Data Mining and Mapping Tools

Enhanced Value through Applied Analysis

Integrated Informatics has developed a set of data mining and mapping tools that are designed to make it easier for oil exploration professionals (and others) to get information from corporate data stored in enterprise databases. These tools work as add-ons for ESRI's ArcMap, and connect to corporate databases, both those using ArcSDE and typical relational databases.

The tools work by querying the databases and creating group layers within ArcMap that are customized to work with the business data, including seismic data, well data and land data. The built in querying interface is configured with the database to make it easy to find the data needed. Because it is all integrated with ArcMap, it is very easy to combine this information with any other type of spatial data and create maps, perform analysis, etc.

Combined with the querying and posting tools is a one-to-many labeling engine, which allows labels to be generated based on related tables in which multiple records exist for a single geometry. This is often the case with exploration data, as a single land parcel can participate in multiple agreements, a single well can have many cores, etc.

These tools make it easier and faster to view, map and analyze corporate data, while reducing the headaches involved in sub-setting data and storing and managing data files on hard disks.

Some of the key features of the tools include:

- Users can create layers from defined types (seismic, well and land) using a simple GUI that permits users to filter the data used to generate the layer. Depending on the layer type users have various options available for posting. For example well bore paths can be plotted, as can the top and bottom holes. Cores can be plotted at their true locations along the well bore path, as line events or as point events, or they can be 'stacked' at the top or bottom hole of the well, resulting in a one to many relationship.

The filter allows users to select from a number of attributes and create a query to limit the amount of data that is returned when posting data.

With land and well data, there can often be multiple records related to a single geometry. For example in land data there may be multiple mineral agreements in place. This type of labeling can be handled by the One-to-Many Labeler component of the Data Mining and Mapping tools. The resulting labels integrate seamlessly with the ArcMap labeling functionality and all options for placement, font, style etc. are still available, including Maplex.

This document has provided only a cursory review of the functionality within the Data Mining and Mapping tools, but hopefully gives an idea of the utility that these tools provide.

Put our team to work for you! Our diverse suite of solutions is focused on establishing and enhancing the true value of GIS and applied data management in your organization.

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