6.1.2 The Data Model – Logical and Physical Design

Presenter
Lou Henefeld
Colorado DOT
louis.henefeld@dot.state.co.us

Co-Presenter
Al Butler
Farragut Systems Inc.

The Colorado Department of Transportation (CDOT) has embarked on a project to re-define its transportation data model and to implement that new model for use in editing and publishing its transportation data. CDOT retained the firm of Farragut Systems, Inc to provide technical services associated with migrating the current TranSys database to the ArcGIS geodatabase form. Associated with this migration is a change in relational database management system from Sybase to Oracle 9i and in data maintenance procedures toward a more integrated approach.

The current TranSys database is a collection of somewhat independent tables developed over several years to meet the needs of various internal applications. These applications include:

* Federal reporting activities, such as those associated with the Highway Performance Monitoring System;
* Calculating the state Highway User Tax Fund allocations for each unit of local government;
* Compiling, analyzing, and reporting traffic data from continuous and periodical surveys;
* Managing State and local roadway inventories.

A number of spatial data sets contained in ArcInfo coverages and ArcView shapefiles are associated with the text-based data housed in Sybase tables. These spatial data include transportation features, jurisdictional boundaries, and water features. The intent of the migration project is to not only update the technology used to support the TranSys applications, but to also more tightly integrate the spatial and attribute data.

This presentation describes the project that CDOT is managing and implementing, especially from the point of view of functional requirements, describes the new data model, and identifies the remaining steps in the project from the perspectives of both CDOT and the contractors.