

Leveraging a Crime Analysis Database With Enterprise GIS

Many crime and disorder-related questions asked of crime analysts are spatially focused. They require answers with a geographic component, such as an address, an intersection, or a beat; thus a geographic information system (GIS) is needed to answer properly.

Because of the heavy geographic nature of law enforcement operations, a quality crime analysis database is ready for use in a GIS. This is generally accomplished by one or more *coordinate libraries* that translate street addresses to X and Y coordinates. It is recommended that such a coordinate library be part of a comprehensive crime analysis database. With a coordinate library applied to cleaned address data, analysts are not required to engage in the time-consuming and frustrating process of geocoding: They simply display events and other addresses directly using the coordinates assigned by the library.¹ Another option is spatially linking the crime analysis data directly to a GIS server.

The process of linking to a GIS server works best when combined with a comprehensive set of base map data or geographic files managed by a city or county GIS department and provided to analysts through GIS servers. Analysts can link their GIS systems directly to these databases or through intermediate applications such as Microsoft Access or Excel.

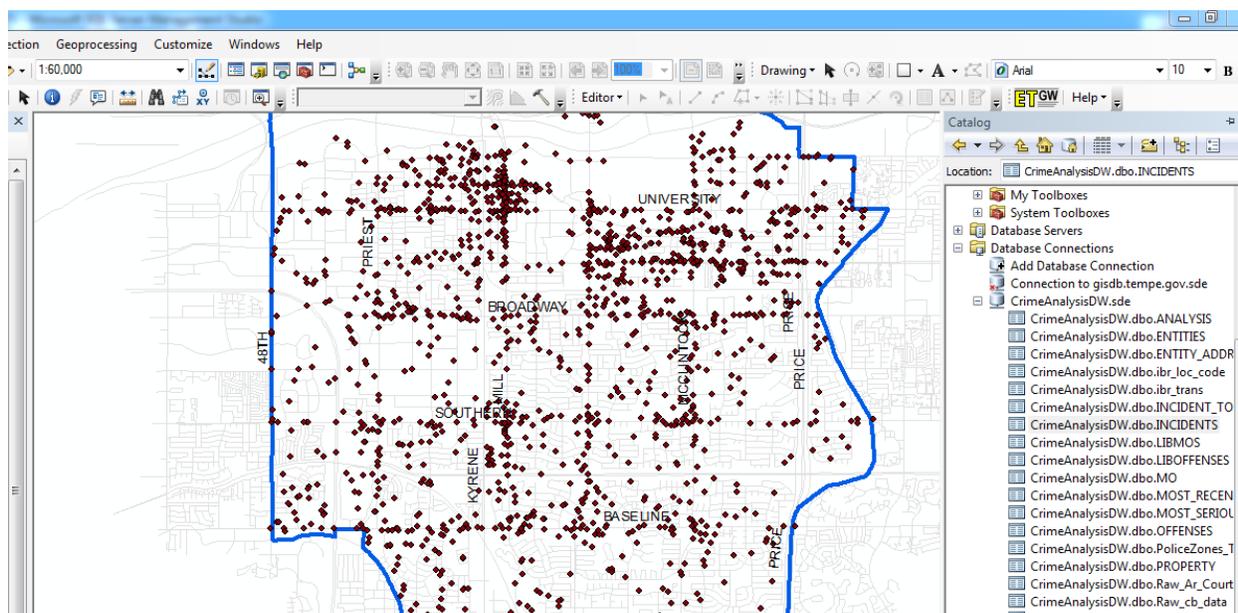


Figure 1: A crime analysis database accessed from a GIS application allows instant display of crime data on a map.

¹ Many police records management systems assign X and Y coordinates automatically to crimes. It is still recommended to have a comprehensive coordinate library in the crime analysis database, since RMS-assigned coordinates are often subject to incompleteness, inaccuracy, failure to change the coordinates when the address is updated, and failure to apply coordinates to all address fields in the database. Maintaining their own coordinate libraries gives analysts greater control over accuracy and precision.