Presentation Abstracts
(listed alphabetically by presentation title)

3D Visualization of Civil War Fortifications using GIS, Austin Williams & Dr. L. Michael Trapasso, Western Kentucky University

Conventionally, maps are used to recreate scenes in history, but are limited to 2D representations. Visualization in a 3D GIS can be used to recreate historical events, thus furthering an understanding of its geography in location, place, human/environment interaction and movement. This presentation will discuss 3D modeling in a GIS of civil war fortifications in Bowling Green, Ky. The focus will be on TIN manipulations and methodologies using primarily ArcGIS’s TIN toolset and ‘Create Random Points’ tool along with the guidance from an American Civil War expert, georeferenced civil war maps, historical documents, and GPS data.

A New Way to View and Search for Old Maps, David Nail, U.S. Geological Survey

For more than 125 years, the U.S. Geological Survey topographic maps have accurately portrayed the complex geography of our Nation. In 2014, two of the nation’s most authoritative mapping sources, the USGS and Esri, have partnered to put the rich tapestry of U.S. Historical Maps into the hands of everyone. The USGS Historical Topographic Map Explorer web application, to be accessed on all digital devices, allows users to access the historical maps (dating from 1884 to 2006) as high resolution georeferenced images for use in mapping applications and features a timeline to easily select the desired maps.

Achieving Your 15 Minute Map with Custom Map Templates, Amanda Witbeck & Michelle Ellington, University of Kentucky Facilities Information Services

Employing map development templates to streamline map production is an integral part in creating the coveted 15 minute map. In this session, Amanda will demonstrate how UK Facilities Information Services implemented a robust template library to support one-piece-flow university-wide map development. Attendees will learn how to build a custom map template library which includes style files, layer files, thumbnails, naming conventions, long term maintenance planning, as well as bonus tips and tricks.
Ah, Push It! - Bridging the Data Synchronization Gap Between Oracle's CCB Application and GIS, *Christina Gnadinger*, *Louisville Water Company*

In 2013 Louisville Water Company began an implementation project for Oracle’s Customer Care and Billing system. Within this project came the task of trying to better integrate and synchronize GIS with the new system. Using Oracle’s SOA architecture and ArcGIS for Server, Louisville Water Company has created a process to not only pass information to and from GIS / CCB but also an efficient means to keep information in sync as it changes in both the systems. This presentation will discuss the current processes, the hurdles, and the future designs.

**ArcGIS Online Steps for Success, *Eric Rodenberg*, Esri**

This session will explore the latest capabilities of ArcGIS Online, and best practices for working with an ArcGIS Online Subscription. Attendees will learn how to effectively publish, manage and share content, support mobile workflows on smartphones and tablets, geoenrich data, and build useful information products and applications with their authoritative GIS data.

**ArcGIS Pro: An Overview, *Jennifer Kuntz*, Esri**

Learn about ArcGIS Pro, a new application that will be added to ArcGIS for Desktop at version 10.3. ArcGIS Pro is a 64-bit, multi-threaded application with a modern user experience that runs on the Windows platform. Get an overview of the features of the ArcGIS Pro user interface including the context-sensitive ribbon and ability to use multiple maps and layouts in both 2D and 3D. See examples of visualization and analysis in this new environment. Learn where ArcGIS Pro fits with your existing GIS resources and workflows and what new functionality it offers to ArcGIS for Desktop.


Esri’s new ArcGIS Web AppBuilder is a HTML5/JavaScript-based application that allows you to create your own intuitive, fast and beautiful web mapping apps, in 2-D or 3-D, without writing a single line of code. Learn how you can interactively configure workflow-driven GIS apps that run seamlessly across all devices, and create both ready-to-use apps and ArcGIS Web App templates for ArcGIS Online or ArcGIS Portal. Learn the possibilities for developers to create custom widgets and themes for Web AppBuilder through the extensibility framework.

**BIM Floor Plan Translation at Ohio State University, *David Alvarez*, Woolpert; *Larisa Kruger*, Ohio State University**

Widely-dispersed assets such as buildings, equipment, roads and bridges present local governments as well as big organizations (universities) with a number of asset management
challenges. Recently financial sustainability and competitiveness have put more pressures on owner/managers to minimize asset total cost of ownership and streamline their asset management operations. This has brought a growing interest in the integration of BIM and GIS. However, most of the research implementations is focused on importing BIM data in GIS applications and vice versa. The key is the integration of BIM and GIS using the strong parts of the GIS technology in BIM, and of course the strong parts from BIM technology in GIS.

**Characterization of Gang and Non-gang Spatial Behavior for Violent Crimes, Timothy Hare, Morehead State University**

We use spatial statistical techniques to explore the separation and overlap between several categories of gang and non-gang offenders in Albuquerque, New Mexico from 1996 through 2006. We use crime and GANGNET data to identify gang members and the locations of offender residences and crimes. Using these data we evaluate the distributions of gang-related versus non-gang-related violent crime as well as compare particular gangs. Previous studies suggest that gang membership facilitates violent criminality, which is often territorially manifested. Results indicate considerable overlap in residences and crime locations between gang and non-gang offenders, as well as between different gangs.

**CMRS NG9-1-1 GIS Plan: Update, Joe Barrows, CMRS Board; Rachel Bello, RCC Consultants**

In 2013, the CMRS Board unveiled the plans to establish a NG9-1-1 GIS working group to provide direction, advice and guidance for the Commonwealth as they move towards NG9-1-1. The working group will be presenting at KAMP and offering up for discussion their draft recommendations to the CMRS Board.

**Creating a 100% Digital Comprehensive Plan, Christy Powell, Joe Busemeyer & James Fausz, PDS/LinkGIS**

In 2013, Planning staff members at PDS (then known as NKAPC) approached GIS staff members about creating a 100% digital comprehensive plan for this update cycle. Using WordPress as the framework for the site and ArcGIS online for hosting the many maps needed, the GIS department created a website will serve as the official comprehensive plan after adoption. This presentation will show how to customize WordPress and ArcGIS online to create a custom website for GIS projects that engage the public and integrate text and maps into a cohesive digital document.
Development of the KY Coal Resource Information Web Application,  

Doug Curl, Kentucky Geological Survey

The purpose of this web application is to show the magnitude and geographic distribution of Kentucky coal resources with potential for future development, by providing users access to the data and maps pertaining to 16 of Kentucky’s most productive coal beds. The focus of this talk will be on the development of the Kentucky coal resource data which are hosted on the KGS ArcGIS Server, and how this JavaScript-based application was developed utilizing the ArcGIS API for JavaScript (for map capability and querying), the Highcharts JavaScript API with jQuery, and the Dojo Toolkit (for layout, data tables, and page functionality).

GIS Benefits for the Small Farmer, Cindy Rice, Dr. Buddhi Gyawali & Ken Bates, Kentucky State University

Many farmers are visual and GIS takes past information and projects into the future their plans and ideas for many different scenarios. Weather data, land information, historical and political information, land ownership are utilized by farmers to manage and monitor their resources. Short and long term goals and efficient use of his resources is one of the benefits of GIS as a farmer visualizes the changes to his farm and operations. Many farmers can pool resources on a countywide basis to economize the costs of GIS usage and aid each other in developing these resources through public and private organizations.

Got Flow?, Josh Cammack, City of Bardstown; Todd Williams, Mapsync; Marlin Howard, Bardstown Fire Chief

Using GIS for hydrant inspection, flow testing, public works, and engineering planning. How Bardstown has teamed with Mapsync and utilized with the GeoSync Go platform to perform hydrant inspections and annual flow test collection. Which is then sync’d wirelessly with our server to keep current annual data in the map project for public works to see make/model/flow numbers as well as Engineering planning for watching flow numbers to compare against theoretical modeling for verification and planning. The Fire Dept. utilizes the numbers in their Mobile Data Units to quickly see hydrant locations which are symbolized based on flow numbers.
Hot Topics Panel: Enterprise-wide Solutions and Best Practices in the Kentucky’s Esri Site Postsecondary License Program, Demetrio P. Zourarakis, PhD, Kentucky Division of Geographic Information; Michelle Ellington, University of Kentucky; French “Tyler” Huffman, Eastern Kentucky University; Kevin Cary, Western Kentucky University; Michael Busby, Murray State University; Timothy Hare, Morehead State University; Bob Forbes, University of Louisville

The fifteen post-secondary institutions currently participating in the Esri Site License Program for Postsecondary Education in Kentucky provide a “24/7/365” laboratory for constantly evolving best practices in licensing, deployment and integration of GIS into curricula, career pathways as part of Kentucky’s postsecondary educational enterprise. This special panel session will provide examples of how participating institutions go about implementing this long-standing and successful program. The group of invited panelists includes geospatial technology managers, educators and administrators, some of whom have played multiple roles for a significant number of years.

Hot Topics Panel: Kentucky K-12 GeoMentoring; State of the Practice, Demetrio P. Zourarakis, PhD, Kentucky Division of Geographic Information; Carol Hanley, University of Kentucky; Laura Moore, Jefferson County Public Schools; Scott Dobler, Western Kentucky University; Charlie Fitzpatrick, Esri; Jeff Sebulsky, Kentucky STLP

By all estimates, GeoMentoring in Kentucky has been going on for a long time, even before the activity had been given a name. A panel with invited educators and program coordinators will explore not only the roots of the practice in the Commonwealth, but its current status and future in the light of T3G and the ConnectEd and Geo-STEM initiatives. The potential contributions from geospatial sciences and technologies to curriculum development and content as guided by the current state education standards will also be explored.

Implementation of Mobile Technology for Utility Workflows, Andrew Oakley, Carrollton Utilities

The focus of this presentation is on leveraging GIS data to enhance the work of each department of a small utility company. Included will be background on the development of the GIS at Carrollton Utilities, a look at the current workflows that are being enhanced by mobile technologies and a discussion of the vision for the future. This presentation deals with the types of work processes and data issues that are typical for a small to medium-sized utility and will be of interest for both the beginner and the advanced user.
Improving the Map of Natural Gas Distribution Utilities in Kentucky,

*Ruth Rowles, Public Service Commission*

The Public Service Commission (PSC) has just completed a project to improve the statewide data for the territory currently served by approximately 70 natural gas distribution utilities in Kentucky. This is part of the PSC’s ongoing inspection efforts to ensure pipeline systems comply with state and federal safety regulations. Each utility filed maps of the territory in which it serves or could serve by ordinary extensions in the usual course of business. Issues that will be discussed include: (1) determination of service territory, (2) appropriate use of service territory GIS data, and (3) overlapping polygons and their symbolization.

Integrating Areal Interpolation and Dasymetric Refinement to Resolve Temporal Incompatibilities in Zoning Systems, *Sarah Ehresman & Matt Ruther, University of Louisville*

This research explores whether currently adopted methods to resolve zonal incompatibilities over time can be improved through dasymetric refinement prior to areal interpolation. Population and housing data from the 2000 Census is estimated within 2010 tract boundaries for all Census tracts in Kentucky, using three different areal interpolation techniques: Areal weighting; target density weighting; and the Expectation-Maximization algorithm. The 2000 source zones (tracts) are then dasymetrically refined using land cover data from NLCD 2001, each areal interpolation method is repeated using these refined source zones, and the performance accuracies of the unrefined and dasymetrically refined interpolations are compared.

Kentucky Story Maps, *Kent Anness, Kentucky Division of Geographic Information*

This presentation will provide an overview of Story Map applications that have been created for the Commonwealth of Kentucky. The applications are based on an ArcGIS.com template and have been customized in terms of look and feel. A brief overview of the customization work will be provided as well.
KentuckyView: K-16 education, remote sensing research, and public outreach, Haluk Cetin, Murray State University; Demetrio Zourarakis, Kentucky Division of Geographic Information; Christine Emrich, Morehead State University; Sung-ho Hong, Murray State University

This panel discussion focuses on KentuckyView projects and collaborations. KentuckyView has been a full member of the AmericaView Consortium as it actively pursues AmericaView's goals in the Commonwealth of Kentucky. The primary focus of KentuckyView is on the use of images collected from spaceborne and airborne sensors, as well as other geospatial technologies, to support K-16 education, applied research, and public outreach. KentuckyView presently has 12 Members.

KYTC's experience with ArcGIS Online for Organizations and Collector App, Andrew McKinney, Kentucky Transportation Cabinet

KYTC has setup an ArcGIS Online Organization account to display maps, build forms and apps, and collect data in the field. This presentation will discuss our initial findings with ArcGIS Online while touching on a few production projects that include field data collection using the Collector for ArcGIS application.

Leveraging LiDAR for the Field: NRCS-KY Tools Overview, David Chan & Steve Crabtree, USDA-Natural Resources Conservation Service

LiDAR data have become increasingly ubiquitous throughout the geospatial industry. However, utilizing these data for practical use typically requires a user to have an advanced GIS skillset. For individuals who lack these skills, LiDAR data are often unusable for typical day-to-day tasks. In an effort to help NRCS field office employees leverage LiDAR data to streamline their field operations, we have developed several LiDAR derivatives and custom Python-based tools that automate complex geoprocessing tasks using LiDAR data within ArcGIS. Here, we present an overview of these tools and derivatives and their potential applications for use in the field.

LiDAR in Big Bat Cave, Breckinridge County, KY, Ken Bailey, LOJIC; Ben Shinabery, QK4

LiDAR is this year’s newest fashion in data. If you haven’t gotten it yet you will. So here is how we jumped into the LiDAR pool. QK4 provided the LiDAR, The Kentucky Karst Conservancy had a cave and there were plenty of talented volunteers. The project practically built its self. Besides being a great way to spend a day the data will have some very practical uses. The first is to improve the current cave mapping techniques. Bat surveys will also have a much better
outcome with the ability to place bats in exact locations. The final work product can be used as a tool to understand the sediment transport, measuring groundwater levels, calculate the volume of the cave and the area of the walls. The data will be more accurate data set for understanding the speleogenesis of the cave. The 3D model can also be used as an educational tool to share the underground wilderness with those that may be unable or not want to go into the underground. The best part of the project has been the service learning opportunity that this project has provided for some of the volunteers. The best outcome would be to create model to help manage other caves throughout Kentucky.

Managing GPS (GNSS) workflow with Trimble Positions & ArcPad 10.2
Using ArcGIS Desktop 10.2.2, Louis R. Hill, Jr, Boone Co. Planning Commission

The Trimble GPS Analyst software has recently evolved into the Trimble Positions Desktop software, which changes the workflow of collecting field data for GIS organizations. This session looks at the new software packages that are available (ArcGIS Desktop 10.2.2, ArcPad 10.2, Trimble Positions), and how they are currently designed to manage GPS field data collection as a single solution. This presentation will cover brief setup and installation tips, workflow challenges, and workflow best practices.

Mapping Honeysuckle Spatial Distribution by Using High-Resolution Remote Sensing Techniques - A Case Study in Middle Creek Watershed, Boone County, KY, Hongmei Wang & Spencer Taylor, Northern Kentucky University

This study explores the process of evaluating honeysuckle (an invasive plant species in Kentucky forests) distribution by using remote sensing techniques. The test field is Middle Creek Watershed, Boone County, Kentucky. A 2 meter resolution WorldView-2 satellite image was acquired on November 9th. Various vegetation indexes were extracted from the image and then used to delineate honeysuckle from overstory woody species. As a pilot program utilizing advanced geospatial analysis, this study provides important information for understanding the status of wildlife habitats and for implementing site-specific management in parks and nature preserves.

Merging Applications, Data & Time: Refreshing the KYTC Interactive Maps, Scott Dickison & Will Holmes, Kentucky Transportation Cabinet GIS Branch

The Kentucky Transportation Cabinet has updated its interactive mapping application. The result is: (1) an improved user interface, (2) a “Driver’s eye” view while virtually driving the
road, (3) freedom to choose between current and past years’ photo runs and (4) a single code base of HTML5/JavaScript supporting all template sites to simplify maintenance.

**Next Generation 9-1-1 and GIS, Tom East, PDS/LinkGIS**

What is Next Generation 9-1-1 (NextGen 9-1-1)? What can it do? Why is it needed? What is required to get there? These are some of the questions this presentation will answer, with particular emphasis on the central role GIS plays in the implementation and functioning of Next Generation 9-1-1. Included will be example scenarios of how NextGen 9-1-1 will handle emergency calls, text messaging and other data streams in order that emergency service providers can respond with up-to-date information and information never before possible.

**Providing Multi-State Situational Awareness in Disaster Situations, Doug Eades, Kentucky Division of Emergency Management; Matthew Basanta, Stantec Consulting Services Inc.**

Recent reports have highlighted the potential for earthquake activity in Western Kentucky along the New Madrid Seismic Zone. If a 7+ magnitude earthquake were to happen today, how would Kentucky and the seven other states that touch this zone coordinate a joint response effort? This session will highlight how GIS and IT initiatives were used during the recent CAPSTONE ’14 Earthquake exercise. Hear and see how the GIS/IT minions carried out the wishes of eight state Emergency Management Directors, Governors, FEMA, DOD, and private sector partners to develop a regional Common Operating Picture that depicted a county level situational awareness.

**Public Lands Data Availability, Keith Wethington & Greg Abernathy, KY Department of Fish & Wildlife Resources**

Updates are in progress to provide current Public Lands data at federal, state, local, and NGO levels. The GAP Stewardship layer published in 2003 by KDFWR was recently removed from Ky-GeoNet because it is very out of date. The Protected Areas Database (PAD) administered by USGS is the planned replacement for GAP Stewardship. Several agencies including KDFWR, KSNPC, HLCF, and KNLT are cooperating on this dataset. We will discuss current data availability, short and long term updates, and invite participation in the working group.

**Python Toolboxes in ArcGIS 10.2, Mike Callahan, National Weather Service**

Python Toolboxes are a feature that was introduced in ArcGIS 10.1, but fully realized in ArcGIS 10.2. They are a way of adding GUIs to desktop tools by using Python code. This presentation will demonstrate how to create a Python Toolbox for a simple tool, showing how to link a
script to the interface, and the options for license checking, input validation, and error message editing.

**Scrub-a-dub-dub, Cleaning Space Data with GIS as the Hub,** *Michelle Ellington, University of Kentucky*

What do 4 years, 45,000 rooms, and 18 million square feet have in common? Combined they equal the result of the largest geospatial data cleanup effort at the University of Kentucky to date. In this session, Michelle will explain how UK is using GIS as the hub for CAD floor plan standardization, Space Database error resolution, and for disseminating accurate space information campus-wide. She will also discuss some of the current obstacles with mapping our interior world and the different data development methods currently being employed.

**Sensors Rising - - Landsat 8 meets KYAPED. Data Fusion, (Sensor) Raster Products and Function Chains in ArcGIS Desktop,** *Demetrio P. Zourarakis, PhD, Kentucky Division of Geographic Information*

A pioneer example of Open Data/Open Government/Big Data development, the availability of Landsat 8 creates an opportunity for an increasing number of GIS professionals to explore “near real time” land cover and land cover change mapping in Kentucky. This presentation will showcase Landsat 8 and KYAPED data procurement, ingestion into ArcGIS - as a raster product and its manipulation for image enhancement and exploitation.

**Small Scale Maps, Models, and 3D Solutions,** *Andrew C. Kellie, Kentucky Transportation Cabinet*

This report describes 3D modeling using small scale (1:48,000) legacy mapping of subsurface geology in Muhlenberg County, Kentucky. Work investigated two questions. First, how can distributed digitizing can be used efficiently? Second, how can small scale data be utilized effectively for 3D models? To use distributed digitizing, mapping was divided into 5 mile x 5 mile panels. Panels were separately scanned, georeferenced, and digitized. Data were gridded, contoured, validated, and then combined to produce a single, composite 3D model. Using perspective projection, identifying data-absent areas, and including attribute information and metadata facilitate effective small scale data use.

**Spatial Database for Intersections,** *Eric Green & John Ripy, Kentucky Transportation Center*

The transportation cabinet has expressed interest in a maintainable intersection database for many years. With the ever increasing dependence on spatial data, a spatially-enabled
intersection database would benefit many areas of transportation. Several years ago, KTC conducted a research study on crashes at intersections. The resulting database has been used by the cabinet for safety analysis and prioritization ranking. Unfortunately, this database was created for safety analysis and has not been maintained and is now out-of-date. This research aims to create a maintainable database that the cabinet can include in their enterprise system.

**The Cartography of Kentucky's Involvement in the War of 1812, Kevin Cary, Western Kentucky University**

This presentation will discuss the methods and challenges used to create maps of Kentucky's involvement in the War of 1812. Maps were created using ArcGIS for Desktop software for black and white publication illustrating physical challenges and progression through time. Challenges include size of maps for print, representation of features in black and white, and absolute location of historic features including battles, forts and trails.

**The FGDC Address Standard in the Real World, Sara Yurman, Spatial Focus LLC**

Addresses can be the heart of an effective GIS program. Unfortunately, addresses are some of the most difficult data to collect and maintain, due to wide variations in syntax, abbreviations and punctuation. The FGDC Address Standard has been used to organize master address repositories at both the local and state levels. As the only address standard that incorporates address data quality control, it has been helpful in creating and maintaining clean, consistent address databases. This paper will review the FGDC Address Standard, its use at the state and local levels, and its place in the current national conversation about addresses.

**Trickle Up Effect: Reverse GIS Marketing, Trisha Brush, PDS/LinkGIS**

The data is accurate, clean, superb and prepared for use. Somebody grab the beater and ring the triangle...the data is ready! Come and get it! Maybe the message didn't get communicated clearly. The data is complete. The data is equipped. The data is organized. The data is arranged. Why is no one rushing to use the data we labored over to make perfect? Whoa did you feel that? Yep it's a paradigm shift! Get ready for some social media, soapbox and bragging, about GIS of course. Learn the trickle down technique to marketing your GIS. When GIS talks people listen. Recommended reading: Made to Stick: Why Some Ideas Survive and Others Die, authors Chip Heath and Dan Heath.
US Census Bureau's Progress on Geographic Support System Initiative (GSS-I), Anne Jeffers, US Census Bureau

As the United State Census Bureau looks toward the 2020 Census, the Census Bureau is actively exploring the continuous update of the MAF/TIGER system through the Geographic Support System Initiative (GSS-I). The GSS-I works through local government partners to improve address coverage, to continually update the MTDB spatial features. As part of this program, the Census Bureau is implementing improved quality assessment and measurement. One goal of the GSS-I is better quality throughout the decade, and aligns with the Census Bureau’s commitment to efficiently provide high quality geographic products to the public. This session discuss the GSS-I program and the Census Bureau's progress on the GSS-I.

Using Collector and Operations Dashboard for ArcGIS, Eric Rodenberg, Esri

Providing the ability to use smartphones and tablets to visualize, collect and update GIS data regardless of an internet connection is critical to the success of your mobile solutions. We'll demonstrate how the Collector for ArcGIS can be used by your organization to support mobile data workflows, and explore how the ArcGIS Platform supports disconnected use. Operations Dashboard for ArcGIS targets decision makers that need to monitor, track and report on daily operations. You will learn how to use this app, and how to create and share operational views that include interactive maps, charts, gauges, and other performance indicators.

Using Inexpensive Esri Tools to Leverage Your GIS Assets for All, Tom Maggard, City of Greenwood

This presentation will focus on utilizing Arc Explorer and Arc Online to grow and enhance the use of GIS for the City of Greenwood. We will discuss the implementation, use, and issues with the cities use of Arc Explorer as well as a brief overview of capabilities and limitations of the program. The initial set up as well as the use of Arc Online as a way to provide the citizens of Greenwood with information will be discussed next. Finally we will look at how the use of these programs will increase the GIS reach for the City of Greenwood.

Using LiDAR for Floodplain Mapping, Carey Johnson, Kentucky Division of Water

LiDAR has many uses. The Kentucky Division of Water (KDOV), through its Risk MAP efforts, is using LiDAR data to revise the flood hazard maps in many areas of the Commonwealth. This presentation will provide an overview of Risk MAP and highlight how using LiDAR for floodplain mapping results in more accurate and credible flood hazard identification.
Using ModelBuilder as an Aid in Determining Consequence of Failure for Sanitary and Storm Assets, *Jerry Biedenbender & Jordan Hamm, SD1*

By utilizing advanced GIS capabilities SD1 generated a consequence of failure rating for all 1600 miles of sewer lines in its service area. This was a multi-tiered approach beginning with data acquisition, attribute analysis, database development, and geoprocessing using GIS programming techniques.

Using Network Analyst to Assess Single-Subject Versus Multiple-Subject Capability of Criminal Activity, *Ben Hughes, Federal Bureau of Investigation*

FBI Louisville wanted to determine if it was possible for a single subject to facilitate transactions at ATMs and purchases for money orders based on the reported time of activity. FBI Louisville also wanted to estimate how many subjects were involved in the transactions if a single subject could not have conducted the activity alone. By using the Vehicle Routing Problem tool in Esri's Network Analyst toolbox extension, FBI Louisville was able to test several scenarios to assess the possibility that one or multiple subjects were capable of carrying out the activity.

Web GIS: Out of the Cubicle and Into the Field with a custom mobile web application, *Eric O’Neal, Louisville Water Company*

This presentation will discuss making the features of LWC’s internal Flex GIS viewer available to external users with a custom JavaScript application, focused on mobile devices. Talking points will touch on the business need, security, testing/deployment, and user interface issues encountered during development. The session will conclude with lessons learned and future planned enhancements.

What can you do with 10 billion points?, *Kayla Barowsky, GeoCue Group*

What can you do with LIDAR data? This is a question that is asked by many in the GIS industry. LIDAR data can be used in various ways, adding a different kind of element to your GIS workflow. In this presentation, we will explore some common ways to derive significant value from LIDAR data sets within the ArcGIS environment, including visualization of the point cloud, land uses, and hydrological purposes. I will use a combination of PowerPoints and the use of the ArcGIS LIDAR software extension, LP360. The overall aim is to provide GIS users, who have access to LIDAR, with ideas that can allow them to unlock hidden value in these often underused data sets.
Where's the Story?, Ryan Cooper, Georgetown-Scott County Planning Commission

In the past year, the term "story map" has increasingly become associated with Esri. While the Story Map competition at the 2014 User Conference brought in some fascinating submissions, the lack of narrative structure in many left some to wonder, "Where's the story?" In this presentation, I draw on the historical development of Georgetown, Kentucky to try and rebalance the relationship between story and map. By focusing on narrativity in the creation of platform-neutral story maps, I challenge Esri's implicit ownership to the story map and encourage greater attention to the value of narrative in map-based communication.