Dave's Redistricting Application Tutorial

In this assignment, you are required to use DRA 2020, a web application that lets you create, view and analyze congressional and legislative district maps. Your goal is to redistrict the NJ state assembly under the following constraints:

- assign all the precincts to districts so that each district has about the same population
- make sure each district is contiguous (all precincts are connected).

Sign Up to DRA 2020

First, you need to sign up (free) on the web site with your email and a password.

Work in a Group

How to Work in a Group using DRA?

My Maps

Click on My Maps and you can navigate to Published, a list of maps others have published, or Official, a list of current congressional and legislative district maps for every state. You can duplicate existing maps and modify them or upload new ones.

Home Page

Click the logo to navigate to the Home Page. You can click a state on the map or use Pick a State to get to a state page. The state page shows the official congressional map (except for states with only 1 district) and legislative map(s). Click on one to view that map. There are also links to additional information about redistricting in that state.

Create A Map

There are two ways to create your own map: start from an existing map or create a new blank map.

1) To start from an existing map, for example from Official, select a map (using the checkbox), and then click the Duplicate icon. This create a copy of that map and takes you to My Maps, where the copy should be on the top of the list, ready for

you to edit. If you are already viewing an official map, or other map in view-only mode, you can duplicate it from there as well.

2) To create a new blank map, click New Map, which brings up Map Settings. When you pick a state, we'll default the district count to the state's current number of congressional seats and set the target population for each seat. Change them as you wish.Once you pick a state, you'll see the Data Selector open below Map Settings.

Import Map

The most precise format is a precincts assignment file. This is a text file containing a series of lines where each line contains a GEOID20, followed by a comma, followed by a district number or label.The block ID may look like a number but is actually a string — so be careful loading it into tools like Microsoft Excel that automatically convert number-like text into actual numbers and might change the format in ways that can corrupt the file.

Paint Map

See the Map UI Tour. (You can always get back to the tour from Help.) The left and right panels allow you to view dataset details, control the district you're painting, and select various options. The left side of the top bar controls when and what to paint; the right side has tools to analyze and help you complete your map.

Tools for Painting Maps

1. The Colors section (lower left panel) lets you view the map colored by Partisan Lean or various demographics. A gradient color option is available if you prefer.
2. The Details panel (right panel) shows the dataset details of the precinct or county your mouse is hovering over.
3. The Overlays section in the left panel has options to show the background map, county lines, district labels and more, and an Opacity slider.
4. As you get to the last few precincts, you'll likely be looking at the population and deviation (from the target population) columns, tinkering to get as close to the target as possible. Sometimes it's difficult to locate a few small precincts that didn't get painted, or there may be mis-painted precincts that make your districts non-contiguous.The tools Find Unassigned Precincts, which will find and zoom to unassigned precincts, and Find Non-contiguous, which will find and zoom to disconnected portions of each district, will help you find those problem areas.

Strategies

Think about what your goals are. Are you trying to keep certain demographic groups together? Are you trying to make a partisan map? Are you going for compactness or competitiveness or proportionality? Do you want to minimize changes from the current map?

Tools for Analyzing Maps

DRA 2020 has a rich set of tools for evaluating redistricting maps. Click on the links below, to get more details.

- The Statistics command shows basic statistics for each district making it easy to compare them side by side.
- The Analytics command shows a bird's-eye view that rates the map along five key dimensions, along with detail about each dimension is rated.After the ratings diagram above, six sections describe each dimension:
    - Requirements
    - Proportionality
    - Competitiveness
    - Minority Representation
    - Compactness, and
    - Splitting
- When you choose the Advanced tab in DRA 2020, you get in-depth information about the characteristics of the map. There are five sections in this view:
    - Rank-vote graph
    - Seats-votes curve
    - Advanced measures of bias and responsiveness
    - Compactness by district, and
    - Demographic voting analysis

Further Resources:

- Articles by Dave Bradlee on Medium
- Articles by Alec Ramsay on Medium