

THE SUMMIT

News From and For The Washington GIS Community

WAURISA

The Washington State Chapter of
URISA – The Association for GIS Professionals



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ISSUE 27

A LOOK AHEAD: UPCOMING PRESENTATIONS AT THE 2012 WASHINGTON GIS CONFERENCE

By Eadie Kaltenbacher

At the 2012 Washington GIS Conference this May in Tacoma, there will be many thought-provoking sessions to choose from. Ranging in focus from cartography to cloud computing, in scope from neighborhood to national, and in diversity from agriculture to asset management, there are sure to be several topics geared towards every interest. *The Summit* contacted some presenters to get an early look at what they are planning.

Sharing GIS Data: Panel Discussion

Moderated by Joshua Greenberg, PhD., GISP: Senior GIS/RS Analyst at Skagit County

Join this lively panel discussion to examine issues surrounding the sharing of GIS maps, data, and services. Meet Timothy Ford, the Open Government Ombudsman for the State of Washington. The Ombudsman's role is to help government agencies and citizens comply with the Public Records Act. He will discuss the legal obligations of the government to provide information to the public, and his opinion of the application of these rules to GIS data and maps.



See: *Washington GIS Conference Preview, Page 2*

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PRESIDENT'S COLUMN

Hello WAURISA Colleagues,

Less than one month away! We are approaching the annual Washington GIS Conference and things are getting exciting! It's especially amazing how hard the volunteers work to bring you this great opportunity to learn about the latest developments in our profession, enjoy the camaraderie of your peers, and have a little fun while we are at it. A big thanks to Board Member and Conference Chairperson Dana Trethewey for taking on the big task coordinating the many decisions that happen in the course of putting together the conference. Please join me in thanking her!

New this year we are bringing you the Esri Learning lab – your chance to chat with Esri staff directly and learn a new topic, or brush up your skills on something you've been curious about. Also, we've got a nice range of workshops available. Our speaker line up looks great this year. Workshops, access to industry leaders, two days of presentations by your peers – all for a very reasonable price. We think it is hard to beat and it's why we work so hard at keeping the cost reasonable. WAURISA wants to make it accessible to everyone.

I truly enjoy the Washington GIS Conference. While the San Diego Esri User Conference brings international opportunities, at the WAURISA event I know that I am going to see presentations about work going on in our region, which I find exciting. The presentations are typically relevant to my daily work, and if I have a question or interest in that presenter's topic, I know that they are local and accessible for discussion and follow up. Some great friendships and working relationships have been built through folks I've met over the years. It is a fantastic way to tap into your local vibrant GIS community and get reenergized about your work. The Northwest is such a fun hotbed of GIS activity. You really shouldn't miss out!

Additionally, in financial crunch times, you want to be able to defend your GIS department. Attending this conference is a very accessible way to hear about and learn about the return on investment GIS brings. See if you can find Greg Babinski and ask him about the new report released by King County that cites a \$775 million return on their investment in GIS. Last year, when Greg told us they were doing that study, we wondered how the possibility of a negative outcome might hurt us all. Luckily the opposite effect can happen now. That's a mighty big (positive) number. Granted, we aren't all living in a big metropolis in King County, but now there is little doubt that GIS is a strong tool to help all organizations save money. Come learn about it and educate yourself so you can educate your upper management!

See: *President's Column, Page 7*

WASHINGTON GIS CONFERENCE PREVIEW

Continued from page 1

Next, Mr Ford will be joined by representatives of three counties who have taken widely varying approaches to sharing their GIS data: Greg Babinski of King County, Geoff Almvig of Skagit County, and Brandy Riche of Pierce County.

Inspired by this year's conference theme of "Communicating Spatial Knowledge", this presentation will appeal to GIS managers and others who interact with the public and make decisions about the best way to share data. The panel will discuss the balance between providing data to the public, meeting mandates, and efficient use of resources.

Bring your ideas and questions for the panel, as audience participation will be welcome.

Reporting Snowmageddon 2012: City of Des Moines Snow Response Tracker: Case Study

Presenter: Steve Schunzel, GISP: GIS Administrator at City of Des Moines

Find out how Steve used only Microsoft Access, ArcGIS Desktop (ArcView License), and an HTML web page to display live information to the public about road closures during January's snowstorm.

Shortly before the storm, the City's Public Works Department had requested a quick and inexpensive solution for communicating road status to the public. In just a couple of weeks, with no extra funding, the "Adverse Weather Response Tracker" was created to accomplish this task. When the snowstorms hit, the Tracker was put to the test.

Field staff communicated road status information to office staff via radio, and office staff entered the information into an Access database. The database form contained a map image with hidden control buttons, so when a road was clicked, an event was triggered. Joined spatial data was populated with the updated attributes, and a refreshed map was exported every five minutes.

Steve used ArcPy (the Desktop Python module) to automate the process. If you are new to Python, this is the perfect demonstration of its ease of use. Learn how Steve used just one command and approximately 12 lines of code to accomplish his task, which earned an official proclamation from the Mayor.

Customized GIS Models to Plan for Slipway Dredging: Case Study

Presenters: Anna Yost and Steve Savage, GIS Analysts at Critigen

This presentation will be of interest to anybody who is considering using ModelBuilder to automate repetitive processes or standardize workflows. GIS users who work with 3D data or with SDSFIE (a federal data standard) will also be interested in this presentation.

Hear the story of Critigen's work with the US Marine Corps to develop a tool to proactively plan for dredging events to maintain minimum water depths for ships near Jacksonville, FL. In their set-up, hydrographic survey point data is collected quarterly.

See: Washington GIS Conference Preview, Page 3



*Timothy Ford, Open Government Ombudsman
State of Washington*

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WASHINGTON GIS CONFERENCE PREVIEW

Continued from page 2

Anna and Steve used ModelBuilder to create models that use these XYZ points as input, translate them to 3D points, and finally output standardized 3D rasters for analysis and comparison. Come see a demo of these rasters in ArcScene, and find out how they used Model Builder, 3D Analyst, and Spatial Analyst to create their customized and repeatable process.

As with any project, there were challenges. Anna was surprised that data from several years was collected in NVGD 29 instead of NAVD 88. Learn how she addressed this challenge by working a data conversion process into a subset of the model.

On the Road to 2020: Update

Presenter: Michaellyn Garcia, Geographer at US Census Bureau

If you work with state or local governments, tribes, 9-1-1 data, or any kind of addressing data, then you will be interested in this update on how the US Census Bureau (USCB) is revamping the entire way they conduct the Census.

In order to improve accuracy and manage costs, the USCB wants to establish data sharing partnerships.

The USCB is investigating the process of updating geographic data with a new, more interactive process, rather than the traditional single opportunity for local governments to provide data updates. One important challenge is balancing this interactivity with security, since Census data is subject to strict privacy laws.



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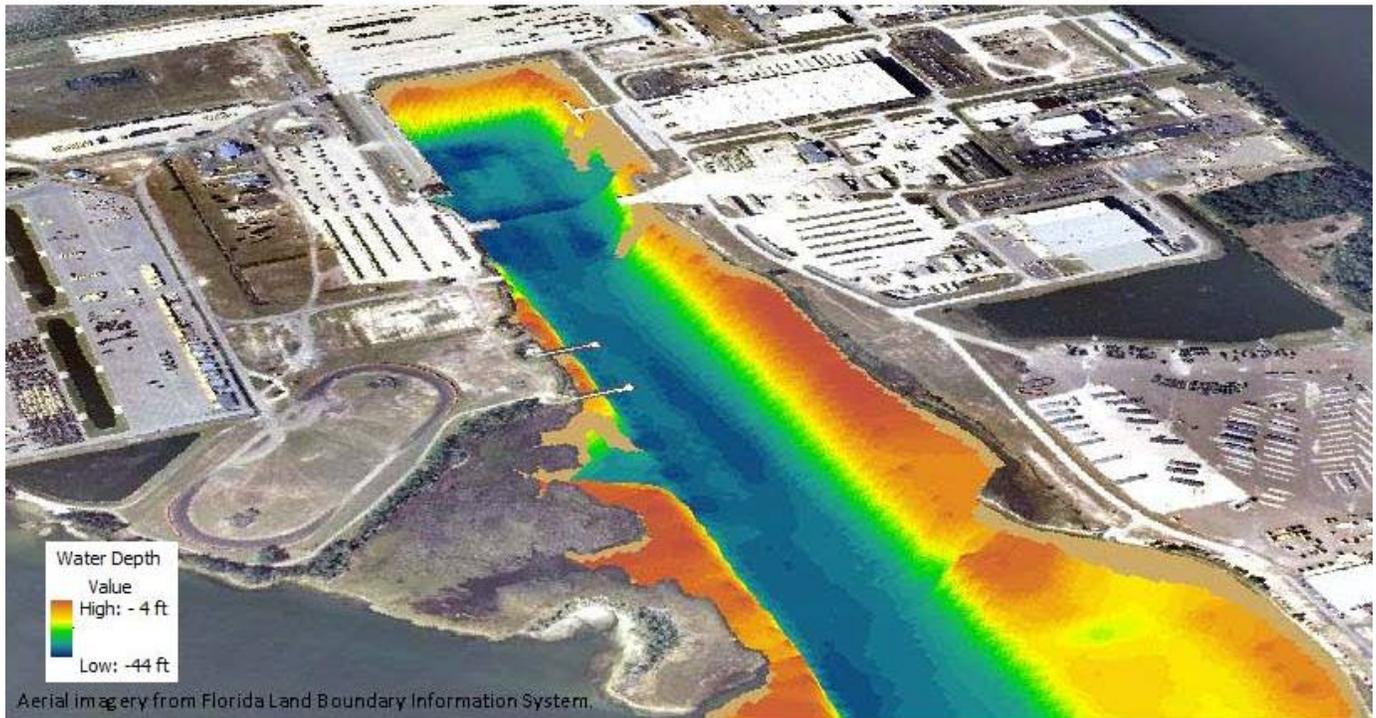
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Water depth raster created from hydrographic survey sounding point data

Data collected for Marine Corps Support Facility Blount Island, FL and processed by Critigen as part of Clark-Nexsen/CH2MHILL joint venture.



ModelBuilder Generated 3D Raster Output

WHEN LAKEHAVEN UTILITY DISTRICT WENT DIGITAL

By Rick Lortz GISP

GISPs under 40 may have a hard time imagining the effort involved in the transition from paper to pixels—but it's something we old-timers have had to learn by falling off the drafting stool, more than once. It took a decade to do something that takes months today. If your enterprise has been planning to turn that old analog data into digital, sharing some lessons we've learned might help your process be less painful to manage once it (inevitably) lands on your desk.

Lakehaven Utility District is a "special use district" distributing, collecting, and treating water in a combined water/sewer service area of about 40 square miles. We are situated north of the Pierce/King county line, with Puget Sound to the West and Auburn Valley to the East. Our facilities span numerous jurisdictions including two counties, 10 cities, and two adjacent purveyors. We have >26,000 customers served by over 750 miles of water and sewer system piping.

Analog to Digital the Beginning:

Our water system mapping consisted of 136 individual 1:1200 scale quarter section mylar Assessor's maps on which the facilities were drawn in India ink. Our sewer system mapping was a set of eight 1:3600 scale mylar sheets with the Construction Record Drawing (CRD) numbers aligned over the sewer main features. All our maps were updated manually on a drafting board using technical ink pens and lining tape. Even when we outsourced blueline production the publishing process took a month or more.

In the late 1980s, construction was increasing in our area. We decided to streamline our mapping process using Computer Aided Drafting (CAD) software to help us to do so. Our intent was to digitally replicate all the features shown on our water facility grid maps (including the cadastre), and then integrate our sewer infrastructure into these individual drawing files.

To make this work we devised a layering system separating each feature type so we would be able to freeze and thaw as precisely as possible. Simple 'water' or 'sewer' would be inadequate, so the piping layers were 'attributed' by size and material to reflect these core attributes. We also designed CAD blocks for complex features such as valve assemblies and fittings. Manhole points were attributed blocks with values identifying them as unique features and allowed later association with tabular data subsequently developed.

Developing a Usable Base

Our first task was to digitize a base of the individual quarter section maps, primarily because of staff familiarity. We acquired King County Assessor's quarter corner point coordinates from the County Surveyor, and hired 4 temporary employees to help in the digitizing effort. A drawing file was created for every quarter section within the District and the bounding grid was defined using coordinate geometry (cogo) CAD entry. We taped the water facility mylar maps onto large (5'x4') digitizing tables and re-registered the quarter corner points on the hard copy to those in the CAD file. That particular version of AutoCAD was not able to register more than two points of the quarter sections' four corners. A rubber-sheeting solution was developed later that improved edge matching significantly.

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We created the Right of Way corridor by digitizing the centerline and offsetting that line by the distances shown on the Assessor Map. This did not work real well due to limitations of the early computers (Intel 80286 processor w/16 MB RAM) to calculate floating point decimals for the northing and easting coordinates. The results were wildly distorted when we tried to offset the centerlines. We moved the bounding geometry of each quarter section grid so that the lower left (SW) corner was at zero, zero. Then we re-register the quarter corners on the hard copy to the drawings' corner coordinates and were able to offset the centerlines to successfully create the Right of Way corridor. Once these were in place, we digitized the individual lot lines. Depending on their configuration, we were able to offset them quickly while laboriously tracing others. Then we created ancillary information such as easements and annotation to complete our base.

GISPs under 40 may have a hard time imagining the effort involved in the transition from paper to pixels...

After these were checked and accepted, we moved (transformed) the drawing file geometry back to their correct coordinates relative to the SW corner. We completed our base by aligning matching features that spanned adjacent quarter section edges using rubber sheeting algorithms to form a seamless transition from one quarter section grid to the next.

See: Lakehaven GIS, Page 5

LAKEHAVEN GIS

Continued from page 4

Adding Our Facilities:

Against this background we used various techniques to capture our water and sewer facilities within the individual drawing files. We taped blueline prints of our water facility maps onto our digitizing tables and registered them to the quarter section corner points in the CAD drawing file. Once registered, we were traced the features onto separate layers based on their function, (e.g., valves, mains, hydrants, fittings, etc). Since we had no quarter section based map set for the sewer system, sewer manhole features were digitized as shown on the CRD drawings, (e.g. 5' west and 5' north of intersecting right of way centerlines). These points were then connected by a line representing the sewer main, on a layer specific to it's size and material, and snapped from the upstream manhole point to the downstream manhole point defining the 'from - to' flow of the line.

AM/FM

After 4 years of moving data into a digital framework we had an Automated Mapping/Facility Mapping (AM/FM) System. We could summarize miles of pipe by type or size, number of manholes, number of hydrants, and other information about our system that was previously kept in spreadsheets, notebooks, paper maps, and sticky notes. We were able to create special thematic maps based on specific criteria. We had succeeded in creating our digital maps but there was a problem. The CAD/GIS Coordinator was the only person capable of answering questions about the data and the system, and it was prohibitively time consuming to so. We realized the system was not effectively designed to answer questions; it was designed to maintain our map sets.

There was still a need for maps in the field. We made them available on laptop and desktop computers using a free AutoDesk viewer called WHIP.

We had rudimentary viewing functionality, layer control, pan & zoom which was thought to be a palatable introduction of this new technology to our field folk. The idea being to wean them away from the cumbersome field map books which tended to become data silos of their own.

Now staff had access to all the information on their paper maps and more. They didn't have to flip from sheet to sheet trying to determine pipe alignment and, best of all; we could update the information on the fly as needed, not just once a year.

Now that our infrastructure information was available for more users, we began to realize the benefits and imagine the possibilities. Now we wanted more information about our facilities, their provenance, history, and condition. We realized it was time to move forward from an AM/FM system to a true GIS.

The Transition to True Blue GIS:

In 2002 we embarked on the creation of a system that we could "hang our information on". We wanted something that would be accessible and easy to use without losing any of our existing functionality. We realized we needed help getting there, so we hired a consultant specializing in migrating CAD data into a GIS geodatabase.

During the design phase, we became familiar with "dirty data"; features on incorrect layers, incomplete or incorrect attributes, and features needing separation into more homogenous collections. We identified other information sources we wanted to access through our new digital format like record drawings and other imagery. In order to better identify what preparation would be required prior to migration we initiated a Pilot Project consisting of a one mile section. Our consultant took our CAD data and populated a prototype geodatabase which was scrutinized to identify problems and prepare solutions. The Pilot Project turned out to be essential and resolution of the challenges encountered saved us considerable time and effort during the remainder of the project.

After preparation of the CAD data, acceptance of the geodatabase schema, and completion of a successful Pilot Project, we were ready to move onto the main migration effort. This was done by our consultant in phases with QA/QC performed by District staff as we progressed.



Rick Lortz – Lakehaven GIS

See: Lakehaven GIS, Page 6

LAKEHAVEN GIS

Continued from page 5

Going On-LION:

While the data migration was being done, we focused on how to make our new GIS available to staff. We decided that a web enabled option was best. We collaborated closely to identify our needs, and whether they could be met at reasonable cost. We had special requests beyond basic layer management, navigation, identification, and printing. We wanted to create reports based on data held in our Permitting and Billing databases, to redline and forward that information to others, to count features, tally lengths, and develop on the fly queries.

An application was developed on a .NET framework by our consultant. Once completed it would be maintained by District personnel. By the time our new application—Lakehaven Infrastructure On-Line (LION)—was ready to test, the geodatabase had been successfully populated. We made LION available to a select group of individuals who were encouraged to break it if possible. Once the bugs were identified and corrected, we were able to go live with LION in June 2006. It has been in use ever since.

Stepping up to Better Data:

We realized our data was still far from its potential, being incomplete and lacking historical context or content. It was our desire to fill in these gaps when we began utilizing mobile GIS technology to complete our data for hydrant, valve, and water main feature classes.

Hydrant Maintenance

Our field staff had been using an MS-Access application on field laptops to track hydrant maintenance. This rich data source held an index field (tag number), manufacturer/model of the hydrant, and other location specific data. Unfortunately, this legacy data silo had developed contradictory information over the years. We realized that we would need to field verify before moving any of these data into our feature class.

When it came time to paint the hydrants we realized that each one would be visited in turn, a golden opportunity to ground truth and assign the indexing tag number to the feature point. Then we would have a key to associate the legacy maintenance data with the feature class. We developed an ArcPad field laptop app with which the operators not only verified the tag number, but also the manufacturer and model. They verified these core data and recorded their work using drop down tables when possible. Management was delighted they could view a map showing near real time progress along with supporting metrics.

It took two years to capture all our hydrants but when we were done, we were successful in merging the legacy data into the feature attribute table. The painting program is finished (for now) but we continue to use ArcPad for hydrant and valve maintenance today.

Water Main Cleaning

GIS was approached to streamline workflow and eliminate redundant efforts in our Water Main Cleaning program. We wanted to tally line footage of main being cleaned; help create notification letters; identify individual mains, valves, and discharge points which collectively made up a cleaning run; and identify which valves were turned so the Valve Maintenance Program workgroup wouldn't redundantly visit valves already exercised as part of the Main Cleaning Program.



We now use ArcView to plan the sequence, create run maps, and produce mailing lists of the affected home owners. We use ArcPad to track and report on various field tasks as they are completed. Together these technologies have significantly reduced the effort necessary and improved the tracking of the Water Main Cleaning Program. Maps and reports are accurate, timely, and reliable.

Valve Maintenance

The Valve Maintenance Program has also benefited from GIS. Much like the Hydrant Maintenance Program, the information was previously collected in an Access database using a field laptop. This too existed as a data silo, was not generally available, and had similar data quality issues. Ultimately, we knew that much of these data belonged in the feature class attribute table. The good news was a key field already existed that we could use to directly relate most of the data to the individual feature records in GIS.

In order to accommodate two separate workgroups exercising the valves, we created a relate table for the maintenance specific information (e.g. exercise date, operator, purpose), and kept the valve core data (e.g. size, depth of operating nut, condition, and operating torque), in the attribute table. We scrubbed the legacy Access table and migrated what data we could into the Valve Maintenance table. Since then, the valve data has been continuously improved by both work groups at each visit because each has access to the latest data, and both are invested in the benefits.

Lessons Learned

We continue to enjoy the benefits of GIS while we plan for software upgrades and migration into an ArcServer framework in anticipation of simplifying our existing programs as well as providing staff with more streamlined and comprehensive access to our growing collection of GIS and spatially related data. We are planning to launch our CMMS (Computerized Maintenance Management System) in the very near future which is dependant on our GIS for much of its success.

CAD is a better drawing tool; GIS is a better analysis tool. Both have grown into their strengths over time, and you have to have both in this line of work if you want to work effectively.

Always do a pilot before embarking on a large transition. The time saved by finding all the major trouble spots is tremendous, and it also prevents a lot of unnecessary tension, stress, and annoyance.

It's better to start out with more layers for the features of the system you wish to digitize, as it is far easier to bring them together than separate them later.

Nothing—and I mean nothing—beats staff feedback; eyes in the field, historical/institutional knowledge, and their awareness of system idiosyncrasies, to ensure core data integrity. Know your resources and form strong partnerships. Without their reflection, infrastructure GIS would be pointless.

-Rick Lortz (RLortz@lakehaven.org)



PRESIDENT'S COLUMN

Continued from page 1

One recent WAURISA accomplishment to note was the Making Beautiful Maps workshop held in Everett – it was a wonderful success! Over 80% of the survey responses said the workshop was “awesome!” (with the remaining 20% saying it was “good”). Thanks to Chris Behee and his partner presenters for coordinating that effort and bringing us all new things to think about in making maps.

Please stop by and introduce yourself while at the conference! I'll be the one with a big smile on my face. See you there!

Ann Stark, GISP, President, WAURISA

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REPORT SHOWS KING COUNTY GIS DELIVERED \$775 MILLION ROI OVER PAST TWO DECADES

April 5, 2012

King County's long-term use of its in-house Geographic Information System (GIS) has resulted in three quarters of a billion dollars in net benefits to the County, according to a first-of-its-kind report.

The report, issued by Professor Richard Zerbe and Associates, outlines the findings of the study of data over an 18-year period - from 1992 to 2010.

During that time, total cost for King County GIS, including capital development, central GIS operations and maintenance, and agency GIS end-user costs was more than \$201 million. Overall net benefits of the County's use of the GIS program was \$775 million.

The study methodology looked at the cost to perform King County agency business functions both with and without GIS. For example, County permit technicians were asked how much time it takes to pull together all the maps and spatial data needed to assist a permit applicant now with GIS, versus the time it would take the technician to perform the same business function without access to GIS tools and data.

The methodology included detailed interviews of 30 key County staff and an online survey to King County GIS users that was completed by 175 respondents.

Interview and survey responses were analyzed to compare costs of the service both with and without GIS level of effort. The results were then compiled and monetized by output type and agency to measure cost savings and productivity benefits.

While return-on-investment estimates are often developed as part of a proposal to develop a geographic information system, it is believed that this is the first study by independent economic consultants to examine and measure the actual benefits realized by a city or county from the internal agency use of GIS.

This project was funded in part by the Oregon Department of Administrative Services, Geospatial Enterprise Office. Professor Zerbe is the Daniel J. Evans Professor of Public Affairs at the University of Washington, where he is Director of the Center for Benefit-Cost Analysis.

Link to report:

<http://www.kingcounty.gov/exec/news/release/2012/April/05GISroi.aspx>

The King County GIS Center is part of King County Information Technology, chartered as an internal service fund to provide GIS services to County agencies and external customers. The King County GIS Center operates King County's enterprise GIS and provides data, services, and training to help put GIS to work. (www.kingcounty.gov/gis).

For more information, contact Greg Babinski at the 206-263-3753; greg.babinski@kingcounty.gov.



WASHINGTON GIS CONFERENCE PREVIEW

Continued from page 3

The USCB is also considering the use of Volunteered Geographic Information (VGI) for the census. Could individuals submit their own data? What kind of quality control procedures would be necessary? What security protocols would be necessary? Bring these and other Census-related questions to Michaellyn's presentation.

Michaellyn notes that many high-level planning decisions will be finalized by the end of April, and she will have the details of these changes just in time for the conference in May.

For more information about the 2012 Washington GIS Conference, see:

http://www.waurisa.org/conferences/2012_Conference_Index.html.

Eadie Kaltenbacher is a staff writer for The Summit



UPCOMING URISA EVENTS IN 2012

URISA Leadership Academy

June 11-15, 2012 Savannah, Georgia

URISA/NENA Addressing Conference

August 6-9, 2012 Memphis, Tennessee

Presented in partnership with the National Emergency Number Association (NENA)

GIS-Pro 2012: URISA's 50th Annual Conference for GIS Professionals

October 1-4, 2012 Portland, Oregon

URISA's 6th Caribbean GIS Conference

November 12-16, 2012 Montego Bay, Jamaica

For updates and details about participation, sponsorship and registration, visit the URISA website, www.urisa.org.

The Northwest GIS Users' Group is co-hosting its 27th annual conference with URISA's GIS Pro 2012, Portland - Sept. 30 - Oct. 4



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May 8–9, 2012 to learn more about Mobile GIS.





Keynote! WAURISA welcomes Gov. Jim Geringer, former Governor of Wyoming, as this year's keynote speaker! http://waurisa.org/conferences/2012_Conference_Index.html#keynote

Registration for student & professional attendees:
<http://www.regonline.com/Register/Checkin.aspx?EventID=976614>

Registration for vendors:
<http://www.regonline.com/builder/site/Default.aspx?EventID=1032359>

Vendor information:
http://www.waurisa.org/conferences/2012_Conference_Index.html#exhibitreg

Call for Poster & Map Contest Entries: Due May 4th
http://www.waurisa.org/conferences/2012_Conference_Index.html#Map/Poster

Workshops! <http://www.waurisa.org/conferences/2012/Workshops.html>

Esri Hands-On Learning Lab taught by Jack Horton!
http://www.waurisa.org/conferences/2012_Conference_Index.html#ESRITrainingLab

Tuesday night social at The Swiss! - <http://www.theswisspub.com/>
http://www.waurisa.org/conferences/2012_Conference_Index.html#social

Second Annual Washington GIS Conference Fun Run!
http://www.waurisa.org/conferences/2012_Conference_Index.html#funrun

Social Media The hashtag for this year's Conference is **#wagis12**.
Follow on Twitter <https://twitter.com/WAURISA>.
Like us on Facebook <http://www.facebook.com/pages/Washington-Urisa/179688892063796>.
Connect on LinkedIn <http://www.linkedin.com/groups?gid=3740111>.

More info on the 2012 Washington GIS Conference:
http://www.waurisa.org/conferences/2012_Conference_Index.html or email questions to 2012WAGISConference@waurisa.org

Coming soon: information on Conference session tracks!



PRESENTATIONS

COMMUNICATING SPATIAL KNOWLEDGE WITH COLLABORATION

A Tale of Twelve Cities: Launching eCityGov's *NWMaps.net* Site, Karl Johansen, GIS Consultant, Port Madison GIS, Inc.; Brian Oevermann, GIS Coordinator, City of Issaquah; Leah Llamas, GIS Analyst, City of Mercer Island; Tim Moore, GIS Coordinator, City of Renton; Beth Carpenter, GIS Coordinator, City of Sammamish; and Xiaoning Jiang, GIS Administrator, City of Kirkland

REPORTING SPATIAL INCIDENTS ON THE ROAD

Reporting Snowmeggedon 2012: City of Des Moines Snow Response Tracker, Steve Schunzel, GIS Administrator, City of Des Moines

Identifying Point Concentrations Using GIS Buffer Zone Methodology, Lona Hamilton, GIS Analyst, WSDOT

SPATIAL KNOWLEDGE IN 3D

2011 LiDAR Acquisition Quality Control Procedures for Pierce County, Ross Heasty, GIS Programmer/Engineer 1, Pierce County IT/GIS

Adding Value to Your GIS with Intelligent Oblique Imagery, Russ Michel, Regional Manager, Pictometry International

3D GIS and the Built Environment, Kevin DeVito, CEO, CyberCity 3D, Inc.

ENTERPRISE GIS, SOLUTIONS AND MANAGEMENT

How Multiple Cities Came Together to Build a Citizen Map Browser, Jay Clark, GIS Specialist, City of Shoreline; Mel Soares, GIS Analyst, City of Kirkland; and Kim Sun, GIS Analyst, City of Kirkland

URISA Helps Develop the USDOL Geospatial Management Competency Model, Greg Babinski, GISP, Finance and Marketing Manager, King County GIS Center

Using ROI Methodology to Measure the Financial Benefits of GIS, Greg Babinski, GISP, Finance and Marketing Manager, King County GIS Center

SPATIAL KNOWLEDGE ON THE WEB

COR Maps - An Interactive GIS Web Portal, Tim Moore, GIS Coordinator, and Nizar Salih, GIS Analyst, City of Renton - Information Technology

Pierce County's Mobile Development Platform, Jared Erickson, GIS Programmer/Engineer, and Sean Grady, IT Software Engineer 1, Pierce County IT/GIS

An Open Source Solution for Portal Authentication and Authorization, Xuejin Ruan, IT GIS Programmer/Engineer II, and Dan King, IT GIS Programmer/Engineer III, Pierce County IT/GIS

ECOLOGY AND HYDROGRAPHY

Customized GIS Models to Plan for Slipway Dredging, Anna Yost, GIS Analyst, and Steve Savage, GIS Analyst, Critigen

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PRESENTATIONS

Designing the Coastal Atlas for the public: Public beaches, shore photos and flood maps, oh my!, Darby Veeck, GIS Programmer and Analyst, and Liz O'Dea, GIS Programmer and Analyst, WA State Department of Ecology

Hydrography: Survey In Motion, Starla Robinson, GISP, Hydrographic Assistant Survey Technician, NOAA Ship Rainier

SHARING SPATIAL INFORMATION

Government's Role in Sharing Spatial Information: Data, Maps and Services, Joshua Greenberg, GIS/Remote Sensing Analyst, Skagit County; Timothy D. Ford, Open Government Ombudsmen, Washington State Attorney General's Office; Greg Babinski, GISP, Finance & Marketing Manager, King County GIS Center; Geoff Almvig, GIS Manager, Skagit County; and Brandy Riche, GIS Programmer/Engineer Supervisor, Pierce County IT/GIS

COMMUNICATING GIS KNOWLEDGE

Learning from Swisstopo: Creating a Nation of Spatially Literate Citizens, Darrell Sofield, GIS Consultant, aMAP pllc

Make Beautiful Maps, Share them Anywhere, Dane Springmeyer, Geographer, MapBox

FROM IMAGERY TO LAND COVER

Vegetation Modeling With NAIP Color IR Imagery, Chris Behee, GIS Senior Analyst, City of Bellingham - Planning & Community Dev

Using ArcGIS for Landcover Classification from Landsat Imagery, Matt Stevenson, Principal, CORE GIS

GIS Land Cover Data: From Data to Sustainability, Sudha Maheshwari, General Manager, Sanborn Map Company, Inc.

STATE AND NATIONAL ENTERPRISE GIS

The Washington State Broadband Map: From Mapping to Applications, Will Saunders, Broadband Policy & Program Manager, WA State Dept of Commerce; Joy Paulus, State GIS Coordinator, Office of the Chief Information Officer; and Sudha Maheshwari, Broadband Program Manager, Sanborn Map Company, Inc.

CENSUS

On the Road to 2020, Michaellyn Garcia, Geographer, US Census Bureau

CLOUD COMPUTING

The Cloud Revolution: How Cloud Computing is Transforming Mapping, Skip Cody, Product Manager, and Benjamin Webb, Customer Success Engineer, Digital Map Products

ASSET MANAGEMENT

Asset Management - Laying the Groundwork for Implementation at Thurston County, WA, Owen Reynolds, GIS Analyst III, Thurston County Geodata Center, and Ben Hoffman, NW Regional Manager, Data Transfer Solutions / VUEWorks

Incorporating GIS in Your Daily Workflow Throughout Your Public Asset Management System, Matt Harman, Account Manager, Azteca Systems, Inc.



PRESENTATIONS

STORING GIS KNOWLEDGE IN PIERCE COUNTY

Are You Ready for Your Election Year - GIS Integration with DIMS-NeT Voter Registration System, Xuejin Ruan, IT GIS Programmer/Engineer II, Pierce County IT/GIS, and Mary Johnson-Hall, Elections Supervisor, Pierce County Auditor's Office

Implementation of Transfer/Purchase Development Rights Program in Pierce County, Aaron Petersen, GIS Specialist, Pierce County, Planning and Land Services

MAINTAINING HISTORIC INFORMATION AND MAPS

Survey Monument Preservation and Restoration, Dorrel Dickson, GIS Analyst, Tulalip Tribes

Update on USGS US Topo and Historical Quadrangle Scanning Project for the Pacific Northwest, Tom Carlson, Geographer, US Geological Survey

COMMUNICATING WITH MAPPING

Mapping the Dynamic Dimension, Xiongjiu Liao, GIS Lead Programmer, and Chuck Buzzard, GIS Supervisor, Pierce County IT/GIS

Talk to Me: Using Mapping to Communicate with Citizens in the Google Era, Skip Cody, Product Manager, and Benjamin Webb, Customer Success Engineer, Digital Map Products

Mapping Secrets Unveiled: Top Mapping Faux Pas and How to Avoid Them, Annie Schwab, Vice President - Marketing, Digital Map Products

PLANNING

A GIS Analysis of Effects of Property Values on Job-housing Balance, Afia Zubair Raja, Doctoral Student, Department of Landscape Architecture and Urban Planning

VENDOR PRESENTATIONS

ESRI Hands-On Learning Lab

Emerging Technologies for Field Data Access and Capture, Bill Timmins, Director, GIS Services

Mobile GIS, ESRI

How to Connect a Mapping Grade GPS Unit to a VRS, Jim Lahm, GPS-GIS Specialist, Electronic Data Solutions

Overcoming Challenges in Deploying Esri-based Mobile & WebGIS Applications, James van Dyk, Account Manager, Latitude Geographics

Demonstration of ArcGIS Online Premium, ESRI

ArcGIS for Local Government, ESRI

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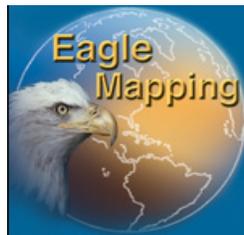


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THE SUMMIT - EDITORIAL

PNW GIS – OUTSTANDING OPPORTUNITIES!

The Pacific Northwest is a great place to live and a great place to work in GIS. As winter gloom gives way to spring, those of us in the Washington GIS community feel our hearts lighten, our wardrobes change, and our outdoor activities transition (though die-hard snow enthusiasts have more months of sport on Mount Baker).

Spring is a nervous time for those of us with aerial mapping projects, as we hope for a string of clear days, with adequate sun angles, but good leaf-off conditions. Field crews get their GPS data collectors ready to deploy, to pick up with routine GIS data collection or to assess damage to trails or road infrastructure.

Spring in the PNW is also a good time to reassess where we are with our GIS program and with our personal career development. URISA always provides great opportunities and 2012 is no exception. Already in Vancouver in February, a day-long URISA BC Chapter seminar presented the Canadian perspective on open data issues.

GIS in Action last month in Portland was the Oregon URISA Chapter's annual event. This year GIS in Action partnered with the Public Land Surveyors of Oregon Conference, to minimize conference overhead costs and also to bring together two interdependent communities that too often work in isolation from each other.

Next month in Tacoma it is our turn, as WAURISA presents the 2012 Washington GIS Conference. The Washington GIS Conference Committee has been working hard to present another outstanding conference. The event is a great opportunity to sharpen your skills by attending a workshop on Monday. Tuesday's keynote speaker, former Wyoming Governor Jim Geringer, promises to inspire us. Then two full days of presentations by your peers provide you the opportunity to select the ideas and technology that you want to promote over the following year where you work. And if you need any financial justification for your boss, be sure to learn about the King County GIS return on investment study and how GIS generated \$775 million in financial benefits.

The Washington GIS Conference is also a great time to network with colleagues and old friends, and make new connections as well. The Tuesday vendor social and get together at the Swiss in Tacoma are great opportunities to unwind.

But wait, there's more. The Fiftieth Annual URISA Conference – GIS-Pro 2012 will be held in Portland in October. URISA had its origins at the University of Washington and elsewhere in the Pacific Northwest. GIS-Pro 2012 will be held in cooperation with the NW ESRI GIS Conference this year, so it is sure to be an outstanding event. A highlight of GIS-Pro 2012 will be Jack Dangermond speaking about the significance of URISA for the development of GIS during the past decades.

Six months from now autumn gloom will once again start to descend over the region, but there is lots of GIS enlightenment between now and then to be had. Don't let these opportunities pass you by. See you in Tacoma in May and Portland in October!

The Summit is published by WAURISA. To encourage the discussion of issues and ideas of importance to the Washington GIS community we welcome letters to the editor or opinion essays. Letters to the editor should be a maximum of 100 words and essays should be limited to 500 words.

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PUBLIC MAPS IN WASHINGTON

Hidden at the end of Thea Foss Waterway Park in Tacoma, those who participate in the 2012 Washington GIS Conference Fun Run will pass by this, the second largest globe in Washington State.



Greg Babinski Photo

Do you know of a public map display in Washington? Send it to *The Summit* and we'll include it in a future issue. -Editor

THE SUMMIT – LITERARY CORNER

The Histories

'Cleomenes, however, was on the throne when Aristagoras of Miletus came to Sparta. According to the Spartan account, Aristagoras brought to the interview a map of the world engraved on bronze, showing all the seas and rivers, and opened the conversation in the following way: "I hope, Cleomenes, that you will not be too much surprised at my anxiety to visit you. The circumstances are these. The Ionians should have become slaves in place of free men is a bitter shame and grief not only to us, but to the rest of Greece, and especially to you, who are the leaders of the Greek world. We beg you, therefore, in the name of the gods of Greece, to save from slavery your Ionian kinsmen. It will be an easy task, for these foreigners have little taste for war, and you are the finest soldiers in the world. The Persian weapons are bow and short spears; they fight in trousers and turbans - that will show you how easy they are to beat! Moreover, the inhabitants of that continent are richer than all the rest of the world put together - they have everything, gold, silver, bronze, elaborately embroidered clothes and beasts of burden and slaves. All this you may have if you wish. I will show you the relative positions of the various nations.'

'Here Aristagoras produced the map he had brought with him. 'Look', he continued, pointing to it, 'next to the Ionians here are the Lydians - theirs is a fine country, rich in money. Then come the Phrygians, farther east, richest in cattle and crops of all the nations we know. And here, adjoining them are the Cappadocians - Syrians, we Greeks call them; and next to them the Cilicians, with their territory extending to the coast - see, here's the island of Cyprus - who pay annual tribute to the Persian king of five hundred talents.'

'Now, the Armenians - they, too, have cattle in abundance; and next to them, here, the Matieni. Again farther east, lies Cissia: you can see the Choaspes marked, with Susa on its banks, where the Great King lives, and keeps his treasure. Why, if you take Susa, you need not hesitate to compete with Zeus himself for riches. You should suspend your wars over a scrap of land - and poor land at that - with your rivals the Messenians and Arcadians and Argives, who have nothing whatever in the nature of gold or silver which is worth fighting and dying for, when you are offered the chance of an easy conquest of the whole land of Asia. Is there really any choice between the two?'

- Herodotus

GIS USER GROUPS IN WASHINGTON

ACSM – Washington State Section

<http://www.wss-acsm.org/>

ASPRS Puget Sound Region

<http://www.photogrammetry.com/ASPRS-PSR/>

Cascadia Users of Geospatial Open Source

<http://groups.google.com/group/cuqos/>

Contact Karsten Venneman at: karsten@terragis.net

Central Puget Sound GIS User Group

<http://waurisa.org/phpBB2/viewforum.php?f=24>

Contact Nora Gierloff at: ngierloff@ci.tukwila.wa.us

Central Washington GIS User Group

Meets the 2nd Wednesday of each month.

For information contact Amanda Taub at:

ataub_gis@yahoo.com

King County GIS User Group

<http://www.kingcounty.gov/operations/GIS/UserGroups.aspx>

Meets 1st Wednesday every other month at 11:00am at the KCGIS Center, 201 S. Jackson Street, Seattle WA, Conf Room 7044/7045.

Northwest Washington GIS User Group

http://www.acadweb.wvu.edu/gis/nwgis_mtgs.htm

Southeast Washington/Northwest Oregon GIS User Group

For more information, contact Chris Owen:

cowen@ci.walla-walla.wa.us

Washington Geographic Information Council (WAGIC)

<http://wagic.wa.gov/>

Join Listserv at: <http://listserv.wa.gov/archives/wagic.html>

Washington Hazus Users Group

<http://www.usehazus.com/wahug>

Contact Cathy Walker at: c.walker@mil.wa.gov

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