



## Background

ESRI Districting 10	KAP
Can require administrator privileges	Add-in functionality usable for anyone with access to tools it uses
Learning curve; requires knowledge of geodatabases, workspaces, and more	Use of simplistic, step-by-step form allows novice users access to functionality, opening access to new applications such as grade-school education, news outlets, and more
Code restricted and not provided	Code available for expert users who want enhanced customization
ESRI cannot compare.	Uses cute little rat icon.

## Major Function

- Creates a new field in a shapefile
- Selects polygons from shapefile, then updates the new field with specified values
- Allows user to select certain polygons to add to a “district” and see the fields updated as the selection changes
- User can manually optimize a district to meet specific criteria (in this case, political advantage)

## User Interface

- Step-by-step
- Buttons
- List fields
- Text boxes
- Supercool Icon:



Center for Economic and Political Redistricting Tool (CEPRT 1.0)

**Step 1: Open a Shapefile**

Open Shapefile

**Step 2: Select Relevant Fields**

Shapefile Fields:  Total Population Field:

LetFields  Republican Field:  (Develop for Future Release)

Democrat Field:  (Develop for Future Release)

**Step 3: Add Field to Hold Your Redistricting Values**

Add Field

**Step 4: Create Your Districts**

Number of New Districts Desired:

**Step 5: Modify Your Districts**

Districts:  Population of Selected District:

LetDistricts  Republicans in Selected District:  (Develop for Future Release)

Democrats in Selected District:  (Develop for Future Release)

You have  districts with an ideal per-district population of   
(Rounding will be incorporated in a future release.)

## Data Requirements

- Data must be contained within a shapefile (.shp)
- Data should be areal in nature (polygons) but might work with other types (untested)
- Only numeric fields will show up in the attributes list
- Though intended for political purposes, can find use with other applications
- Example data includes Oregon counties with 2010 Census population data

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  - Provided a great deal of assistance with troubleshooting for this project
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  - Very helpful with the labs, the results of which this project uses a lot of code

## Future Updates

- Party ID text box results
- Save results as new shapefile to expand flexibility
- Allow users to specify other tracking fields (third parties, unaffiliated voters, non-political use)
- Allow symbology changes in the display during district editing, including on-screen labels