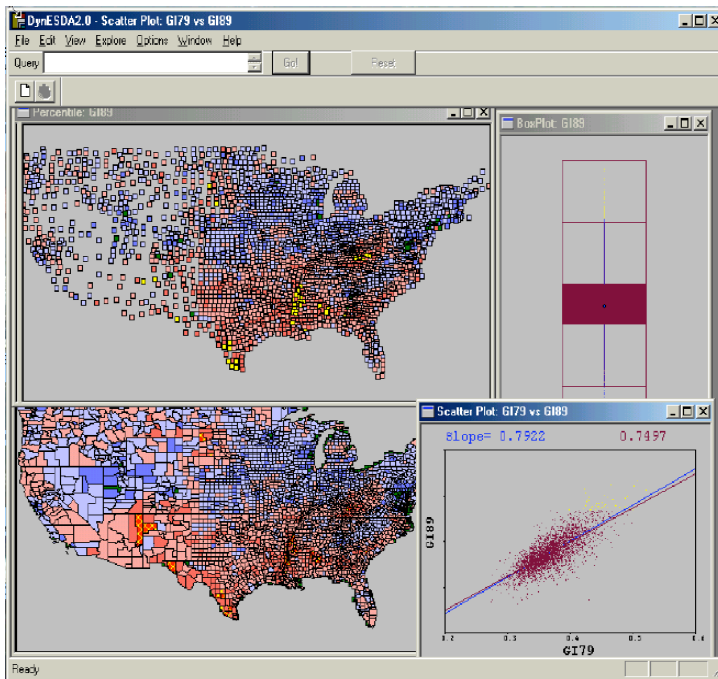


Geographic Visualization (Geovisualization)

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Definition: Geovisualization “integrates approaches from scientific visualization, (exploratory) cartography, image analysis, information visualization, exploratory data analysis (EDA) and GIS to provide theory, methods and tools for the visual exploration, analysis, synthesis and presentation of geospatial data” (MacEachren and Kraak, 2001).

Geovisualization typically involves extensions that have been built on top of conventional GIS packages or stand-alone software because “the ability to handle spatial-temporal data, visualize change, and explore the temporal dimension of spatial data is limited within conventional GIS” (Hernandez, et al., 2004).



Techniques used in geovisualization include animation, 3D scenes, time-based views, schematic views of networks and exploratory spatial data analysis (ESDA). The image at the right is an example of an ESDA application in which maps and graphical plots of the same dataset can be viewed in tandem. In an ESDA environment, the user can “brush” map or graph elements and see the associated elements in other views of the data.

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