GEOSPATIAL INTELLIGENCE
meets
TEXT ANALYTICS

»» Mixing GIS and Text Analytics for Better Insight

Geographic information systems (GIS) are digital technologies for storing, analyzing, and displaying, geographic information. They allow one to reveal the spatial and geographical nature of complex social phenomena through the production of static and dynamic maps. These tools often use data that is quantitative or categorical in nature. They are less well suited for leveraging the richness of information stored in unstructured text data such as interview transcripts, tweets, crime narratives, customer feedback, field notes, or in photographic images.

Computer assisted qualitative data analysis software (CAQDAS) and text analytics techniques have proven more valuable for extracting insightful information from such unstructured sources. They can provide rich details for better understanding complex social phenomena, such as people's perceptions and interpretations, or reveal hidden factors or unexpected connections underlying those phenomena.

Provalis Research's QDA Miner and WordStat provide a unique integration of GIS mapping, qualitative analysis and text analytics features, allowing one to relate unstructured text data with geographic information to create maps, timelines, and other graphic displays to enhance your analysis and presentations. The software is equally adept at utilizing location-based data embedded in text, linked with another source or stored separately from the unstructured text.

PROVALIS
R E S E A R C H

Make full use of geographic information embedded in text and images

It can be very challenging and time-consuming to extract geographic information embedded in text and images to produce comprehensive geographic representations. However, by using QDA Miner's computer assisted features, you can extract references to geographic locations in unstructured text such as names of cities, towns, regions, states, provinces, countries and other geographic locations to create maps. By attaching time tags to text segments or image areas, you can also create timelines to visually present themes or events in a chronological sequence. These features are being used by crime analysts, legal experts, historians, literary scholars, geographers and many others. Here is how it works.

Step 1 - GEOTAGGING

GEOTAG DOCUMENTS
- Manually attach geographic coordinates as well as date and time to text segments.
- Search location from gazetteers or insert coordinates by pasting Google Earth placemarks.

EXTRACT LOCATIONS AND DATES
- Automatically extract from documents all references to locations, dates and times.
- Attach codes with corresponding geographic or time tag to retrieved segments.

IMPORT AND CODE IMAGES
- Import photos in JPEG and PNG as well as images from GIS software along with their coordinates.
- Associate geographic coordinates, dates and times to image areas.
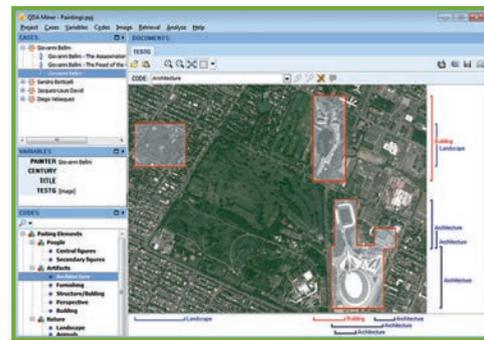
Step 2 - RETRIEVING

RETRIEVE GEOTAGS
- Search and retrieve all geo-tags or time-tags in your entire project.
- Filter on a specific time period or on a distance from a geographic location.

Step 3 - VISUALIZING

DISPLAY GEOTAGS ON A MAP
- Export retrieved geographic locations into KMZ or KML file and display them in Google Earth, ArcView, or ArcGIS.
- Create thematic maps or heatmaps using the integrated GIS Viewer.
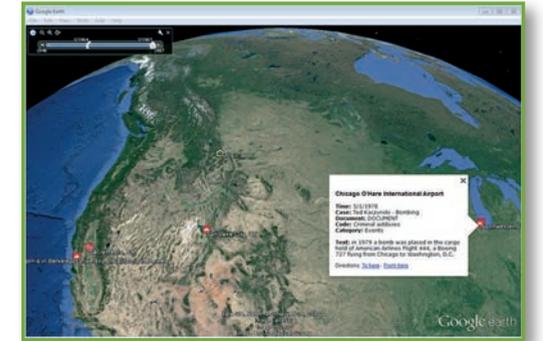
CREATE TIMELINES
- Organize information chronologically by automatically generating timelines from time tags.
- Link back from any timeline marker to the associated text segment or image area.
- Fully customize the position and appearance of time-line annotations.
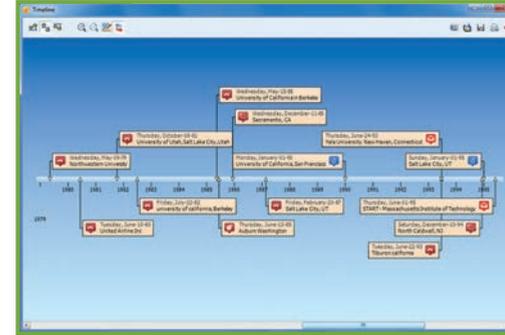
Enhance your research findings through comprehensive mapping

Geographic information associated with one's core research can also be stored or referenced separately as metadata in accompanying fields. WordStat 7 and QDA Miner 5.0 feature a geocoding service to convert city names, postal codes and even IP addresses into latitudes and longitudes. One may then use the GIS mapping and editing module to relate such information to themes, topics, keywords and key phrases automatically extracted or manually coded. One can build maps to display the spatial distribution of themes, identify trends, customer concentrations, crime hotspots, demographic shifts, or any other geographic representation tailored to your research data.

INTERACTIVE PLOT OF DATA POINTS
- Easily create plots of data points from words, phrases, or topics extracted from unstructured text fields.
- Quickly filter data points on categorical, numerical, and date variables or create dynamic range displays and custom animations to easily identify temporal trends, cyclical patterns or relationships to numerical variables.
- Customize and annotate single data points.
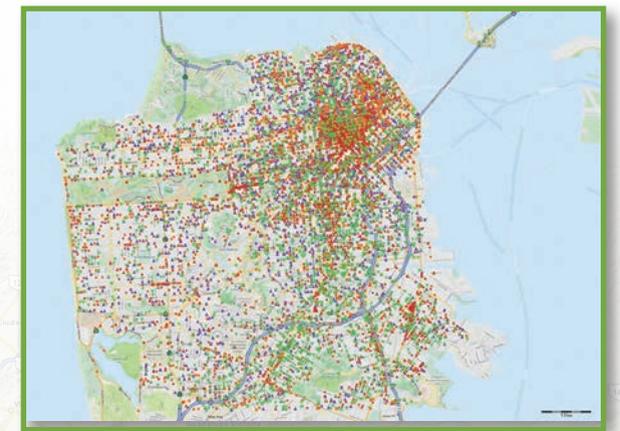
DISTRIBUTION MAPS

- Create layers from various vector file formats and produce choropleth maps to represent point density, demographic information stored in shapefiles, or statistical summaries of numerical values associated with text segments.

- Easily adjust the color range, the number of steps and level of transparency.

HEATMAPS

- Visualize the density of data points with heatmap displays to easily identify customer concentrations, crime hot spots, or disease outbreaks.

- Choose from a wide variety of color ramps or create your own.

- Create heatmaps on all data points or on selected regions.
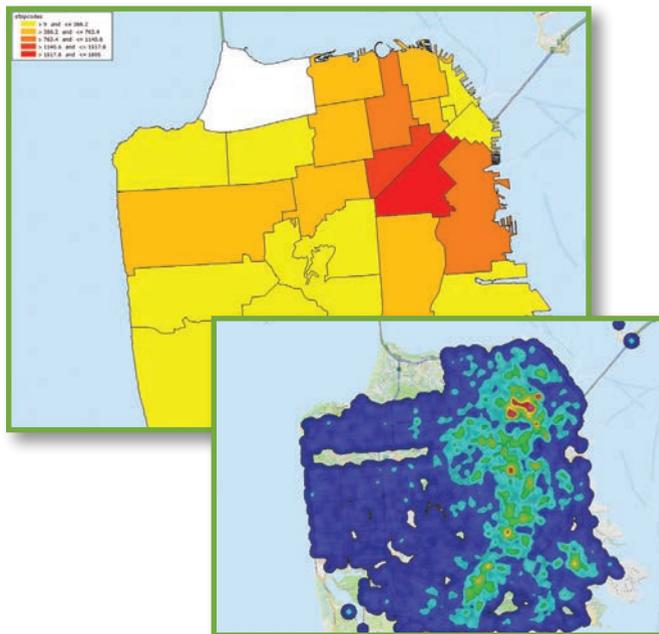
OTHER GIS FEATURES

- Natively opens and displays a wide range of vector, image, grid, and SQL database layer formats, including advanced spatial server geodatabases, WMS, WFS, and WMTS mapping services.

- Comprehensive visual layer property, legend, and scale controls provide for deep customization of the map appearance.

- Create, edit, translate, and export map layers into a number of vector, image, grid, and SQL database formats.

- Support for coordinate systems with on-the-fly layer reprojection between thousands of predefined geographic and projected coordinate systems or any coordinate system defined from 150+ projections and 900+ datums.

- Integrated geocoding of cities, countries, zipcodes, and IP adresses.

- Extract gazetteers from SHP, KML, KMZ, GPX, or from our online geographical database.

Download a trial version at: **provalisresearch.com/trial**

To schedule a web demo or for more information on our products, contact us: TOLL FREE **1 855 355-5252** or **1 514 899-1672**
sales@provalisresearch.com, provalisresearch.com