



THE SUMMIT

News From and For the Washington GIS Community

The Next Thirty Years of GIS in Washington State

By: Joy Paulus and Ben Vaught

Before “Big Data” became the latest buzzword, GIS practitioners in Washington State government had already been collecting and utilizing extremely large sets of data to facilitate decision-making and benefit Washington citizens. From early adopters in the natural resource management area approximately thirty years ago to the many investments across the state today, members of the GIS community have been pioneers in data collection, management and analysis. We’ve seen great things happen over time, from manual cartography, to digital mapping systems, to Google Earth.

Now, as we enter our next thirty years, the demand for GIS continues to grow. Customers both inside and outside state government want what we provide, and what we can provide in the future. While our customer base continues to grow, however, the resources available to us have not. This makes collaboration and increased interagency support more important than ever.

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Combining “big data”: NAIP imagery and LiDAR point cloud data, by the Department of Natural Resources, Forest Resources Division.

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President’s Column

By: Ann Stark, GISP

Spring! My favorite time of the year! As many of you know, I’m an avid gardener and spring is when it all starts for me. My greenhouse gets loaded full of sprouts, my fingers get dirty weeding the beds, and I get busy planning the summer harvest! Visions of baskets of zucchini, broccoli, kale and

tomatoes (all my favorites) dance in my head.

Another favorite thing of mine about Spring is that it means the **Washington GIS conference** is coming! This year it is **May 6 – 8 at the Lynnwood Convention Center**. And indeed, the conference committee is hard at work bringing all

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2012 Summit Award Winner

By: Michelle Lortz

Congratulations to Greg Babinski, GIS pioneer and recipient of the 2012 "Summit Award". The Summit interviewed Greg to discuss his influences, experiences, and thoughts on the future of GIS.

Summit: What did you want to be when you grew up and how close have you come?



Greg Babinski (right) receives the Summit Award from Tom Nolan

Greg: Grow up? Who said anything about growing up?

Seriously, at various points in my early life I wanted to be a rancher. I wanted to be a bulldozer operator. I went to a Catholic school and our parish had a bishop. I wanted to be a bishop, but when I learned that I would have to go to seminary many years and first start out as a regular priest, well I changed my mind about that.

I was fortunate though in high school to come into contact with two remarkable teachers. First Sister Marie Madonna – a Dominican nun who was a truly dedicated teacher – for four years encouraged me to think for myself and instilled in me the notion of doubt and certainty in science. Then my freshman year history teacher, Miss Jednakiewicz, first made me realize that history is not dry facts but the understanding of the context for millions of lives, and that we live and make history every day. So when I left high school and entered Wayne State University my intention was to become a high school history teacher.

Summit: What was the greatest influence in your youth that sent

you on the technical path?

Greg: Maps led me on the technical path. I was the oldest of 10 kids and I was fortunate, being the oldest, that my mom and dad could devote more one on one time with me. One of my very early memories with my mom was her amusing me on rainy days by drawing me imaginary maps. She would take a blank sheet of paper, draw the squiggly outline of an island, then talk to me as she drew in hills and mountains, added forests and farms, and sketched little towns and roads connecting them. Then she would say 'oh, let me just go check on dinner – you work on the map...' and I was hooked. Then every few months my dad would come home from work with some old National Geographic magazines and maps. I kept them all and would read each issue from cover to cover. But more than just reading them, I would find the places and locations of the pictures on the maps. I think at a very early age I realized the concept that maps were a scien-

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The Next Thirty Years of GIS in Washington State

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Moving forward, we must match the innovation shown by the GIS community with a statewide commitment to strengthening this community.

Last year the Office of the CIO established the Washington State GIS Program Office to provide enterprise-level leadership, governance, policy direction and standards oversight. At its heart, this office seeks to help fulfill the mission of our GIS community: *to work in partnership with the public and private sector statewide to provide accurate, consistent, accessible, and comprehensive GIS resources for decision-makers and the public.*

With the rising popularity of GIS, we must be there for innovators who will bring to life the data we provide in entirely new ways.

The GIS enterprise approach will help our GIS community best serve our customers today, tomorrow, and well into the future. We must continue to build out our single point of access for enterprise level data and web services, and pursue key elements including:

- ◆ Formalize GIS Data Stewardship: Designate one or more data stewards for each of the enterprise level GIS data sets and any data services consuming these data.
- ◆ Provide a Shared GIS Infrastructure: Establish a single point of access for enterprise level data and shared services to reduce confusion and storage costs of hosting multiple data, and provide access to services like matching, visualization tools, and applications that public, private and governmental agencies can benefit from. Shared data will lead to better decisions as agencies work from official versions of data rather than multiple, unsynchronized or inconsistent versions of data.
- ◆ Expand Services Offered by the WA GIS Program Office: Internally, we need to build out the Program Office in order to make it relevant, drive shared infrastructure solutions, coordinate GIS data and software purchases, manage business agreements between stakeholders, secure sustainable funding for the upkeep of shared infrastructure, coordinate data acquisi-

tion, and serve as the GIS point-of-contact for external stakeholders. In addition to the GIO, the GIS Program Office will strive to increase stakeholder input and communication around governance, standards and policies.

A more integrated GIS community will lead to more valuable opportunities for existing and potential customers. With the rising popularity of GIS, we must be there for innovators

who will bring to life the data we provide in entirely new ways. This means making the strategic goals as identified in the Washington State GIS Strategic Plan a reality: establishing an access mechanism for WA geospatial data; establishing a state Geospatial Information

Officer in accordance with the enterprise approach outlined above; strengthening coordination across jurisdictions and agencies; developing statewide standards and guidelines for data and services; and increasing awareness and support for GIS through education and outreach.

Our GIS community has been at the tip of the spear for innovative ways to collect and utilize data. Now, we must match this innovation with equally innovative ways to streamline,

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2012 Summit Award Winner

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tific construct that cartographers could use to depict the real world. But the real excitement for me was the notion that maps could then be used to construct an image of what the real world would look like, what I could expect to see, say in Wuppertal, Germany; or Banjul (formerly Bathurst), Gambia; or in the middle of the Nullarbor Desert.

After a couple years as a history major at Wayne State, I decided to take a few geography classes and met Dr. Robert J. Goodman from the WSU Geography Department, another key influence on my life. I also met Dr. William Bunge, who had studied with Edgar Horwood at the University of Washington, though I did not realize the connection at that time. 'Doc' Goodman was a remarkable teacher who nurtured an excitement for geography and geographic analysis in me. I opted for a dual History-Geography major.

After graduation, there was not really a 'technical path' as we would think of it now. Jack Dangermond and others, who had come into contact with Horwood and the early organizers of URISA, were just starting to develop technical tools to unleash the power of geographic thinking.

I started working as an engineering design-drafter for the Michigan-Wisconsin Pipeline Company, in Detroit. After about 4 years there, Doc Goodman called me up one day and encouraged me to finish working on the Masters in Geography I had started shortly after I got my BA from SU. I remember he motivated me by telling me "...you know Greg, as you go through life, you can lose your car, lose your wife, lose, your health and all your money, but you can never-ever lose your education and your degrees." I finished my MA in Geography in six months after that talk!

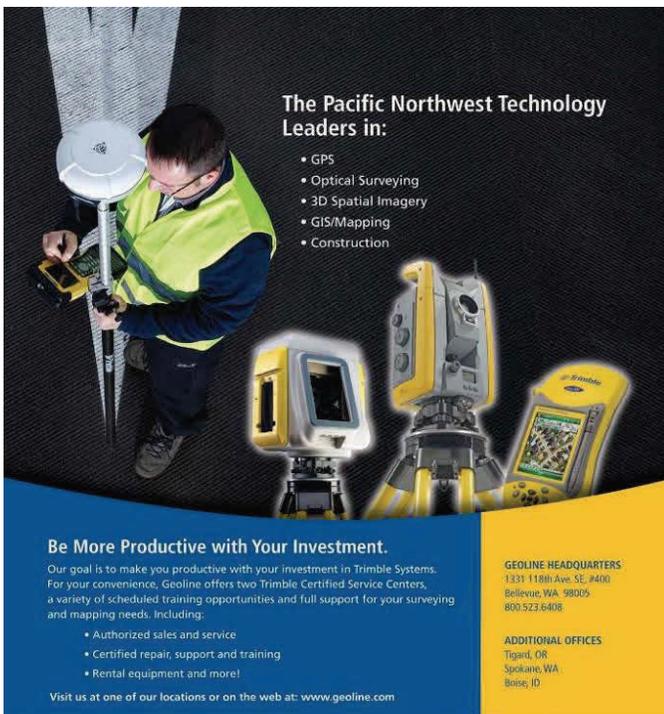
Shortly after that I moved to San Francisco to work for British Petroleum on the Prudhoe Bay Alaska Oil Field Project. I was hired as Chief Drafter and within 4 years I was supervising 35 people. This job included mapping and annual aerial photo updates for the oil field. It was here also that I started developing my computer technology skills as I spec'd and procured our first computer aided design-drafting system. I recall about a \$250,000 purchase for just 3 workstations! Trouble on the 'oil patch' led Sohio (successor to BP) to close the San Francisco office. I then worked for 5 years as Design Supervisor for Johnson-Loft Engineers in Marin County. JLE designed and built vegetable oil process plants around the world and my job involved lots of work with surveyors on preliminary site-surveys.

Then in 1989 I was hired by East Bay Municipal Utility District (EBMUD) in Oakland, as their first GIS Mapping Supervisor. For almost nine years I worked at EBMUD building an Intergraph based computer mapping systems, then coordinating the transition to a true Esri/ArcInfo and ArcView based GIS. In 1998 I made the move to Seattle to work for King County GIS.

Summit: I see you have 'Twittered' for years, where do you see Social Media fitting in with GIS?

Greg: Well I think lots of smart people are going to figure that out. But I think there are some trends starting to emerge. First geography does matter...for as much as people retreat into the virtual world of social media, digital entertainment, and remote work, where we live, work, and play comes back to the finite space available in the real world. Facebook and Flickr right now are mapping our lives via the tools that they provide. Our locations are trackable minute by minute via our cell phones. And our tweets right now can be mined to track ideas and opinions real time in real space. Some of

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collaborate, market and share our work. Demand for GIS will continue to grow, and we as a community must continue to grow with this demand.

To start, the WA GIS Program Office will be pursuing the following initiatives over the next 6 months:

- ◆ Working to establish state access to the Western States Contracting Alliance (WSCA) Public Cloud Hosting Services contract by standing up Participating Agreements with qualified vendors
- ◆ Working with the state and vendor to establish single sign-on access to GIS software using Active Directory Federated Services (ADFS)
- ◆ Working on an operational pilot project for Location Based Web Services (address correction, geocoding and

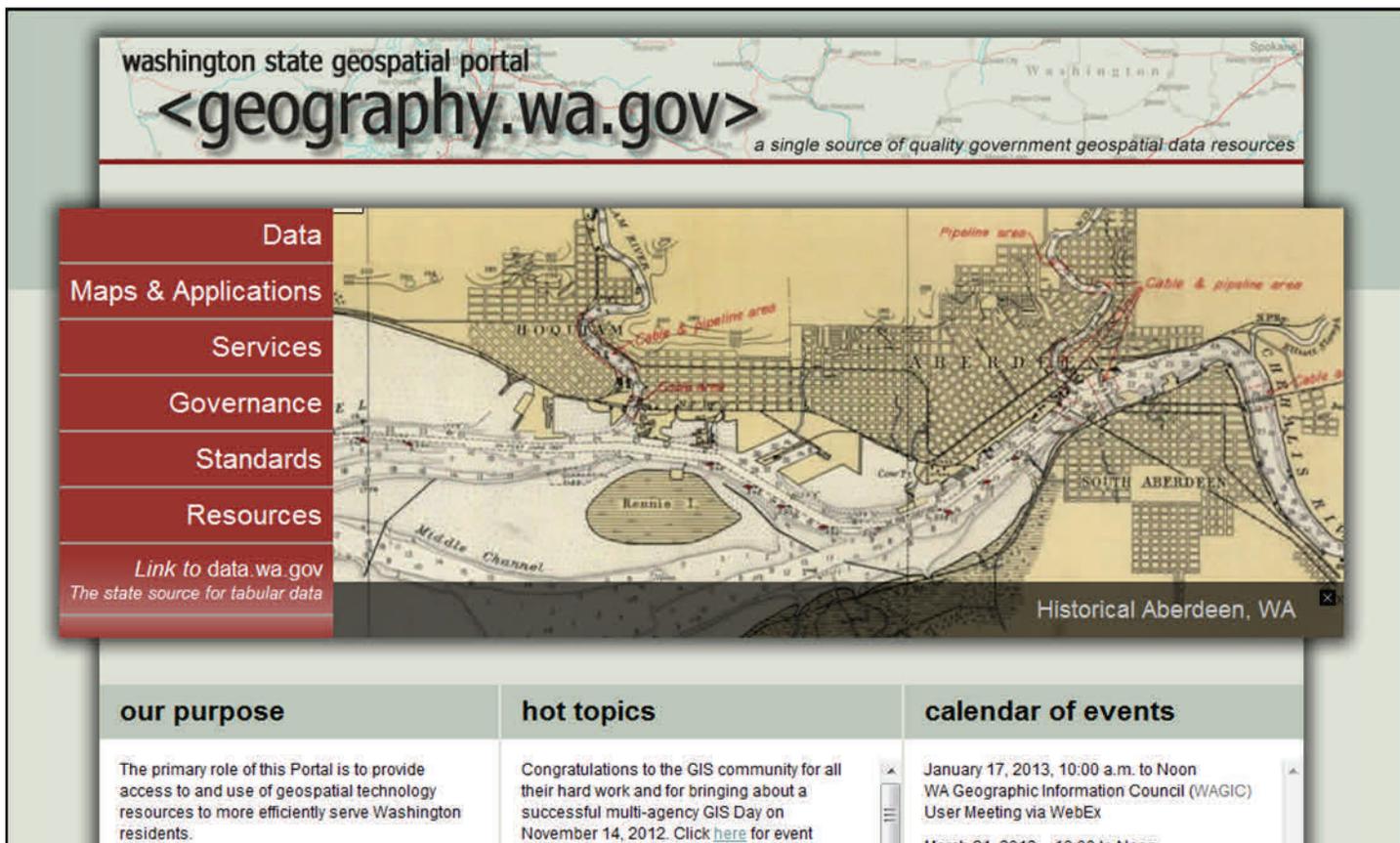
master address file)

- ◆ Continue to promote publication of spatial data by providing state and local government access to free publication tools like organizational ArcGIS On-Line and cloud based services and storage solutions.

Thank you for being active and involved members of the GIS community. I look forward to meeting you and discussing your thoughts on the future of GIS in Washington State.

Joy Paulus is the State GIS Program Manager for the Office of the Chief Information Officer. She also serves as the Chair of the WA Geographic Information (GIT) Committee and representative at the National States Geographic Information Council (NSGIC).

Ben Vaught is a Special Assistant to the Office of the Chief Information Officer.



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WAURISA Conference Preview

By: Eadie Kaltenbacher, GISP

WAURISA's annual conference is coming up soon: May 6-8, to be exact. The Summit contacted three presenters to get a sneak peek of what they will be discussing at the event.

From Proprietary to Open Source – The Road we Travelled to Renovate an Enterprise GIS System: Presented by Xuejin Ruan and Stan Grochowski

Users are exposed to maps every day on products ranging from Google Maps to Bing to Apple, and they have come to expect fast performance and a sophisticated user interface. Xuejin Ruan at Pierce County was well aware that their existing enterprise GIS system was aging. While it still functioned, its user interface was dated, and its performance was limited: for example, it required an entire screen refresh every time the user made a request to the server. In addition, some components of the system, such as ArcIMS, were nearing their product support end-of-life.

Ruan likened this process to building with Lego... they could wrap up modules out of old projects, store them in a library, and snap them into place.

To address these issues, Pierce County is in the process of migrating seven applications created in proprietary formats to a single open-source solution. Ruan noted that Pierce County is lucky to have a team of skilled developers, so they were able to create a solution entirely in-house. This team includes Stan Grochowski (the programmer for the legacy system), Brandy Riche (supervisor of the implementation and support team), and Chuck Buzzard (Ruan's supervisor).

An open source solution was a natural fit for Pierce County because they had already developed some open source applications several years ago, and some great components of these projects were available for reuse.

Ruan likened this process to building with Lego: she explained they could wrap up modules out of old projects, store them in a library, and snap them into place in the new projects as needed.

One example of an application that was successfully migrated earlier is Public GIS, the County's public-facing mapping site used daily

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2012 Summit Award Winner

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these concepts are and can be good to help companies and government provide services and products to make our lives better.

One huge concern is balancing access to all that data in aggregate with our individual privacy. There is a worrying trend now regarding privacy that everyone who works in GIS should be concerned about – that is the pandering by some politicians to the notion that people have an absolute right to privacy, by things like restricting personal information from aggregated databases. Well, in my opinion, we live in society, and in addition to rights, we have obligations too. There have been many recent, serious proposals in the Federal government and state legislatures to restrict things like taking aerial photographs, unless advance permission is received by everyone who might be in the photo! This is seri-

ous and a reason that organizations like URISA are important. I'm not talking about Washington URISA – I mean the work of URISA at the international level is important for the future of GIS and everyone who works in the field.

I'll tell you the social media app I'd like to see developed – it's one that would automatically shut down the device after sending the user a message saying: 'Put your smart phone away – the sun just came out and that is Mount Rainier over there – take a good long look!'

Summit: *Where do you see GIS having the greatest influence in the future?*

Greg: I think GIS is and will create a more geographically aware world. I don't mean geographically aware like in the Jeopardy Category (What is the Blue Mountain Range?), but aware of the choices we as a society are faced with that relate to the finite space we have to work with. We have always had that finite space (except for the occasional marsh re-

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claimed, or island swept away), but in past centuries most of the world was frontier – in a literal sense. As population grew, there was always a new valley to farm, or forest to clear. No more. Look, in 1950 just 30% of the world population lived in cities. Within the last two years, for the first time in human history, 50% of people live in cities. And the U.N. forecasts that by 2050, 70% of the world's population will live in cities. That's 1-2 billion more people we need to move into cities – fast! And this is not just a third world issue (if there is still a third world). By the end of this century demographic forecasts are that the population of the U.S. will at least double, and some projections are that by 2100 the U.S. will be the most populous country on earth. Let's just think of Washington State. Imagine the population not 6 million plus, but 12 million, or 18 million! What will Lynnwood look like then, or Seattle, or Yakima? What will we want them to look like?

A geographically aware society, with GIS as a tool for citizens, politicians, government agencies, business, and research is absolutely critical. And GIS professional have to think of themselves as not just 'tool users' but as geographers. We need to help society see the relationship and impact of decisions that we make on use of space.

A geographically aware society, with GIS as a tool for citizens, politicians, government agencies, business, and research is absolutely critical.

Summit: What is one of your most memorable experiences during your involvement with URISA and/or the Washington Chapter?

Greg: The beauty of URISA, at any of its conferences or at any chapter event, is that for me that 'memorable experience' happens again and again. It is that sweet moment after a presentation, or sitting down for lunch, or over a beer afterwards with people you might not know, but sharing ideas and experiences. Too often we get trapped in our old routine and circle of friends and don't have the time or the opportunity to float ideas, share problems, or explore new solutions. For me any URISA conference is like an intellectual nuclear reactor. But in this case, the fallout is absolutely good for you!

Summit: Your career has evolved toward Policy and Management; tell us about your favorite hands-on GIS work.

Greg: Well I'll tell you two things. First – working my way through college I worked a couple summers at the Detroit Stamping Company (featured in the film 8 Mile) as a spot welder. You take two pieces of sheet metal, position them next to a third piece of sheet metal, hit a foot pedal a few times to trigger the welder and within a minute or two you have an air conditioner blower housing. Sparks flying all over the place – I loved it. At EBMUD I did a bit of parcel data development. That always seemed like the spot welding of GIS, but usually without the sparks. More recently I have enjoyed GIS needs assessment and planning work. It's great to help people see the connections between GIS and getting their work done.

Summit: After all these years of experience you are in a position to take the longer view. As a visionary, what do you see as core competencies to be encouraged in those entertaining a career in GIS?

Greg: One ought to have a passion for technology; very good geographic awareness, a customer-services focus, and ability to see the big picture. The big-picture is the key. Being a GIS spot-welder in the future

will be much rarer. Technology and education are increasing the productivity of GIS. But there is a danger that as the software tools become more powerful and easier to use, organizations that use GIS will need to rely on highly competent managers and well developed best practices and standards. A core competency will be continuous process improvement as a way to deliver value.

Summit: It is amazing to consider all you have done, how do you

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WAURISA Conference Preview

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by thousands of visitors (designed by Xiongjiu Liao). This application has been entirely migrated to open source, which includes the use of a PostgreSQL/PostGIS database, TileCache, GeoServer, OpenLayers, and Extjs. One of the best performance improvements was the use of AJAX technology: when a user makes a request to the server, only the portions of the screen that have changed actually get refreshed.

For Pierce County, going to open source was a cost savings. Obviously, they saved on the direct costs of the software, but they also saved on the costs of third-party implementation and future maintenance fees. However, Ruan stressed the importance of having a strong in-house development team for this approach to be successful.

Their transition is almost complete. One outstanding item is the finalization of the tiles for TileCache. Internal users require a very fine scale, so tiles are being created at a scale of 1:600 across the entire county. As you might imagine, this is

an incredibly time-consuming process.

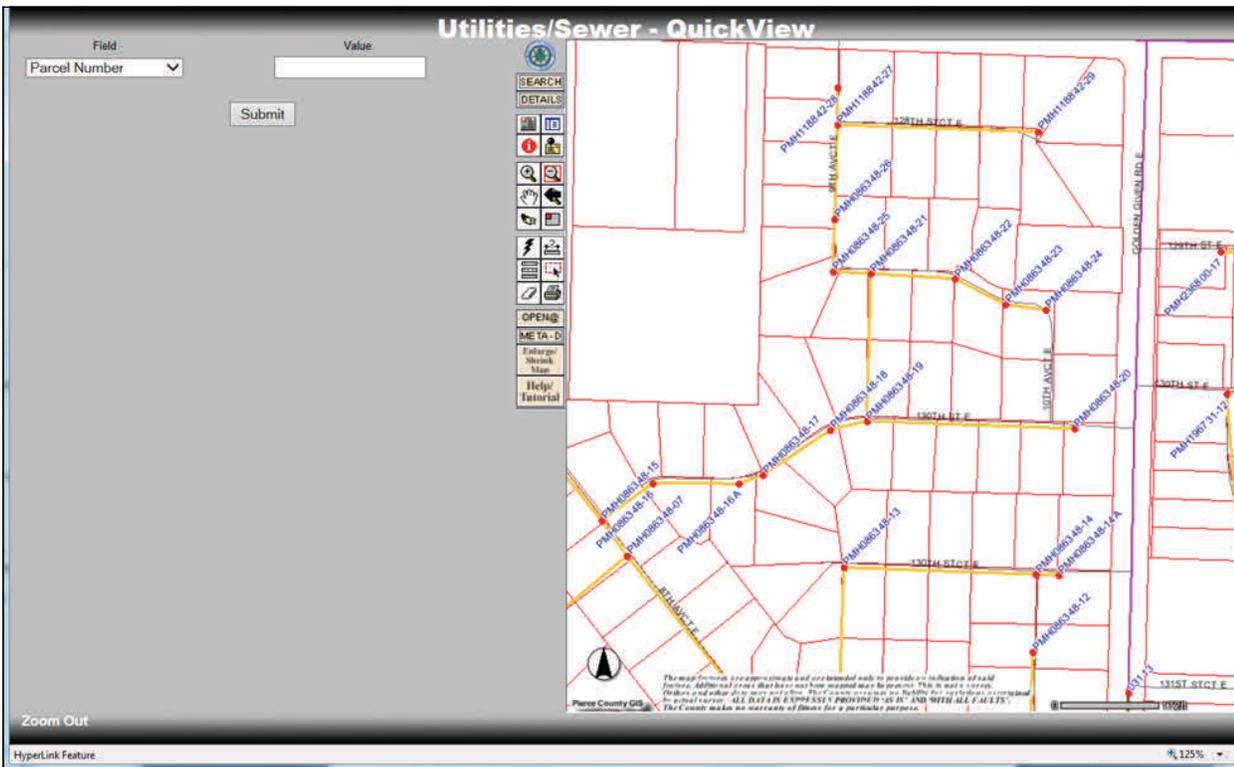
In this session, the presenters will give an overview of both the old and new systems, and discuss the positive results they have achieved during the transition.

Developing a Surface Water Asset Inventory for Municipalities: Presented by Scott Reese

Imagine creating an inventory of almost 120,000 items. Seattle Public Utilities (SPU) was recently required to do so as they pursued an NPDES (National Pollutant Discharge Elimination System). A NPDES permit must be issued by the Environmental Protection Agency to large municipalities in order to authorize the discharge of stormwater.

From the NPDES website, “the permitting mechanism is meant to prevent stormwater runoff from washing harmful pollutants into local surface waters”. It has many requirements, including a requirement to map where features and boundaries are located.

Seattle Public Utilities is required to map and inventory each of their 120,000 assets.



Before: A view from Pierce County's Quickview (legacy) application

WAURISA Conference Preview

Therefore SPU is required to map and inventory each of their 120,000 assets, including catchbasins, ditches, and culverts.

Scott Reese is the technical lead for the SWAMP (Surface Water Asset Management Project), which is addressing the mapping requirements of the permit. To inventory the assets, he is using a combination of Trimble, ArcGIS, and an asset management software called Maximo. Maximo is a database system that stores information for each asset regarding its work history, and has the capability to issue work orders. GPS data collected from the Trimble units will feed into it. The data is always collected as points; however, features may be converted to lines or polygons during post-processing. For example, a technician might collect the start and end points of a ditch in the field, and connect them together back in the office.

One unique aspect of this project is the use of the WSRN (Washington State Reference Network) which is a collection of GPS reference stations that provide real-time high-precision positioning. Technicians collect data on their GPS units, and use the WSRN to accurately position an asset in the field to within 10 centimeters in just seconds, without any corrections required in post-processing.

Reese noted one of his biggest challenges was for all the project team members to agree on a common language. For example, when he began the project, he received three different descriptions for a catchbasin. To address this issue, he put together a glossary of assets and their definitions.

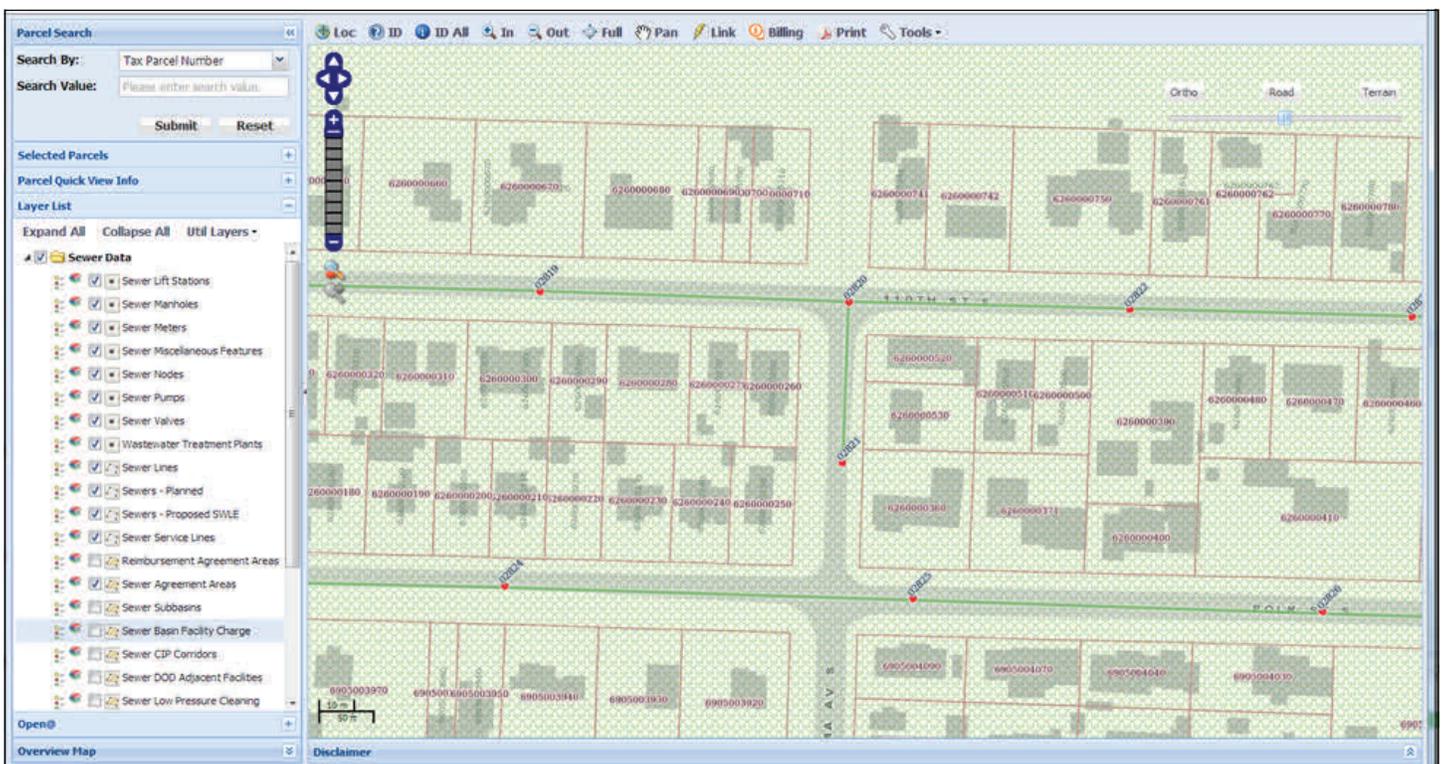
You will enjoy this presentation if you have an interest in surface water, or the low-cost use of GIS software and hardware to address a large-scale task.

A Low-Cost Mobile Solution for Fire Hydrant Inspections: Presented by Greg Heintz

Central Pierce Fire District's hydrant inspection program began as many programs do: in an ad-hoc fashion, which included paper forms, multiple steps in data entry, and non-systematic routing. This presentation will cover their transition to a standardized database, mobile GPS unit for data entry, and determination of inspection routes by geography.

The District was using paper forms to document hydrant maintenance items such as flow pressure and paint condi-

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After: A view from Pierce County's new open source application

2012 Summit Award Winner

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manage to fit everything into your busy schedule and still have time for yourself?

Greg: Sleep is highly over rated. The world is great and the people in it are awesome. But seriously, I try to run almost every day, plus walk to and from my train into work, to have time to just think. I guess I just have a few little routines, like the Sunday newspaper and a pot of coffee, or skiing on my birthday. But maybe I think this question is a little strange. I like my job and I enjoy my URISA volunteer work...so even that is time for me.

Summit: *In 2011 you were voted in as URISA President Elect and are now in your last year Immediate Past President what do you hope to achieve during your tenure?*

Greg: There are three things I committed to work on at the beginning of that period.

First, integrating chapters more fully into URISA. I realize that many people who only attend chapter events don't see the benefit of being part of URISA, the fact that new chapters

are forming and non-URISA state organizations are joining URISA convinces me that this is the way to go. Within five years – I think it will be less time, we will achieve the agreed goal that all chapter members will be URISA members.

Second, extending that idea on integrating chapters, turning URISA into a true international organization is on its way. URISA had its origins here in Washington State 50 years ago as an international organization.

URISA has agreed to achieve 50% membership outside North America within 10 years. We have a new chapter in the UAE and affiliations being pursued in Poland, Taiwan, and elsewhere.

Lastly, URISA's GIS Management Institute will provide true stature for the GIS profession and provide viability for URISA into its future as the leader of the GIS profession. Period.

Summit: *Thank you so much for all you have done. Are there any words of wisdom or insight that you would like to leave us with?*

Greg: Yes – well I don't know if they are wise, but maybe insights. My friend and colleague David DiBiase in a recent ArcNews article suggested that if GIS is a profession, GIS, like any profession needs to have a moral imperative. In that article he asked GIS professionals to each propose a moral imperative for what we do. A moral imperative is not just what we do, but also why we do it and why it is important. Here is my proposal:

The GIS profession uses geographic theory, spatial analysis, and geospatial technology to help society manage the Earth's finite space, with its natural resources and communities, on a just and sustainable basis for the benefit of humanity.

And then, never grow up! Seriously, as we get older we have lots of valuable experiences to share, but more valuable is the realization of how little we really truly know. Never become too certain, do not be afraid to doubt and question what might seem true, and always strive for life-long learning.

Thanks Michelle!

Summit: *It was my pleasure Greg.*

Michelle Lortz, Summit Journalist

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President's Column

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the pieces together and cultivating another great conference for us all. Our keynote speaker is Professor Michael Goodchild who, among many other top honors, is credited with coining the phrase "volunteered geographic information". Michael is a well-respected, much-honored GIS researcher who has a reputation for inspirational keynote addresses. You won't want to miss it. We had a great turnout in presentation abstracts and added an additional track to accommodate all of them. There should be something for everyone's interest during the presentations. And this year we will be again offering the Esri Learning Lab, which was very popular last year. It's your chance to take Esri web classes with Esri staff standing by to answer questions you may have.

The conference web page is updated continuously to include new information. Be sure to check it often. And take a minute to thank our conference coordinators, Heather Glock and Greg Babinski. It really is a tough job that they undertake without pay. In fact *they* pay with sweat, heartburn, and lack of sleep. Be sure to let them know how much you appreciate the conference each year.

This will be my last few months as president of WAURISA. Many thanks to the board for making it a good and productive term. I learned a great deal working with stellar GIS professionals. I harvested a basketful of new skills and ideas from my experience on the board. I encourage you to get involved with the committees and board too!

I look forward to the results of the upcoming election. There was a good level of interest in the vacant board positions. Be sure to vote at the conference for your new board members!

I look forward to seeing you at the conference in a month where you and I can harvest some new ideas, gather creative inspiration, and share recipes for success in the coming year!

Ann Stark, GISP
@StarkAnn
President

WAURISA Conference Preview

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tion, but individual technicians had different ways of denoting the data. The paperwork was brought out to the field, and had to be transcribed into the system back at the office. In addition, technicians visited hydrants in the order of their unique ID number, which did not correspond to a logical route.

Greg Heintz created a streamlined mobile solution which addressed these issues. He set up a database with domains, so the data entry could be done in the field in a consistent fashion. Technicians used their mobile units to check out a current version of the hydrants at the start of the day, collect data, and check in the updates at the end of the day. This solution enabled technicians to visit hydrants by looking at a map book to visually determine which hydrants were nearby, rather than by the order of their ID number, so the inspections could be completed more efficiently. A side benefit of this project was a corrected and completed hydrant dataset. Heintz researched recorded plats and aerial imagery to determine where hydrants might be missing from the dataset, or possibly relocated due to new construction or other factors.

The hardware and software was quite low cost, using a basic Trimble unit (less than \$1000) and ArcPad, which was obtained for less than \$700. The system is straightforward enough that it can be used by computer-literate volunteers and interns who require only a few minutes of training. Finally, the cost by GIS staff has been lowered because no programming is required, and the use of domains has cut down on the costs of QA/QC.

This presentation will appeal to anybody who works with fire departments or hydrant data, people interested in transitioning from paper to digital forms, as well as those looking to streamline processes with a tight budget.



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Reflections on The Summit

By: Greg Babinski, GISP

I first became actively involved with WAURISA in the summer of 2005. I had volunteered to run for the Board once a few years before, but WAURISA was still struggling to do much more than put on a conference every year. I had served on the Board of BAAMA – the Bay Area chapter of URISA – until 1998 when I moved from California to Seattle. One thing that WAURISA has struggled with was its geographic identity. WAURISA is the Washington State Chapter of URISA, but several of us on the Board back in 2005 wondered what we could do to provide viable services outside the Central Puget Sound region.

The question was actually asked, if we cannot define some statewide services, maybe we should call ourselves the Puget Sound Chapter of URISA. There are a lot of reasons why holding our annual conference somewhere between Tacoma and Everett makes a lot of sense. But we toyed with ideas such as workshops or one-day seminars in locations like Bellingham, Vancouver, Olympia, Spokane, or the Tri-Cities. WAURISA by then had a basic website, but it did not really provide much to chapter members in the way of true services.

If you think about what chapters of the Urban and Regional Information Systems Association like WAURISA deliver, it is a venue for people to come together and exchange ideas using the following basic formula:

How I used technology X with data Y for business purposes Z.

Go to a URISA chapter conference, workshop, seminar, or user group meeting and that is the basic formula for what you will learn. That's not bad. It has allowed hundreds of GIS professionals and users within the state to learn from what others have been doing then go back to their own employers and put data and technology to work to deliver value to their agency.

One idea I tossed around the WAURISA Board back then (Rick Lortz, Kristina Evanoff, Steve Schunzel, Jaime Crawford, Effie Moody, John Joseph, Matt Stull, and myself) was a newsletter. But a chapter newsletter is a chore. When I was on the BAAMA Board, being newsletter editor was the worst job. You not only had to drum up articles, but printing and

mailing it out was fraught with all sort of publication and distribution challenges. But a newsletter could be a statewide service of the chapter because it could reach every part of the state and everyone within the state could be solicited for articles.

That summer of 2005 I had driven one of my sons to the High School Cross Country Camp held at White Pass over two or three weeks in July. On the way home, after dropping my son off, I was driving down Highway 12 when Mount Rainier came in to view. I had my little digital camera and I pulled over to shoot a picture. Then it dawned on me that the summit of Mount Rainier is an icon for the state. From the east, west, north and south it can be seen to some degree. It seemed to me too that many of the state's geographic challenges can be perceived from its vantage point...the challenges to the health of Puget Sound and the sprawl of the communities that straddle it. The forestry and agricultural industries that still play a key role in our econo-

(Continued on page 18)

The summit of Mount Rainier is an icon for the state...many of the state's geographic challenges can be perceived from its vantage point.

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Conference at a Glance

WASHINGTON GIS CONFERENCE
MAY 6—8, 2013 LYNNWOOD



Monday	Tuesday	Wednesday
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Registration
8 AM—4 PM

Registration 8 AM—4 PM

Registration 8 AM—1:30 PM

8:30—12:00
Morning Workshops

8:00—10:00
Continental Breakfast
Ballrooms

9:00—10:15
Opening Session
Keynote: Michael F. Goodchild

10:15—10:30
Morning Break

10:30—12:00
Technical Presentations

12:00—1:00
Lunch
Box Lunch

12:00—1:00
Lunch
Buffet Lunch

1:00—4:30
Afternoon Workshops

1:00—2:30
Technical Presentations

2:30—3:00
Afternoon Break

3:00—4:30
Technical Presentations

5:00— ?
Informal dinner—
Rock Woodfired
Pizza & Brewery
4010 196th Street
SW Lynnwood

4:30— 6:00
Vendor Social
Vendor Area

6:30—8:30
Evening Social—
Big E Ales (Ellersick Brewing Co.)
5030 208th St SW, Lynnwood

6:30 AM—Fun Run!

8:00—10:00
Continental Breakfast
Ballrooms

8:30—10:00
Technical Presentations

10:00—10:30
Morning Break

10:30—12:00
Technical Presentations

12:00—1:30
Lunch

BALLOTS DUE

1:30—3:00
Technical Presentations

3:15—4:00
Closing Awards Ceremony
Board Election Results
Door Prizes!

Vendor Exhibits 8:00-6:00 Esri Learning Lab 11-4:30

Vendor Exhibits 8:00-3:00 Esri Learning Lab 8:30—3:00

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Conference Paper Presentation Titles

TITLE	AUTHOR	ORGANIZATION
Using Digital Signatures in Washington State Agencies	Brad Hofman	Snohomish County
Mining Enterprise Memory	Rick Lortz	Lakehaven Utility District
A Divide and Conquer Algorithm for Multi-stop Routing	Zongxiang Yang	Microsoft Corp
URISA is Changing - WAURISA Will Change Too - Open Discussion	Greg Babinski	King County
URISA Launches the GIS Management Institute	Greg Babinski	King County
PntTrax - A Simple, Open Source, Web Application for the Persistence of Field Collected Data	Matt Kenny	RIDOLFI Inc
Low-Cost Mobile Solution for Fire Hydrant Inspections	Greg Heintz	Pierce County GIS
Bridging the CAMA-GIS Gap Using the JavaScript	Masao Matsuoka	Thurston County, Geodata Center
Developing a Surface Water Asset Inventory for Municipalities	Scott Reese	City of Seattle
From Proprietary to Open Source - The Road We Travelled to Renovate an Enterprise GIS System	Xuejin Ruan	Pierce County GIS
Address Repositories - Benefits, Challenges and Future Direction	Jason Matthiessen	Pierce County GIS
Using Hazus for Planning and Emergency Response	Kelly Stone	FEMA Region X
Supercharge your GIS reporting skills with SQL Reporting Services & Reportlab, a python plug-in	Don Burdick	City of Bellingham
Infrastructure Emergency Preparedness Mapbook	Gene Wisemiller	City of Everett Public Works
Visualizing the Impacts of Natural Disasters: Hurricanes Irene & Lee in the Hudson Valley	Collin Hodges	New York Cycling Coalition
Where to Grow? Identifying Suitable Locations for Urban Agriculture in Federal Way, Washington	Christopher Walter	Forterra
Real Life Tales of a Treasure Hunter	Dan Neitzel	City of Bellingham
Census Data Makeover: How King County Spins GIS Gold from ACS Straw	Mary Ullrich	King County
A Component and Tool Based GIS Modeling Approach	Jie Chen	Pierce County - Public Works
Developing a field assessment program using asset management, ArcExplorer& Python programming	Renee Quenneville	Pierce County - Public Works
Provisioning Data for Emergency Preparedness/COOP	Brad Hofman	Snohomish County
Leveraging a Pilot Project for Maximum Benefit in AutoCAD to ArcGIS Migration	Kirsty Burt	Kirsty Burt GIS
Understanding the Dynamic Effects of Flight Patterns on Land Use	Matt Paskus	Matt Paskus
Beyond Data-Driven Pages: .NET-Based Map Series Development	David Howes	David Howes, LLC
The Lone GIS Professional: Running Your Own GIS Business	David Howes	David Howes, LLC
Technology and Policies for Public Safety Addressing	Donna Wendt	Wendt Consulting and GIS Services
Illustrating the land use/transportation link	Chris Behee	City of Bellingham Planning & Community Dev.
Governing the City of Seattle\'s Enterprise GIS	Charlie Spear	Seattle Public Utilities
ModelBuilder Case Study: Associating Traffic Signals to Roads	Eadie Kaltenbacher	Kitsap County
Making an effective map: some simple cartographic principles	Robert Norheim	UW College of the Environment
Proposed USACE Dredge Sampling and Analysis Plan	Craig Hanson	Windward Environmental LLC
GIS Historical Snippets and Predictions for the Future	Donna Wendt	Wendt Consulting and GIS Services
Web-based Decision Support: Community-based Coastal and Marine Spatial Planning for Washington	Matthew Marsik	The Nature Conservancy
Meeting Utility Locate Legislation at Seattle Public Utilities with Web Services	Steve Beimbom	City of Seattle, SPU
Regulatory Compliance Effects on a Utility GIS Data Maintenance Team or How a Small Staff Managed to "Smell Victory"	Elaine Eberly	City of Seattle, SPU
Managing GIS for NG9-1-1	John Joseph	GeoComm
Esri Maps for Office	Scott Moore	Esri
Analysis with ArcGIS	Leah Saunders	Esri
The Path Not Taken; A primer to PostGIS	Robert Bernier	Medio Systems Inc./Operations Dept
An Introduction to Geocortex & Building Esri-based Mobile and WebGIS Applications	James Van Dyk	Latitude Geographics Group Ltd.
Lidargrammetry: Using 3D stereo photogrammetry for lidar interpretation and feature extraction	Doug Smith	David C. Smith & Associates, Inc
Free and Easy Web Mapping	Karsten Vennemann	Terra GIS Ltd
King County GIS Center's GIS Training Express	Greg Babinski - Dennis Higgins	King County
Asset and Infrastructure Mobile Mapping	Chris Aldridge	David Evans and Associates
The Mapping Renaissance: How Progressive Governments are Unlocking the Power of Location	Annie Schwab	Digital Map Products
GIS Modernization Project: Snohomish County Assessor & Sidwell Case Study	Tony Pelletiere	The Sidwell Company



Preliminary Presentation Schedule

Tuesday, May 7

10:30 a.m. - NOON

Asset Management

Mining Enterprise Memory, Rick Lortz, Lakehaven Utility District
Developing a field assessment program using asset management, ArcExplorer and Python programming, Renee Quenneville, Pierce County
Leveraging a Pilot Project for Maximum Benefit in AutoCAD to ArcGIS Migration, Kirsty Burt GIS

GIS for Addressing I

Managing GIS for NG9-1-1, John Joseph, GeoComm
Technology and Policies for Public Safety Addressing, Donna Wendt, Wendt Consulting & GIS Services

URISA

URISA is Changing - WAURISA Will Change Too - Open Discussion, Greg Babinski, King County
URISA Launches the GIS Management Institute, Greg Babinski, King County

Technology Track

The Mapping Renaissance: How Progressive Governments are Unlocking the Power of Location, Annie Schwab, Digital Map Products
Free and Easy Web Mapping, Karsten Vennemann, Terra GIS Ltd.

1:00 p.m. - 2:30 p.m.

Enterprise and Federated GIS

From Proprietary to Open Source – The Road We Travelled to Renovate an Enterprise GIS System, Xuejin Ruan, Pierce County
Governing the City of Seattle's Enterprise GIS, Charlie Spear, Seattle Public Utilities
Web-based Decision Support: Community-based Coastal and Marine Spatial Planning for Washington, Matthew Marsik, The Nature Conservancy

Cartography & Map Production

Beyond Data-Driven Pages: .NET-Based Map Series Development, David Howes, LLC
Illustrating the land use/transportation link, Chris Behee, City of Bellingham
Making an effective map: some simple cartographic principles, Robert Norheim, University of Washington College of the Environment

GIS for Addressing II - PANEL

Address Repositories - Benefits, Challenges and Future Direction

Technology Track

Esri Maps for Office, Scott Moore, Esri
GIS in Daily Workflows, Matt Harman, Azteca Cityworks

3:00 p.m. - 4:30 p.m.

GIS Fun

Real Life Tales of a Treasure Hunter, Dan Neitzel, City of Bellingham
GIS Historical Snippets and Predictions for the Future, Donna Wendt, Wendt Consulting & GIS Services

Mobile GIS

PntTrax - A Simple, Open Source, Web Application for the Persistence of Field Collected Data, Matt Kenny, Ridolfi, Inc.
Low-Cost Mobile Solution for Fire Hydrant Inspections, Greg Heintz, Pierce County
Developing a Surface Water Asset Inventory for Municipalities, Scott Reese, City of Seattle

The Business of GIS: PANEL

The Lone GIS Professional: Running Your Own GIS Business

Technology Track

GIS Modernization Project: Snohomish County Assessor & Sidwell Case Study, Tony Pelletiere, The Sidwell Company
The Path Not Taken; A primer to PostGIS, Robert Bermier, Earth Economics



Preliminary Presentation Schedule

Wednesday, May 8

8:30 a.m. - 10:00 a.m.

Data Development I

Census Data Makeover: How King County Spins GIS Gold from ACS Straw, Mary Ullrich, King County
ModelBuilder Case Study: Associating Traffic Signals to Roads, Eadie Kaltenbacher, Kitsap County
Proposed USACE Dredge Sampling and Analysis Plan, Craig Hanson, Windward Environmental LLC

GIS for Landuse Planning

Where to Grow? Identifying Suitable Locations for Urban Agriculture in Federal Way, Washington, Christopher Walter, Forterra
A Component and Tool Based GIS Modeling Approach, Jie Chen, Pierce County
Understanding the Dynamic Effects of Flight Patterns on Land use, Matt Paskus

FEMA HAZUS Workshop

Using Hazus for Planning and Emergency Response, Kelly Stone, FEMA Region X

Technology Track

King County GIS Center's GIS Training Express, Dennis Higgins, King County
An Introduction to Geocortex and Building Esri-Based Mobile and WebGIS Applications, James Van Dyk, Latitude Geographics

10:30 a.m. - NOON

Business Process Improvement

Using Digital Signatures in Washington State Agencies, Brad Hofman, Snohomish County
Meeting Utility Locate Legislation at Seattle Public Utilities with Web Services, Steve Beimborn, Seattle Public Utilities

GIS Student Project Competition

Richard "Dick" Thomas Memorial Student Presentation Competition

Technology Track

Finding Patterns and Relationships using ArcGIS Online, Leah Saunders, Esri
Mapping & GIS: Field To Finish, Mark Congdon, GeoLine, Inc.

GIS Project headaches: Whoops – we won't be doing that again!

GIS Project Headaches/Lightning Talk: Fiber Optic Chasing, Dorrel Dickson, Tulalip Tribes
GIS Project Headaches/Lightning Talk: The JAMP Chronicles in Three Short Episodes, Karl Johansen, Port Madison GIS
A Short History of Disruption (Please Turn on Your Cell Phones), Greg Babinski, King County

1:30 p.m. - 3:00 p.m.

Data Development II

A Divide and Conquer Algorithm for Multi-stop Routing, Zongxiang Yang, Microsoft Corp.
Bridging the CAMA-GIS Gap Using the JavaScript, Masao Matsuoka, Thurston County

GIS Reporting and Compliance

Regulatory Compliance Effects on a Utility GIS Data Maintenance Team, Elaine Eberly, Seattle Public Utilities
Supercharge your GIS reporting skills with SQL Reporting Services and Reportlab, a python plug-in, Don Burdick, City of Bellingham

GIS Disaster Preparedness and Response

Infrastructure Emergency Preparedness Mapbook, Gene Wisemiller, City of Everett
Visualizing the Impacts of Natural Disasters: Hurricanes Irene & Lee in the Hudson Valley, Collin Hodges, New York Bicycling Coalition
Provisioning Data For Emergency Preparedness/COOP, Brad Hofman, Snohomish County

Technology Track

Asset and Infrastructure Mobile Mapping, Chris Aldridge, David Evans & Associates
Lidargrammetry: Using 3D stereo photogrammetry for lidar interpretation and feature extraction, Doug Smith, David C. Smith & Associates

Reflections on The Summit

(Continued from page 13)

my. The geographic choke points that create challenges for our transportation networks. The list goes on. Within maybe 30 minutes, the idea of naming the WAURISA newsletter 'The Summit' came to me. The following week I mocked up the first page and made a proposal to the Board...and because I volunteered to do the work, I got the go ahead.

My hope was for a quarterly publication (the BAAMA newsletter came out every two months and that seem too often). The BAAMA newsletter was just two or four pages, and I thought four pages every issue would be fine. To kick off the first issue I got Rick Lortz to pen the first President's column. I wrote a little piece introducing readers to the new Summit. Stearns Wood from Lewis County wrote an article on their GIS program. George Horning from King County wrote an article about GIS services for schools and I did a recap of the 2005 WAURISA Conference in Tukwila. We did not want the hassle or expense of mailing newsletter out so I opted to create a PDF that would be emailed to everyone on the chapter mailing list. This not only eliminated cost but speeded up the process of getting the finished product to end users.

I told the Board back then that if the run of the Summit lasted just 4-6 issues, that would be doing pretty good. Well, the Summit has done better than that. With 30 issues the Summit is now into its eighth year of publication. And we've never looked back at an issue of just four pages. During the first two years, all issues after the first were 12 or 16 pages. Since then, issues in the range of 18 or 20 pages have been the norm. Almost 500 pages have now been published.

And soliciting articles has been somewhat easier than I originally imagined. New features have been added, including an editorial each issue, WAURISA Volunteer profiles, a 'public maps in Washington' photo, literary corner, and lots of public announcements. There has been good representation from across the state too. Some things I wish we had more of, including letters to the editor or opinion essays. Also the 'Jobs in Washington' and 'Looking for Employment' features have been under-utilized.

The Summit has also developed a cadre of volunteers including Effie Moody, Michelle Lortz, Whitney Bowerman, and Eadie Kaltenbacher. Eadie recently volunteered to take over as Chief Editor of the Summit and I look forward to continued great service to the state under her leadership. But no one person can do it all alone. Whoever you are, wherever you work in the state, I urge you to share your work, your ideas, your successes and your challenges. Write a brief article for the Summit today and send it in to Eadie. We have all benefited from the Summit. We all have a stake in its continued and future success.

Greg Babinski is the Finance & Marketing Manager for the King County GIS Center. He served several years on the WAURISA Board and he is finishing 6 years on the URISA Board, currently as URISA Past-President.

Literary Corner

"Most villanously; like a pedant that keeps a school i' the church. I have dogged him, like his murderer. He does obey every point of the letter that I dropped to betray him: he does smile his face into more lines than is in the new map with the augmentation of the Indies: you have not seen such a thing as 'tis. I can hardly forbear hurling things at him. I know my lady will strike him: if she do, he'll smile and take't for a great favour."

-Maria, in Twelfth Night, by Shakespeare

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Editorial

By: Eadie Kaltenbacher, GISP

This 30th issue of *The Summit* is a landmark in two important ways. First of all, it is wonderful that there is enough enthusiasm about GIS in Washington to generate 30 issues of a newsletter dedicated to the field. Greg Babinski started *The Summit* in 2005 with the goal of producing a handful of issues and seeing if there was any interest. Eight years later, it is still going strong! Secondly, this issue marks a change in leadership of *The Summit*.

Let me introduce myself. My name is Eadie Kaltenbacher, and I am excited to be taking over as Editor-in-Chief of *The Summit*. I have been in the field of GIS for ten years, with half of that in Washington State. My background is in biology, agriculture, mineral resources, and local government. I have always loved reading and writing, and began writing for *The Summit* in 2008.

When Greg asked if I would be interested in taking over *The Summit*, I decided to accept the challenge because I believe in its value to the GIS community, and I am willing to put forth the effort necessary to make it a success. You may have even noticed I gave the design a makeover for the occasion.

Public Maps in Washington

While shopping for his newest hi-tech toy, Greg Babinski noticed this iconic flooring at the entrance to the Lynnwood Best Buy store.



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

I want to know what common problems we are facing, and what solutions might benefit the group.

My primary goal for *The Summit* is to make it a reflection of the professionals, students, and volunteers that make up the GIS community in Washington State. I am interested in big-picture ideas, but with a focus on how they apply to our local community. I want to keep up-to-date on the local governmental infrastructure for GIS, and I want to know what private companies are innovating. I want to know what common problems we are facing, and what solutions might benefit the group.

As a natural introvert, I believe my biggest challenge will be maintaining the energy of the contributors.

Therefore, I ask all you readers who have thus far been enjoying the high-quality content of this newsletter to take a little time to think about how you might contribute. Perhaps you have heard about an interesting GIS project or event and would like to learn more about it. Perhaps you yourself are involved in such a project or technique. Perhaps you have met someone who has a unique perspective on GIS. These are all potential articles! I look forward to hearing your ideas and working with you to get them published.

I would like to thank Greg for his many years of leading *The Summit*. I encourage you to read Michelle Lortz's "2012 Summit Award Winner" article to learn more about his many contributions to GIS in Washington State, as well as nationally and internationally, and to the profession in general. And Greg, thank you for putting your trust in me to carry *The Summit* forward.

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

Chief Editor: Eadie Kaltenbacher

Contributing Editors: Greg Babinski, Effie Moody, Holly Glaser, Dwight Barry, Collene Gaolach

Interview Editor: Michelle Lortz

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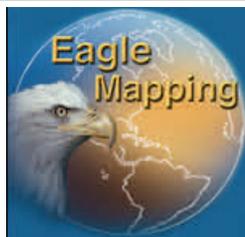


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<http://www.photogrammetry.com/ASPRS-PSR/>

Cascadia Users of Geospatial Open Source

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

Contact Karsten Venneman at: karsten@terraxis.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_mtg.htm

Southeast Washington/Northwest Oregon GIS User Group

For more information, see: <http://web03.pocketinet.com/~sewa-neor-gis/sewa-neor-gis.org/index.html>

Washington Geographic Information Council (WAGIC)

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Washington Hazus Users Group

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

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

To have your GIS-related group or event listed in future issues of *The Summit*, notify the editor at: Summit@waurisa.org.

To be added to *The Summit* mailing list, contact:

Marketing@WAURISA.org

Back issues of *The Summit* are available at:

<http://waurisa.org/thesummit/>

Interested in volunteering your time to help WAURISA? Contact Don Burdick or any Board member listed to the right.



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