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## Integrating Heterogeneous Traveler Information Using Web Services

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### Abstract

Various types of information, e.g. weather, road and traffic conditions, can assist travelers in making better-informed decisions about their trips. The information is widely disseminated by distributed data sources and web sites. The integration of such information would provide significant value-added services to travelers, and XML-related technologies have proven to be effective to achieve this goal. This paper aims to design and implement an integrated system to make use of widely distributed traveller information by employing the XML and Simple Object Access Protocol (SOAP) techniques. The prototype system adopts a three-tier architecture and is implemented using integrated Java technologies. The shared XML schema for geo-referenced data provides a foundation for heterogeneous information integration. The XML wrappers, the metadata schema, and the visualization tools were developed to provide information services based on the heterogeneous data sources. Two examples concerning travel information query and route selection, respectively, are presented to illustrate the applicability of the system.

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