Introduction to Choropleth Mapping

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This article is intended to serve as a starting point for anyone trying to create choropleth maps. It outlines the numerous free methods for creating a dynamic map from a given dataset.

Choropleth mapping, or "heat mapping" is a ubiquitous element of our visual centric society. It is a method of visually representing data over an area. The most popular form seen today is the election map, where specific counties and/or states are colored to represent their selection of a candidate. Due to the inherent diversity of the United States, they have become a popular form of visualizing the geographic distribution of sociological data.

Until recently, choropleth mapping has been reserved for entities with large resources, that can spend significant amounts of money for software specifically designed for such mapping. Examples of this are Microsoft's MapPoint or ESRI's ArcGIS. However, with the advent of AJAX and the increasing popularity of publically accessible mapping software like Google Maps and Yahoo Maps, the costs and learning curve associated with choropleth mapping has virtually evaporated. For professors, as well as students, data can now be mapped to create powerful visual statements.

Choropleth mapping in a dynamic AJAX application operates in a very simple manner. Raw coordinates are fed into the application that specifies an overall shape. This shape is then applied with an appropriate color. The most critical elements are obviously the coordinates, and as such, they take up most of the space in mapping files. This problem can be dealt with in two ways: storing coordinates in a database, or storing coordinates in a generated file.

Because many of the following applications use Google Maps, due to the limitations of Google Maps, each of the following applications have their own strengths and weaknesses. They certainly lack the robust functionality of MapPoint or ArcGIS, but for more casual purposes they are well suited.

- Color-It

- Mapeteria

- Many Eyes

- Google Earth Pro

- Yahoo! Pipes Mashup

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