



Geographic Information Advisory Council

January 13, 2015

10:00 AM – 12:00 PM

Kentucky Association of Counties Conference Room
400 Englewood Drive, Frankfort, KY

Chair

James Fowler

Members

Rusty Ashcraft
Brad Bates
David Couch
John Covington
Doug Curl
Todd Ewing
Buddhi Gyawali
Shari Randle
Will Holmes
Joshua Karrick
Elisabeth King
Ann Miller
Steve Pigg
Shari Randle
Roger Recktenwald
Tom Rossman
Donna Schartung
Paul Schrader
Jason Scriber
Robert Stout
Bob Stewart
Steven Vest

Legislative Liaison

Scott Hamilton

Executive Director

Carla Hawkins

Welcome & Announcements..... Jim Fowler

Chair

KYAPED Update & OverviewKent Anness

Division of Geographic Information (DGI)

Leveraging LiDAR for the Field: NRCS-KY Tools Overview David Chan

National Resources Conservation Service (NRCS)

GeoEvent Processor: KYTC Snow & Ice Removal.....Jeremy Gould & Chris Lambert

Kentucky Transportation Cabinet (KYTC)

KAMP Update..... Lance Morris

President, Kentucky Association of Mapping Professionals (KAMP)

Notes on Metadata Kent Anness

Division of Geographic Information (DGI)

Committee Reports

- Executive Committee Carla Hawkins
- Strategic Planning Committee Chair TBD

Next Generation Information Highway (KIH) Mike Hayden

Office of the Secretary, Finance & Administration Cabinet

Division of Geographic Information ReportTom Rossman

New Business

Kentucky Geographic Information Advisory Council

669 Chamberlin Avenue Frankfort, KY 40601 (502) 564-6231

<http://technology.ky.gov/gis/Pages/GIAC.aspx>

Geographic Information Advisory Council

1-13-15 MEETING MINUTES

Kentucky Association of Counties, 400 Englewood Drive, Frankfort

MEMBERS ATTENDING:

1. Rusty Ashcraft (*Kentucky Chamber of Commerce*)
2. Robert Hackworth for David Couch (*Kentucky Department of Education*)
3. John Covington (*Department for Local Government*)
4. Doug Curl (*Kentucky Geological Survey*)
5. Todd Ewing (*Department of Military Affairs*)
6. Will Holmes (*Kentucky Transportation Cabinet*)
7. Joshua Karrick (*Kentucky Chapter American Planning Association*)
8. Ann Miller (*Kentucky League of Cities*)
9. Steve Pigg (*Energy & Environment Cabinet*)
10. Shari Randle (*Cabinet for Health & Family Services*)
11. Roger Recktenwald (*Kentucky Association of Counties*)
12. Tom Rossman (*Finance & Administration Cabinet*)
13. Donna Schartung (*Kentucky Board of Registered Geologists*)
14. Paul Schrader (*Kentucky Association of Professional Surveyors*)
15. Jason Scriber (*Kentucky Association of Counties*)
16. Lindy Casebier for Bob Stewart (*Tourism, Arts & Heritage Cabinet*)
17. Dana Jenkins for Robert Stout (*Kentucky Department of Agriculture*)

GUESTS:

William Andrews (*KGS*), Kent Anness (*DGI*), Kim Anness (*DGI*), Jeff Bradshaw (*DGI*), Brenda Brown (*FAC*), David Chan (*NRCS*), Jeremy Gould (*KYTC*), Mike Hayden (*FAC*), Chris Lambert (*KYTC*), Ryan Siemens (*KACO*), Demetrio Zourarakis (*DGI*), Roberta Young (Scribe)

I. Welcome & Announcements

- Meeting called to order at 10:05 by Tom Rossman, chairing the meeting for Jim Fowler
- Welcome to new/returning members: Steve Pigg (new designee for Energy & Environment Cabinet), Ann Miller (returning member for Kentucky League of Cities), Lindy Casebier (attending for Bob Stewart, Tourism, Arts & Heritage Cabinet), Dana Jenkins (attending for Robert Stout, Kentucky Dept. of Agriculture)
- Meeting minutes from 9/16/14 (handout) were distributed & reviewed; motion entered by Roger Recktenwald to adopt minutes, motion seconded by Donna Schartung, all members approved, minutes were adopted as written.

II. KYAPED Update (Kent Anness)

- 2015 Program Year
 - Slide presented showing coverage area, including some areas with 3” photography
 - SOW to be finalized within 3-4 weeks, so last-minute requests or funding can still be accommodated
- Status/Future Planning
 - After 2015 acquisition, LiDAR will cover 77% of state and imagery will cover 26% of state.
 - Many infrastructure plans/projects could benefit from and have a supporting interest in program:
 - ✓ \$208 million in water projects
 - ✓ \$228 million in wastewater projects
 - ✓ 9,011 acres in industrial sites
- Story Maps Developed from KYAPED Data
 - Imagery: <http://kygeonet.ky.gov/StoryMaps/KyFromAbove/>
 - Elevation: <http://kygeonet.ky.gov/StoryMaps/KyFromAboveElevation/>
 - Action Item: Roberta will send links to the maps presented.

III. Leveraging LiDAR for the Field: NRCS Tools Overview (David Chan, National Resources Conservation Service)

- NRCS has contributed \$1.5 million to Kentucky for LiDAR acquisition, which is important source of data.
- Two challenges:
 - LiDAR data is not user-friendly for users with no GIS expertise
 - DEMs are huge files for users to access and use effectively
- NRCS developed smaller, pre-built derivatives and automated geo-processing which focuses on ease of use.
 - Many derivatives are build using ArcGIS tools relying upon point & click ease-of-use and speed

- Pre-processed LiDAR derivatives provided to field offices in lieu of raw LiDAR data to supplement field practical design.
- Examples:
 - ✓ Smooth vs. Unsmooth DEMs – slightly modified data results but cleaner produce that can be used for hydrological models
 - ✓ Runoff/Curve Number Tool – utilized LiDAR DEM, land cover and SSURGO to provide tools for use in hydrological runoff model
 - ✓ Hydro-Developed Enforced DEM – manipulated LiDAR (which doesn't recognize culverts and results in incorrect drainage patterns) product
 - ✓ Slope Tool, which is made more accurate as a result of LiDAR
 - ✓ Contour Tool
 - ✓ Cross-Sections/Profile Tool
 - ✓ Concentrated Flow Tool
 - ✓ Ground Area Tool (using polygon tool in ArcGIS)
 - ✓ Ground Length Toll (using 3D Analyst in ArcGIS)

IV. **GeoEvent Processor: KYTC Snow & Ice Removal (Jeremy Gould & Chris Lambert, *Kentucky Transportation Cabinet*)**

- Challenge: federal Information Technology Services (ITS) requirements include 10-20 minute response times for reporting road impacts (construction, roadway or lane blockages, weather events, etc.), which depend upon:
 - ✓ Consolidation of data from multiple sources
 - ✓ Ability to display data simply and quickly
 - ✓ Real-time analysis for quick decision-making & adjusting responses to quickly changing needs
- ArcGIS GeoEvent Processor – receives, processes and delivers data
 - Receives data from multiple, real-time sources, feeds, and tools
 - ✓ ArcGIS Online (cloud): displays maps and dashboards for desktop and mobile users
 - ✓ Hadoop: Big Data storage and processing (open source freeware)
 - ✓ Tableau: analysis and reporting on Big Data
 - Processes data using real-time analysis of spatial and non-spatial data to calculate, geo-tag and join together
 - Sends data via multiple channels
- Benefits include cost savings and improved safety due to improved, real-time decision-making.
 - Better forecasting for removal activities, which are based on multiple pieces of data (precipitation rates, temperature, weather feeds, etc.) which directs how much salt to drop, when and where to drop it, etc.
 - Even greater efficiency will be realized when collaborating with county and city governments to communicate and share information, avoid overlapping or redundant efforts, etc.

V. **Kentucky Association of Mapping Professionals (KAMP) Report**

Handout from Lance Morris (absent) was distributed.

VI. **Notes on Metadata (Kent Anness)**

- Ongoing efforts to reconcile data and identify data stewards continue.
- Important Note: To avoid breaking services, which prevents users from connecting to enterprise databases, KyGeoNet publishers must contact DGI before publishing data with schema changes to enterprise databases.

VII. **Committee Reports**

- New Web Mapping Application Committee
 - Will Holmes entered motion to establish the GIAC Web Mapping Application Committee
 - Doug Curl seconded the motion, all members approved, and committee was established.
 - Chairperson will be identified and committee members will be selected (all are encouraged to volunteer to join the committee).
- Strategic Planning Committee
 - Roger Recktenwald will lead committee efforts to review and update Kentucky's Geospatial Strategic Plan developed in 2010.
 - Interested members of the GIS community are encouraged to volunteer; first meeting to be scheduled within a few weeks.

VIII. Division of Geographic Information (DGI) Update – Tom Rossman

- GIAC website content has been updated with meeting notes and current membership.
- Jennifer Schenkenfelder has transferred from the Cabinet for Economic Development).
- Jeff Bradshaw is a fully integrated SME for Cabinet for Economic Development as well as development efforts for other projects/agencies.

IX. New Business

- Next meeting is March 10 in same location.
- Hardin County and Boone County have advertised GIS positions.

-- BREAK ---

X. Next Generation Kentucky Information Highway (NG-KIH) – Mike Hayden, *Finance and Administration Cabinet*

- Definitions
 - Dark Fiber: fiber optic cable not currently in use
 - Middle Mile (e.g. KIH): network connection between global internet & “last mile” (e.g. FPB, local internet carrier)
- U.S. ranking in internet speed is well behind global average
- Kentucky internet:
 - Average 7.3 Mbps compared to 10 Mbps national average
 - 46% broadband availability
 - 23% rural areas with no internet access
 - 58% adoption rate where services are available
- Socio-economic factors and relatively little federal funding have contributed to Kentucky’s lag in progress.
- Increasing partnerships with higher education to create an educated workforce reliant will require a much heavier reliance upon distance learning:
 - 25 Mbps is absolute minimum speed required for these services
 - 50 Mbps is necessary for reliable and effective delivery
 - Kentucky is only at 7.3 Mbps
- NG KIH Vision:
 - Enhance education & outreach capabilities
 - Improve government service delivery
 - Promote economic development (depends on bridging gap in areas not covered by fiber network)
 - Enhance public safety
 - Improve health care
 - Create stable network for future growth
- NG KIH Goals:
 - 3,000 miles of fiber by October 2016, covering all 120 counties in Kentucky
 - 250+primary locations, including K-12 institutions, state universities, community & technical college system
- Considerations & needs:
 - Must leverage needs and lower net costs for citizens by bringing vendors together and building partnerships
 - Initial build efforts must consider long-term sustainability
 - KIH development depends heavily upon obtaining GIS data
 - Reliance on public & private partnerships will eliminate need for new tax funds to meet costs

XI. Adjournment

Donna Schartung entered motion to adjourn meeting, Roger Recktenwald seconded the motion, all members approved, and Tom Rossman adjourned the meeting at 12:02 p.m.

Minutes adopted as written 6/9/15