



AGENDA

October 7th

CDT TIME

8:30-8:40 **Zoom Intro/Housekeeping - Michael Camponovo, UTK**

8:40-8:50 **Presidential Welcome - President Sam Moffat, Woolpert**

8:50-9:30 **KEYNOTE: The Path from GIS Manager to GIS Leader - Adam Carnow, ESRI**

In order to maximize the impact of GIS in your organization, garner executive sponsorship for GIS, and increase your personal career potential, we have got to shift the conversation from technology to capability, and that capability is Location Intelligence (LI). This presentation will review the 5 pillars of LI (Strategy, Organization, Data & Technology, Culture, Literacy), as well as provide real examples of GIS practitioners that are using these techniques to move up in their organizations and increase the value of their GIS program.

9:30-9:35 **5 minute break**

9:35-9:55 **Geospatial Maturity Assessment: How does TN stack up? - Dennis Pedersen, STS-GIS**

The National States Geographic Information Council (NSGIC) has conducted a review of each state's geospatial maturity. Serving as the Tennessee delegate to NSGIC, I was able to participate in the Geospatial Maturity Assessment conducted in 2019 and would like to share the results of the GMA. This will shed some light on the advancements that TN and the TNGIC community have made and compare how TN stacks up with other states in developing various statewide GIS datasets and other geospatial maturity criteria.

9:55-10:15 **Preserving the Cradle of Southern Appalachia; a Collaborative Landscape Conservation Plan for the Greater Chattanooga, TN Region - Charles Mix, University of TN Chattanooga**

The Chattanooga, TN region is nestled in the Tennessee and Hiwassee River basins and spans from the Southern Blue Ridge to the Ridge and Valley/Cumberland Plateau escarpments of the Appalachian Mountains. It is considered a biodiversity hotspot varied in both species' richness and landform diversity. To address conservation concerns due to rapid urban development, a partnership of 20+ plus land trusts that operate in the region was formed to find ways to collaborate in land conservation and restoration. The partnership has established four conservation goals to meet for the region by 2050: protect at least 50% of intact habitat, delist at least 50% of the region's 303d streams, maintain at least 90% of species of greatest conservation need, and

connect people to nature. Approximately 15% of the region is protected while 70% is forested habitat. To spatially identify lands in the region that reflect these goals, a GIS conservation prioritization model was created using weighted suitability analysis using definitive datasets. From this model, 6 unique focus areas in the region were identified for the partnership to focus conservation efforts on. This information is communicated through cartographic products and GIS web tools within a conservation plan outlining conservation threats, strategies, and opportunities that will help guide the work of the partnership. In this evolving project, the partnership aims to leverage the results of these data and GIS tools for fundraising and outreach for landscape conservation of one of the most unique regions in North America.

10:15-10:35 Introduction to PostGIS - Randal Hale, North River Geographic Systems, Inc

PostGIS is a spatial database extender for PostgreSQL. It adds support for geographic objects allowing location queries to be run in SQL. It's also turned into my 2nd favorite of Free and Open Source Software for GIS. Load it on your Server. Load it on your laptop. Use it with QGIS, ESRI, or with anything else. Learn Spatial SQL!

10:35-10:45 10 minute break with door prizes in last 5 minutes

10:45-11:05 Trimble SiteVision: High Accuracy Augmented Reality for your GIS - Cliff Hoeffner, Duncan-Parnell, Inc

Trimble SiteVision improves your ability to visualize and understand 3D geospatial data using High Accuracy Augmented Reality. You can now visualize, interact, and collaborate to understand your above and below ground data in a 3D environment. The days of trying to interpret your data in the field from a 2D aerial view are over!

11:05-11:25 Automated mapping of surface water in the state of Tennessee using Google Earth Engine cloud computing - Qiusheng Wu, University of TN Knoxville

Surface freshwater stored in lakes, wetlands, rivers, and reservoirs is essential for human societies and ecosystem functioning. During the past decades, Earth observation satellites have been collecting remote sensing data that can be used to derive surface water measurements (e.g., height, inundation extent, and storage volume). Google Earth Engine is a free cloud computing platform with a multi-petabyte catalog of satellite imagery and geospatial datasets. This presentation will demonstrate how to use Earth Engine and the geemap Python package for automated mapping of surface water in the state of Tennessee. I will introduce a general workflow that is applicable to many environmental applications, such as large-scale vegetation mapping, urban mapping, and land cover change analysis. Some of the key steps of the workflow include: defining study area, searching GEE data catalog, filtering image collection, creating timelapse

animations, developing algorithms, applying algorithms to timeseries images, visualizing results, and batch-exporting datasets.

11:25-11:30 **Business/Closing** - President Sam Moffat, Woolpert

October 8th

CDT TIME

8:30-8:40 **Zoom Intro/Housekeeping** - Michael Camponovo, UTK

8:40-8:50 **Presidential Welcome** - President Sam Moffat, Woolpert

8:50-9:30 **KEYNOTE: Data Management and GIS in a Pandemic - What else can they throw at us?**
-Jason Duke, USFWS

Trying to lead data management and GIS efforts in a COVID-19 world have proven to be challenging and entertaining, all at the same time. Data quality issues affect our maps, databases, and society as a whole. The presentation starts off with some poor data management humor regarding geography errors in movies and music, and the main presentation involves treating data as the valuable asset we know it is. Expect a few brief notes about how Jason is adapting to office life in D.C. as well.

9:30-9:40 **10 minute break with door prizes in last 5 minutes**

9:40-10:00 **Can you protect your passwords used in Python scripts?** - Jeff Kirchberg, City of Maryville

Many Python scripts require you to store a username and password in plain text, which is readable by anyone who can open the script. Let's talk about some terms you should know before learning about password security.

10:00-10:20 **Cost-Effective Asset Collection and Faster, Better Workflows using 3D Streetscapes** - Daniel Hendren, Cyclomedia

Organizations large and small can benefit from rapid and cost-effective asset collection using a 3D environment created from street-level imagery and terrestrial lidar. Why send people trekking through the streets with GPS units when in a fraction of the time and at significantly reduced costs, artificial and natural intelligence (skilled data extraction analysts) can deliver a geodatabase with your asset locations and attributes? As a bonus item, like those Ginsu knives, you get a 3D streetscape embeddable in GIS, asset management systems, workflow management, websites, CAD and other applications. Use the 3D imagery for additional work such as: DIY asset extractions, ad

hoc measuring, project planning, real property reviews, or checking field conditions for public safety.

10:20-10:40 **Geospatial Happenings at Vanderbilt University - Natalie Robbins, Vanderbilt Univeristy**

At the Vanderbilt Initiative for Interdisciplinary Geospatial Research (VIIGR) and Spatial Analysis Research Lab (SARL) at Vanderbilt University, we are pursuing a diverse range of trans-disciplinary geospatial research collaborations. This presentation will touch on two VIIGR/SARL collaborative projects launched this summer: Parsing the Pandemic and Mapping Self in Society (MaSelfS). Parsing the Pandemic is a public facing web portal showcasing Vanderbilt research efforts focusing on many dimensions of the COVID-19 pandemic. Mapping Self in Society is a multi-university collaboration that leverages an open-source tool called the Interaction Geography Slicer to visualize personal mobility, while creating a framework for critical spatial inquiry of your community and spatial habits. These projects highlight the power of commercial and open-source geospatial tools in the wide breadth of VIIGR and SARL projects.

10:40-10:50 **10 minute break with door prizes in last 5 minutes**

10:50-11:10 **GIS for Rapid COVID-19 Response in Tennessee State Parks - Rachel Schultz TDEC TN State Parks**

When the novel coronavirus hit the Southeastern US, Tennessee State Parks leveraged GIS to act quickly. Using ArcGIS web and desktop products including Survey123, Experience Builder, Dashboards, and ArcGIS Pro, the Parks team mobilized a series of COVID-19 response workflows including risk assessment and PPE tracking. This GIS-based disaster response enabled stakeholders to make informed decisions and the public to stay up-to-date with park closures.

11:10-11:20 **Map Gallery Presentation - Sunny Fleming, ESRI**

11:20-11:30 **Business/Close/Door Prizes - President Sam Moffat, Woolpert**

11:30 **THANKS FOR ATTENDING!!**

THANKS TO ALL OF THE FALL FORUM SPONSORS!

