Integration: Data Warehouse & GIS

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Safety Data Warehouse

• Initial Release April 2007
  ▪ Crash, Vehicle Person Data
  ▪ Spatially Enabled Data
  ▪ Tool Agnostic

• Purpose – Crash Analysis
Solution Architecture

SDM Cube

SDM Relational Database

GIS Data

Crash Information System

Slice and Dice

Selection, Custom Identify, Enable/Disable

Excel/ArcEngine Client

Pivot Table

Map

Custom Drill Through

Data Grid
SDM Excel Add-in Solution

- Many users familiar with Excel 2007 functionality
- Tight Integration of functionality
  - Map in Custom Task Pane
  - Customizable Data Grid
  - Pivot Tables
- Excel extensibility – ESRI
- Crisp experience / performance
Demo – Engineering Perspective

- Examine a known intersection or road segment.
- Navigate to see what the experience is there.
- The spatial location provides another dimension to data attributes that describe locations.
Demo – Crash Factor Perspective

- Isolate the crashes based on ‘what’ happened… specific behaviors or events.
- See on the map “where” these are happening.
- Queries based on person on vehicle dimensions weren’t possible with just the map/grid.
Successes & Challenges

• Success
  – In user testing
  – Integration is seamless
  – Response time is awesome
  – Supports all kinds of users (GIS oriented, Data Oriented, simple problems, complex analysis)

• Challenges
  – Deployment
  – Re-introducing tools
  – Data Quality
  – Training