

THE ATRINSIDER



The American Transportation Research Institute

SPECIAL ITEMS OF INTEREST

ATRI Research Advisory Committee Meeting
August 3, Chicago

Fatigue Management in Transportation Operations International Conference
September 11-15, Seattle

ATRI will present the following papers at the Fatigue Conference:

[Fleet Safety & Health Impacts of the Revised U.S. Hours-Of-Service Rules](#)

[Commercial Driver Wellness, Health and Fitness: A Program for Mastering Driver Alertness and Managing Fatigue](#)

[Truck Driver Responses to Alertness Monitoring and Fatigue Management Technologies](#)

American Trucking Associations 2005 Management Conference and Exhibition (MC&E)
October 15-18, Boston

ATRI Board of Directors Meeting
October 18, Boston

Safety and Productivity Impacts of the New Hours-of-Service

First instituted in 1939, the Hours-of-Service (HOS) rules for commercial truck drivers existed nearly 60 years with few revisions. New research on sleep patterns, driver fatigue, and safety analyses led the Federal Motor Carrier Safety Administration (FMCSA) to make a major HOS program overhaul in 2003.

New HOS rules, which were implemented in early 2004, redefined on-duty and rest periods to more closely resemble the 24-hour circadian schedule. In reaction to the court decision in 2004, which called into question the research behind the rule change, FMCSA and the trucking industry began working to determine the impact of the new rules on driver health, safety, and carrier productivity.

In response, ATRI is conducting the largest study to date on the impact of the new HOS rules on carrier safety and productivity. To accurately depict how these fac-

tors have been impacted by the change, 2004 data is being contrasted with 2003 data, the last year under the previous HOS rules.

In November 2004, ATRI began administering surveys to commercial drivers, collecting safety and productivity data, and organizing focus groups with CMV safety directors. ATRI also established a Technical Advisory Group (TAG) to provide expert advice regarding priority analysis questions, methods, and optimal data sources.

Early findings show that, generally, drivers and safety directors are satisfied with the new HOS. Of the 1,000 drivers responding to the survey, a majority indicated that the changes either positively impacted their quality of life (66%) and time at home (52%), or did not make a difference.

Focus groups with safety directors led to similar findings; both groups identified the 34-hour

restart and 11-hours of driving time as the most preferred new features, and the 14-hours on-duty as the least. Fleet safety directors also reported that adapting to another change in rules would be costly to carriers in terms of training and business process changes.

While fleet data on safety and productivity measures is still being analyzed, preliminary analysis indicates that since the new rules went into effect there have been lower collision rates, preventable collision rates, and driver injury rates.

ATRI will publish the final report later this year, highlighting major findings and the analyses performed. This research will not only provide near-term answers on the impact of the new HOS, but will also serve as the foundation for future research on longitudinal impacts of the changes.

INSIDE THIS ISSUE:

Board of Directors	2
Letter from the Chairman	2
Board Member Spotlight Mike Card	2
Research Highlights	3
RAC Member Spotlight Peter Martin	3
Research Advisory Committee	3
Contact Information	4

National Initiative to Measure the Performance of Freight Movement

ATRI recently completed Phase Two of the U.S. DOT sponsored Freight Performance Measures (FPM) initiative, which uses advanced data collection and processing techniques to assess the surface transportation system's ability to manage an ever-increasing demand for freight movement by truck. This project continues to develop an FPM system which provides valuable information to government and industry on system imped-

iments such as traffic congestion and other capacity-related bottlenecks.

How FPM Works

The FPM initiative employs advanced vehicle tracking technologies, advanced data processing software and algorithms, and diverse mapping capabilities. Using satellite data, ATRI has measured average travel rates and reliability indices for five freight-significant corri-

dors (I-5, I-10, I-70, I-45, and I-65). This number will grow exponentially during Phase Three.

The FPM system calculates average travel rates for trucks using lat/long positions collected by satellite tracking. Combining average travel rates for multiple trucks across the corridors allows for identification of freight movement inefficiencies. (Continued on page 4)

Board of Directors

Mr. James D. Staley
President and CEO
 YRC Regional Transportation
 Akron, OH

Mr. Michael S. Card
President
 Combined Transport, Inc.
 Central Point, OR

Mr. Edward Crowell
President
 Georgia Motor Trucking Association, Inc.
 Atlanta, GA

Mr. Douglas G. Duncan
President and CEO
 FedEx Freight
 Memphis, TN

Mr. Hugh H. Fugleberg
President and COO
 Great West Casualty Company
 South Sioux City, NE

Mr. Craig Harper
COO and Executive Vice President, Operations
 J.B. Hunt Transport Services, Inc.
 Lowell, AR

Mr. Ludvik F. Koci
President
 Penske Transportation Components
 Bloomfield Hills, MI

Mr. Gregory L. Owen
Head Coach and CEO
 Ability/Tri-Modal Transportation Services Inc.
 Carson, CA

Mr. Donald J. Schneider
Chairman
 Schneider National, Inc.
 Green Bay, WI

Mr. Douglas W. Stodar
President and CEO
 CNF Inc.
 Palo Alto, CA

Ms. Rebecca M. Brewster
President and COO
 American Transportation Research Institute
 Atlanta, GA

Hon. Bill Graves
President and CEO
 American Trucking Associations
 Alexandria, VA

Message from the Chairman

Welcome to the inaugural edition of *The ATRInsider*, a quarterly newsletter designed to keep you apprised of the vital research being performed by the American Transportation Research Institute (ATRI). With its focus on the critical issues facing the trucking industry, ATRI's research is providing the answers to questions as varied as the safety impact of the new Hours-of-Service (HOS) to the future of freight performance measures.

In this and subsequent issues, you will learn about current research underway, and research findings as work is completed. You will also learn about the work of our Research Advisory Committee (RAC). ATRI's RAC, comprised of carriers, suppliers to the industry, academia, government, labor and others, is charged with annually developing a research agenda for the Institute. The men and women listed on the opposite page commit their expertise and practical industry experience to deliberations that result in an objective research agenda, prioritized to focus on the most relevant of issues.

Equally impressive are the myriad partners involved in ATRI's research. Consider that recent research has involved stakeholders as diverse as the U.S. Department of Agriculture, Cummins Inc, QUALCOMM, the University of Pennsylvania School of Medicine, the University of Minnesota ITS Institute, the Federal Highway Administration, the Federal Motor Carrier Safety Administration, and a host of motor carriers who have provided safety data for HOS, equipped trucks for fatigue management studies, and provided drivers to test the latest technologies. It is easy to see that ATRI's success is rooted in the Institute's ability to coalesce the right partners at the right time.

As you read through *The ATRInsider*, I hope you too will discover ways to become involved with ATRI.

Jim Staley
 Chairman
 ATRI Board of Directors

BOARD MEMBER SPOTLIGHT

Mike Card, President of Combined Transport, Inc., has been a member of the ATRI Board of Directors since 2003. In addition to serving on ATRI's Board, Mike served as Chairman of ATRI's Research Advisory Committee from its inception in 2001 until 2004.

Mike has been with Combined Transport, a family-owned and operated business based in Central Point, Oregon, since 1982. He was named President in 1990. Mike is a graduate of the University of Oregon,



with degrees in Economics and Business Administration.

In addition to his involvement with ATRI, Mike is active in the American Trucking Associations, serving as incoming Chairman of the Insurance Task Force and as a member of the Highway Policy Committee and the Size and Weight Task Force.

"Through my involvement with ATRI, first with the RAC and now the Board, I have had the opportunity to be at the forefront of some very exciting research. I would encourage my peers throughout the industry to get involved with ATRI, either through the RAC or through individual research initiatives."

Research Highlights

ATRI recently completed the **Pilot Test of Fatigue Management Technologies** for the Federal Motor Carrier Safety Administration (FMCSA) and Transport Canada. The research was designed to test how truck drivers reacted to a number of fatigue management technologies, and whether the technologies would improve the alertness and fatigue awareness of commercial truck drivers and increase their sleep time by providing drivers with information feedback about changes in sleep need, in drowsiness and in driving performance. ATRI's research team included David Dinges of the University of Pennsylvania, Greg Maislin of Biomedical Statistical Consulting, Gerald Krueger of Krueger Ergonomics Consultants and Col. Daniel Redmond of Walter Reed Army Institute of Research.

Idling Preferences Survey – ATRI is under contract to the New York State Energy Research and Development Authority (NYSERDA) to develop and conduct a nationwide survey of trucking companies to determine preferences and capabilities for the use of idle reduction technologies. ATRI's work for NYSERDA is being done as part of a Clean Cities Program grant.

Predicting Truck Crash Involvement – A Commercial Driver Behavior-Based Indicator Is it possible to predict what driver behaviors will lead to crashes? ATRI will soon release the results of research designed to do just that. This study focuses on whether there is a significant difference in future crash rates for drivers based on past roadside inspection, conviction, and/or crash information. In conjunction with research partner CVSA (Commercial Motor Vehicle Safety Alliance), ATRI's research is also identifying effective enforcement actions specifically targeting those driver behaviors most likely to lead to future crash involvement.

Driving Simulator Evaluation – ATRI has begun work on its evaluation of the safety and efficiency impacts of driving simulator training on truck drivers. The research includes identification of key simulator features most likely to impact safety and efficiency and the analysis of safety data from drivers receiving simulator training versus those trained in more traditional ways.

Other research in which ATRI is currently involved includes:

- Employer Notification System Pilot Test**
- Development of a Freight Information Highway**
- ITS Security Curriculum Development**
- Intelligent Vehicle-Based Safety Systems**
- Safety Technology Survey Synthesis**
- Traffic Incident Management Focus States Initiative**
- Brake Maintenance Certification**
- Highway Funding Analysis**
- State Economic Analysis**

For a complete listing of all ATRI research, please visit us online at www.atri-online.org. For more information about a specific research initiative, contact us at ATRI@trucking.org.

RAC Member Pete Martin



ATRI's Research Advisory Committee Chairman, Pete Martin, is in his 40th year in the trucking industry. He started his career as a dockman for Saginaw Transfer Company in Chicago, after graduating from high school.

After serving his country in the Army, Pete returned home to resume his education, working in trucking while attending college. After college, Pete entered a management training program with Terminal Transport Company and has been trucking ever since. Pete is now the President of Lakeville Motor Express, a Minnesota-based LTL carrier serving the Midwest.

Pete was first appointed to the Research Advisory Committee in 2003, and in October 2004, the ATRI Board appointed him Chairman to succeed outgoing RAC Chairman Mike Card. In addition to his leadership of the RAC, Pete is involved with the Minnesota Trucking Association, the American Trucking Associations, and serves on the Boards of the Middlewest Motor Freight Bureau and the Egan Corporation.

2005-2006 Research Advisory Committee

Pete Martin, RAC Chairman Lakeville Motor Express	James J. Eberhardt, Ph.D. U.S. Department of Energy	Danilo J. Santini, Ph.D. Argonne National Laboratory
John R. Berry FedEx Freight East	William G. Joyce, Jr. New York State Motor Truck Association	Robert W. Schomber Florida Power & Electric Company
Stephen F. Campbell Commercial Vehicle Safety Alliance	Dimitri N. Kazarinoff Eaton Corporation	Michael C. Smith, Ph.D. University of Virginia
Michael Conyngham International Brotherhood of Teamsters	Ronald R. Knipling, Ph.D. Virginia Tech Transportation Institute	Greer Woodruff J.B. Hunt Transport Services, Inc.
John Corbin Wisconsin Department of Transportation	Don Osterberg Schneider National, Inc.	Garland L. Woods ABF Freight System, Inc.
David M. Creer Utah Trucking Association	Robert G. Petrancosta Con-Way Transportation Services, Inc.	Skip Yeakel Volvo Trucks North America, Inc.
John Culp Maverick Transportation, Inc.	Karen Rasmussen Arizona Trucking Association	ATRI's Research Advisory Committee (RAC) is responsible for annually recommending a research agenda for the Institute.
Duke Drinkard Southeastern Freight Lines	Marc Sands QUALCOMM Wireless Business Solutions	

The American Transportation Research Institute

Atlanta • Sacramento • Minneapolis
2200 Mill Road
Alexandria, VA
22314-4677

Phone: 703-838-1966
Fax: 703-838-0291
E-mail: atri@trucking.org

*Knowledge and Excellence
In Trucking and Transportation
Research*

We're on the web!

<http://www.atri-online.org>



(Continued from page 1)

During FPM Phase Three, the scope of the research is expanding to include major U.S./Canadian freight border crossings. This summer, ATRI will begin collecting data for key corridors that allow for large flows of truck-based freight to move between North America's largest trading partners.

**Washington State Average Travel Rate for Trucks
April-June 2004, 10 Mile Segments**

