

**Project Title:** Real-time Online Decision Support System for Intermodal Passenger Travel

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**TRB Keywords:** Traffic data, real-time data processing, data interoperability, intermodal transportation, passenger information systems, information dissemination, data interoperability, this is a research project.

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**Project Summary:**

In the United States, transportation modes and their respective industries have evolved independently over time, but the public transportation is underutilized compared to other developed countries. Also, development of intermodal transportation for passengers lags behind the freight transportation system. An information-management system that can handle overabundant travel information and track the changes in transportation schedules in real-time is lacking.

The *research objective* of this two years project is to improve the efficiency of intermodal-passenger transportation, improve the utilization of public transportation modes, and reduce transportation cost and travel time for passengers by developing a *decision support system* for *intermodal passenger travel* that's available in *real time online*. The following *research tasks* will achieve this objective: 1) design an "all-in-one" database to store travel information for multiple modes; 2) develop an *automatic data collection* strategy to collect real-time travel data; 3) propose an *intelligent decision support* method to determine the best itinerary based on passenger's preferences; 4) develop a *web-based travel search system* and *real-time notification* mechanism for unexpected plan changes; and 5) system *verification* and *validation*. The project should benefit U.S. transportation by building a *coherent and efficient* intermodal passenger transportation system that improves travelers' scheduling, increases the utilization of public transportation, and improves the overall efficiency of the U.S. transportation system.