

Safety Data Mart - An Excel 2007/ GIS Integration

Presenter

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This project's objective is to develop a Safety data mart to address areas concerning the access of information while maintaining a long-term focus and consistency with an enterprise data warehouse.

The Department has enormous amounts of data stored in databases not lending themselves to easy access. The Safety Data Mart is intended to provide business users easy, direct access to information regarding roadway safety issues to identify the state's safety problems, to manage the countermeasures applied to reduce or eliminate those problems, and to evaluate those programs for their effectiveness.

To facilitate self-service analysis and reporting of crash data; Illinois DOT chose to integrate three components:

1. A map
2. A data grid
3. A pivot table with drill through capability

This integration is seamless to the users as all pieces are contained in Microsoft Office Excel 2007. The Excel interface can be used to conduct high-level analysis of crash information, while the map interface allows users to select and view data based on its geospatial context. The map component is an Excel Add-in using ESRI ArcEngine 9.x with both out-of-the-box and custom tools. The map is associated with the Active Worksheet in Excel and context menu actions instantiate map events; including selections, zoom to, and feature flash.

The end result is/will be an integrated crash analysis tool offering both high-level query and geospatial tools. This presentation will describe the decision making process, integration and tool selection; and highlight and describe/demo application features.

Note: This project is a Phase 2 under development. The project team has lessons learned from Phase 1 analysis tools.