

## 7.2.3

### Minding the Roadway: The Pennsylvania Turnpike Commission Operation Center's GIS

#### Presenter

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The Operation Center at the Pennsylvania Turnpike Commission (PTC) is responsible for the most vital service that the Commission provides: customer safety. As a result, it is imperative that the most accurate and up-to-date information regarding facilities and assets, roadway conditions, and traffic patterns be highly accessible to dispatchers to facilitate response to incidents on the Commission's roadways. GIS has been successfully implemented to provide a map-based solution to the integration of those disparate data and databases that exist in the PTC's computing environment.

Specialized applications exist for Computer Aided Dispatching, operation of ITS and ATIS infrastructure, tracking the types and locations of physical assets (such as access gates, turnarounds, etc.) and coordinating maintenance operations and lane closures. While all of these applications utilize information, which is vital to the mission of the Operation Center, they were (with the exception of the Dispatching System) developed and maintained by other Departments within the Commission. As a result, dispatchers had to rely on specially prepared spreadsheets and hardcopy reports and maps that, in many instances, were out of date or incomplete.

A specially developed ArcEngine application has been developed to integrate and synthesize these disparate data. Each dispatcher has a plasma console that displays the portion of the roadway for which he is responsible. Digital color orthophotographs serve as the background for the map that includes the roadway centerlines, access gate and turnaround locations, hydrography, construction projects and lane closures for the day, and centerlines for the highway network within ten miles of the Turnpike. Connections to the Computer Aided Dispatch System (CADS) and the application that operates the ITS/ATIS equipment are maintained so that when an incident is reported (by route and milepost) it is automatically displayed on the map and the dispatcher can then navigate the map and access critical information utilizing customized GIS tools. In this way, the dispatchers have instantaneous access to all relevant data across the enterprise. The net result is more efficient and timely response to incidents, which in turn, dramatically increases customer safety.

The proposed presentation will set forth the problem, describe the solution and will include a demonstration of the application.