

Notes from Geospatial/GIS Meetup

May 18, 2021

via Zoom

Attendees: Janet Reyes, facilitator;
Via Zoom: Alex Sainz, Amanda Grey, Candace Paulman, Elizabeth Perez, Gerald Winkel, Jedeliza Ferrater, Jorge Aponte Gomez, Joseph (Jay) Spencer, Kevin Comerford, Luciane Musa, Mario Guevara, Mike Cohen, Pamela Sosa, Shanon Langlie, Ta’Keda Eastern

Announcements

This meeting was recorded; video is available [here](#). The access passcode to view is D%4!A15s

The R’Geospatial Club is hosting a **mapathon** this Friday, May 21, from 12:00 - 4:00 pm. Drop in for any length of time you choose; RSVP [here](#). Participants will receive guidance on how to map buildings from aerial imagery for a location in Zambia. This mapped information is needed for humanitarian purposes.

The David Rumsey Map Center at Stanford is hosting a [presentation](#) about **The Quarantine Atlas** (maps contributed by the general population during the pandemic) on Friday, May 21 at 3:00 pm.

The next presentation in the [AAG GeoEthics Webinar Series](#) will be on Wednesday, May 26 from 1:30 - 3:30 pm. The topic will be “Responsible Use of Spatial Data.” Another presentation on June 1, from 11:00 am - 1:30 pm, will cover labor rights and geospatial data.

The next [GIS in Higher Education Chat](#) on June 1 at 9:00 a.m. will focus on **visualizing multivariate data in ArcGIS**. Recordings and resources from previous presentations can be found on the site.

Janet shared a poll for **potential discussion topics for the June meetup**. The most popular topic was out-of-the-ordinary applications of GIS, followed closely by tools. No other options received votes. Maybe we’ll split the time in June between these two topics.

It’s now possible to register for the Esri [Education Summit](#) (the mornings of June 21-22), and the [User Conference](#) (July 12-15). Both are free, virtual events.

Anyone who has a **non-enterprise account in UCR’s academic ArcGIS Online** organization is reminded that access to those accounts will end after June 18, 2021 (in theory). To transfer contents of an earlier account to your enterprise account (single sign-on with UCR NetID and password), use the [ArcGIS Online Assistant](#), or contact an administrator to help you change ownership of items.

LCM (Library of Congress Magazine) recently had a [special issue](#) on maps.

Jay mentioned the **Science Symposium** he helped coordinate for high school students who used ArcGIS StoryMaps and Esri mapping tools to share their class projects on air quality. The Esri Education Team

helped supply guidance to the students on how to create maps. Jay hopes to expand the program to other high schools in the Inland Empire.

Jorge shared the [link](#) for this important program on **Disaster Response During a Pandemic**, to be held Thursday, May 20 from 9:00 - 12:30 pm.

Map sharing

The [broadband gap](#) mapped to US counties.

[Radio Garden](#) allows you to explore radio stations from around the world.

First-time Attendees

Our first-time attendees who introduced themselves in the chat:

Alex Sainz (the presenter for today) is with GEOinovo Solutions.

Candace Paulman also works for GEOinovo Solutions.

Ta’Keda Eastern started at UCR this spring and is going for a Masters in Environmental Engineering.

Pamela Sosa is from Mexico, and has recently become interested in GIS and its applications to environmental solutions.

To our other first-time attendees: thanks for joining us, and we hope you’ll return in the future!

Presentation

Alex Sainz is a GIS Project Manager with [GEOinovo Solutions](#). His work experience has mostly involved data preparation and standardization, as well as being involved with operation centers during an emergency.

Alex started the presentation by discussing public safety preplans, which are large-scale maps that show features of interest to first responders trying to quickly understand the site layout in an emergency (e.g. unit numbers in multifamily residential complexes, fire hydrants, etc.). Preplans may be created for many types of sites, including residential, commercial, educational or business complexes. Creating this type of resource sometimes involves data conversion: capturing data from other sources (including printed maps or CAD files) and rendering it in a GIS so that key information can be easily understood.

Training is an important component of real-world GIS - for instance, switching from ArcMap to ArcGIS Pro, and updating all the established workflows to the newer technology.

GEOinovo is using [ArcGIS Dashboards](#) to keep track of the status of mapping projects. Dashboards are also helpful for public safety administrators who need an easy-to-digest snapshot of important statistics

as well as a map. One example given was a dashboard of 9-1-1 location and performance metrics, such as comparing the response times and caseloads of fire stations within a district.

Alex shared a slide of a very elaborate geodatabase schema model, years in the making, for the design and implementation of custom GIS solutions (including preplans, mapbooks, dashboards) for public safety.

[NextGen 9-1-1](#) is a huge national undertaking to have local and regional agencies convert, in a standardized manner, street-segment-based emergency response routing to point-based (individual buildings) routing. GEOinovo has done some testing of a client's existing data to assess its formatting and level of accuracy compared to NG911 standards.

[GeoEvents](#) is an ArcGIS Enterprise tool that enables an organization to consume real-time GIS data. Alex showed an example of GeoEvents integrated with Waze data that can give first responders near-real-time information on events like accidents and traffic jams.

Field apps are another tool used in public safety, such as in the inspection of fire hydrants.

The Regional Public Safety Geodatabase (RPSG) program in San Diego County implemented GIS standards for dispatch centers, fire/police agencies, CalFire, and Emergency Operation Centers.

Q&A / Discussion

What kinds of skills would be helpful for students to acquire or emphasize if they are considering getting into public safety GIS work?

- Adaptability; be ready to use many different GIS tools and procedures, and many different data sources from which useful data will be extracted. Be ready to pivot from planned tasks to doing something else, especially in an emergency such as a wildfire.
- Understand the target audience for the geospatial data products you're producing.
- Be prepared to multitask and acquire new skills.
- Learn how to do some programming.

How can this be used for disaster recovery?

- Inspectors use GIS field apps to record their assessment of damage to pass along to insurance companies.
- Others use the apps to help those impacted by property loss on the path to recovery.

Was all the data shown in real time?

Just the data in GeoEvents and external data feeds. The rest is prepared over the span of weeks or months.

Mike Cohen was the GIS Team Leader for San Bernardino County and worked with Sheriffs, County Fire, and Emergency Response teams. He worked with ground photos and aerial imagery in the aftermath of wildfires impacting the mountain communities. Emergency responders used the GIS street network his unit maintained for the county.

GEOinovo welcomes the resumes of students who are interested in working on real-world GIS projects!

Luciane (also from GEOinovo) shared that GIS public safety is a fun, fast-paced field to get into. You get exposed to a variety of tasks, tools, and clients.