

Notes from Geospatial/GIS Meetup

May 12, 2022

via Zoom

Attendees: Janet Reyes, facilitator;
Via Zoom: Alex Sainz, Amos Lee, Assimilating Analytics, Habiba Naqvi, Jorge Aponte Gomez, Kiran Manchikanti, Krystal Boehlert, Luciane Musa, Mary A, Mike Cohen

Announcements

This meeting was recorded; video is available [here](#). The passcode to view is CifH&n8d

On Tuesday June 7 at 9:00 am, the topic for Esri's [GIS in Higher Education Chat](#) will be **Visualizing and Interacting with Temporal Data Using ArcGIS**, involving ArcGIS Online, ArcGIS Pro and ArcGIS JavaScript API.

This summer, the [Education Summit](#) at the Esri User Conference will be held July 9-12 at the San Diego Convention Center. The [User Conference](#) itself will be held from July 11-15, also in person at the Convention Center. A few free passes for UCR affiliates may still be available; if you are interested in obtaining one, it may be advisable to register soon.

Kiran Manchikanti is the founder of [Mapsol](#), a GIS solutions startup company that is supported by UCR's [ExCITE](#) program. Mapsol does consulting work, and has also developed an end-user-friendly product called [fuse.Earth](#). Anyone interested in giving fuse.Earth a try is encouraged to log in using their Gmail account.

Janet said that she'll be the presenter for the June meetup, which will have an in-person element in Rivera Library, Room 140 in addition to being on Zoom.

First-time Attendees

Habiba Naqvi, Kiran Manchikanti, Mary A, and Assimilating Analytics were all first-time attendees.

Welcome, and we hope to see you again!

Presentation

Alex Sainz is a GIS Project Manager at GEOinovo Solutions. Alex presented on **Leveraging GIS to Support Election Redistricting**.

In the United States, district lines for federal (Congress), state, and local government districts are adjusted every ten years following the release of US Census data. The goal is to create population-balanced districts that allow for equal representation, especially to maintain voting influence

of protected-class groups (minority ethnic and language groups). The redistricting process also serves to increase general awareness of community priorities.

The basic building blocks for creating districts, which need to be geographically contiguous, are US Census blocks. The top-priority statistical criteria is population balance. Demographic data on ethnicity and citizenship are also important considerations. The map creators must adhere to applicable federal and state voting laws.

GEOinovo worked on several redistricting projects from the start of 2021 until April 2022. Especially because this was a new type of project for them, GEOinovo staff learned several lessons along the way: public participation is important in the process; those who persisted in participating (residents and politicians) usually were rewarded in achieving their desired outcome; GIS and demographic staff were under relentless scrutiny from the stakeholders; and demographic data and maps are game-changing tools for redistricting if designed and deployed effectively.

Alex demonstrated five tools that GEOinovo deployed in their redistricting work: interactive mapping tools called Districtr and GEODistricts; Survey123 to create a community input map; a dashboard; and an ArcGIS web map.

[Districtr](#) was an online tool used in the City of Menlo Park, CA to allow ordinary citizens to easily create and submit their suggestions for revised city council district maps. As the user selected census blocks to build a hypothetical council district, population counts for the district-in-progress were displayed on the fly. Another facet of the tool allowed the public to create maps of communities that they felt should be contained within one district.

The [GEODistricts](#) tool was spun up very quickly for the remaining redistricting projects GEOinovo had been awarded. GEODistricts had similar features to Districtr, but also allowed for displaying relevant map layers, such as hospital locations when healthcare districts were being formed.

ArcGIS [Survey123](#) was used in a school district redistricting survey on identifying communities of interest. The survey was deployed in three languages. Users had the option for uploading images, of a community landmark for instance.

GEOinovo also deployed a [dashboard](#) for the school district project that showed the balance of the four major ethnic groups within each district (current and proposed), by total population and by citizen-voting-age population. The map on the dashboard included school site locations. Because average citizens and decision-makers who don't routinely look at demographic data tended to be overwhelmed by all the information on the dashboard, its deployment was less than successful in this instance.

Lastly, GEOinovo created a web map for Bay Area Rapid Transit (BART) redistricting. The BART service area is diverse, and is large in both area and total population. The web map included layers depicting census blocks shaded by various ethnic population densities. In keeping the mapping as simple as possible, GEOinovo saw more community engagement and more positive feedback for the map.

Discussion

In response to **Kiran's** questions, Alex said that in these cases the county election officials were the end users of the information. The new districts are being recorded and will be in effect for the November 2022 elections. GEOinovo got involved at the outset by bidding on and being awarded contracts by the various agencies in need of redistricting support.

Amos asked about the role of the demographer compared to the role of the software in deriving the recommended outcomes, acknowledging that everyone brings their implicit and explicit biases to the task, and much depends on the perspectives of "who's in the room" when final decisions are made. Alex responded that California laws contain well-defined criteria to use (such as population balance) in creating districts. Also, the GEOinovo staff make a conscious effort to remain as neutral as possible, even though sometimes the decisions are subjective, with multiple competing priorities to weigh.

Janet asked whether the team had to deal with any deliberately misleading census block information, such as blocks that are totally freeway right-of-way that are shown as having a resident population. Alex said that the California rule regarding counting incarcerated persons as living at their last known address was one unusual circumstance they dealt with. The Census Bureau tries to make it difficult for census block data users to trace census responses back to specific individuals or families.

Amos asked whether information regarding what California did about counting incarcerated people is publicly available. Alex said the process can be found in the [California Statewide Database](#).

Alex is happy to answer additional questions. Contact information: asainz@geoinovo.com

Map sharing

Janet shared the following:

Article on satirical cartography:

<https://bigthink.com/strange-maps/satirical-cartography-9th-avenue-steinberg/>