

NATMEC 2002

North American Travel Monitoring Exhibition & Conference 2002

ICWIM3

Third International Conference on Weigh-In-Motion



Conference presented by:
Florida Department of Transportation
Federal Highway Administration
Transportation Research Board

Conference co-sponsored by:
Transport Canada
AASHTO

HOME

VIEW
PROGRAM

CONFERENCE
AT-A-GLANCE

START
OPENING MENU

SEARCH

WELCOME



Tom Barry, Secretary, Florida Department of Transportation

Welcome to NATMEC 2002 and the Third International Conference on Weigh-in-Motion. We've put together an exciting agenda for you that we hope you'll find both educational and entertaining. It's our pleasure being your host – again.

You are coming back to your roots as you return to Orlando. The first national conference dedicated to automating the collection and use of traffic monitoring data for transportation planning was held here in 1974.

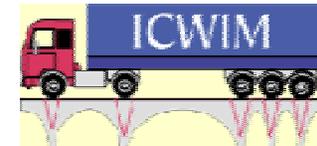
This year's conference is designed to give you the latest technology, knowledge and progress in travel monitoring and data analysis so you can use it to better serve the public.

Thank you for choosing Florida as your convention and vacation destination. Please take advantage of all that the conference and the Sunshine State have to offer. Enjoy your stay with us.

SUNDAY, MAY 12, 2002

AFTERNOON

1:00 PM—5:30 PM
Registration

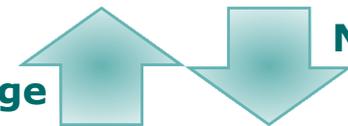


5:30 PM—7:30 PM
Welcome Reception
Ballrooms C & D
(vendor displays open)

Please attend and renew old friendships, meet new friends, and generally "unwind" and enjoy the delicious hors d' oeuvres. A cash bar will also be available.

The Florida Department of Transportation is pleased to host the *North American Travel Monitoring Exhibition and Conference—2002*. The conference is co-sponsored by the Florida Department of Transportation and the United States Department of Transportation—Federal Highway Administration and is being held concurrently with the *Third International Conference on Weigh-In-Motion*. The conferences are endorsed by the Transportation Research Board, American Association of State Highway and Transportation Officials, and Transport Canada.

[Previous Page](#)

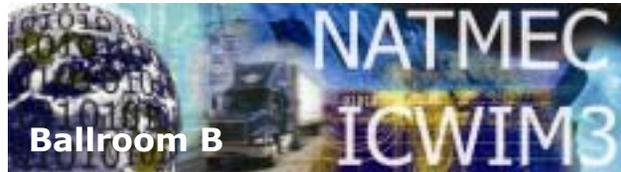


[Next Page](#)

BREAKFAST (provided) 7:30 AM—8:30 AM Ballrooms C & D (vendor displays open)

8:30 AM—8:55 AM

Opening General Session NATMEC & ICWIM3 combined



Chair: Ysela Llort, State Transportation Planner, FDOT
 Tom Barry — Secretary of the Florida Department of Transportation
 Jim St. John — Division Administrator, Federal Highway Administration
 Bernard Jacob — Department Head, LCPC
 Mike Snyder — Florida Department of Transportation District 5 Secretary



9:05 AM—10:00 AM

NATMEC Opening

Chair: Ysela Llort

Susan Lapham — Associate Director, Bureau of Transportation Statistics
 Barna Juhasz — Director, Office of Highway Policy Information FHWA
 Alan Pisarski — Consultant, TRB Data Committees

9:05 AM—10:00 AM

Bill McCall — Introductions

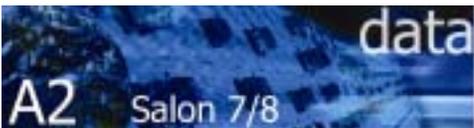
Bernard Jacob — Output and Dissemination of WIM Developments in Europe

Mark Hallenbeck — WIM in North America

Chia-Pei Chou — WIM in Asia



BREAK 10:00 AM—10:30 AM Ballrooms C & D (vendor displays open)



10:30 AM—12:00 PM

Traditional Sensors

Chair: Mark Gardner

This session provides some guidance on selecting the optimum location for constructing a continuous traffic monitoring site. It covers construction coordination, safe practices, and sensor installation techniques.

Dan Inabnitt — Traditional WIM Sensors Experiences in Kentucky

Mike Ashbrook — WIM Site Selection

Robert Triplett and Joe Avis — Sensor Sharing Among Applications

Scott Fugit — Best Practices WIM, The Idaho Experience



10:30 AM—12:00 PM

Privatizing Traffic Monitoring Programs

Chair: Ron Tweedie

Traffic monitoring programs provide essential data for decision making throughout all facets of state transportation agencies. The speakers represent both the public and private sectors, and will share their experience in contracting for and providing these vital traffic monitoring activities.

Keith Merritt — An Arkansas Experience

Dayton Burlarley-Hyland — Amortized Performance Based Outcome WIM System Management

Todd Westhuis — Public/Private Partnerships: A Data Collection Team That Works

Dave Gardner — Ohio DOT Privatization Activities



10:30 AM—12:00 PM

CMS: The Role of Travel and Traffic Data

Chair: Eugene Bandy

Now that Congestion Management Systems (CMS) have been with us almost a full decade, it is time to "look under the hood" and see how they utilize travel information. The session will begin with an overview of CMS, its needs for travel information, and examples of how data is used and presented.

Dan Blevins — Wilmington MPO

Mark Schlappi — CMS Data and Applications: Phoenix Metropolitan Area

Martin Guttenplan — CMS Data and Multimodal LOS Applications: Florida DOT

Keith Nichols — CMS Data and Applications: Hampton Roads MPO



10:30 AM—12:00 PM

WIM Testing (1)

Chair: E. J. O'Brien/M. Caprez

Daniel Stanczyk — Analysis of WIM Systems in the Continental Motorway Test

Sophie Jehaes — Analysis of WIM Systems in the Cold Environmental Test

Anne Marie McDonnell — Evaluation of Quartz Piezoelectric WIM Sensors in Connecticut

Discussion

LUNCH (provided) 12:00 PM—1:30 PM Ballrooms A & B

Keynote Speaker: **Frederick (Bud) Wright, Executive Director, Federal Highway Administration**



1:30 PM—3:00 PM

Non-Traditional Sensors

Chair: Anne Marie McDonnell

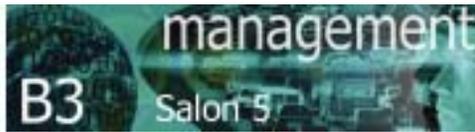
Some of the newer types of sensors and techniques for acquiring traffic data will be presented.

Erik Minge—Update of the Evaluation of Non-Intrusive Technologies for Traffic Detection

William Tansil—The Michigan Experience with Utilizing Fiber Optic Sensor Technology

Alan Murray—Overview of Private Sector Approaches for Estimating Traffic Flow using Aerial Photography and Videography

Luz Elena Mimbela—Status of the Vehicle Detector Clearinghouse



1:30 PM—3:00 PM

Non-Traditional Data Sources

Chair: Rick Schuman

Examines different programs and technologies currently or soon to be available giving public agencies purchasing options.

Brian Smith—Anonymous Mobile Call Sampling: A New Approach to Traffic Monitoring

Mike Akridge—Innovative Data Collection Techniques: An Analysis of Probe Vehicle Technologies

Chung Eng—Intelligent Transportation Infrastructure Program

Paul Schuldiner—Video-Based Travel Time Information for Rural Traveler Information System



1:30 PM—3:00 PM

Issues in Urban Traffic Data

Chair: Jim Thorne

Issues and practices associated with urban traffic data collection programs. Examples from an existing travel monitoring program will be followed by a discussion of traffic detectors, then a facilitated discussion of issues and practices used by agencies in urban data collection. The audience participation exercise will identify significant issues in urban traffic counting programs and possible best practices.

Ron Harris—Urban Traffic Data Collection by Georgia DOT

Vince Pearce—Traffic Detectors: Are They Working?

Audience Participation—Traffic Data Collection Issues



1:30 PM—2:15 PM

WIM Testing (2)

Chair: E.J. O'Brien/M. Caprez

Arturo Gonzalez—Testing of a B-WIM System in Cold Environmental Conditions

Tom Papagiannakis—Laboratory and Field Evaluation of Piezoelectric WIM Sensor



2:15 PM—3:00 PM

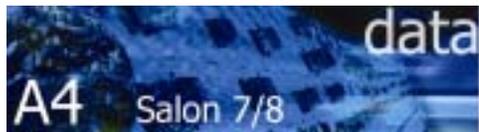
WIM Standards (1)

Chair: Ralph Gillmann/Chia-Pei Chou

Barbara Ostrom—Site Characterization of LTPP SPS WIM Sites

Gonzalo Rada—Pavement Smoothness Specifications for LTPP WIM Locations

BREAK 3:00 PM—3:30 PM Ballrooms C & D (vendor displays open)



3:30 PM—5:00 PM

Data Archiving

Chair: Joe Avis

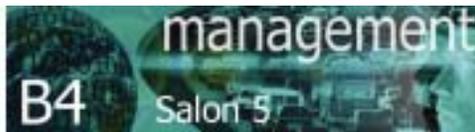
Collecting traffic data is just a single aspect of the overall job. A look at the development of databases to store traffic statistics and site maintenance information in a usable manner.

David Schade and Mike Walimaki—Michigan Database

Dawn Doyle—Information Technology Meets Engineering and Transportation Planning

Frank Tabatabaee—Continuous Counter Inventory Service Calls Database

Joe Avis—California's Integrated Transportation System Network



3:30 PM—5:00 PM

State of the Art for Travel Time Data Collection and Analysis

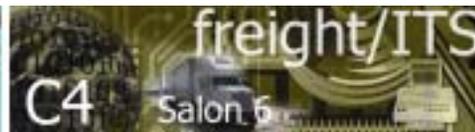
Chair: Michael Pietrzyk

This session will bring together the experiences of three innovative practitioners directly involved with travel time data collection and analysis, each with their own unique application and vision.

Jeff Woodson—Video-Based Travel Time Data Collection and Analysis for the Metrolina Region External Travel Survey

Brian Smith—The Virginia Smart Travel Van

Gordon Morgan—Travel Time for Performance Measures



3:30 PM—5:00 PM

Estimation of Truck Traffic Volumes

Chair: Paul Bingham

Approaches to estimating and forecasting truck traffic volumes both within and between urbanized areas.

Edward Fekpe, Mohammed Alam—Truck Traffic Flow for Highway Capacity Analysis

Daniel Beagan—The Development of a Freight Truck Travel Demand Model for Florida

David Hunt—Freight Movements in the Orlando Urbanized Area

Brian Smith—Smart Travel Van



3:30 PM—4:20 PM

WIM Standards (2)

Chair: Ralph Gillmann/Chia-Pei Chou

Paul Dixon—The Development of an OIML Recommendation for "Automatic Instruments for Weighing Road Vehicles in Motion"

Clyde Lee—ASTM WIM Standard E 1318—Revised for the New Millennium

4:30 PM—5:45 PM

Panel Discussion 1: Harmonization of WIM Standards and Tests

BREAKFAST (provided) 7:30 AM—8:30 AM Ballrooms C & D (vendor displays open)



8:30 AM—10:00 AM

ITS/DATA General Session

Chair: Anita Vandervalk

Harshad Desai and Chester Chandler—Mining of Florida ITS Data for Transportation Planning

Jeff Paniati—Data Collection on the National Highway System—Requirements for a National “INFOstructure”

Vince Pearce—Using ITS Data in Measuring the Reliability of Transportation Network Performance

Tom Palmerlee—Transportation Operations and Data—Making the Connection at TRB and AASHTO



8:30 AM—8:50 AM Sponsor Welcome

8:50 AM—10:00 AM

Technical Aspects of WIM Products

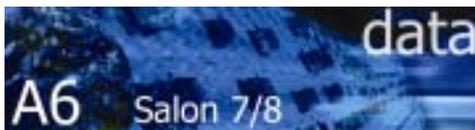
Chair: Sophie Jehaes/Perry Kent

Emil Doupal—Measurement of Dynamic Wheel Load Distribution

Dave Hill—Networked Fibre Optic WIM Sensors

Eugene O’Brien—Proposal for an International Society for Weigh-in-Motion

BREAK 10:00 AM—10:30 AM Ballrooms C & D (vendor displays open)



10:30 AM—12:00 PM

Quality Control of Data

Chair: Glenda Fuller

Many times it is assumed that if the traffic data collected by the traffic counters is successfully retrieved back in the office, then the traffic program is a success. Often this is not the case. Not only does the data have to reach the office, it has to be of good quality to be of benefit to anyone. This session will look at the methods for detecting good and bad volume, speed, classification, and weight data.

Susan Cospser—Quality Control for Short-Term Daily Counts

Steven Jessberger—Ohio Traffic Data Quality Control Procedures

Dennis Williams—Automating Class and Volume Editing with the Pennsylvania Traffic Editing Program



10:30 AM—12:00 PM

Remote Sensing

Chair: Joel Morrison

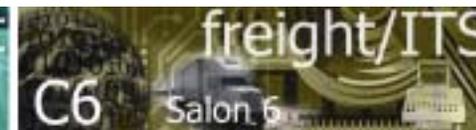
In March 2000, the U.S. Department of Transportation funded four university consortia to work on incorporating into transportation studies the use of remote sensing. This session reports some of the activities of the National Consortium for Remote Sensing in Transportation-Flows (NCRST-F).

Gregory Jordan—Use of Remote Sensing to Evaluate and Measure Highway Traffic Flows

Delmar Anderson—Truck Traffic Analysis Using IKONOS Satellite Imagery

Mark McCord—Space and Air Based Remote Sensing of Transportation Flows: Promising Applications

Joel Morrison—NCRST—Flows



10:30 AM—12:00 PM

Making the Connection Between ITS and Traffic Monitoring

Chair: Shawn Turner

Focus on making the connection between 2 previously disparate communities: ITS/Operations and Traffic Monitoring/Planning. Presentations on existing partnerships that are being formed, as well as on planned partnerships and data sharing / integration.

Rick Schuman—Building a National Transportation INFOstructure: Recent Activities and Its Impacts on the Traffic Monitoring Community

Terri Johnson—Building Data “Bridges” Between Operations and Planning: Case Study in Pittsburgh and Philadelphia, Pennsylvania

Mark Hallenbeck—All RHODES Lead to Seattle: Getting Useful Arterial Street Data from the RHODES Traffic Signal Control Software

Shawn Turner—Making the Operations to Planning Connection in Texas: Experiences and Findings



10:30 AM—12:00 PM

WIM Technologies (1)

Chair: Bernard Jacob/Anne Marie McDonnell

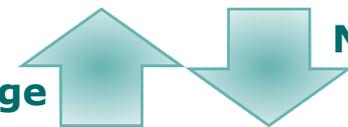
Delphine Labry—Accuracy Comparison of Three MS-WIM Static Weight Estimation Algorithms

Eugene O’Brien—An Investigation Into the Use of a Neural Network Algorithm in Multiple-Sensor Weigh-In-Motion of Road Vehicles

Sophie Jehaes—Axle Rank Calibration, A Tool to Improve the Accuracy of Portable WIM Systems

Ling Yu—Multi-Axle Load Identification in the Laboratory Discussion

LUNCH (provided) 12:00 PM—1:00 PM Ballroom A





A7 Salon 7/8
1:00 PM—2:30 PM
LTPP Specific Pavement Studies
Chair: Larry Wisner

An update of the Long Term Pavement Performance Study and its needs for quality traffic data. Explores the need for research grade traffic data and the pooled fund study developed to provide it.

- Larry Wisner**—LTPP SPS Traffic Pooled Fund Study
- Barbara Ostrom**—Pilot Studies and Lessons Learned
- Richard Rogers**—A State Perspective: Opportunities and Challenges
- Larry Wisner, Richard Rogers & Amy Kruger**—Pre-Proposal Conference-LTPP WIM Assessment, Calibration and Performance Evaluation Contract

B7 Salon 5
1:00 PM—2:30 PM
Integration of Data Sources
Chair: Pat Hu

Explores how different agencies have collected and combined data sets in order to meet their system monitoring needs.

- Anita Vandervalk**—Summary of Peer Exchange on Data Integration
- Daniel Papiernik and David Fletcher**—Assessing Your Data Management Infrastructure: A Check-Off List for Data Integration
- David Zattero**—Integrating Traditional and Non-Traditional Data Sources: The GCM Gateway Traveler Information System
- Roemer Alfelor**—Data Integration for Asset Management—US Perspectives

C7 Salon 6
1:00 PM—2:30 PM
ITS Archived Data—Now and the Future
Chair: Ralph Gillmann

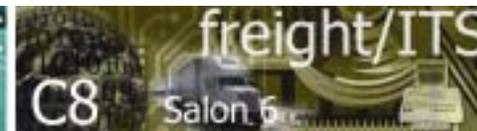
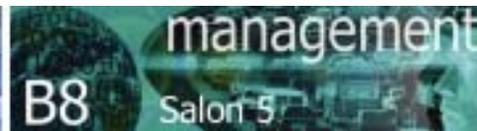
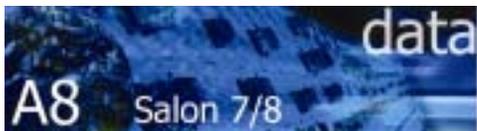
An update on the state-of-the-art in the management of archived data from ITS/Operations.

- Ralph Gillmann**—The Status of ADUS
- Kim Ferroni**—ITS: A Resource for Archived Traffic Data
- Rob Bostrom**—ARTIMIS Archived Data Partnership: The Kentucky Transportation Cabinet and the Ohio Transportation Department
- Rich Margiotta**—ITS as a Data Source for Traditional Transportation Information Systems

4b Salon 3/4
1:00 PM—2:30 PM
WIM Technologies (2)
Chair: Bernard Jacob/Anne Marie McDonnell

- Arturo Gonzalez**—Influence of Dynamics on Accuracy of a Bridge WIM System
- Michael Quilligan**—Development and Testing of a Multiple Vehicle Bridge WIM and a Vehicle Transverse Location Algorithm
- Tatsuya Ojio**—Bridge WIM Systems Using Stringers of Plate Girder Bridges
- Ales Znidaric**—The Next Generation of Bridge WIM Systems
Poster and Discussion

BREAK 2:30 PM—3:00 PM Ballrooms C & D (vendor displays open)



A8 Salon 7/8
3:00 PM—5:00 PM
Automatic Traffic Recorder Fundamentals
Chair: Rick Reel

Covers the design of solar power supplies, surge suppressors, and communications.

- Dr. Bruce Harvey**—Lightning Suppression at Telemetered Traffic Monitoring Sites
- William Wilson**—Traffic Monitoring Using Solar Power
- Dr. Bruce Harvey**—Tests and Analysis of Analog Modems for Remote Data Collection at Telemetered Traffic Monitoring Sites
- Jim Cerqua**—Digital Pagers for Telemetry

B8 Salon 5
3:00 PM—5:00 PM
Integration of Data Sources (cont.) Chair: Pat Hu

Michael Trickey—Data Integration for Asset Management—A Canadian Perspective

- Mark Hallenbeck**—Integration of Multiple Data Sources to Provide Truck Performance Monitoring
- Steve Gordon**—Issues for Real-Time Data Integration
- Demin Xiong**—Future of Data Integration: Combine Remote Sensing Data and Ground Truth Data
- Kirk Mangold**—Integration of Road Inventory and Traffic Counting Programs

C8 Salon 6
3:00 PM—5:00 PM
Monitoring for North American Cross Border Traffic
Chair: Frank Southworth

The session will identify the types of traffic count data being collected at border crossings and provides examples of how this data is being used in specific freight operations and planning studies.

- Bruce Lambert**—The US DOT's Freight Analysis Framework
- John McCray**—Cross-Border US-Mexico Traffic
- Rick Donnelly**—Data on Truck Flows Across the US-Canada Border

5 Salon 3/4
3:00 PM—4:30PM
Enforcement Using WIM

- H. van Loo**—WIM Projects in the Netherlands
- Daniel Stanczyk**—Overloaded Vehicle Screening for Enforcement
- Dennis Kroeger**—Application of WIM Technologies in Overweight Vehicles Enforcement
- Ralph Meschede**—Poster: Top Trial Project

Questions

4:30 PM—5:30 PM
Panel Discussion 2: Enforcement, Technical and Legal Issues

RECEPTION 5:00 PM—7:00 PM Live Music with Coco Loco

BREAKFAST (provided) 7:00 AM—8:00 AM Ballroom A



8:00 AM—9:30 AM **COMBINED NATMEC/ ICWIM SESSION**

Chair: Ralph Gillmann and Mulder Brown

- Perry Kent**—The Evolution of Vehicle Weighing in the United States
- Rick Quinley**—The CTWIM Suite
- David Jones**—Summary of US National and Regional Trends in Truck Loadings
- Maggie Chalkline, Curt Dahlin**—Observations Quartz Piezoelectric WIM
- Barry Mason**—Florida's State-of-the-Art Truck Weigh Stations

POSTER SESSION Photos 9:30 AM—10:30 AM Ballroom A Foyer

Mulder Brown, Coordinator

- Mulder Brown**—First National Conference/Workshop on Automating Data Collection for Transportation Planning—November 6-7, 1974
- Barry Grossman**—Advances in Fiberoptic Sensors for Classification and WIM
- Barry Mason**—Florida's State-of-the-Art Truck Weigh Stations
- Ales Znidaric**—Measurements on Short Slab Bridges Without Axle Detectors
- George Mintsis**—Performance of HGV's in a Major Greek Road Network Using WIM Technology
- Lili Poulidakos**—Long-Term Pavement Performance Monitoring of a Swiss Motorway
- John Harris**—Portable and Permanent Sites HS-WIM Data Comparison

- Ralph Meschede**—Top Trial Project
- Dennis Williams**—Pennsylvania Department of Transportation Traffic Information System
- Gary Flynn**—Making Traffic Cameras Smart
- Renatus Mussa**—Laboratory Evaluation of Adhesives Used In Installation of Piezoelectric Axle Sensors
- Steven Jessberger**—Ohio's FHWA Scheme F Classification Tree
- Joe Avis**—Sensor Sharing
- Bill Hughes**—Traffic Monitoring Activities at the Kansas DOT
- Michael S. Curley**—Data Processing Using Graphics in Microsoft Access
- Robert Hanson**—Florida Traffic Information CD-ROM



11:15 AM—12:00 PM **Data Quality, Management, & Use**

Chair: Mark Hallenbeck/J. Leal

- Paul Grundy**—Accommodation of Time Dependent Drift of WIM Data
- Stephen Cropley**—WIM Net—An Internet Based WIM Data Management Application

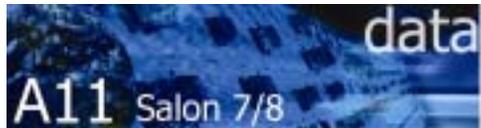
Discussion



10:30 AM—12:00 PM **VENDOR INFOMERCIALS FIELD DEMOS**

- Salon 5, 6, 7, & 8
- Rear Parking Lot

LUNCH (provided) 12:00 PM—1:00 PM Ballroom A



1:00 PM—2:30 PM **Weigh In Motion**

Chair: Mulder Brown

Quality control techniques developed specifically for WIM data.

Curt Dahlin—A Process to Calibrate a WIM System, Monitor That Calibration and Determine the Validity of the Weight Data

Anne Marie McDonnell—Evaluation of Weigh in Motion (WIM) System Utilizing Quartz Piezoelectric Sensor Technology

Herb Weinblatt—Alternate Methods for Estimating ESALS

Kip Jones—Evaluation of Quartz Piezo WIM Using Enforcement Data



1:00 PM—2:30 PM **MPO Uses of Urban Traffic Monitoring**

Chair: Jean Wolf

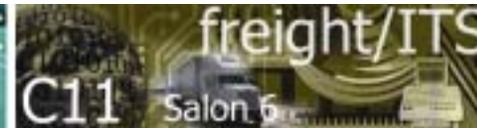
How MPOs use travel data and its importance.

Michael Onuogu—Integration of Traffic and Transportation System Data for Use in Travel Demand Analysis

Guy Rousseau—Application of HPMS Data in Travel Demand Modeling at the Atlanta Regional Commission (ARC)

Dena Jackson—Use of Urban Traffic Monitoring Data to Estimate LOS Defaults

Douglas Skowronek—HOV Lane Data Collection, Procedures, and Forecasting



1:00 PM—2:30 PM **Innovative Uses and Applications of ITS/Operation Data Archives**

Chair: Robert Winick

What users are doing with data archives.

Shih-Miao Chin—Estimating Temporary Loss of Capacity Due to Incidents, Work Zones, and Crashes

Robert Benz—Monitoring Mobility: Utilizing Environmental, Weather, and Traffic Data

Robert Winick—Using Archived Data in the Validation of Travel Time Predictions

Dena Jackson—Use of ITS Data for Reliability and the Florida Reliability Method



1:00 PM—2:30 PM **Application of WIM to Structures**

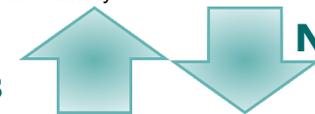
Chair: Ales Znidaric/Jerry Hajek

Fritz Prophete—Using WIM and FWD Data to Evaluate Impacts of Load Restrictions on Pavements

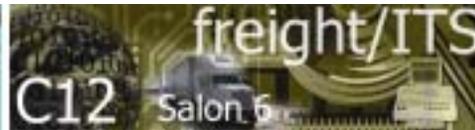
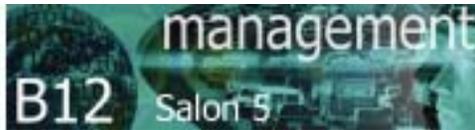
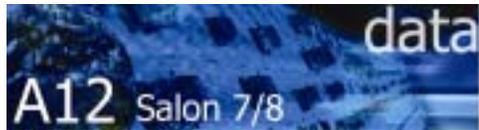
Alan O'Connor—Use of WIM Data to Predict Characteristic Live Load Effects for Highway Bridge Design

Jerry Hajek—WIM Data Requirements for Mechanistic Pavement Design

L. Poulidakos—Pavement Monitoring Swiss roadway



BREAK 2:30 PM—3:00 PM Ballroom A



3:00 PM—4:30 PM

2002 Pavement Design Guide

Chair: Tony Esteve

A look at the forthcoming pavement design guide and its impacts on the traffic data collected to support it.

Katherine Petros—The Use of Traffic Monitoring Data for the 2002 Pavement Design Guide

Herb Weinblatt—Traffic Data Collection and Analysis for Pavement Design

Rob Robinson—Traffic Monitoring from the Illinois DOT's Perspective

Tony Esteve—Summary of Recommendations from the Traffic Monitoring Guide

3:00 PM—4:30 PM

Future Data Programs and Performance Measures

Chair: Rich Margiotta

A first glimpse into what the future holds for performance measures and the data needed to support them. Presentations will be based on extrapolating current practice, views, and concepts rather than "hard analysis."

Mark Hickman and Alejandro Angel—An Investigation of the Use of Aerial Video for Traffic Data Collection

Anderson-Bomar—The Year 2525, Data Collection as we have come to know it

Peter Plumeau—New York MPOs: Using Advanced Technology

Shawn Turner—Observations from FHWA's Mobility Monitoring Program

3:00 PM—4:30 PM

GIS and Web Tools to Organize Urban Traffic Data

Chair: Kitty Hancock

This session reviews the set of geographic information systems and web sites for traffic and accident data. It will share lessons learned and some of the problems in doing this at the local level.

Shih-Miao Chin—Visualizing Urban Traffic Data

Michael Vickich—The Houston TranStar Traveler Information Web Site

Steve Taylor—Applying Today's Technology to Traditional Transportation Projects

3:00 PM—5:15 PM

Freight Mobility, Road Safety and Pricing

Chair: Mark Hallenbeck/J. Leal

Chris Koniditsiotis—National Study of Heavy Freight Vehicle Loading in Australia

Alan Clayton—Using WIM Data in a Modern Truck Traffic Information System

Angela Gardiner—Using WIM for Performance Based Contracts

Discussion and Poster

Conclusions:

Mark Gardner—Technical Output of the Conference

Eugene O'Brien—Scientific Output of the Conference

Bill McCall—Perspectives

DINNER (provided with entertainment) 7:00 PM—9:00 PM Ballroom A



Introducing... Giovanni Livera

One afternoon after school, seven-year-old Giovanni said to his mother, "Mom, when I grow up, I want to be a magician." She advised, "You can't do both."

So he became a magician. Giovanni started his career with his first paid magic show at the age of 10. He convinced 26 of his friends and neighbors to each pay a dime to watch him perform. And that's when he learned *Anything Is Possible!* Ever since, Giovanni has been making his living entertaining, inspiring, and training audiences.

Whether it is a banquet show to astonish or his *Anything Is Possible* motivational program to educate, Giovanni's years of entertainment experience translate into a memorable event that is custom tailored for your audience.

His business acumen and ability to sell complex concepts means that his tradeshow sales programs and *Presenting U* presentation skills training seminar create instant business growth for clients. Giovanni teaches you how to communicate information in a way that is completely unforgettable.

The International Brotherhood of Magicians recognized Giovanni's tremendous talent by awarding the Gold Cups Award for excellence in the art of close-up magic. Only four other magicians have received this recognition.

Giovanni has worked with more than half of the Fortune 500 companies, entertaining, designing, and delivering custom presentations. He now serves on the board of advisors for two major companies, Campus Pipeline, an Internet company serving the college market (on the board with Michael Dell), and TissueNet, an Internet-based clearinghouse for human tissue and organ donors.

Giovanni is president of Magic Marking Concepts, Inc., a publishing, training, and entertainment organization that helps companies, associations, and people entertain, market, and motivate through wonder, laughter, and inspiration.



BREAKFAST (provided) 7:30 AM—8:30 AM Ballroom A



8:30 AM—11:00 AM

FUTURE DIRECTIONS FOR DATA PROGRAMS

Chair: Ralph Gillmann

Harshad Desai—FDOT Summary

Barna Juhasz—FHWA Summary

Anita Vandervalk—Chair, Transportation Research Board Statewide Data Committee

Mark Gardner—Chair, Transportation Research Board Traffic Monitoring Committee

MONDAY OPENING GENERAL SESSION FEATURED SPEAKERS



Ysela Llorc
State Transportation
Planner,
Florida Department
of Transportation



Bernard Jacob
Department
Head, LCPC



Jim St. John
Division
Administrator,
Federal Highway
Administration



Mike Snyder
District 5 Secretary,
Florida Department
of Transportation

CONFERENCE PROGRAM COMMITTEE

Host and Traffic Monitoring Community
Rick Reel, P.E.
Supervisor, Traffic Data Quality Control
Florida Department of Transportation

Host and Traffic Monitoring Community
Mulder Brown
Supervisor, Telemetry Construction Unit
Florida Department of Transportation

TRB Statewide Data Committee
Anita Vandervalk, P.E.
Cambridge Systematics, Inc.

Traffic Monitoring
Joe Avis
Research Manager, Caltrans

TRB Data Committee
Ed Christopher
Metropolitan Activities
Midwest Resource Center
Federal Highway Administration

TRB Traffic Monitoring Committee
Mark P. Gardner, P.E.
Fugro-BRE, Inc.

FHWA
Ralph Gillmann
Federal Highway Administration

Traffic Data Collection
Mark E. Hallenbeck
Research Engineer
University of Washington TRAC

Exhibitors
Perry M. Kent
President
Perry M. Kent & Associates

ICWIM
Bill McCall
Associate Director for Advanced
Transportation Technology
Center for Transportation Research and
Education (CTRE)
Iowa State University

Freight and Truck Transportation
Frank Southworth
Leader, Transportation Planning and
Systems Analysis Program
Oak Ridge National Laboratory

FHWA
Sabrina David
Florida Division Office
Federal Highway Administration

MPOs
James D. Thorne, P.E.
Metropolitan Transportation Specialist
Midwestern Resource Center
Federal Highway Administration

Remote Sensing Community
Joel L. Morrison, Ph. D.
Director, Center for Mapping
The Ohio State University

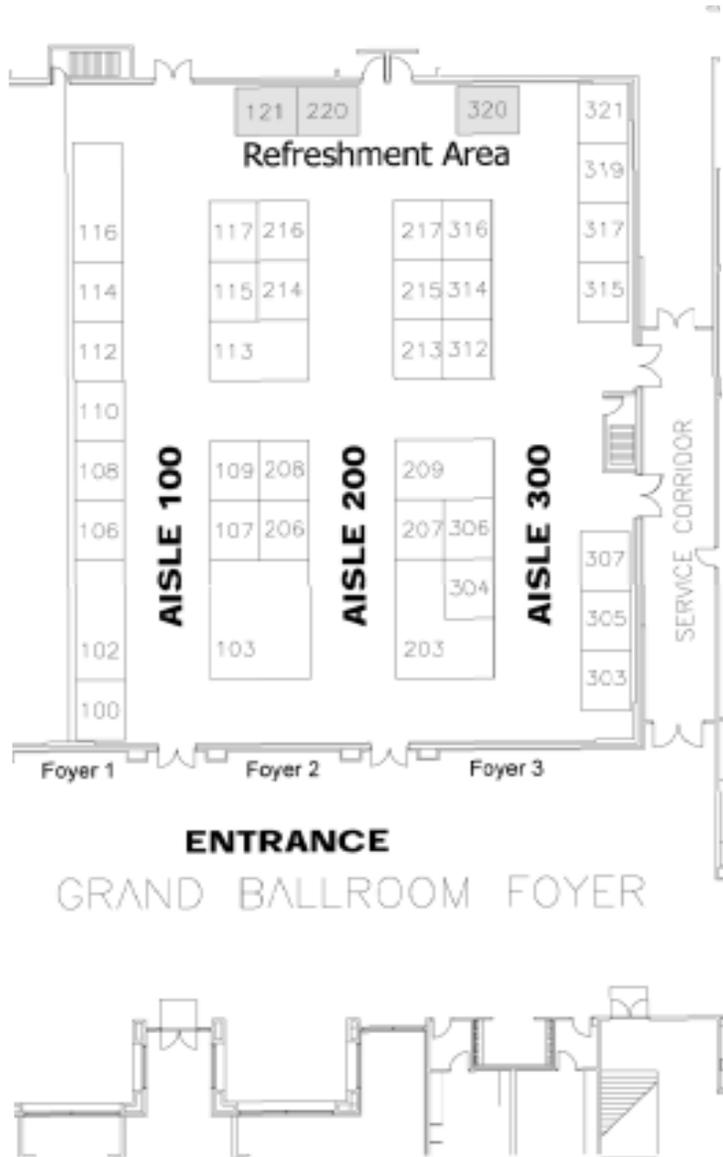
Sponsor and Transport Canada
Robert (Bob) Leore
Economist
Economic Analysis Directorate
Transport Canada



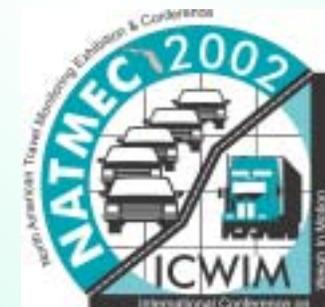
EXHIBITORS BALLROOMS C & D

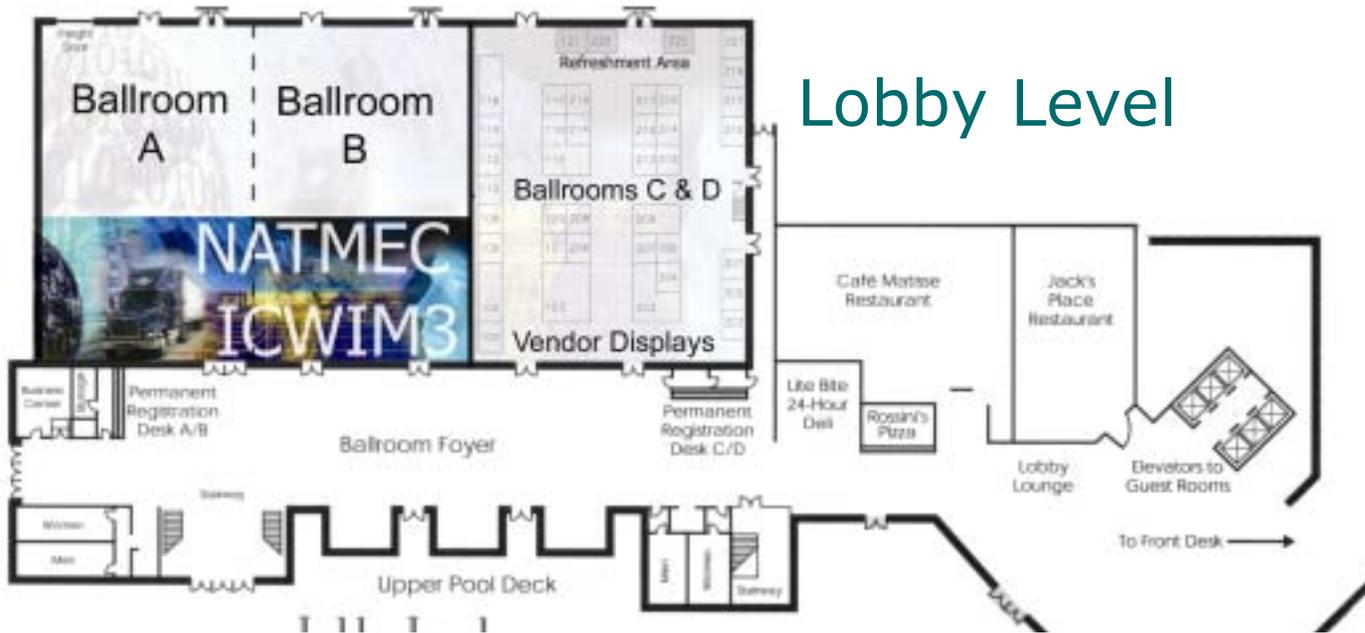
Please visit our exhibitors' area where a variety of data collection equipment, software, and/or services are on display. In addition to the indoor display area, several exhibitors will be displaying equipment in the hotel parking lot on Wednesday morning from 10:30am—12:00pm. These exhibitors have graciously contributed the refreshments you will be enjoying during conference breaks.

EXHIBIT HALL HOURS: *Sunday 5/12 5:30-7:30PM* *Monday 5/13 7:30-10:30 AM, 3:00-5:00 PM* *Tuesday 5/14 7:30-10:30 AM, 2:30-5:00 PM*

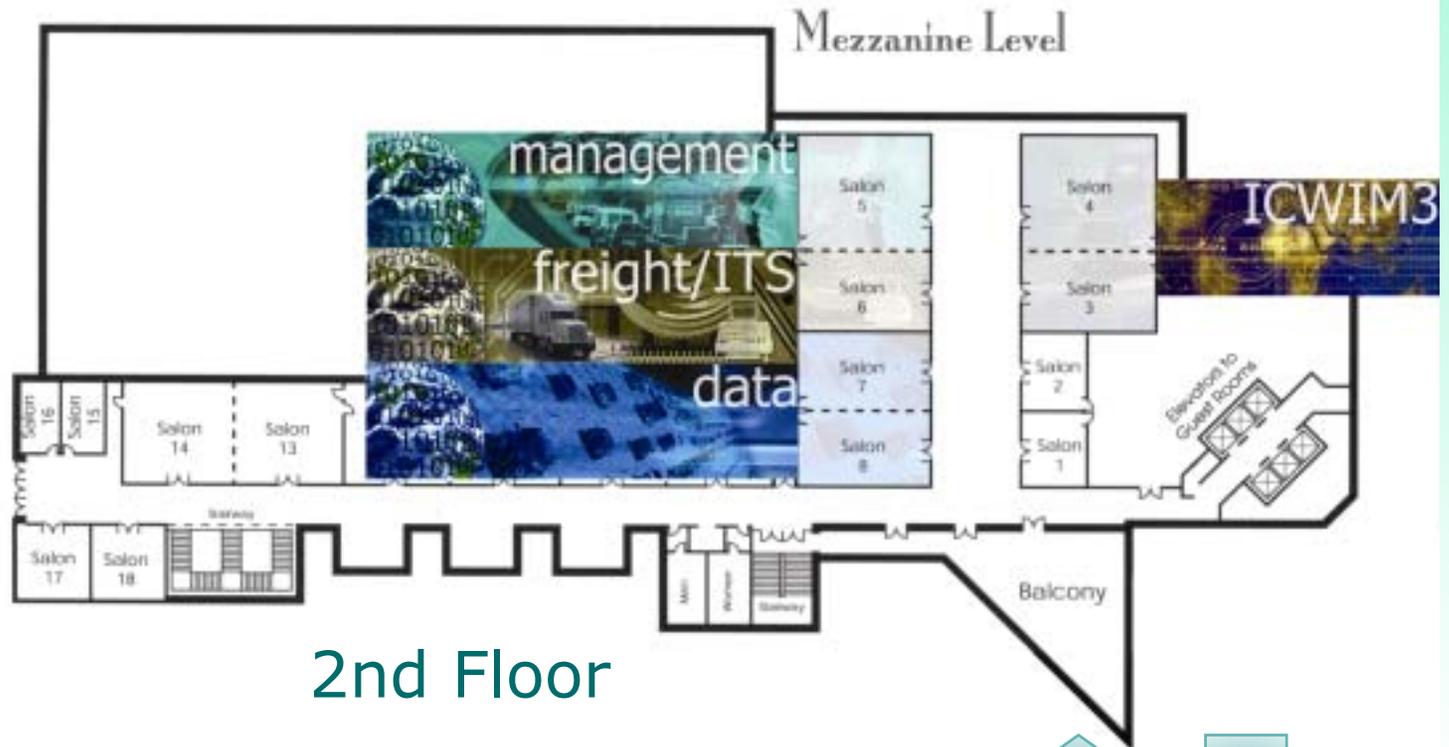


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|--|--|
| 100 Electronic Control Measurement, Inc. | 303 Eres Consultants, Inc. |
| 102 Metrocount USA, Inc. | 304 U.S. DOT—Bureau of Transportation Statistics |
| 103 Peek, Inc. | 305 Spectra Research |
| 106 Captels CA | 306 Geostats, LP |
| 107 Optical Sensor Systems | 307 Dia-L Associates |
| 108 Sterela | 312 3M |
| 109 Electronic Integrated Systems, Inc. | 314 Southern Traffic Services |
| 110 Diamond Traffic Products | 315 R A I Products |
| 112 Cestel D.O.O. | 316 Battelle Memorial Institute |
| 113 Timemark, Inc. | 317 Omni Weight Corporation |
| 114 Cambridge Systematics, Inc. | 319 Thermocoax |
| 115 Roadramp Systems LLC | 320 Refreshment Area |
| 116 Measurement Specialties, Inc. | 321 F.R. Aleman & Associates, Inc. |
| 117 Smartek Systems, Inc. | |
| 121 Refreshment Area | |
| 203 International Road Dynamics, Inc. | Foyer 1 FHWA |
| 206 Kistler Instrument Corporation | Foyer 2 FHWA |
| 207 Trafinfo Communications, Inc. | Foyer 3 VDC & A S T M |
| 208 Multicom, Inc./Multilink, Inc. | Foyer 4 Computer Recognition Systems, Inc. |
| 209 Jamar Technologies | Foyer 5 The Ohio State University Center for Mapping |
| 213 Athens Technical Specialists, Inc. | |
| 214 The Traffic Group | |
| 215 Trancite Logic Systems | |
| 216 Mettler-Toledo | |
| 217 Pat America, Inc. | |
| 220 Refreshment Area | |





Lobby Level



2nd Floor

EXHIBITORS

3M **Contact: Marcia Lozier**
3M Center, Building 0225-05-S-08
St. Paul, Minnesota 55144-1000 USA
(651) 733-3879 Fax (651) 737-1055
mllozier@mmm.com Booth No. 312

3M traffic sensing technology addresses traffic management needs, including ATMS, incident management, and roadway planning.

F.R. Aleman & Associates, Inc. **Contact: Yvette Aleman**
10305 NW 41st Street, Suite 200
Miami, Florida 33178 USA
(305) 591-8777 Fax (305) 599-8749
yaleman@fr-aleman.com Booth No. 321

An engineering firm dedicated to providing transportation services and solutions to government and private agencies worldwide.

Athens Technical Specialists, Inc. **Contact: Ted Gilfert**
8157 US Route 50
Athens, Ohio 45701 USA
(740) 592-2874 Fax (740) 593-2505
ted@atsi-tester.com Booth No. 213

ATSI manufactures testers to certify any counter/classifiers using standard in-pavement axle and presence sensors.

Battelle Memorial Institute **Contact: Mark Leposky**
901 D Street, SW, Suite 900
Washington, DC 20024 USA
(202) 646-7786 Fax (202) 646-5203
lepofskym@battelle.org Booth No. 316

GPS Leader™ provides in-vehicle data collection for travel survey, travel time, and vehicle activity studies.

Cambridge Systematics, Inc. **Contact: Amy Habeshian**
150 Cambridge Park Drive, Suite 4000
Cambridge, Massachusetts 02140 USA
(617) 234-0571 Fax (617) 354-1542
ahabeshian@camsys.com Booth No. 114

A national leader providing solutions for transportation, turns data into information for decision-making.

Captels CA **Contact: Celine Garcia**
Zae des Avants, 1 Rue du Mazet
34270 St. Mathieu de Treviers FRANCE
33 0 467 552 570 Fax 33 0 467 553 013
captels@mnet.fr Booth No. 106

Cestel D.O.O. **Contact: Bajko Kulauzovic**
Puhova Ulica 2
SI-1113 Ljubljana SLOVENIA
38615681719 Fax 38615686099
bajko.kulauzovic@cestel.si Booth No. 112

DIA-L Associates **Contact: Lee Hockett**
3302 Aquia Drive
Stafford, Virginia 22554 USA
(540) 659-2264 Fax (540) 659-2264
dialassoc@va.prestige.net Booth No. 307

Diamond Traffic Products **Contact: Andrea Taylor**
76433 Alder Street
Oakridge, Oregon 97463 USA
(541) 782-3903 Fax (541) 782-2053
sales@diamondtraffic.com Booth No. 110

For more than 20 years, Diamond Traffic Products has produced accurate measurement solutions with traffic counters for states, cities, counties, parks, and private business.

Digital Traffic Systems **Contact: Gary Flynn**
(703) 593-7564
jgflynn@aol.com

EIS Electronic Integrated Systems, Inc. **Contact: Mike Ouellette**
150 Bridgeland Avenue, Suite 204
Toronto, Ontario M6A 1Z5 CANADA
(416) 785-9248 Ext. 222 Fax (416) 785-9332
mike@rtms-by-eis.com Booth No. 109

RTMS is a radar-based vehicle detection sensor capable of providing volume, speed, occupancy, and long vehicle count in up to eight individual lanes.

Electronic Control Measurement, Inc. **Contact: Ron White**
10804 Highway 290 East
Manor, Texas 78653 USA
(512) 272-4346 Fax (512) 272-4966
ecmusa@io.com Booth No. 100

ECM provides engineering products and services in the traffic monitoring arena, specializing in turnkey weigh-in-motion solutions, piezo sensors, and non-intrusive radar vehicle detectors.

ERES Consultants **Contact: Don Dixon**
9030 Red Branch Road, Suite 210
Columbia, Maryland 21045 USA
(410) 997-6181 Fax (410) 997-6413
ddixon@ara.com Booth No. 303

ERES provides services that include installation and maintenance of traffic monitoring sites and pavement engineering.

Federal Highway Administration **Contact: David L. Jones**
400 Seventh Street, SW
Suite 3306
Washington D.C. 20590
(202) 366-5053 Fax (202) 366-7742
david.l.jones@fhwa.dot.gov Booth No. Foyer 1 & 2

Geostats, LP **Contact: Jeremy Myers**
530 Means Street, NW, Suite 310
Atlanta, Georgia 30318 USA
(404) 588-1004 Fax (404) 588-1227
jmyers@geostats.com Booth No. 306

Geostats specializes in the application of GPS and GIS to transportation data collection and analysis.

International Road Dynamics, Inc. **Contact: Brian Taylor**
702 43rd Street East
Saskatoon, Saskatchewan S7K 3T9 CANADA
(306) 653-6600 Fax (306) 242-5599
info@ird.ca Booth No. 203

JAMAR Technologies **Contact: James Martin**
151 Keith Valley Road
Horsham, Pennsylvania 19044 USA
(800) 776-0940 Fax: (215) 491-4889
sales@jamartech.com Booth No. 209

Manufacturer of traffic counting and classification equipment and supplies. Distributor of Golden River products.

Kistler Instrument Corporation **Contact: Lou Pfohl**
75 John Glenn Drive
Amherst, New York 14228 USA
(716) 691-5100 Ext. 337 Fax (716) 691-5226
lou.pfohl@kistler.com Booth No. 206

Kistler manufactures quartz-based acceleration, pressure and force transducers. The LINEAS is a high-accuracy, quartz WIM sensor developed by Kistler for easy installation into asphalt or concrete pavements.

Measurement Specialties, Inc. **Contact: Don Halvorsen**
950 Forge Avenue
Norristown, Pennsylvania 19403 USA
(610) 650-1580 Fax (610) 650-1509
don.halvorsen@msiusa.com Booth No. 116

Piezoelectric and Fiber Optic Axle Sensors used for classification, speed/red light cameras, WIM and treadles.

EXHIBITORS

Metrocount USA, Inc. **Contact: Jim Ball**
17130 Moss Side Lane
Olney, Maryland 20832 USA
(800) 576-5692 Fax (866) 440-8407
usasales@metrocount.com Booth No. 102

With the release of our all-new, 6th generation MetroCount 5600 Series Vehicle Classifier System, we continue the Revolution in Traffic Counting. Our proven approach to traffic surveys, combined with our world-leading Traffic Executive software (All New Ver. 2.25!), gives you the ultimate in traffic analysis power and flexibility.

Mettler-Toledo **Contact: Bob Susor**
1900 Polaris Parkway
Columbus, Ohio 43240 USA
(614) 438-4917 Fax (614) 430-2537
rebecca.thompson@mt.com Booth No. 216

Multicom, Inc. **Contact: Sid Lieberman**
/ Multilink, Inc.
1076 Florida Central Parkway
Longwood, Florida 32750 USA
(407) 331-7779 Fax (407) 339-0204
multicom@multicominc.com Booth No. 208

Omni Weight Corporation **Contact: Vesa Pylkkanen**
2111 Wilson Boulevard, Suite 700
Arlington, Virginia 22201 USA
(703) 351-5089 Fax (703) 351-9292
info@owacacamerica.com Booth No. 317

Optical Sensor Systems **Contact: Dr. Barry Grossman**
2530 Kirby Avenue, Suite 303
Palm Bay, Florida 32905 USA
(321) 726-5933 Fax (321) 726-3993
b.g.grossman@ieee.org Booth No. 107

Optical Sensor Systems was founded in 1996 with the objective of providing high performance, cost effective fiberoptic sensor based equipment to government, industry and business.

Pat America, Inc. **Contact: Gary Peck**
1665 Orchard Drive
Chambersburg, Pennsylvania 17201 USA
(717) 263-7655 Fax (717) 263-7845
g.peck@patamerica.com Booth No. 217

Peek Corporation **Contact: Michael McKee**
1500 N. Washington Boulevard
Sarasota, Florida 34236 USA
(866) 260-7335 Ext. 133 Fax (941) 552-1498
michael.mckee@peekcorp.com Booth No. 103

R A I Products **Contact: John Rosenblatt**
421 Roundtree Road
Charlotte, North Carolina 28217 USA
(704) 525-1852
jack@raiproducts.com Booth No. 315

RoadRAMP Systems **Contact: Tim Fielder**
5565 Pin Oak Drive
Doylestown, Pennsylvania 18901 USA
(215) 794-9155 Fax (215) 794-3959
info@roadrampsystems.com Booth No. 115

RoadRAMP portable axle sensors for multi-lane classification projects using road tube and existing traffic counters.

Smartek Systems, Inc. **Contact: Greg Pieper**
295 Waycross Way
Arnold, Maryland 21012 USA
(410) 315-9727 Fax (410) 384-9264
gpieper@smarteksys.com Booth No. 117

Southern Traffic Services, Inc. **Contact: Carolyn Thornton**
505 Lockwood Street
Pelahatchie, Mississippi 39145 USA
(601) 854-8898 Fax (601) 854-8896
cthorton@netdoor.com Booth No. 314

Traffic impact studies, traffic signal and multi-way stop warrant studies, traffic mitigation studies, traffic signal design/preparation of construction plans and documents.

Spectra Research, Inc. **Contact: Mike Johnson**
3085 Woodman Drive, Suite 200
Dayton, Ohio 45420 USA
(937) 299-5999 Ext. 19 Fax (937) 299-7773
mjohnson@spectra-research.com Booth No. 305

Sterela **Contact: Manuel Reolid**
P. O. Box 2, Impasse Pedenau
Pins Justaret 31860 FRANCE
info@sterela.fr Booth No. 108

Established in Pins-Justaret, near Toulouse, in 1980 with a capital of 262 112 euros, Sterela's principal activities are the research, design, manufacture and sales of electronic systems. From the beginning, it has specialized in three sectors: traffic department, aeronautical department, and industry department.

Thermocoax **Contact: Tracy Dejong**
6825 Shiloh Road East, Suite B7
Alpharetta, Georgia 30005 USA
(678) 947-4430 Fax (678) 947-4450
tracy.dejong@thermocoax.com Booth No. 319

The Traffic Group **Contact: Donald Hayes**
9900 Franklin Square Drive, Suite H
Nottingham, Maryland 21236 USA
(410) 931-6600 Fax (410) 931-6601
dhayes@trafficgroup.com Booth No. 214

Services include data collection services, traffic engineering, transportation planning, planning studies, traffic engineering design, and roadway/parking lot design.

Timemark, Inc. **Contact: Mike Bonser**
3080 22nd Street, SE
Salem, Oregon 97302 USA
(503) 363-2012 Fax (503) 363-1716
sales@timemarkinc.com Booth No. 113

Innovative data collection equipment, stellar quality products and support. One road, one system, no limits.

Trafinfo Communications, Inc. **Contact: Sudhir Murthy**
209 Lowell Street
Lexington, Massachusetts 02420 USA
(781) 863-0051 Fax (781) 863-0051
smurthy@trafinfo.com Booth No. 207

Internet-based wireless telemetry system with nation-wide coverage using digital paging and satellite communication technologies.

Trancite Logic Systems **Contact: Joshua Evarts**
7646 West Lemhi #6
Boise, Idaho 83709 USA
(208) 323-2481 Fax (208) 322-6031
jevarts@pathfinderdg.com Booth No. 215

U.S. DOT Bureau of Transportation Stats. **Contact: Renita Hamlet**
400 Seventh Street, SW
Washington, DC 20590 USA
(202) 366-6947 Fax (202) 366-3197
renita.hamlet@bts.dot.gov Booth No. 304

Vehicle Detector Clearinghouse VDC **Contact: Luzelena Y. Mimbela**
Box 30001, Department 3SOL
Las Cruces, New Mexico 88003-8001 USA
(505) 646-4240 Fax (505) 646-2960
lmimbela@nmsu.edu Booth No. Foyer 3



CONFERENCE-AT-A-GLANCE

to **PROGRAM**



SUN	5:30 PM	Welcome Reception			Click on blue text to view session
MONDAY	8:30 AM	OPENING GENERAL SESSION			
	9:05 AM	1 NATMEC OPENING			ICWIM3 INTRO
	10:30 AM	A2 Traditional Sensors	B2 Privatizing Traffic Monitoring Programs	C2 CMS: The Role of Travel and Traffic Data	1a WIM Testing (1)
	12:00 PM	LUNCH Fredrick (Bud) Wright, Executive Director, FHWA			
	1:30 PM	A3 Non-Traditional Sensors	B3 Non-Traditional Data Sources	C3 Issues in Urban Traffic Data	1b WIM Testing (2) 2a WIM Standards (1)
	3:30 PM	A4 Data Archiving	B4 Travel Time Data Collection & Analysis	C4 Estimation of Truck Traffic Volumes	2b WIM Standards (2) Panel Discussion 1: Harmonization of WIM Standards & Tests
TUESDAY	8:30 AM	5 ITS / DATA GENERAL SESSION			3 WIM Products
	10:30 AM	A6 Quality Control of Data	B6 Remote Sensing	C6 Making Connection Between ITS & Traffic Monitoring	4a WIM Technologies (1)
	1:00 PM	A7 LTPP Specific Pavement Studies	B7 Integration of Data Sources	C7 ITS Archived Data - Now and the Future	4b WIM Technologies (2)
	3:00 PM	A8 Automatic Traffic Recorder Fundamentals	B8 Integration of Data Sources (cont.)	C8 Monitoring for North American Cross Border Traffic	5 Enforcement Using WIM Panel Discussion 2: Enforcement, Technical & Legal Issues
WEDNESDAY	8:00 AM	9 COMBINED NATMEC/ICWIM SESSION			
	9:30 AM	POSTER SESSION			6 Data Quality, Management & Use
		10 VENDOR INFOMERCIALS FIELD DEMOS Rear Parking Lot			
	1:00 PM	A11 Weigh In Motion	B11 MPO Uses of Urban	C11 Innovative Uses of ITS/	7 Application of WIM to
	3:00 PM	A12 Pavement Design Guide	B12 Future Data Programs & Performance Measures	C12 GIS and Web Tools to Organize Urban Traffic Data	8 Freight Mobility, Road Safety and Pricing
7:00 PM	Dinner with the magic, laughter and inspiration of Giovanni			Conclusions	
THU	8:30 AM	FUTURE DIRECTIONS FOR DATA PROGRAMS			