

Notes from Geospatial/GIS Meetup February 13, 2024

Zoom

Attendees: Janet Reyes, facilitator;

Via Zoom: Andrew Haglund, Bolu Daodu, Luis Barrios, Mike Cohen, Steve Ries

Announcements

This meeting was recorded; video is available [here](#). The passcode to view is WcD.03Bi

[UC Love Data Week](#), running through the end of the week, will include staff from UC ANR presenting on “Drone Data 101: The Data Pipeline” February 14 at 1:00 pm.

[Register](#) for a **University Industry Research Engagement webinar with Microsoft** staff members. The webinar will take place February 14 at 1:00 pm. Cohost Elia Scudiero says that “(t)he Microsoft people will talk about their resources for research in agriculture, with a focus on geospatial data.” The webinar will be recorded.

The [Los Angeles Geospatial Summit](#) will be held at the USC Hotel on Friday, February 23, 2024. This is a great opportunity for students in particular to network. Registration is \$25 for students and is affordably priced for others as well.

[CalGIS 2024](#) is a 3-day event being held in Visalia March 18-20. It will feature “preconference workshops and training, keynote speakers, breakout sessions, networking, and a Solutions Showcase.” Full-time students can register for \$100.

[Time is running out](#) on using **ArcMap**, which goes to mature support on March 1. All ArcMap users should plan to make the switch to ArcGIS Pro (or other GIS software). However, in a recent update that Andrew Haglund from Esri confirmed, Esri has committed to providing universities such as UCR (annual license renewal prior to July 1) with 250 single-use and 250 concurrent-use ArcGIS desktop licenses for FY 2024-25 - but not beyond that. If using a Mac is one of the barriers to utilizing ArcGIS Pro, [this article](#) has information about how to make it work.

The presenter slot for the **meetup in May** has opened up. Let Janet know if you would like to present, have a suggestion for a presenter, or have a discussion topic to propose.

Shared links

Janet stumbled across [StoryMaps](#)[™], a product from Esri for the general public that is very similar to ArcGIS StoryMaps, but outside the ArcGIS Online environment. Andrew pointed out that the two products aren’t interchangeable, and that StoryMaps has a mobile app. The Basic version is free; the Premium version costs \$10/month or \$100/year.

Propaganimals maps: <https://blogs.loc.gov/maps/2024/01/propaganimals/?loclr=eamap>

Presentation

In keeping with the Love Data Week theme, Janet Reyes, the Geospatial Information Librarian at UCR Library, presented on **Working with GIS Data**. She started out by outlining the structure of the vector model vs. raster model, and that vector data has tabular data associated with it. Mesh is another model, often used when the data has a temporal element, such as sequential maps of wind speed and direction.

Next, sources for spatial data and tabular geospatial data were discussed, as well as pointers for structuring the layout of a CSV table so that it can be incorporated successfully into a GIS.

Janet covered common file types for vector data (shapefiles, KML/KMZ, GeoJSON, and many others). Fortunately, there is a lot of interoperability among GIS platforms for ingesting and exporting different file types. Many file types also exist for raster data, including GeoTIFFs and MrSID. Mike shared that MrSID is a file type that can be used in platforms other than GIS, such as those used by engineers and architects. Other file formats include LiDAR, CAD, and multitemporal data types.

Creating metadata about a data set is a best practice generally, including for GIS data. Knowing the who/what/when/where/why/how behind mapped information will help others understand whether this data set will be useful to their objectives. Data sets created using different map projections and coordinate systems may not align if they are brought into a GIS. Many GIS platforms will “reproject on the fly” to make later additions conform to the first data set. That is fine for viewing but not for doing analysis; it’s better to use tools in the GIS to make the projections of different consistent.

Anyone using geospatial data sets created by others should consider various aspects of the quality of the spatial representations, such as completeness of coverage, accuracy of delineations, and minimum feature size depicted. In terms of attributes, considerations include data granularity, timeliness, proportion of null values, and authoritativeness. Those who are creating maps from scratch can assure data quality by carefully considering the structure of the mapping classification, establishing the range of valid values for an attribute if applicable, and determining what would be illogical attribute combinations. For cartographic quality, GIS platforms include settings for snapping features together and checking map topology (such as gap or overlap errors).

Janet concluded the presentation with some tips about data management relating to storage, file and folder naming, versioning, and sensitive data.

A copy of the slide deck can be found [here](#). Contact Janet at janet.reyes@ucr.edu

Discussion

Mike mentioned Adobe files and JPEG 2000 as other file types that can be used in mapping; the latter can be used to create a basemap layer from adjoining images.

Mike also asked about the Drone Data 101 event that is part of Love Data Week. It is online, as is being presented by staffers at UC ANR, which also hosts a drone camp every year.