



THE SUMMIT

News From and For the Washington GIS Community

Washington GIS Conference 2017—President’s Message

By: Joshua Greenberg, Senior GIS/Remote Sensing Analyst, Skagit County, WAURISA President

Spring is here. Not sure if you can tell but that was said with jubilation as we certainly endured a cold and wet winter. In fact, the National Weather Service in Seattle reported that it was the wettest winter in Seattle history. As we begin the slow transition through spring towards summer, once again the tulips in Skagit County have returned to greet us along the way. Another annual springtime event that I look forward to is the annual Washington GIS conference. It’s shaping up to be one of the best years ever as a large number of volunteers are busy putting on the final touches.

The Washington GIS conference is the capstone project for Washington URISA and it takes a huge number contributors to pull it all together. It has always an amazing forum by and for, Washington GIS users and I hope you will join us again this year. In keeping with last year’s conference, Tacoma will again play host to the gathering. While we normally switch up locations, we had such an overwhelming positive response to

hosting last year it in Tacoma, we decided to give it another go for 2017. Despite hosting it in the same location two years in a row, this year has some changes to look forward to.

Some of the highlights include two full days, Monday and Tuesday, of pre-conference workshops with five concurrent tracks. My biggest complaint is that it is impossible to be in more than one workshop at a time. In addition, this year will include a URISA certified trainer flying out from Florida to offer a popular asset management course as well as having both

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Skagit Valley Tulips—Photo Credit: Joshua Greenberg

Trauma in a Pictorial Map

By Anton Thomas—Cartography Artist www.antonthomasart.com



Hand Drawn Excerpt of Hispaniola from the work "The North American Continent" by Cartography Artist Anton Thomas

Several months ago, while preparing a commentary on drawing Haiti, a huge 7.8 earthquake rocked the centre of New Zealand. The most powerful quake to hit my home country in nearly a century, it was a reminder that geography is a story of upheaval and change. Mountains cracked and heaved, pulling hundreds of kilometres of coastline straight out of the ocean - along with vast stretches of submarine rock. This new shoreline, birthed in seconds, left immense reserves of shellfish to rot in the sun while landslides smashed a hole in our main national highway. All the lower North and upper South Islands were shaken, including both my hometowns, leaving rattled nerves and condemned buildings. Fortunately, the timing and location led to only two casualties, but the destructive power was breathtaking. I live in Australia now, a continent of seismic calm, but talking to friends and family while watching pictures and analysis come in - it left me considering something wider than the overview I was writing about Haiti. This world would be unrecognisable without destruction and trauma. So, what of trauma in cartography?

Having just drawn earthquake-shattered Haiti around the time of the quake, I'd been considering this question a lot. I was moved to explore this in further depth, with particular focus on two traumatic forces that play a role in Haiti: fire and earthquakes. Today I will present several examples in my work where I've grappled with this problem, and offer thoughts on the traumatic nature of geography and how we might discuss it. So first, why does this present a challenge at all?

Trauma is not evenly spread around the world. Some countries suffer earthquakes, others don't. Some burn, some flood, some freeze. These earthly forces are interwoven with the story of civilization, which too has a profound imbalance of pain: prosperity uplifts some, while poverty restrains others. This can present unique challenges for cartographers, not least those making pictorial maps. When we choose to display trauma while elsewhere beauty flourishes, might this harden existing notions of despair?

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Washington GIS 2017 Conference—President’s Message

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professional trainers and colleagues offering a wide variety of training opportunities. Other offerings include courses in drones and UAV’s, working with linear referencing and geodatabases, practical python, geosimulation and agent based modelling, among other. Keeping with our goal of serving the Washington GIS community, the workshops are offered at prices that are hard to pass up. Workshops and classes are offered ala carte, so you can sign up for half-day sessions in any combination to fill two days as suits your needs. Be sure to check out all the classes and schedules here: <https://wagis2017.sched.com/>

After workshops Monday & Tuesday, the conference will officially be kicked off Wednesday, May 17th by keynote speaker Dr. Monica Stephens. Dr. Stephens’ research integrates methodologies in GIS with social network analysis (SNA) and Big Data. You can read more about her work and her upcoming presentation later in this issue. An additional perk this year is that presenters were able to register for the conference at half price. This is a substantial increase in reward over our past years and we hope demonstrates WAURISA’s desire to reward members who actively contribute.

Another highlight this year is that our ever popular social

will be at the Washington State History Museum. Conference participants will be able to explore the exhibits after hours while discussing their most pressing GIS issues over a drink.

In closing, this will be my last conference as WAURISA President. My term comes to an end on the last day of the conference. It is a bitter sweet time since I enjoyed working with and meeting so many amazing GIS people from around the state and beyond. I look forward to seeing you at the conference as we share, celebrate and learn about all things GIS. Thank you for the opportunity to serve as WAURISA President and I look forward to continue working with all of you into the future.

Sincerely,

Joshua Greenberg

UPCOMING SUMMIT DEADLINES

Submit articles to *The Summit* for publication by:

	Summer Issue	Fall Issue
First Draft (optional)	6/15/2017	9/15/2017
Final Draft	6/22/2017	9/22/2017



Trauma in a Pictorial Map

(Continued from page 2)

Focusing on the beauty of the world is compelling, not merely because we want maps and art to be beautiful, but because cartography is critical in how the world is viewed. Acknowledging trauma can deepen shadows that already depress places and people that deserve the dignity of beauty. But life is not utopia. Rather than decorate the world, I'd like to engage with it. First and foremost a cartographer relies on data, and data has a way of encouraging complexity.

In creating pictorial maps, the temptation to focus solely on idealistic content is strong. However, beauty is not a matter of good or bad. Truth has a beauty that tells a more interesting and relatable story than any utopia. Even in regions with far more wealth than Haiti I have irritated locals (who are justified in feeling this way) - by drawing smog-belching factories, open-pit mines and grim oil refineries. In parts of Mexico ravaged by cartels I've drawn assault rifles and opium poppies. Prince William Sound in Alaska has the sinking Exxon Valdez spilling oil through its waters. In Bhopal, India, I left the cityscape entirely without colour to emphasise the toxic legacy of the Union Carbide disaster. These are reminders of real pain, and I don't blame residents of such areas if they dislike my depiction. No one wants their home defined by trauma.

After all, we connect with our land through much more than a lens of despair and disaster. Yet we're also unlikely to view it as a sunny brochure of attractions and regional



ChristChurch Cathedral damage in 2011

iconography. Some places are impossible to imagine without the changes brought on from recent trauma. Port-au-Prince, Haiti is one of those places. To draw this shattered city I settled on a method I used on my first major project: [South Asia/Australasia](#).

To draw this shattered city, I settled on a method I used back in my first major project: South Asia/Australasia.

Christchurch, New Zealand, was devastated by a violent 6.3 in February 2011. 185 people died as many buildings in the city collapsed, huge boulders barrelled down the hills, and liquefaction turned concrete to slush. The most iconic landmark and symbol of the city, the ChristChurch Cathedral,

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Photo of Hispaniola & Cuba from "The North American Continent" by Anton Thomas

Finding Great Trails and Helpful Search & Rescue Applications

By: Miranda Brewer, GISP, GIS Specialist, King County Sheriff's Office/RCECC

As the saying goes, April showers bring May flowers. The spring months bring something else too, a great opportunity to go hiking! You're less likely to encounter snow, and in many places, it's still rainy enough to keep the crowds away and the parking lot accessible. It's also long before wildland fire season. When it comes to ensuring a successful hike, a little preparation can go a long way. I'm going to cover a few online resources to help you find a suitable trail, how to stay safe while hiking, and how to be found should an emergency occur

Washington State is home to many trails of various lengths and levels of difficulty. In King County alone, there are 175 miles of regional trails and 215 miles of backcountry trails. They are available for viewing in [TrailFinder](#), an easy to use mobile-friendly app. Just click or tap on a trail to determine its length, surface type, and which areas of the county it passes through. Pair TrailFinder with the Washington Trails Association [hike finder map](#) and you will have a good idea of what to expect on most trails in the county.

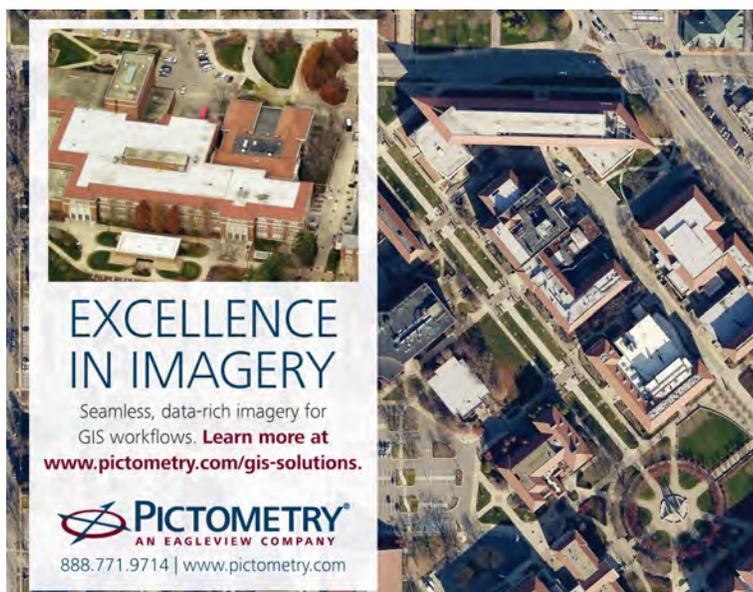
(<http://gismaps.kingcounty.gov/TrailFinder/>)

While not quite as interactive, the National Parks Service has a map of Olympic National Park that shows the major trails, camp sites, and peaks (<https://www.nps.gov/olymp/planyourvisit/maps.htm>). This map is good for general planning purposes, but a more detailed topographic map is recom-

mended for hiking and are available from a variety of public and private sources. The U.S. Department of Agriculture Forest Service's geodata clearinghouse offers a series of quadrangle maps called FSTopo. These are freely available as geo-enabled PDFs or GeoTiffs at <https://data.fs.usda.gov/geodata/rastergateway/states-regions/states.php>. So whether you're looking to hike near Mt. St. Helens in the Gifford Pinchot National Forest or head east of the Cascades to the Colville National Forest, there is a good chance you will find the map you need. Pair these with the [Avenza Maps App](#) on your smartphone and you've got a backcountry GPS unit ready to go! Another great resource for topographic maps is Gaia GPS. This application isn't free, but it might be worth the cost if you're an avid hiker and are looking for a reliable alternative to paper maps or guidebooks. Download the area you are interested in prior to hitting the trail. You will find a wide variety of detailed topographic and street maps. There are options for track routing, navigation, access to way points, and more.

Google Maps also offers offline maps. You can download areas and utilize them offline if you know you will be somewhere where the Internet is sluggish or you do not have a data connection. Find more detailed instructions at <https://support.google.com/maps/answer/6291838>. The quality for hiking might be limited to how much data Google knows about the

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Trauma in a Pictorial Map

(Continued from page 4)

was toppled. As is the case with symbols, its destruction was symbolic too - the crumbled church came to symbolize an earthquake that changed a city forever. I drew it lightly with a faint aura to make it somewhat ghostly, but ensured it was as prominent as if the building were still standing. A crane rising from the broken skyline symbolises the rebuild, while the deference paid to the cathedral is to respect both trauma *and* the spirit.

Hard copy maps will always be time stamps. Borders change, forests burn, new landmarks are built while old ones crumble. Port-au-Prince, like Christchurch, required addressing an earthquake that stripped it of landmarks and thus much of its identity. As the imbalance of trauma in the human story is pervasive in Haiti, their quake was much more deadly. On January 12, 2010, a shallow 7.0 struck Port-au-Prince. Centred only 25km west of the city, it turned dense hillside slums into landslides of rubble and bodies, as up to 70% of the buildings in the city collapsed. The final death toll will never be known, but estimates run as high as 200,000. Among the deadliest quakes in recorded history, it will take much more than seven years for its terrible legacy to abate.

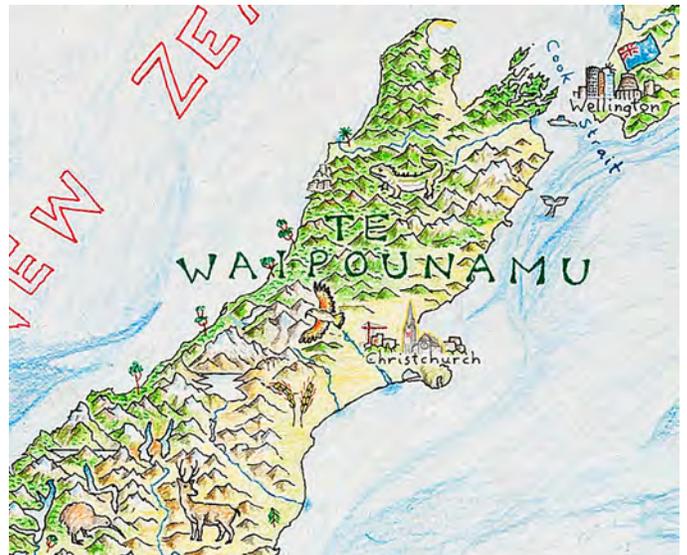
It was the confluence of many other traumas that made the earthquake so deadly. The poorest country in all the Americas, Haiti has suffered a long history of political instability and unrest. This turmoil at the top has played no small role in another example of physical trauma - and one equally unavoidable in cartographic depiction. In less than a century, the large majority of its forests have been burned and felled, wreaking havoc. Rivers are either dry or flooding, topsoil has made way for bedrock, and the northwest is now home to the largest desert in the Caribbean. Less than 2% of its original forests remain, with only a small pocket to be found at Pic Macaya in the far west. The Dominican Republic, Haiti's wealthier, healthier neighbour to the east, has had a very different history with deforestation. The border they share is one of the most disparate in the world. Matching exactly what one can see from space, I've ensured the colours on each side make this clear.

60% of Haiti's energy comes from coal. This is central to the loss of forest, so I have drawn burning coal in the north-

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Excerpt from piece "The North American Continent" by Anton Thomas



Excerpt from piece "South Asia and Australasia" by Anton Thomas



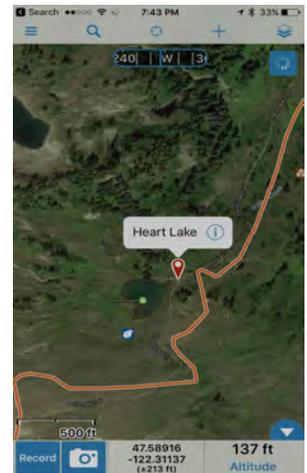
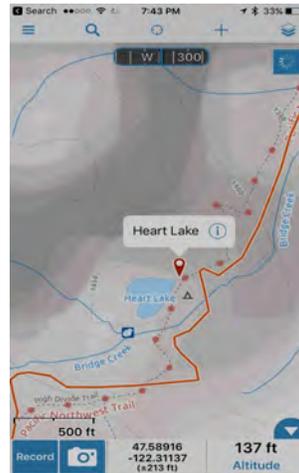
Finding Great Trails and Helpful Search & Rescue Applications

(Continued from page 5)

trails.

Finding the perfect trail to suit your desires and abilities isn't difficult given all of these publically-available tools. And if you're venturing out, you need to know where you're going and be familiar with landmarks and places nearby. But what happens if you get lost, someone needs medical attention, or a dangerous situation prevents you from proceeding safely? In these situations time is of the essence, and relaying your precise location to emergency responders could be lifesaving. There are numerous search & rescue tools in existence to aid rescuers in their efforts. But before you even leave your living room, you can increase the likelihood of being found quickly on a remote trail if the unthinkable were to occur. On your smart phone, navigate to www.FindMeSAR.com and give permission for the browser to use location services. Through a coding technique called appache, FindMeSAR will now be functional offline. The

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Screenshots from Gaia mobile

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North American Continent
Progress as of 27 November 2016
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Partial completion of "The North American Continent" by Anton Thomas

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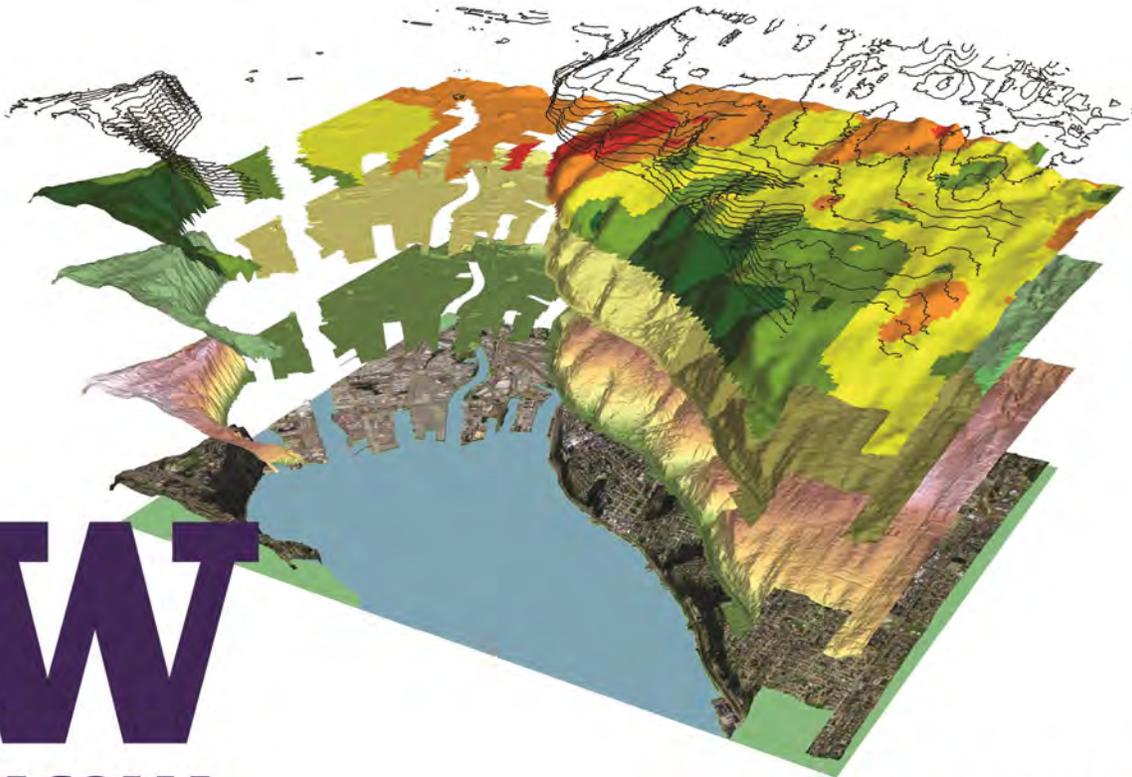
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Finding Great Trails and Helpful Search & Rescue Applications

By: Miranda Brewer, GISP, GIS Specialist, King County Sheriff's Office/RCECC

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app will continuously request the user's location from the API. "Next format" allows the user to cycle through four coordinate formats. The coordinates and accuracy can now be shared. There is also an option to "Display map" and select base maps in various formats. FindMeSAR is developed by Joseph Elfelt and more information can be found at <https://findmesar.com/p/911-wireless-location-accuracy.html>.

YourLo.ca/tion is another simple mechanism for communicating or requesting location. A 911 operator, for example, could use "free" mode in four steps: 1) Go to <http://YourLo.ca/tion> and generate a URL. 2) Text the URL to the lost person. 3) Wait for the webpage to load and determine the lost person's location. 4) Check email for the message showing the location.

SARLOC, CellGPS, and Most Likely Area are other resources that might be worth investigating, and talented developers

are often building upon existing apps and making vital improvements. All situations are different, and depending on the particulars of a circumstance, one app may be more useful than another.

Hiking is a great way to exercise and enjoy Washington's great outdoors. Remember to pack water, snacks, a source of light, and layers of clothing in case your hike becomes longer than anticipated. Always tell a friend or family member where you're going and when you plan to return. Avoid becoming a distressed hiker by respecting your own ability and taking trail conditions into consideration. Take advantage of the many maps and apps at your disposal, and happy hiking!

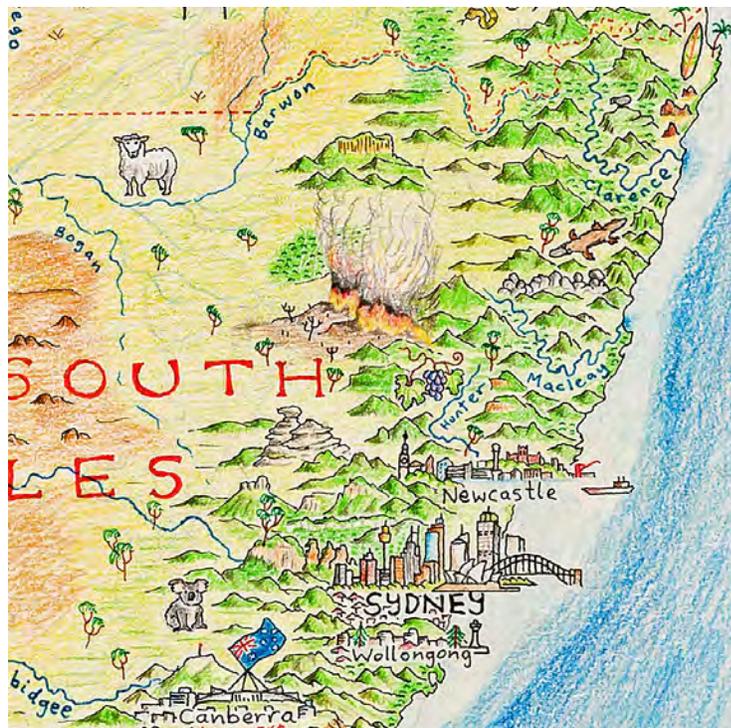
Trauma in a Pictorial Map

(Continued from page 10)

2009 Black Saturday fires sadly remind us, but it is in harmony with the Australian biome. So, even within the same phenomena, the opacity of trauma and the diversity of geography present very different tales.

As the eucalypt tells us, fire is rebirth. As the tropical hardwood tells us, fire is destruction. Avoiding trauma in geography is to avoid the very forces that shape our world. Acknowledging this is critical in my view; even if it may remind some of very real hardship and danger.

Anton Thomas is a Cartographic Artist and resides in Melbourne, Australia. For more on his work or to order prints, visit: <http://www.antonthomasart.com/>



Excerpt from now completed "South Asia & Australia" by Anton Thomas

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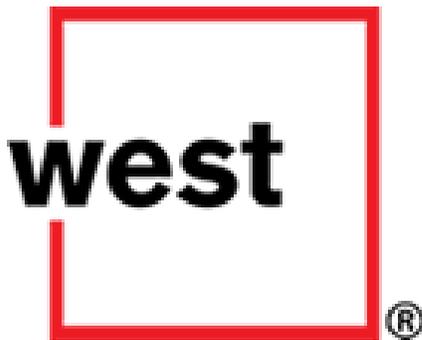
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For more information, please contact:

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More is Better—ArcBruTile, a Basemap Add-in for ArcMap

By: Jacob Tully, GIS Coordinator, Swinomish Indian Tribal Community, The Summit Editor & WAURISA Board Member

ArcBruTile is a tiling basemap add-in for ArcMap that brings together a variety of basemaps not found in the default ArcMap choices. From the [ArcBruTile GitHub page](#), “ArcBruTile also solves the projections problem: all tiles are transformed on the fly to the desired projection if needed. ArcBruTile makes it very easy to combine data with different projections.” Having used it myself now for over a year, I can personally attest that this statement is true and correct, and that it’s extremely easy to both install and use. It taps into webmap services that are often more responsive, and in some instances, more useful than the default options presented to you in the default ESRI basemap options. You won’t get a piece of cartographic brilliance with ArcBruTile, but you will definitely get information you can use to enhance your maps. It’s not a tool to create a great print product, but it is a great tool to pull up numerous basemap styles from some of the most popular tiling services to generate ideas and content for your own more cartographically advanced projects. It also supports the [Stamen Design watercolor basemap](#). I would consider installing it just to get that with a few clicks.

What ArcBruTile may lack, namely higher resolution tiles (which is of no fault of its own) it more than makes up with its ease of use. You can find ArcBruTile release 8.0 on GitHub for use with ArcMap versions 10.1-10.5. The latest release supports numerous basemap services including but not limited to: Baidu, Bing, CartoDB, Mapbox, OpenStreetMap, OpenWeatherMap, Stamen and others. I reached ArcBruTile developer Bert Temme in the Netherlands via Google Hangouts to hear about the inspiration for the add-in.

Bert began his career at ESRI in the Netherlands, and after eight years moved onto work for the Dutch company Geodan where he found himself working with [BruTile](#), a C# open source library for accessing tile services. This was back in the bad old days of ArcMap 9.3 which didn’t natively support web basemap services, and Bert had the idea of combing the BruTile library with ArcMap’s capabilities. As Bert told me, “ArcMap was always missing one piece, you’d add a

shapefile, but you needed references, especially to determine whether or not there were projection issues.” Thus the project was born.

Bert opened his effort up to the world by posting the project on Codeplex, and eventually moved it over to GitHub. Bert started the project by offering OpenStreetMap, but after a few years of tweaks and feedback by contributors, ArcBruTile began to grow, adding support for an increasing number of basemap services. When asked why he chose to keep his project open source, Bert responded he was open to exploring and wanted to see peoples reaction. When asked for advice to those considering a similar project, he cheerfully replied, “Go ahead and do it! Just try, it’s fun to develop and see it grow. Don’t be afraid of programming, to make mistakes.” Certainly good advice for anyone embarking on a project, regardless of your level of experience.

Map services are being added over time, and recently Bert was contacted by the New York City Maps Department. [Their map services](#) are currently in soft-launch but should be available to for use in ArcBruTile soon. If you or your organization is interested in adding your services to the add-in, you can contact Bert via twitter [@berttemme](#) for more information.

For more details or to download ArcBruTile, visit <https://github.com/ArcBruTile/ArcBruTile/>. Currently, Bert is a R&D Engineer at [Geodan](#). Thanks to Bert for taking the time to speak with us.



Screenshot of Stamen Design watercolor basemap in ArcMap



The ArcBruTile version 0.8 Toolbar in ArcMap

Dr. Monica Stephens to Keynote #WAGIS17

By Sarah Meyers, GISP, Systems Engineer Analyst, Peninsula Light Company, WAURISA Board Member & 2017 Washington GIS Conference Chair

We are excited to be joined at this year's Annual Washington GIS conference by Monica Stephens, PhD as our keynote speaker. She is an assistant professor of geoscience at the University of Buffalo in New York where she has taught since 2014. She is interested in social networks, GIS, cartographic visualizations, and the gendered dimensions of Volunteered Geographic Information. She studies the segments of society that are excluded and marginalized by online maps and she examines how crowd sourced data reproduces inequality in places like Open Street Maps and Google Maps. Most recently, she has been looking at how municipal data processes reproduce and marginalize certain populations.

Her address to us will focus on how we can affect social change within communities by changing how we collect, use and view our spatial data. You can check out her blog at www.FloatingSheep.com and learn more about her work. Dr. Stephens has produced maps for Wired Magazine, The Atlantic, and The Guardian in addition to being interviewed by the BBC, CBC, NPR, and NBC. We are excited for Monica to join us this year at #WAGIS17.



Dr. Monica Stephens, Assistant Professor at the University at Buffalo, State University of New York



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GIS User Groups in Washington

ACSM – Washington State Section

www.wss-acsm.org

Cascadia Users of Geospatial Open Source

groups.google.com/group/cugos

Contact [Karsten Venneman](#)

Central Puget Sound GIS User Group

Join Listserve [here](#)

Central Washington GIS User Group

<https://www.linkedin.com/groups?home=&gid=8252704>

Meets the 2nd Wednesday of each month.

Contact [Amanda Taub](#)

Cowlitz-Wahkiakum GIS User Group

Meets the first Wednesday of each month at 3:00 pm at the Cowlitz County Administration Building, general meeting room (GMR-3rd flr), 207 North 4th Ave, Kelso WA (*unless other location is announced*).

Contact [David Wallis](#)

King County GIS User Group

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

www.wvu.edu/huxley/spatial/nwwgis/nwwgis_mtg.htm

Southeast Washington/Northwest Oregon GIS User Group

<http://gisgroup.wordpress.com>

Washington Geographic Information Council (WAGIC)

geography.wa.gov/wagic

Join Listserve [here](#)

Washington Hazus Users Group

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

Contact [Kelly Stone](#)



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The Summit is the newsletter of 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 should be a maximum of 100 words and essays should be limited to 500 words.

Chief Editor: Jacob Tully

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