



# ANYTOME ANYWHERE

## Conference Presenter Abstracts and Bios

|   |   |
|---|---|
| <b>Presenter</b>  | Scott Dickison, GISP  |
| <b>Agency/Sector/Company</b>  | KYTC – GIS Support Services Branch  |
| <b>Title</b>  | Going from Silverlight To HTML5 or Hang on, We're Gonna Re-Write this Sucker. |
| <b>Topic</b>  | Building a new Photolog application   |
| <b>Abstract</b>   |   |
| <p>The Kentucky Transportation Cabinet currently employs a Silverlight GIS application for its web-based mapping needs. This application is customized through an XML configuration file. KTC is currently transitioning from Silverlight to HTML5/JavaScript and a new application is being written. As part of this re-write the capabilities of the Photolog application are being folded into the capabilities of the Silverlight template to produce a new application. This presentation will outline the major parts of the new functionality and show how some of the existing functionality made its way into the new application.</p> |   |
| <b>Speaker Bio</b>  |   |
| <p>Scott Dickison (KYTC GIS Support Branch): is the lead GIS developer for the GIS Branch of the Kentucky Transportation Cabinet. He graduated from the University of Kentucky in 1996 with a degree in Geography and has almost 18 years of experience in GIS where he's been employed in both the public and private sectors.</p>   |   |

|  |                                    |
|--|------------------------------------|
| <b>Presenter</b>   | Teri Dowdy, GISP                   |
| <b>Agency/Sector/Company</b>   | KYTC – GIS Support Services Branch |
| <b>Title</b>   | I Didn't Know You Could Do That!   |
| <b>Topic</b>   | GIS Desktop Application            |
| <b>Abstract</b>  |                                    |
| <p>New tools, functions and features are introduced with each revision of the ArcGIS software suite. Many of these tools and features are under-utilized and not because they are arcane in their application. Often users struggle to find an "easier" way to accomplish a task within ArcGIS due to lack of experience, not knowing that very useful components are at their fingertips. This presentation is an overview of some new features and some of the lesser known older tools hidden in ArcGIS.</p>                |                                    |
| <b>Speaker Bio</b>   |                                    |
| <p>Teri Dowdy, a member of the KYTC GIS Support Staff, serves as lead for SDE geodatabase administration and as GIS Training Coordinator. Prior to KYTC, Teri spent the majority of her 20+ year GIS career in private consulting and as an Adjunct Instructor at the University of Kentucky, where she taught courses on GIS applications in Water Resources Engineering. In addition to multiple undergraduate degrees, she holds a Master's degree in Hydrogeology (with a GIS emphasis) at the University of Kentucky.</p> |                                    |



# ANYTOME ANYWHERE

|   |  |
|---|--|
| <b>Presenter</b>  | Eric Green                                       |
| <b>Agency/Sector/Company</b>  | Kentucky Transportation Center                   |
| <b>Title</b>  | Development of a GIS-based Intersection Database |
| <b>Topic</b>  | Intersection Data                                |
| <p><b>Abstract</b></p> <p>The Kentucky 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.</p> <p>This research aims to create a maintainable database that the cabinet can include in their enterprise system. The database would be spatially linked to other features allowing its attributes to be updated with major roadway changes.</p> <p>The development of this database will include input from planning, traffic, safety, maintenance and information technology to ensure that the database will be sustainable. The database will include attributes based on input from the study advisory team.</p>  |  |
| <p><b>Speaker Bio</b></p> <p>Eric Green received his Bachelor's Degree in Civil Engineering in 2000 from the University of Kentucky. Mr. Green also received his Master's Degree in Civil Engineering with an emphasis in transportation at UK. He has worked for the Kentucky Transportation Center since 1998 and is currently a research engineer in the traffic and safety section. He has been a licensed professional engineer in the state of Kentucky since 2004 and a GISP since 2012. He is currently in pursuit of his PhD.</p> <p>Mr. Green is involved in several research projects each year; many of which are funded by the Kentucky Transportation Cabinet. He has written reports and has been published in many areas related to transportation safety with a focus in crash data analysis. Several reports include findings that produce guidelines or methodologies that help many cabinet personnel perform their jobs. Mr. Green has also produced several software packages that are currently used by transportation and police agencies.</p> <p>Mr. Green teaches a civil engineering course on geographic information systems and has developed and teaches workshops related to sign retro-reflectivity, asset management, crash analysis, and crash reporting. He has presented at over 50 conferences and taught over 25 workshops and courses. He has written over 60 research reports and 4 publications. He is the member of several national and regional professional organizations and part of many local groups such as the Geospatial Science and Technology Committee, Kentucky's Governor's Highway Safety Program, and Kentucky Association of Mapping Professionals. He is a member of the Transportation Research Board's GIS Committee (ABJ60) and the chair of Southern District of the Institute of Transportation Engineers' Technical Knowledge Committee.</p> <p>Mr. Green lives in Lexington, Kentucky with his wife, daughter, and son. He also started the transportation software company Pin3, LLC.</p> |  |



# ANYTOME ANYWHERE

|   |           |
|---|-----------|
| <b>Speaker 2</b>  | John Ripy |
| <b>Speaker 2 Bio</b>  |           |
| <p>John Ripy has worked in the information technology and transportation industries for over twenty years. He completed his Bachelor of Science in 2007 with a focus on Java development. Mr. Ripy developed a routing toolset that incorporates public involvement and stakeholder feedback that creates preferred corridors for highways and power transmission lines on a NSF study. He provides complex turnkey analysis for predictive geographic information systems by creating open source tools and toolboxes in ArcGIS Desktop. Working with low income communities, he has developed desired transit routing outcomes and context sensitive design for transit oriented development. The Integrated Freight Network Model (IFNM) was started by Mr. Ripy for the Multimodal Transportation and Infrastructure Consortium. The IFNM has been used to develop a coal energy movement analysis tool. He has developed a Java web application deployed on Tomcat web server for a project management system for use at the Kentucky Transportation Center and the Kentucky Transportation Cabinet.</p> |           |

|  |  |
|--|--|
| <b>Presenter</b>   | Will Holmes, Branch Manager                    |
| <b>Agency/Sector/Company</b>   | KYTC – GIS Support Services Branch             |
| <b>Title</b>   | 2014 KY TransGIS Conference: Anywhere, Anytime |
| <b>Topic</b>   | Welcome and Introduction                       |
| <b>Abstract</b>  |  |
| Welcome and Introduction to Conference   |  |
| <b>Speaker Bio</b>   |  |
| <p>Will has more than 18 years of GIS experience in the public and private sectors. He works in the Transportation Cabinet as the GIS Support Services Branch Manager in the Office of IT, where he has helped the Cabinet as its desktop GIS use has grown by more than 500% and expanded into the web and mobile environments. He advocates broad sharing of data and knowledge. He is active in the larger state GIS community through KAMP work and GIAC. He sits on the Geographic Information Advisory Council's Executive Committee, GIAC, the GIAC Planning Work Group and the Standards Committee working to build a collaborative GIS community that serves the needs of Kentucky.</p> |  |



# ANYTOME ANYWHERE

|  |   |
|--|---|
| <b>Presenter</b>   | Ian Horn                                |
| <b>Agency/Sector/Company</b>   | KYTC Division of Environmental Analysis |
| <b>Title</b>   | Developing a Custom Assessment Tool     |
| <b>Topic</b>   | Environmental Assessment                |
| <b>Abstract</b>  |   |
| <p>For most construction projects, the KYTC is required to comply with the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA). The Division of Environmental Analysis is typically consulted during the design phase of projects. At times, the environmental process may delay letting, and in worst case scenarios, halt construction until environmental issues are resolved. We have a suite of GIS tools that are extremely useful in determining and isolating specific environmental barriers, but at what level and at which phase (planning, design, and construction) are these tools useful. Currently, the American Association of State Highway and Transportation Officials (AASHTO) is promoting the use of Environmental Planning GIS Tools (EPGT) by highlighting Maryland's Green Infrastructure (GI) and the Texas Ecological Assessment Protocol (TEAP). Kentucky has the data, resources, knowledge, and personnel to create its own ecological assessment tool that converts the current data available into a comprehensive tool that expedites the environmental consultation process, thereby creating a sustainable, environmentally conscientious design without impeding a construction schedule.</p> |   |
| <b>Speaker Bio</b>   |   |
| <p>Earlham College, BA Spanish and Hispanic Studies, Minor Biology, 2002.<br/>         EKU: MS Biology (Behavioral Ecology), 2008<br/>         Employment: KYTC Division of Environmental Analysis as an Environmental Biologist since July 2013.</p>  |   |

|  |                              |
|--|------------------------------|
| <b>Presenter</b>   | John Houlihan                |
| <b>Agency/Sector/Company</b>   | KY Airport Zoning Commission |
| <b>Title</b>   | GIS for Airport Zoning       |
| <b>Topic</b>   | GIS for Airport Zoning       |
| <b>Abstract</b>  |                              |
| <p>One of the tasks set forth by the FAA requires that the KY Airport Zoning Commission, in conjunction with the KY Transportation Cabinet, is to determine objects that intersect approach zones and 3D surfaces as defined by federal mandates. John will discuss how KAZC is using GIS to develop the surfaces with the assistance of KYTC GIS Support Services and how these will be utilized in the analysis process.</p> |                              |
| <b>Speaker Bio</b>   |                              |
| <p>KAZC Administrator</p>  |                              |



# ANYTOME ANYWHERE

|   |   |
|---|---|
| <b>Presenter</b>  | Cory Jones                                      |
| <b>Agency/Sector/Company</b>  | KYTC – District 7 Design                        |
| <b>Title</b>  | Incorporation of LiDAR at the District Level    |
| <b>Topic</b>  | District 7's use of LiDAR in the Design Process |
| <b>Abstract</b>   |   |
| <p>This presentation will discuss Districts 7's use of LiDAR information to assist in the design process. It is an opportunity to discuss and collaborate on ways LiDAR can be used to save time and money in the design process. Participants will learn about situations in which LiDAR has been beneficial in District 7, as well as have the opportunity to discuss their own experiences using LiDAR. There will also be a segment focusing on the process of getting LiDAR into MicroStation DGN files.</p> |   |
| <b>Speaker Bio</b>  |   |
| <p>Cory Jones is from Berea, KY and currently lives in Lexington. He is a graduate of Western Kentucky University with a B.S. in Civil Engineering. He started working for the Cabinet as a scholarship student and became full time in May of 2012. He has been a member of District 7's design staff since December of 2013.</p>  |   |

|  |   |
|--|---|
| <b>Presenter</b>   | Stephanie Leedy   |
| <b>Agency/Sector/Company</b>   | KYTC – District 3   |
| <b>Title</b>   | The District Three Interactive Map: Uses, Development, Future |
| <b>Topic</b>   | Interactive Mapping   |
| <b>Abstract</b>  |   |
| <p>The District Three Interactive Map has been a valuable tool which provides the district staff with quick accessibility to a large quantity of data. We will explore the uses, benefits, process of development and future of the Interactive Map.</p>   |   |
| <b>Speaker Bio</b>   |   |
| <p>Stephanie Leedy is a Geoprocessing Specialist with the Department of Highways, District Three. There she works to meet the mapping needs of district staff, manages the district's website and serves as the Adopt-A-Highway coordinator. Prior to her current position, she also worked with the construction crew in the Bowling Green Section Office. She is a 2012 graduate of Western Kentucky University where she received her Bachelor's in Geology with a minor in Geographic Information Systems.</p>                       |   |
| <b>Speaker 2</b>   | Jeremy Gould  |
| <b>Speaker 2 Bio</b>   |   |
| <p>Jeremy Gould is a Systems Consultant with the KYTC – Office of Information Technology where he is the lead for ArcGIS Server administration. Prior to his current position, Jeremy administered CAD systems for Division of Highway design and also worked as a CAD/GIS tech for various consulting firms. He is a 2000 Graduate of Kentucky State University where he received his Bachelors in Mathematics. He is also a 2007 Graduate of the University of Colorado at Denver where he earned his Master's in Engineering GIS.</p> |   |



# ANYTOME ANYWHERE

|   |   |
|---|---|
| <b>Presenter</b>  | Andrew McKinney                               |
| <b>Agency/Sector/Company</b>  | KYTC – GIS Support Services Branch            |
| <b>Title</b>  | Introduction to KYTC's ArcGIS Online presence |
| <b>Topic</b>  | Cloud and Mobile GIS                          |
| <b>Abstract</b>   |   |
| <p>KYTC is currently piloting two new products from ESRI: ArcGIS Online and ESRI's Collector app for mobile devices. KYTC has had some early successes with these two products. This session will showcase what these products can do for the public and government employees.</p>  |   |
| <b>Speaker Bio</b>  |   |
| <p>Andrew McKinney is the Mobile GIS lead for the Kentucky Transportation Cabinet's Office of Information Technology in the GIS Support Services Branch (OIT-GIS). He has more than 7 years of GIS experience in the nonprofit and public sectors. Andrew is a graduate of the University of Louisville with a B.S. in Applied Geography with a concentration in GIS.</p> |   |

|   |                                 |
|---|---------------------------------|
| <b>Presenter</b>  | Tracy Nowaczyk                  |
| <b>Agency/Sector/Company</b>  | KYTC – Operations and Pavement  |
| <b>Title</b>  | Pavement Evaluation Application |
| <b>Topic</b>  | Pavement Evaluation Application |
| <b>Abstract</b>   |                                 |
| <p>The Operations and Pavement Management Branch conducts extensive pavement condition evaluations annually. Historically, these evaluations involved paper maps, paper collection forms and large amounts of data entry. The Operations and Pavement Management Branch entered into a collaborative project with the Geographic Information Systems Branch to develop an application for pavement evaluations. The application will allow for real time location referencing and mobile data collection. This advancement will streamline the pavement evaluation process, eliminate error sources and provide the Cabinet with more reliable pavement data.</p> |                                 |
| <b>Speaker Bio</b>  |                                 |
| <p>Tracy is an Engineer in the Operations and Pavement Management Branch. She feels that hot pink is underutilized in the world of symbology.</p>   |                                 |



# ANYTOME ANYWHERE

|   |   |
|---|---|
| <b>Presenter</b>  | Carl Shields, Archaeologist               |
| <b>Agency/Sector/Company</b>  | KYTC – Division of Environmental Analysis |
| <b>Title</b>  | Something LiDARish This Way Comes         |
| <b>Topic</b>  | LiDAR                                     |
| <b>Abstract</b>   |   |
| <p>An update will be given on the current status and future plans of the Kentucky Aerial Photography &amp; Elevation Data Program and how it applies to the environmental process, and more specifically, archaeology. A surprising benefit to the investment has been archaeologists' use of LiDAR and other remote sensing data. A few new LiDAR derived examples of archaeological sites and environmental settings will highlight the utility of this data.</p> |   |
| <b>Speaker Bio</b>  |   |
| <p>Carl Shields has been an archaeologist with Kentucky Transportation Cabinet almost 15 years. Besides archaeology, he helps staff with their GIS needs and assists FHWA with their Native American Consultation process. He has been dabbling with GIS for two decades.</p>   |   |

|  |                                       |
|--|---------------------------------------|
| <b>Presenter</b>   | Cliff Skees                           |
| <b>Agency/Sector/Company</b>   | Blue Grass Airport                    |
| <b>Title</b>   | BGA GIS Applications                  |
| <b>Topic</b>   | BGA's App-139 and Pavement Management |
| <b>Abstract</b>  |                                       |
| <p>Presentation will show BGA's App-139 developed by GateKeeper Systems. BGA's Operations department now uses App-139 to log FAA Part 139 inspections, the application also is used as a work order management system to dispatch maintenance and track work history on airfield assets. BGA's Engineering department has been using MicroPaver for many years to keep track of nearly eight million square foot of pavement. Mobile software has now made the pavement inspection process paperless. GIS is used to store the results and produce vital exhibits for future capital planning.</p> |                                       |
| <b>Speaker Bio</b>   |                                       |
| <p>Cliff Skees graduated from Western Kentucky University in 2007 with a degree in Geography. His first three years out of college were spent traveling the US doing GPS work for utility companies. Cliff is currently settled in as a GIS Specialist at Blue Grass Airport in Lexington, KY. As the one man GIS shop at the airport, he strives to keep up with daily map requests and works to extend quality GIS data to all of BGA's employees.</p>   |                                       |



# ANYTOME ANYWHERE

|   |  |
|---|--|
| <b>Presenter</b>  | Resa Tarter                              |
| <b>Agency/Sector/Company</b>  | KYTC – GIS Support Services Branch       |
| <b>Title</b>  | THE PMO–What Does It Have To Do With Me? |
| <b>Topic</b>  | GIS Services at KYTC                     |
| <b>Abstract</b>   |  |
| <p>The Project Management Office and the project management process is relatively new to the GIS Support Branch. In this short presentation, Resa will discuss the how this “new” way of doing business will define and change the process of implementing GIS “projects”, most specifically how it affects you, our customers.</p>   |  |
| <b>Speaker Bio</b>  |  |
| <p>Resa Tarter joined the KYTC GIS Support Branch late in 2013 to bring her project management expertise to the team. She has over 20 years of experience working in every phase of the software development cycle. She has a BSEE from Florida Atlantic University in Boca Raton where she was introduced to the telecom industry with Siemens for much of her career. The quick growth and ever changing software application interfaces moved her interest to other customer applications and grew her portfolio to include cargo tracking and logistics serving commercial and federal customers.</p> |  |

|   |   |
|---|---|
| <b>Presenter</b>  | Michael Weitlauf                              |
| <b>Agency/Sector/Company</b>  | KYTC – District 7 Design                      |
| <b>Title</b>  | GIS Training in the District                  |
| <b>Topic</b>  | Outcomes from In-House Training in District 7 |
| <b>Abstract</b>   |   |
| <p>As GIS becomes more and more a part of our daily work in the transportation cabinet, District 7 has set forth an initiative to introduce their employees to this new technology. Over the last year District 7 staff in collaboration with the GIS team from Frankfort have performed several in-house trainings for District 7 employees. The benefits from these trainings have been seen helpful from the CDE to the inspector.</p>   |   |
| <b>Speaker Bio</b>  |   |
| <p>Michael is a 1986 graduate of Murray State University with a Bachelor’s Degree in Construction Engineering Technology. Michael spent the first 13 years of his career with the Transportation Cabinet in the Geotechnical Engineering Branch where he was involved in subsurface investigations, mitigating of geotechnical issues on KYTC construction projects, landslide investigation and design and field crew supervision. The second half of his career has been spent in the District 7 Highway Design office where he has spent much of his time with the integration of GIS and CADD platforms in the daily work of the design office.</p> |   |



# ANYTOME ANYWHERE

|   |   |
|---|---|
| <b>Presenter</b>  | Demetrio Zourarakis   |
| <b>Agency/Sector/Company</b>  | Kentucky Division of Geographic Information   |
| <b>Title</b>  | GIS Goes For The Gold: KYAPED LiDAR DEM/Land Cover Data Fusion And Analysis To Assess Selected Kentucky Wetland Locations |
| <b>Topic</b>  | GIS, Remote Sensing, LiDAR, DEM, Terrain Analysis, Land Cover, Web Mapping Services                                       |
| <b>Abstract</b>   |   |
| <p>Certain land cover types in need for environmental impact assessment, preservation, or mitigation vis-à-vis potential construction activities present mapping challenges. For example, wetland ecosystems are relatively rare at a global scale in Kentucky, and valuable from the standpoint of the services these ecosystems provide. The cartographic delineation of these systems can be challenging as it contains elements of fuzzy classification, a result of the interplay of spatial and temporal requisites. The tasks of identification and mapping these features, as well as inventorying their location, type and structure may be costly, and can be aided by using GIS analytics. This presentation will exemplify how remote sensing derived data layers, i.e. the KYAPED LiDAR DEM data layer, and the latest National Land Cover Database release (2011), in synergy with ancillary vector datasets such as soils and hydrology, can provide valuable information used in mapping potential wetland locations.</p>                             |   |
| <b>Speaker Bio</b>  |   |
| <p>Demetrio P. Zourarakis serves as GIS and remote sensing analyst with the Kentucky Division of Geographic Information. Data processing, information analysis, outreach, agency consultation and coordination, and administration of the Esri postsecondary Site License Program, are among his duties. He holds GISP (GISCI) and Certified Mapping Scientist (ASPRS) – both Remote Sensing and GIS/LIS certifications, and contributes regularly to the educational and professional development of the geospatial community-of-practice of the Commonwealth. Demetrio is active in the American Society for Photogrammetry and Remote Sensing, and the Kentucky Association of Mapping Professionals, where he has served as Chair of the Education and Professional Development Committee for several years. In addition to serving in numerous committees and advisory workgroups, such as the 2014 ASPRS Conference (Louisville, KY) Organizing Committee, he presents regularly at conferences, instructs at workshops and has published several articles.</p> |   |