Volume 2

ATC Standards Update ................................................................. 732
   Ralph Boaz

TS05 – TRANSPORTATION COORDINATION I

Benefits and Costs from the Caltrans IRIS Open Traffic Management System Demonstration Study ........... 745
   Michael Darter, Ty A. Lasky, Bahram Ravani

Implementation of Florida Department of Transportation’s “TIM IN ‘10” Training Program for
Traffic Incident Management Responders ........................................ 773
   Ingrid Birenbaum, Paul Clark, Charles Creel
Achieving Integrated Management on the Schuylkill Expressway Corridor in Southeastern Pennsylvania ................................................................. 780
Brian Depan, Jambola Jay Ruit
San Mateo County Smart Corridors Program-Systems Engineering Process ................................................................. 793
Syd Bowcott

TS06 – DEPLOYMENT PRACTICES I

Ethernet Migration And Traffic Control System Upgrade ................................................................. 804
Jonathan Turner

TS07 TRANSPORTATION COORDINATION II

Rural ITS Safety Solution Systems (RITSS) ................................................................. 814
Dennis Foderberg, Marthand Nookala

TS08 – DEPLOYMENT PRACTICES II

Applying Intelligent Transportation Systems to Decrease Hydroplane Related Traffic Crashes in Greenville County, South Carolina ................................................................. 824
Theodore Smith, Tony Sheppard, Linda Dodge, Ben Pierce, Kevin Dopati
Operation of Ramp Signaling System – FDOT’s Experiences ................................................................. 834
Xuesong Zhu, Charles Robbins, Joseph Snyder, Javier Rodriguez
ITS to Address Non-Signalized Rural Intersection Safety ................................................................. 852
Ray Starr

TS09 – EMERGENCY RESPONSE – SAFETY

Wisconsin's Approach to Emergency Evacuation Planning and Lessons Learned ................................................................. 873
Steven Cyra
A Genetic Algorithm Based Microscopic Simulation to Develop the Evacuation Plan for Multi-Institutional Centers ................................................................. 877
Fengxiang Qiao, Ruixin Ge, Lei Yu
HAZMAT and the First Responder ................................................................. 917
John Dougherty

TS10 – COMMUNICATION

Roadside Equipment Architectures for DSRC-Enabled Applications Using Traffic Signal Phase and Timing Information ................................................................. 925
Susan R. Dickey, Somak Datta Gupta, James Misener, David Nelson
Cellular and 5.9 GHZ DSRC: Complimentary Not Competitive Technologies for Vehicular Communications ................................................................. 958
Justin McNew, Matthew Dorfman, Scott Andrews, Bob Frank
Three-Tier Wireless Communication System, in Sugar Land, Texas ................................................................. 970
Rick Staigle

TS11 – CONGESTION MANAGEMENT II

Application of System Engineering to a Major Integrated Corridor Mobility Project ................................................................. 997
Timothy Fehon, Kevin Fehon, Rich Shinn
ITS Aspects of an Alternative Analysis of Transit Circulator Systems ................................................................. 1026
J. Sam Lott, Lee Anne Dixon, Joe Willhite, Nathan New
UK ITS Best Practices ................................................................. 1041
Robert Edelstein
TS12 – BUILDING TRANSPORTATION PROJECTS

Leading With Safety - How Leaders Influence Behavior and Create Culture
Jim Spigener

ITS Professional Capacity Building (PCB) Program: Incorporating a Focus on Technology Transfer
Mac Lister

Reducing ITS Project Risk by a Policy of Developing and Using Consensus Based Regional ITS Architectures and a Systems Engineering Process
Robert Jaffe, Manny S. Insignares

Time Synchronization and Positioning Accuracy in Cooperative IntelliDriveSM Systems
Scott Andrews

INTERACTIVE PAPER SESSIONS

IS01

The Need for a Systems Approach to Information Management in Emergency Operations
John Broemmelsiek

US 59 at SH 6 Triple Left-Turn Lane System
David Worley, Jeff Durso

Dynamic Ridesharing for Livable Communities
Sean O’Sullivan

I-35W Design-Build ITS Elements
Steve Garbe, Scott Carlson

Practical Deployment of ITS Standards
Bryan Mulligan

Miami-Dade County’s ATMS Upgrade, Success with Embedded Integrators
K. K. Saxena, Jim Reynolds, Robert William

Using Smartphones to Enable Situation Awareness on Highways
Christian Manasseh, Yaser P. Fallah

Illinois Tollway Weigh In Motion Enforcement Program
William Hereth, John Benda, Jeff Hochmuth, Matt Devery, Jim Powell

The Mississippi DOT ITS Program – A Decade of Amazing Success
Ranzy Whiticker

Implementation of Alerts for High Travel Times on the Orlando-Orange County Expressway Authority’s Dynamic Message Signs
Charles Lattimer

IS02

Tolling Overweight Vehicles on Highways
Rod Klashinsky

Road Safety Via Incident Management: Implementing a Video Image Processing System
Bill Klyczek

Optimizing Slow Traffic Ahead Alert Model Based on Empirical Data
Michael Seelhorst, Shahram Rezaei, Ching-Yao Chan, James Misener, Raja Sengupta

Emerging ITS Technologies - Infrastructure
Bryan Mulligan

Simulation of Vehicle Infrastructure Integration Implementation in Highway-Rail Grade Crossings
Elizabeth Jones, Chung-Jen Hsu

Evaluation of ACS Lite Adaptive Control Using Sensys Arterial Travel Time Data
Jun Wang, Rob Robinson, Steven G. Shelby, Kenneth B. Cox, Walt Townsend

Benefit-Cost Analysis of Pavement Marking Improvements in Support of Lane Departure Warning Systems
Prasoon Sinha, Mohammed A. Hadji, John R. Easterling IV

Multi-Tier Multi-Hop Routing in Large-Scale Wireless Sensor Networks for Freight-Train Monitoring
Michael Hempel, Puttipong Mahasukhon, Hamid Sharif, Ting Zhou, Wei Wang, Tao Ma
IS03

95 Express Lanes: What Is It Worth? .......................................................... 1384
Charles Robbins, Javier Rodriguez, Rory Santana

Quality Traffic Information ................................................................. 1398
Manuel Fonan, Jose Grullon, Charles Robbins

Travel Times on Virtual DMS ............................................................. 1412
Brad Williamson

A Cost-Sensitive Approach to Deriving Accurate Vehicle Dynamics Information for Retrofit or
Aftermarket DSRC Vehicle Safety Devices ........................................... 1417
Bryan Wells

Application of Work Zone ITS Systems for the DFW Connector Project .... 1429
Kent Kacir

Analysis of LPR Data on I-10 ............................................................. 1463
Charles Lattimer

Next-Generation Multi-Agency Fusion Center: Teams & Technologies .... 1467
James Chong

Author Index