

## **THE USE OF TRAFFIC COUNT DATABASES IN THE VALIDATION PROCESS OF THE CALIFORNIA STATEWIDE TRAVEL DEMAND MODEL**

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The California Statewide Travel Demand Modeling (CSTDM) Framework is a comprehensive model system designed and developed for use in transportation policy analysis and forecasting. It includes representation of all major components of both long and short distance transportation covering the entire state. This paper discusses the strategy used for the validation of the CSTDM. The process is based on the comparison of the model forecasts for traffic volumes on the California highway network with observed traffic data. As part of this process, we identified the most relevant screenlines on which to evaluate interregional traffic flows and to assess the accuracy of the model forecasts on the main intercity travel corridors. The validation strategy involved the use of traffic counts data from multiple sources. A comprehensive database on interregional traffic volumes was built using data from both the California Department of Transportation (Caltrans) Transportation System Information (TSI) database and the Performance Measurement System (PeMS).

This paper describes the process of aggregation followed in the construction of the traffic count database and its use for the CSTDM validation. It also discusses some computational issues associated with the heterogeneity of the available data. Daily traffic data were collected over a multiple-year period for each counting section, and contained information on the hourly traffic volumes by time of the day, direction and vehicle type. Specific tests were performed to validate the reliability of the traffic counts data and to validate their inclusion in the database. The approach allowed querying the database to generate the required validation data at the level of aggregation required by a statewide model. The comparison of the estimated traffic volumes with the data obtained from the database was used to further refine the components of the travel demand model, and to assess the accuracy with which intercity travel volumes are modeled in the CSTDM framework.

### **Full Paper Review**

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