



No. 2, July 2010.

### Word from the editor

Dear ISWIM-member, here it is the second edition of the ISWIM Newsletter. Ready a bit later than originally planned but I guess we all know how things go. Our time and attention is required for all kinds of urgent matters, meetings, projects, etc. This often leaves little time to share what we do with others that are a bit further away. Sometimes the other side of the street seems already too far away.

This is exactly why we have started the ISWIM-Newsletter. To inform each other on recent projects and developments in the field of Weigh-In-Motion around the world. Despite the differences in all the different countries I have found it always surprising to see that so many things are the same; the WIM-technology we use, the practical problems with installations, the difficulties to convince customers of new applications, discussions about requirements, the specifications and testprocedures and the importance of data quality management.

I would like to thank the authors for sending in their articles for this second edition. Like the first edition I hope you will enjoy reading this edition of our Newsletter. Regards,  
Hans van Loo, [hvloo@kalibra.nl](mailto:hvloo@kalibra.nl)

### Your Article in the Newsletter?

The Newsletter is intended to bridge the gap between international WIM-conferences by informing you about recent projects and developments. We are looking for short 'articles' (around 200 words) on new projects, research, tests or other developments related to WIM-technology and its applications. Pictures to accompany your article are also welcome. For the WIM-vendors the newsletter offers the possibility to present their latest technological developments, newly acquired or concluded projects. The aim is to find a balance between research and application and between public and commercial items.

The Newsletter is open for all ISWIM-members that want to share their latest news in the field of Weigh-In-Motion. So don't hesitate to send your short article(s) for the next edition to me. Hans van Loo, [hvloo@kalibra.nl](mailto:hvloo@kalibra.nl).



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## ISWIM membership fees

At the last meeting ISWIM Board Meeting in Brussels on 7th July 2010 the new membership fees have been determined. Like before the fees are valid for a period of two years (2010 and 2011).

In order to try to increase the number of Individual, Student and Senior members these membership fee have been reduced to €0,-. The corporate membership fees have remained the same as for 2008/2009.

Member	Fee
Individual	€ 0,-
Student	€ 0,-
Senior	€ 0,-
Corporate small	€400,-
Corporate large	€600,-

## ISWIM-callendar.

In the coming two years at least two ISWIM events are planned. More official information relating dates, venues and organisation of both events will be available soon. Or contact the persons mentioned in the table below.

Event	Date
ISWIM-workshop in Santa Catarina, Brazil Contact: Helio Goltsman at <a href="mailto:goltsman@labtrans.ufsc.br">goltsman@labtrans.ufsc.br</a> or Bernard Jacob at <a href="mailto:Bernard.jacob@lcpc.fr">Bernard.jacob@lcpc.fr</a>	April 2011
ICWIM-6, in cooperation with NATMEC-2012 Contacts: Bernard Jacob at <a href="mailto:Bernard.jacob@lcpc.fr">Bernard.jacob@lcpc.fr</a> and Anne-Marie McDonnell at <a href="mailto:AnneMarie.McDonnell@ct.gov">AnneMarie.McDonnell@ct.gov</a>	June 2012

## WIM for better Pavement Design

Obtaining quality data on traffic loading is at the heart of a new workshop developed by the U.S. Federal Highway. "When designing new pavements, it is critical to have accurate WIM data," says David Jones of FHWA's Office of Highway Policy Information. "The better the WIM data that is collected, the better the weight projections are for the future."

The WIM and Traffic Workshop, which targets traffic and pavement design staff, demonstrates the complete process of using WIM technologies to collect data on vehicle and axle weights, inter-axle distances, speed, and vehicle class. The free, 2.5-day event starts with an overview of available WIM technologies and collection equipment.

Participants then learn how to select appropriate sites and prepare the pavement for installing the equipment. Instructors also cover procedures for WIM system installation, calibration, validation, and acceptance testing, as well as data collection, processing, and validation.



*Installation of WIM site in Virginia.*

The workshop concludes with a demonstration of PrepME, a software tool developed by the University of Arkansas that is used to input quality



data, including traffic data, into the Mechanistic-Empirical Pavement Design Guide. Workshop participants receive a 444-page workbook that contains detailed information for future reference.

For more information about upcoming workshops or how to host a workshop, contact David Jones at 202-366-5053 or [djones@fhwa.dot.gov](mailto:djones@fhwa.dot.gov), or Mike Moravec at 202-366-3982 or [mike.moravec@dot.gov](mailto:mike.moravec@dot.gov).

### **US Developing Weigh-in-Motion Standards**

USDOT's Federal Highway Administration (FHWA) has launched an initiative to explore the integration of Weigh-in-Motion technology into the National Institute of Standards and Technology's "Hand Book # 44: Specifications, Tolerances and Other Technical requirements for Weighing and Measuring Devices". NIST's Weights and Measures Division is partnering with FHWA on this endeavor. A representative from Cardinal Scales is assisting in overseeing this project as well.

Consideration of work performed by FEHRL's FiWi Group will be used as reference in the project. OIML's R 134-1 and the ASTM 1318 WIM Standards will also be considered in the development of the US standard. The goal of the project is to incorporate WIM as a highway mainline truck weight screening device into the Handbook supporting enforcement's use of WIM to select vehicles requiring additional measurements on stationary scales.

For more information contact Tom Kearney of FHWA at (518) 431-4125 ext. 218) or [tom.kearney@dot.gov](mailto:tom.kearney@dot.gov).

### **Air Quality Monitoring Study**

There is a growing demand from the European Union for authorities to conduct regular reviews of air quality. The European Committee has set limits for sulphur dioxide, nitrogen dioxide and oxides of nitrogen, particulate matter and lead in ambient air. However, most authorities are unable to gather data from feeder road systems. This information is essential in transport planning and environmental modelling.



*The HITRAC® System.*

In support of these requirements TDC Systems are interfacing the industry standard HI-TRAC® High Speed WIM System with air quality monitoring equipment so that a direct comparison with air quality and traffic data can be made. Wind speed and direction sensors are added to help interpret roadside air quality data. Vehicle classification data could now be used to compare directly, numbers of HGV on a given route, with NOx concentrations by the roadside.

The system will be used to monitor levels of NO2 and PM10 alongside local meteorological conditions such as wind speed and direction, temperature and noise. The HI-TRAC® System collects traffic data in vehicle-by-vehicle format, creating an individual record for each vehicle passing over the in-road loop/piezo sensor array. This individual record contains details on the vehicle's classification and weight.



The equipment is now on trial by the UK Department for Transport and Transport Scotland. The first results will be available by the end of the year.

For more information contact Tony Di Monaco at [tony@tdcsystems.co.uk](mailto:tony@tdcsystems.co.uk)

### WIM@Toll™

Weigh-In-Motion has many applications in areas such as data collection and enforcement. The WIM scope has drastically broadened with the amalgamation of Electronic Vehicle Identification (EVI) technologies for Automatic Vehicle Identification (AVI)

International Road Dynamics (IRD) WIM is utilized at toll plazas, directly decreasing the amount of delays users typically endure at traditional toll stations. With the addition of Electronic Toll Collection (ETC) to the WIM@Toll™, vehicles are able to proceed through the tolling plaza without stopping, while the manual collection of toll from vehicles not subscribed to the ETC program is still possible. With fewer vehicles stopping, it has been observed that the amount of environmental harmful emissions is reduced up to 63% and the vehicle throughput at the toll plaza is increased significantly.



IRD WIM@Toll™ plaza.

IRD has installed WIM@Toll™ in China, Korea and India and has

achieved an accuracy of over  $\pm 97,5\%$  at a 90% confidence level. WIM@Toll is now being used, by both the public and private toll operators, thereby creating a more efficient technique for funding the construction, operation and maintenance of road ways and bridge structures worldwide. For more information contact Rish Malhotra at [rish.malhotra@irdinc.com](mailto:rish.malhotra@irdinc.com)



IRD-scales installed at toll plaza.

### International Society on Weigh-In-Motion Corporate Members

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