

TR NEWS

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Intelligent Transportation Systems: Determining Directions

3 Introduction

Intelligent Transportation Systems: Making Inroads

Steven E. Shladover

Information technology can revolutionize surface transportation but new ways of thinking are required to develop, implement, and integrate the potential advances. Intelligent transportation systems already are having an impact on travelers and the transportation infrastructure, according to the authors of articles in this issue.

4 Introducing Intelligent Transportation Systems: Paradigm for 21st Century Transportation

Steven E. Shladover

Intelligent transportation systems offer the opportunity to integrate the transportation system through traffic management, traveler information, vehicle control and safety, and other applications. Advocating “system thinking,” the author outlines promising directions for ITS research and development, which should proceed in tandem with deployment and operations.

10 Intelligent Transportation Systems at the Turning Point: Preparing for Integrated, Regional, and Market-Driven Deployment

Joseph M. Sussman

A longtime leader in the U.S. National Intelligent Transportation Systems Program summarizes expert assessments of the program's first decade; traces the technology, systems, and institutional issues—including the effects on agency operations, finances, and human resources; and explores the opportunities to advance transportation—and the profession.

18 California's Performance Measurement System: Improving Freeway Efficiency Through Transportation Intelligence

Pravin Varaiya

California plans to deploy the Performance Measurement System statewide in July—converting data from freeway loop detectors to provide timely reports for decision makers, identify and resolve traffic bottlenecks, determine travel times and optimal routes, and more.

25 Traveler Response to Information: Who Responds and How?

Jon Bottom, Masroor Hasan, and Jane Lappin

Research on the effects of advanced traveler information systems provides clues about how people become regular users, how use affects tripmaking and nontripmaking behavior, the “accuracy threshold” for messages, applications for commercial deliveries and city center parking, valued features, user willingness to pay, and other responses.

31 Customer-Driven Intelligent Transportation Systems: The Next Generation

Thomas A. Horan

The next generation of intelligent transportation systems—offering travel information, navigation, electronic tolling, safety, and emergency services—should be customer-oriented, satisfying the individual traveler and affecting overall system choice and performance, according to this author.



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Cover: Michael Corwin (left), URS Corporation, and Stephany Hanshaw, Virginia Department of Transportation (VDOT), use the Smart Traffic Center of Hampton Roads in Virginia Beach (photo by Tom Saunders, courtesy of VDOT).

TR NEWS

features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

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38 TRB Report Standards for Intelligent Transportation Systems

Andrew C. Lemer

In a review of the U.S. Department of Transportation's Intelligent Transportation Systems Standards Program, a TRB study committee affirmed the program's approach and value but asked for clarification of the rationales for selecting standards and for allowing regional variations.

43 Security Redefines the Agenda: The Transportation Research Board's 2001 Field Visit Program

The delivery of services to customers was the focus at state departments of transportation and other transportation organizations nationwide in 2001, but the events of September 11 have thrust security to the top of every agenda, according to this annual roundup of developments in all modes by program officers in TRB's Technical Activities Division.

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69 New TRB Special Report Strategic Highway Research: Saving Lives, Reducing Congestion, Improving Quality of Life

Ann M. Brach

In response to a congressional request, a TRB study committee has outlined a research agenda, administrative structure, and fiscal needs for a strategic research program to accelerate the renewal of U.S. highways, improve highway safety, provide reliable travel times, and add capacity in support of economic, environmental, and social goals.

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Preventing crashes with animals, detecting toxins in transit systems, providing incentives for telecommuters, and more.

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Coming Next Issue



The upcoming March–April *TR News* features reports and highlights, including a section on transportation security, from the TRB 81st Annual Meeting, held January 13–17, 2002 in Washington, D.C.

U.S. Secretary of Transportation Norman Y. Mineta delivers remarks on the new Transportation Security Administration and the status of transportation since September 11.