earth surface in detail the amount of data is very extensive. —As a side note the same map in 1871 is on the other side.



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Assessment of CI-FLOW and remote sensing-derived flood depths during Hurricane Irene

Nicole Grams, Dr. May Yuan, Dr. Jonathan Gourley, Dr. Yang Hong, Dr. Kendra Dresback, Center for Spatial Analysis, University of Oklahoma, National Severe Storms Laboratory, Norman, OK, School of Civil Engineering and Environmental Sciences, University of Oklahoma

The Coastal and Inland Flooding Observation and Warning (CI-FLOW) project is an innovative coupled modeling system that predicts the combined effects of waves, tides, river flow and storm surge in order to provide routine total water level forecasts for tidally-influenced watersheds. Current evaluations of the modeling system are restricted by the number of land-falling storms in the test basins as well as the number of water-level observations against which model output can be compared. Furthermore, even with available observations from gauges or sensors, validation efforts are only relevant at point locations without considerations of spatial variability over an entire model basin. Such spatial variability is most effectively captured by remotely sensed imagery if available. The premise of this research is that improved remote sensing measurement of water depth can lead to better validation of the CI-FLOW modeling system, and hence, better address issues about spatial and temporal uncertainty, advance understanding of CI-FLOW intricacies, and continue to establish the basis for the application of CI-FLOW in other watersheds.

In August 2011, Hurricane Irene offered the opportunity to investigate CI-FLOW performance in the Tar-Pamlico and Neuse River test basins of coastal North Carolina in real-time. This study utilizes the best available satellite data collected before, during and after Hurricane Irene in conjunction with DEM datasets to derive flood extent and height at various times during the storm. Water

Poster Presentations

level observations are used as ground truth measurements to compare with derived flood heights and CI-FLOW estimates. The ISODATA classification algorithm was used to separate the remotely sensed pixels into inundated areas, and spatial analysis determines the flood depth by subtracting underlying DEM data from flood heights. Preliminary findings indicate that the derived flood heights are adequately representative of ground-truth observations, which demonstrates potential for improved flood detection in the absence of real-time measurements.

The graphic features a blue background with a grid of squares. On the right, a stylized green and yellow globe is topped with various infrastructure icons: a crane, a city skyline, a wind turbine, a power tower, and solar panels. Three small green and yellow spheres are scattered around the globe. The SAIC logo is in the top left, and the company's tagline and contact information are in the bottom left.

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GPR Survey of the Burney Institute

Adam Drannon, The Chickasaw Nation

A Ground Penetrating Radar Survey was conducted to find anomalies consistent with the size and shape of unmarked graves. The piece of land where the survey was conducted is known as the Burney Institute; a Chickasaw Indian school and orphanage that opened in 1859 and was used until the public school system began in 1906. Over the years, many people were buried in a cemetery at the back of the property. Unfortunately, grave markers have been destroyed or moved making it unclear where the extents of the cemetery are located. Out of respect for our ancestors and to help aid in the preservation effort, we are attempting to locate the cemetery boundaries and grave locations using ArcGIS and GPR surveys; with the purpose being to locate, collect and preserve these points of interest.

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

Bruce Hoagland, Dan Hough, Todd Fagin, and Kayti Ewing, Oklahoma Biological Survey and Department of Geography & Environmental Sustainability, University of Oklahoma

The Oklahoma Geographic Information Council identified the need for a contemporary land cover map for Oklahoma. Funding has been acquired to begin the mapping project. The Oklahoma Biological Survey is collecting ground-truth data for 30 eastern Oklahoma counties. Methodology is being coordinated with personnel at the Texas Parks and Wildlife Department who are conducting a similar project in Texas. We will give a progress report of sites visited and habitats identified so far.

Poster Presentations

Determining Spatial Locations for Properties on the OLI

Andrew Potter, Tom Cox, Helen Agnew and Michael Larson, Oklahoma State University

With passage of the National Historic Preservation Act of 1966, each state established a State Historic Preservation Office to administer the federal preservation programs within its state, including development and maintenance of an archaeological and architectural/historic resources survey and inventory. Oklahoma Landmarks Inventory (OLI) is the Oklahoma Historical Society, State Historic Preservation Office's (SHPO) compilation of information about buildings, sites, districts, structures, objects, and landscapes under the federal preservation programs.

The OLI includes thousands of entries and is continuously expanded and updated. Not only does the SHPO generate information for the OLI, but the SHPO also receives material from other government agencies, nonprofit organizations, preservation professionals, and the general public for inclusion in the collection. The OLI houses data for properties listed in or eligible for the National Register of Historic Places, listed in the State Register of Historic Places,



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determined ineligible for either register, and unevaluated properties. The OLI is maintained in a paper file organized on a geographical basis and in a searchable computerized database. Prior to 2009 most properties listed in the OLI did not include spatial location information. As a part of a continuing program, OSU Cartography Services and the Department of Geography has been asked to locate more than 45,000 properties and obtain spatial location information with GPS equipment and when possible, collect digital imagery as well.

AAPG – OSU Geoscience GIS Consortium

Mary Niles, April Chipman and Michael Larson, Oklahoma State University

The AAPG - OSU Geoscience GIS Consortium projects are funded via the Boone Pickens Digital Geology Fund. Projects are considered for funding if they have a geology, geography, energy or economic focus, need cartographic work, or produce a GIS-based database, report or study end product. The Consortium was established in 2008 with pledged gifts from T. Boone Pickens totaling 9.4 million which provide \$240,000 per year for 10 years and additional funding thereafter.

The American Association of Petroleum Geologists Foundation and Oklahoma State University Geoscience and Geographic Information Systems (GIS) Consortium exists to create, promote and provide access to digital peer-reviewed GIS products carried out through OSU's Boone Pickens School of Geology, the Geography Department and the AAPG GIS Publications Committee. The products have direct applications to the search for and development of petroleum and energy-related mineral resources, and/or related to environmental geology and related economic issues.

Poster Presentations

Map Automation Using Data Driven Page Tools

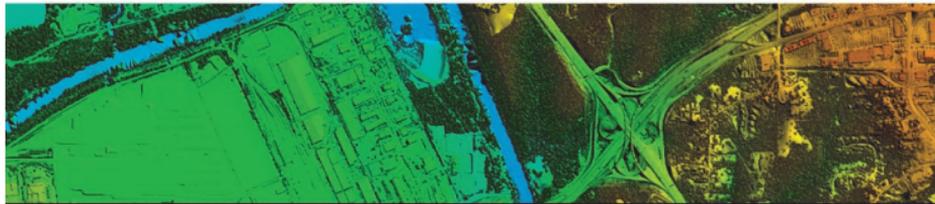
Brian S Martin, Enogex

This poster explains in detail the steps needed to setup data driven pages. Data driven pages are a new feature added in ArcGIS 10.0 that allow the automation of map production using a single page layout. The poster highlights three different examples of a map series created with the data driven page tool available in ArcGIS. One example shows a map series that displays statistics in a report based format that are stored in the index layers attribute table. The second example shows a map created with the Strip Map Index Feature tool. The third example shows a map series based on a fixed scale that makes use of the dynamic data frame properties to show an aerial photo close up of a facility. The poster explains the different options utilized in producing a map series both in the selection of the index layer and the setup of the extent indicator



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used as a locator map. The two tools that can be used to generate new index grids are explained as are the four tools that can extend the use of existing grid based index features. The poster also provides additional best practice tips for utilizing the data driven page enabled definition query option.

Initial Decision Making for Pipeline Routing

Bryn Evans and Matt Wilks, Willbros Engineers

Often a new pipeline route begins with an idea. How are we going to get a product from point A to point B.? Part of the task of the GIS group is to examine the area for obstacles which will effect overall project costs, as well as, optimize the route for increased permitting ease. We also prepare files to support the engineering estimates, and provide iPad applications for the engineers to take with them to the field during recon trips, both driving and flying in a helicopter. Once a route is selected we prepare property sketches for the ROW agents to share with the land owners. Our poster will show a pipeline route, how to avoid potential bedrock, and an example of a property sketch developed using data driven pages. The pipeline depicted in this poster is fictitious. Any similarity to any pipeline living or dead is merely coincidental.



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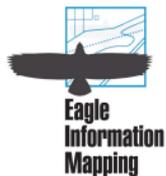


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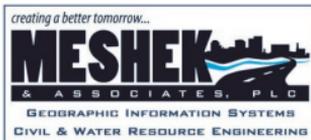
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Suredex Corporation is one of the largest geospatial data and services providers in North America. For over a half-century we have served federal, state, and local



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TractBuilder is a GIS software and services company, based in the Houston Texas area.



TractBuilder is best known for its unique tools for mapping features based on legal descriptions in the ArcGIS for desktop (ArcMap) environment. With the TractBuilder Tools for ArcGIS users can efficiently map polygons and lines according to quartering/aliquot and metes & bounds descriptions. TractBuilder also offers GIS drafting services, custom programming, and the Blink Server web portal.



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As the Nation's largest water, earth, and biological science and civilian mapping agency, the U.S. Geological



Survey (USGS) collects, monitors, analyzes, and provides scientific understanding about natural resource conditions, issues, and problems. The diversity of our scientific expertise enables us to carry out large-scale, multi-disciplinary investigations and provide impartial scientific information to resource managers, planners, and other customers. The National Geospatial Program (NGP) component provides leadership for USGS geospatial coordination, production and service activities. The NGP, using a variety of mechanisms, engages partners, stakeholders and users at Federal, State, Tribal, regional, and local levels of government to develop standards, produce, acquire, and make available high quality, consistent geospatial data for the nation.



United Geo Technologies, LLC is a professional services organization providing all disciplines of softcopy photogrammetric mapping, digital



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- *Topographic Mapping*
- *Planimetric Feature Extraction*
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GIS CERTIFICATION INSTITUTE

2012 Oklahoma SCAUG GISP Credit Checklist

Workshops (4 & 8 hour)

Description	Classification	Credit	Earned
GPS Data Acquisition & Processing (8 hrs)	EDU	0.2	_____
Lost in LiDAR (4 hrs)	EDU	0.1	_____
How To Talk GIS to Your Legislators (4 hrs)	EDU	0.1	_____
GIS Data Exploration (4 hrs)	EDU	0.1	_____
Arcmobile Applications Workshop (4hrs)	EDU	0.1	_____
(Workshop Certificate required for documentation credit)			

SCAUG CONFERENCE

Description	Classification	Credit	Earned
Attendee	EDU	0.1	_____
Presenter	CON	1.0	_____
Poster Presenter	CON	1.0	_____
Poster Award Winner	CON	2.0	_____
OKSCAUG Scholarship Winner	CON	2.0	_____

2 Day Training (16 hour)

Description	Classification	Credit	Earned
Managing Imagery Using ArcGIS 10.0	EDU	0.4	_____
ArcGIS 10 Desktop III : GIS Workflows & Analysis	EDU	0.4	_____
ArcGIS Basics II	EDU	0.4	_____
(Training Certificate required for documentation credit)			

Total GISP Points Earned

Congratulations!
OKSCAUG Chesapeake 2012
Scholarship Recipients

Zachary Davis - Undergraduate
East Central University

Janie Goddard – Undergraduate
Northeastern State University

Nichole Grams - Graduate
University of Oklahoma

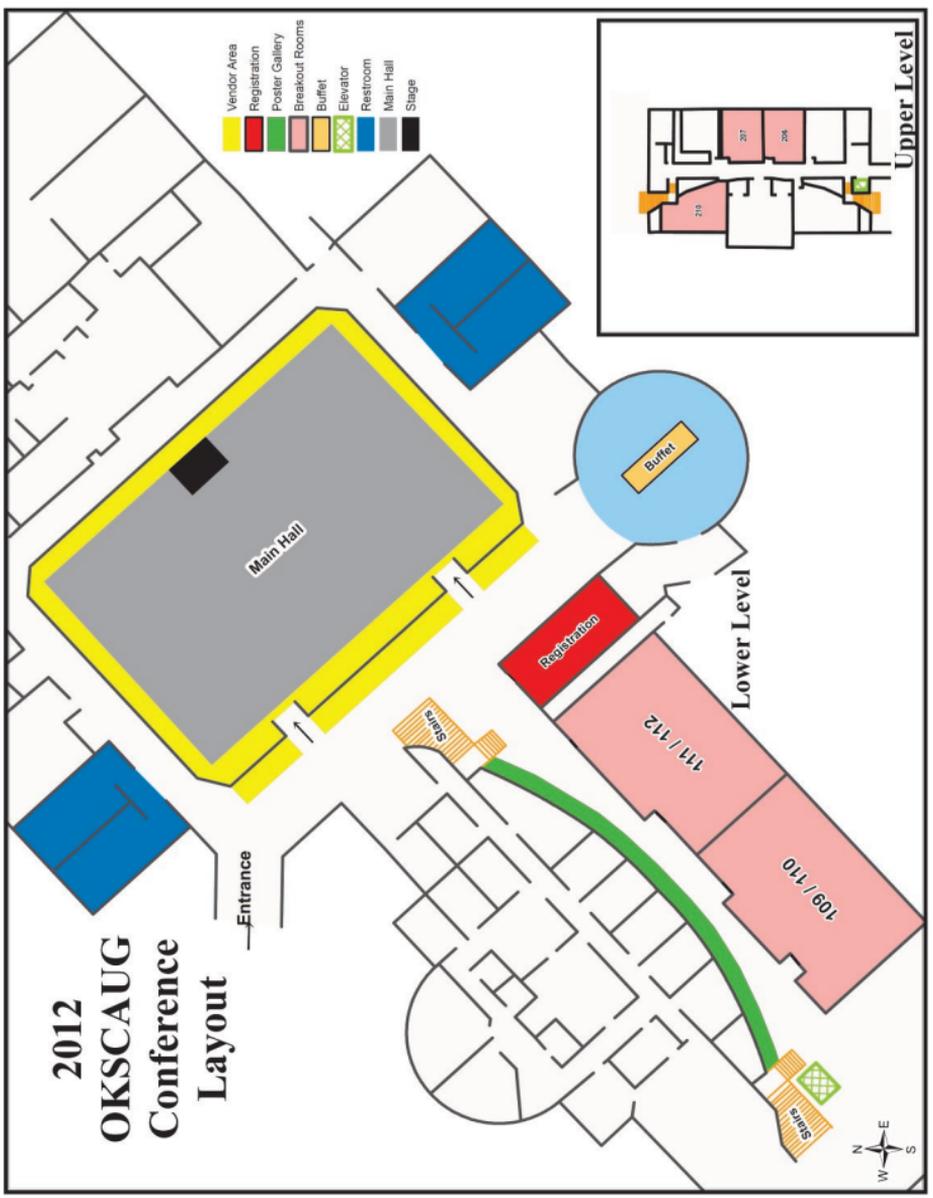
Adhikari Pradeep - Graduate
University of Oklahoma

Jason Redden – Graduate,
University of Oklahoma

Each Recipient Received a \$600 OKSCAUG Scholarship Funded by
Chesapeake Energy.

2012 OKSCAUG Conference Layout

- Vendor Area
- Registration
- Poster Gallery
- Breakout Rooms
- Buffet
- Elevator
- Restroom
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