

# ISWIM NEWSLETTER

## Message from the ISWIM president

Dear ISWIM Members, Colleagues, and Friends,

Usually, the President's message is associated with highlighting the progress within our society and summarising the key features contained in the newsletter. Whilst this is the business of ISWIM, it would be remiss of me to not wish you, your families and colleagues to keep safe at this time.

ISWIM has a membership that spans the world. In the past two weeks, I have had communication with many members and colleagues all have shared similar experiences. To different degrees, our countries and regions are isolating in a means to best manage Covid-19. I am not medically qualified to provide any commentary that is more enlightened than what can be ascertained through the general media. However, I recognise that all of us are impacted by this health situation and flow-on consequences that have engulfed our world. We are all in this together and my prayers, my thoughts, and my hopes are with all of you.

Whilst the terminology used is 'social distancing', I disagree with this term, I do not witness 'social' rather only 'physical distancing'. Indeed we remain socially engaged, albeit, in our homes, we are communicating socially through technology and checking on our families, work colleagues and friends.

We must remain strong and we must remain optimistic for both ourselves and everyone around us. As such our Newsletter is published on-time and as expected – full of WIM information.

Keep well, take care of your families and friends and be safe.

Please see page 7 for more information.

Chris Koniditsiotis  
President – ISWIM

■ [Chris Koniditsiotis](mailto:ChrisKoniditsiotis@bigpond.com) | [ChrisK2.0@bigpond.com](mailto:ChrisK2.0@bigpond.com)



**ISWIM**  
International Society for Weigh in Motion

## In this issue

Message from the ISWIM president	1
Young Researcher Award – Deadline Extended!	2
ISWIM User Guide	2
Measurement accuracy meets improved robustness	2
Coming Events (subject to changes)	3
<b>Tramanco's CHEK-WAY®</b> On-Board Weighing System	3
3 <sup>rd</sup> Regional ISWIM Seminar in South Africa	4
Call for Abstracts for the 3 <sup>rd</sup> ISWIM Regional Seminar	4
ISWIM Vendors	5
NMi for WIM and Cyber Security	5
ISWIM at NaTMEC 2020	5
New ISWIM Member	6
Axtec releases 3 <sup>rd</sup> generation OnBoard Load Indicator	6
Check-Up Message from ISWIM President	7
VanJee WIM Pavement Experiences: Difference between asphalt and concrete pavements	7
Responses to Chris' Check-Up Message	8
SW-Defined Free-Flow WIM Enforcement	8
IRD WIM Screening Systems – Washington State	9
Contact ISWIM	9
OIML R134 Certification Expanded for Strip Sensors	10

## Young Researcher Award – Deadline Extended!

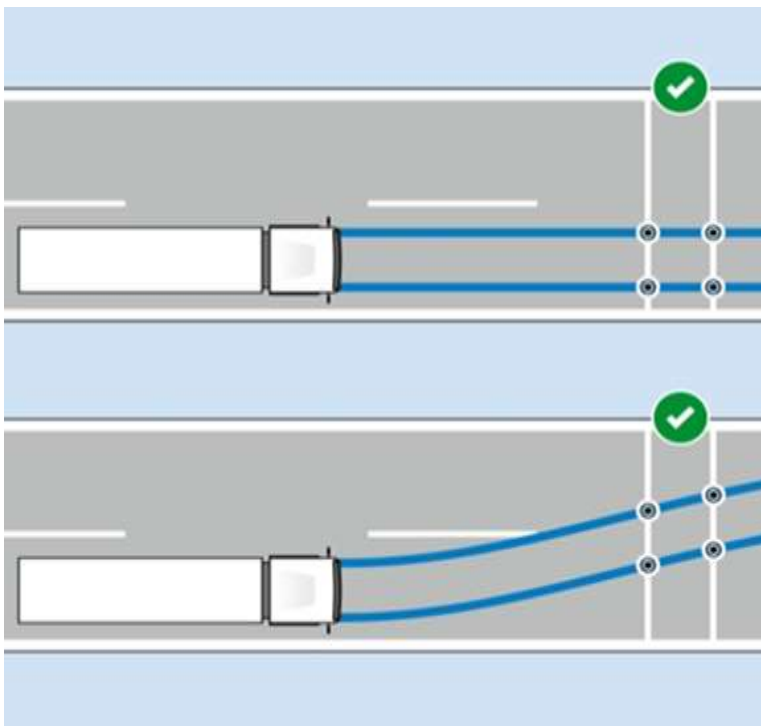
Every year, ISWIM offers scholarships to bachelor, master and PhD students, or post docs up to five years after graduation working on WIM-related research projects. Participants must demonstrate a passion for WIM through either their studies or early professional life **and show “substantial evidence” of their research. “Substantial evidence” could be an original contribution in the form of a journal or conference paper; a report; or a series of presentations that clearly defines the scope of the project, technical approach, and anticipated or final conclusion(s).**

ISWIM will fully sponsor the travel and registration expenses for recipients to present their work at an ISWIM event worldwide, such as ICWIM, an ISWIM seminar, or a sponsored session by ISWIM at other conferences. Sponsorship from ISWIM will not exceed 2500 Euro. Applicants should send their CV, two reference letters, and an abstract up to 1000 words with supporting **“substantial evidence” of their work if it is not fully documented in the abstract. Submissions should be emailed to Lily Poulidakos at [lily.poulidakos@empa.ch](mailto:lily.poulidakos@empa.ch). This year’s deadline is extended to December 31<sup>st</sup> and the award winners will be announced early 2021.**

■ Lily Poulidakos | [Lili.Poulidakos@empa.ch](mailto:Lili.Poulidakos@empa.ch)

## Measurement accuracy meets improved robustness

Kistler will present its new WIM system KiTraffic Digital to the public on different virtual platforms in May 2020. It is the first system of its kind without an induction loop: the sensor itself registers when a vehicle needs to be measured. This reduces installation efforts and increases the reliability of the WIM site. With an accuracy of up to two percent, KiTraffic Digital is the most accurate Weigh-In-Motion system to date.

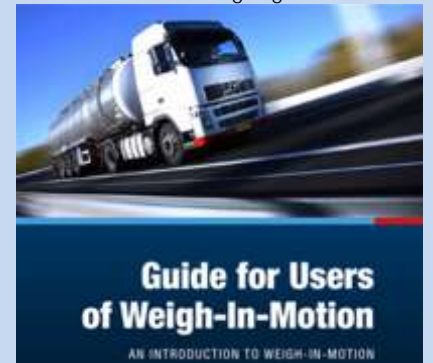


KiTraffic Digital System working independently of lane changes.

## ISWIM User Guide

The new ISWIM Guide for Users of Weigh-In-Motion was launched last year during the 8<sup>th</sup> International Conference on WIM in Prague, Czech Republic. All delegates of the conference received a free hard copy of the guide.

It serves as a basic, yet comprehensive introduction to Weigh-In-Motion. The Guide covers different aspects related to the working, specifying, buying, installing, testing, maintaining and using of WIM systems and data. To enhance accessibility for users starting with WIM, these topics are described in easy-to-understand language.



The guide was well received at the conference both by vendors of WIM systems and end users of WIM data. **As one of the vendors said: “This is exactly what we needed. We are definitely going to use the guide in our contacts with customers especially the ones that are new to WIM”.**

For those of you that were not able to participate at the ICWIM8 a .PDF version of the WIM User Guide can be downloaded at the ISWIM website: <https://lnkd.in/euW9KuZ>.

■ Hans van Loo | [hans.vanloo.int@gmail.com](mailto:hans.vanloo.int@gmail.com)

Lineas Digital, the all-new sensor used in KiTraffic Digital incorporates multiple quartz crystals that autonomously deliver data via a digital interface. By individually calibrating each crystal and adaption them to the road conditions, KiTraffic Digital is able to compensate the influence of poor road quality. Moreover, the system works independently of driving maneuvers because its new algorithms automatically compose the vehicles based on the digital information provided by the sensors and calculate the wheel, axle and total weight as well as information on the tire status.

The digital signal is very robust against noise, which allows robust signal transmission over a long distance. KiTraffic Digital does not require induction loops and works with only one robust cable per sensor. The same ethernet cable that transmits the digital signal from the WIM sensors also provides them with power. This simplifies the installation and improves the overall robustness of the system.

■ Tomas Pospisek | Tomas.Pospisek@kistler.com

## Tramanco's CHEK-WAY® On-Board Weighing System

Tramanco is a family owned business based in Brisbane Australia which designs and manufactures electronic on-board weighing and data logging systems for the road transport industry. Established in 1975 by Roger Sack as a company specialized in heavy-duty truck conversion engineering and suspension manufacturing business. Products included conversions for 6x4, 8x4, 6x6 and 10x6 configurations and specialist air suspensions for the Australian and export markets. With Roger's extensive knowledge of Australian road conditions, he decided in 1982 to manufacture a multi-purpose electronic on-board weighing system to survive these harsh conditions. The system was designed and built with complete interoperability to suit the wide range of vehicles in Australia. After 18 months of successful field trials in Australia and Papua New Guinea the CHEK-WAY® systems went into commercial production.



Tramanco's Chek-Way® on-board WIM-system.

## Coming Events (subject to changes)

Intertraffic Amsterdam  
Amsterdam, the Netherlands  
~~21-24 April 2020~~ (Postponed)  
New date: 23 - 26 March 2021.  
[www.intertraffic.com](http://www.intertraffic.com)

Transport Research Arena  
Helsinki, Finland  
~~27-30 April 2020~~ (Cancelled)  
[www.traconference.eu](http://www.traconference.eu)

NaTMEC 2020  
Raleigh, North Carolina, USA  
~~1-4 June 2020~~ (Postponed)  
New date: June 2021  
[www.natmec.org](http://www.natmec.org)

SATC  
Pretoria, South Africa  
8-11 July 2020  
[www.satc.org.za](http://www.satc.org.za)

ITS Central Eastern Europe  
Kazan, Russia  
21-24 September 2020  
[www.itsworldcongress2020.com](http://www.itsworldcongress2020.com)

ITS World Congress  
Los Angeles, USA  
4-8 October 2020  
[www.itsworldcongress2020.com](http://www.itsworldcongress2020.com)

HVTT-16  
Qingdao, China  
4-8 October 2020  
<http://www.rtet.com.cn/en/>

4<sup>th</sup> ANTT WIM Workshop  
Brasilia, Brazil  
Early December 2020  
[www.antt.gov.br](http://www.antt.gov.br)

TRB Annual Meeting  
Washington DC, USA  
24-28 January 2021  
[www.trb.org](http://www.trb.org)

ISWIM 3<sup>rd</sup> Regional Seminar  
Pretoria, South Africa  
2-5 May 2021  
[www.is-wim.org](http://www.is-wim.org)

ICWIM-9  
Melbourne, Australia  
2023  
[www.is-wim.org](http://www.is-wim.org)

For other WIM-related events contact: ■  
Hans van Loo | [hans.vanloo.int@gmail.com](mailto:hans.vanloo.int@gmail.com)

The CHEK-WAY® on-board weighing system interfaces with most GPS and GPRS systems. This enables operators to monitor several **aspects of each vehicle's** operation in real time, like; static mass and dynamic mass with speed and location. It also has its own live tracking and monitoring server from where operators can download information on each of their vehicles so equipped. Being software, not hardware-based the CHEK-WAY® system uses load cells and/or transducers in any combination to provide end users with solutions to suit their requirements – **“our systems are made to fit the trucks and trailers, not vice-versa”**. **Tramanco designs** and manufactures the systems and writes their own software in-house to give their clients 100% support. Their systems have been working successfully in Australia and Southeast Asia for almost 40 years with system updates being software driven.

■ Roger Sack | roger@tramanco.com.au

## Call for Abstracts for the 3<sup>rd</sup> ISWIM Regional Seminar

ISWIM has published the call for abstracts for the 3<sup>rd</sup> Regional ISWIM Seminar. The seminar will be held from 2-5 May 2021 **(dates subject to change)** in the CSIR Convention Centre in Pretoria, South Africa. The seminar will cover the following topics concerning in-road and on-board WIM:

- **WIM systems, users' perspectives and experiences,**
- WIM sensors, technologies and developments,
- Standards, specifications and testing,
- Data quality, management and use,
- Application of WIM for enforcement and toll-by-weight,
- Applications of WIM in infrastructure and road safety.



The CSIR Convention Centre in Pretoria, South Africa.

The selection of presentations for the seminar will be based on extended abstracts which should be about 4 pages and include sufficient information for a good understanding of the topic to be presented. The **Seminar's Program Committee** will make a selection based on the content and quality of the abstract and the relevance for the specific topics of the symposium and quality of the proposed papers.

## 3<sup>rd</sup> Regional ISWIM Seminar in South Africa

In 2021 ISWIM will be organizing its 3<sup>rd</sup> Regional WIM-Seminar in Pretoria, South Africa with a specific focus on Sub-Saharan Africa. Several countries in this region have been using WIM systems for many years, while others have only recently started implementation. By bringing all these users together ISWIM wants to support the development of WIM in Southern Africa.

The seminar will be held from 2-5 May 2021 **(dates subject to change)** at the CSIR Convention Centre in Pretoria, South Africa. The hosts of the seminar are ISWIM, PIARC Technical Committee TC2.3 'Freight' and Syntell, with the support of the SANRAL and ITS South Africa.

During the seminar there will also be an exhibition where ISWIM Vendors will have the opportunity to present their systems and solutions.

The seminar offers different levels of sponsorship; each level includes a booth at the exhibition, a 15 minute presentation at an end-user session, and a number of free registrations depending on the sponsorship level.

For details on the possibilities and conditions for sponsoring please visit our website: [www.is-wim.org](http://www.is-wim.org) (available soon) or contact:

- Andy Lees | Andrew.Lees@q-free.com
- Andrew Houlston | Andrew@syntell.co.za
- Chris Konidisiotis | Chrisk2.0@bigpond.com



Abstracts must be submitted in English and on-line at [www.is-wim.com](http://www.is-wim.com). The authors of abstracts selected for presentation will be notified early 2021. All abstracts presented at the symposium will be made available to the delegates in electronic form and via the ISWIM web-site. The preliminary timetable for submission of abstracts and registrations is as follows:

- 30 November 2020: Closure of submission for extended abstracts
- 30 January 2021: Notification of successful authors/presenters
- 30 March 2021: Final date for registration of presenters
- 2 to 5 May 2021: 3<sup>rd</sup> Regional ISWIM Seminar.

■ [Andrew Houliston](mailto:Andrew@syntell.co.za) | Andrew@syntell.co.za

■ [Chris Koniditsiotis](mailto:ChrisK2.0@bigpond.com) | ChrisK2.0@bigpond.com

## NMi for WIM and Cyber Security

After NMi published its Weighing in Motion standard back in 2016, there have been interesting developments in the field of weighing in motion. One is that WIM-systems did not become simpler, on the contrary, they became more advanced and got equipped with more and more features. Making technology work for us, and the good.

In case of WIM these additional features are, often, intended to offer more and more advanced applications to end-users and to make the systems and the measurements more accurate and more reliable. In addition when developing systems, we want to make sure they are always available to the user, no matter what. End-users will want these WIM-systems to operate 24/7, while the data is guaranteed to be correct and the privacy is not compromised. In other words, how to achieve optimal availability, data quality, integrity and confidentiality over the entire data-chain?

All this can be covered when taking cyber security into consideration when developing, or purchasing systems or components in order to compose your state-of-the-art weighing in motion system. More specifically, the IEC-62443 provides great insight on how to analyze and address the aforementioned areas (technology, people, policy and procedures). When it comes to operational technology and cyber security; NMi is here to help you. More information on: <https://nmi.nl/markets/cyber-security-and-safety/>

■ [Mike van de Heijden](mailto:mvanderheijden@nmi.nl) | mvanderheijden@nmi.nl

## ISWIM at NaTMEC 2021, Last minute update

This year's National Travel Monitoring Exhibition and Conference (NaTMEC) organized by the Collaborative Sciences Center for Road Safety (CSCRS) with support of the Federal Highway Administration (FHWA). It was to be held from June 1-4 in the Raleigh Convention Center, North Carolina, USA.

NaTMEC brings together traffic monitoring professionals and transportation data users from around the world and North America in particular. The conference offers the opportunity to share knowledge and good practices, exchange ideas and see the latest advancements in policy, technology, and equipment. In addition there will be an exhibition and outdoor demonstration area where vendors can show their solutions, see [www.natmec.org](http://www.natmec.org).

NaTMEC 2020 has been postponed to June 2021 due to Covid-19.

Please look at [www.natmec.org](http://www.natmec.org) for updates.

We will keep you informed on ISWIM participation in NaTMEC.

## ISWIM Vendors

Axtec

[www.axtec.co.uk](http://www.axtec.co.uk)

Betamont

[www.betamont.sk](http://www.betamont.sk)

Camea

[www.cameatechnology.com](http://www.cameatechnology.com)

Captels

[www.pesage-captels.com](http://www.pesage-captels.com)

Cestel

[www.cestel.eu](http://www.cestel.eu)

Corner Stone Int.

[www.corner-stone-int.com](http://www.corner-stone-int.com)

Cross

[www.cross.cz](http://www.cross.cz)

ECM

[www.ecm-france.com](http://www.ecm-france.com)

Haenni

[www.haenni-scales.com](http://www.haenni-scales.com)

Intercomp

[www.intercompcompany.com](http://www.intercompcompany.com)

IRD / PAT Traffic

[www.irdinc.com](http://www.irdinc.com)

Kapsch

[www.kapsch.net](http://www.kapsch.net)

Kistler

[www.kistler.com](http://www.kistler.com)

Mettler Toledo

[www.mt.com](http://www.mt.com)

Mikros

[www.mikros.co.za](http://www.mikros.co.za)

Osmos Group

[www.osmos-group.com](http://www.osmos-group.com)

NMi

[www.nmi.nl](http://www.nmi.nl)

Q-free / TDC

[www.tdcsystems.co.uk](http://www.tdcsystems.co.uk)

Sterela

[www.sterela.fr](http://www.sterela.fr)

TE Connectivity

[www.te.com](http://www.te.com)

Traffic Data Systems

[www.traffic-data-systems.net](http://www.traffic-data-systems.net)

Tramanco

[www.tramanco.com.au](http://www.tramanco.com.au)

VanJee Technology

[www.wanji.net.cn](http://www.wanji.net.cn)

Wheelright

[www.wheelright.co.uk](http://www.wheelright.co.uk)



The venue of NaTMEC 2020 in Raleigh, North Carolina, USA.

Over the years Weigh-In-Motion has been an important topic within NaTMEC and at the same time NaTMEC has been an important platform for ISWIM (members) to promote the use of WIM technologies and the applications of WIM data. This **year's edition sees a number** of WIM related sessions;

Monday June 1<sup>st</sup> we will start from 13:00-14:30 with an End-User Workshop where a number of ISWIM Vendors will present their show case projects, implementations and experiences. Next from 15:00-16:45 there will be an ISWIM+FHWA **Workshop** titled **"An Introduction to Weigh-In-Motion**. This workshop is aimed at new and starting users of WIM systems and data and will **be based on the new ISWIM 'WIM User Guide' and the FHWA 'WIM Pocket Guide'**. In addition two regular conference sessions focused on WIM are scheduled for Tuesday June 2<sup>nd</sup> and Wednesday June 3<sup>rd</sup> with presentation from delegates from around the USA.

■ [Andy Lees](mailto:Andy.Lees@tdcsystems.co.uk) | [Andy.Lees@tdcsystems.co.uk](mailto:Andy.Lees@tdcsystems.co.uk)  
 ■ [Hans van Loo](mailto:Hans.vanloo.int@gmail.com) | [Hans.vanloo.int@gmail.com](mailto:Hans.vanloo.int@gmail.com)

## Axtec releases 3<sup>rd</sup> generation OnBoard Load Indicator

Axtec have released the latest version of their OnBoard Axle Load Indicator, which they claim is the most advanced, most accurate and most reliable load indicator on the market. Axtec OnBoard shows real-time axle and gross vehicle loads via an intuitive traffic light configuration; green for lower levels, amber as maximum limits approach and red to indicate an overload.

Load data can be saved and downloaded for analysis, whilst audible and visual **alarms, and outputs to telematics devices are provided as standard**. The 5" widescreen display, which can show the vehicle type, accepts inputs from up to **6 cameras and the new "touch-cam" facility offers uninterrupted viewing of a priority camera**.

Axtec OnBoard powers up with the vehicle and requires no driver input, reducing the risk of tampering or accidental damage and eliminating the need for additional driver training. The display can automatically dim when safe to do so, reducing driver distraction and fatigue.

## New ISWIM Member

In the last months ISWIM has welcomed another new member in its Vendors & Consultants College:

NMi, is the independent specialist for testing, certification, inspection and training in the field of metrology and affiliated activities. We are a Notified Body for the Measuring Instrument Directive (MID), and Non Automatic Weighing Instruments Directive (NAWID), and have issued more than 50% of all the OIML certificates worldwide.

Manufacturers and end-users can rely on our expertise ranging from accuracy testing, cyber security, uncertainty calculation, electromagnetic compatibility, humidity and safety testing. NMI offers best in class services when it comes to accuracy and reliability.

[www.nmi.nl](http://www.nmi.nl)





Axtec OnBoard Load Indicator.

One unwelcome feature of all new vehicles is the tendency for suspension springs to relax, which can impact on medium-term accuracy. The zero-reset facility on Axtec OnBoard allows the user to compensate for this, even on a loaded vehicle. This helps to reduce downtime and the cost of ownership by avoiding the need for regular service visits.

**Axtec, who are the UK's only company specialising in axle load measurement,** produce a range of dynamic, static, on-board and portable axle weighing solutions.

■ [Alasdair Littlejohn](mailto:Alasdair.Littlejohn@axtec.com.com) | [Alasdair.Littlejohn@axtec.com.com](mailto:Alasdair.Littlejohn@axtec.com.com)

## VanJee WIM Pavement Experiences: Difference between asphalt and concrete pavements

Today, many WIM sensors are installed into the asphalt pavement directly. However, asphalt road would usually have rutting and deformation within merely one year if there are too many overloading vehicles drive through. Asphalt surface deterioration will affect WIM operation in two perspectives including: reducing the accuracy of weight measurement dramatically, increasing the maintenance cost and reduce sensor's life span.



VanJee installed bar sensors into an asphalt road.

Firstly, asphalt surface deterioration will reduce the accuracy of weight measurement dramatically. As the result, WIM system has trouble to provide valid weight data. The weighing error is too large to perform the enforcement purpose for traffic authorities. Secondly, the deterioration will decrease the lifespan of bar sensor and increase the maintenance cost. Bar sensor will be

## Check-Up Message from ISWIM President

Melbourne, March 19<sup>th</sup> 2020.

Dear ISWIM Directors, Colleagues, and Friends,

The purpose of my message is to **'check-in' with you and simply ask** if you, your families and your work colleagues are alright at this time?

I am not medically qualified to provide any commentary that is more enlightened than what can be ascertained through the general media. However, I recognise that all of us are impacted by this terrible health situation and flow on consequences that have engulfed our world. We are all in this together and my prayers, my thoughts, and my hopes are with all of you.

Keep well and keep safe.

■ [Chris Koniditsiotis](mailto:ChrisK2.0@bigpond.com) | [ChrisK2.0@bigpond.com](mailto:ChrisK2.0@bigpond.com)

### Responses from the board:

The responses from the board members have a number of common themes:

- No 'ISWIM' known infections
- Some level of lock-down in place
- Most are working from home
- Staying positive in hard times

The responses also show that we are going through a truly global crisis, as can also be seen from - parts of - the responses from our board members around the globe on the next page.

Personally, I live close to North-Italy, one of the hardest hit areas. The situation here is still getting more serious with this week the first couple of victims in my village. We are hoping to see the first effects of the lock-down in the coming days.

Take care and stay safe

Editor – ISWIM Newsletter

■ [Hans van Loo](mailto:Hans.vanloo.int@gmail.com) | [Hans.vanloo.int@gmail.com](mailto:Hans.vanloo.int@gmail.com)

more easily damaged due to the truck press on extruded sensors. This will **dramatically increase users' maintenance cost** and maintenance frequency.

After the bad experience of asphalt pavement, VanJee discovered that to install bar sensor in hard concrete pavement within length 16m to guarantee stability of WIM measurement and road quality. Additionally, VanJee designs 5cm grindable layer for bar sensor in the hard concrete pavement installation. WIM users can grind sensor surface to achieve perfect same level between sensor and concrete road even though there is deformation of road. The WIM system in hard concrete pavement would keep great accuracy for more than 10 years.

■ Zhao Zhai | zhaizhao@vanjee.net

## SW-Defined Free-Flow WIM Enforcement

CAMEA long-term in-the-field experience with WIM enforcement shows that once drivers understand the mechanism of the measurement, many will immediately try to avoid the correct weighing. Therefore, there is a strong need for measurement **“validation”** - correct detection of all problematic maneuvers that vehicles perform, as well as for a **“free-flow” approach** - weighing in the whole width of the road.



CAMEA Free-Flow WIM system.

At first glance it may seem to be logical to cover the entire roadway with sensors, even in one piece. But real-life **conditions usually don't allow that** (the slope of the road, dilatation and construction joints, etc.) and gaps between sensors may appear. SW-Defined Free-Flow WIM is a solution ensuring that the overwhelming majority of vehicles can still be properly weighed. Some vehicles are not properly weighed - but they are still clearly identified. This is field-proven and as close to the free-flow WIM as it gets.

CAMEA WIM, apart from sensor technology independence, can weigh vehicles driving in both directions and, generally, detect various maneuvers that complicate the measurement – bypassing on a bi-directional road, driving between lanes, changing direction abruptly and acceleration with deceleration. These features were tested by an independent highway authority in 2019 with no error, proving the capability of the free-flow weighing under real-life conditions.

■ Prokop Kudliki | p.kudlik@camea.cz

## Responses to Chris' Check-Up Message

■ Here in Brazil there are different understandings for these hard times. For the Health Minister the isolation shall be vertical and avoid to social contact. For Santa Catarina there are more restricted procedures. All commerce and public transportation (less supermarket and pharmacies) are shut down for 14 days. But, yesterday the Governor published a new rule after this period. The stores will start opening their doors with some precautions and progressively.

■ In France, the global situation is not very good with more than 9,000 infected people and already 150 fatalities. The hospitals are almost saturated. However some very strong measures were taken by the government a quite strict confinement (likely a bit more flexible than in Italy but Paris is almost empty, never seen that before in all my life!). The government also announced quite strong measures to economically support individuals and companies in trouble.

■ In Slovenia it is also pretty crazy. Streets are empty. We mostly work from home, factories, offices and hotels are mostly closed, there is no public transport and no flights. Shops have shortened their opening hours, except the food ones, which are opened longer, to reduce the density of buyers. We are 'lucky' that we are neighboring Italy where many Slovenians were skiing during the winter holidays. These skiers were our initial sources of infections.

■ In Canada daily life has been changed drastically—kids home from school, on-line classes, no public gatherings, etc. Companies have adopted all the recommended measures as we work to flatten the curve.

Fingers crossed and our thoughts, prayers and well wishes for everyone **in these challenging times ...**



## IRD WIM Screening Systems – Washington State

Washington State DOT (WSDOT) recently selected IRD's iROC (Intelligent Roadside Operations Computer) system to replace the systems that they had developed internally for inspection station e-screening. For this project, IRD augmented previously installed Single Load Cell (SLC®) WIM scales that the state had selected for their long service life. With regularly scheduled maintenance, the SLC scales provide the most value for money as their service life is typically over 20 years!

IRD's iSINC® Electronics, Automatic Vehicle Identification (AVI) and overheight detection technology is now being augmented with IRD's operator display software and iROC. Currently, five out of eleven WSDOT screening sites have been upgraded to IRD's systems.

Vehicles are measured on the road approaching the weigh stations using the SLC scales and overheight detectors. These measurements are used to determine whether vehicles are compliant with the weight and dimension limits for the defined vehicle class. The system captures digital images of all commercially-classed vehicle license plates. Vehicles equipped with transponders will have their transponder read by an AVI reader.



SLC WIM Scales and AVI – Everett, WA



Upgraded Operator Display Software – Cle Elum, WA

The iROC checks identified vehicles against credential and safety information in federal and state databases. Vehicles that are identified in federal or state databases are signaled to report for inspection or bypass via in-cab notification. Vehicles with an identified license plate are directed using message signs. Vehicles with an identified AVI transponder are allowed to bypass the weigh station depending on the random pull in settings, e-screening settings, and their compliance to weight regulations. Vehicles that are not identified are not allowed to bypass the weigh station.

Vehicles directed to report to the static scale enter the report lane. Using IRD's software, the operators control a variable message sign that directs trucks to be weighed on the static scale. These weights are also added to the vehicle record and the operator may issue a citation. At this time, the operator may also correct a misread license plate. If this is done, the system will re-run compliance-screening checks against the iROC databases.

■ Rish Malhotra | Rish.malhotra@irdinc.com

## Contact ISWIM

Website:  
[www.is-wim.org](http://www.is-wim.org)

E-mail:  
[iswim@free.fr](mailto:iswim@free.fr)

LinkedIn:  
[linkedin.com/groups/13400438](https://www.linkedin.com/groups/13400438)

Newsletter:  
[hans.vanloo.int@gmail.com](mailto:hans.vanloo.int@gmail.com)



## OIML R134 Certification Expanded for Strip Sensors

Intercomp is pleased to announce the recent release of an expanded OIML R134 certification for our strain gauge based Strip Sensors. Prior certification was for Class 10, indicating +/- 5% MPE GVW accuracy at initial verification at up to 100km/h and +/-10% MPE GVW at in-service. This certification was achieved with configurations of 2, 3, or 4 rows of sensors, the only manufacturer of sensors of this form factor to do so with 2 rows up to mainline speeds.



Intercomp OIML R134 certified 2 sensor row WIM system.

The expanded certification is for OIML R134 Class 5, achieving +/- 2.5% GVW accuracy at initial verification up to 40km/h. With this speed range covering low and medium speeds, this gives added flexibility when WIM systems with a good degree of accuracy is required at anything above low speeds. The Strip Sensors are installed in channels cut into the pavement and operate in pairs, with the amount deployed based on the application and the required accuracy. Designed to be used in WIM systems operated by our partners and system integrators, **Intercomp's scales and sensors are capable to be integrated via several different methods based on levels of expertise in software and electronics.**

The expanded OIML R134 certificate for Intercomp Strip Sensors is in addition to the existing OIML certificate the LS-WIM Axle Scale obtained for highly accurate use at low speeds. Intercomp looks forward to sharing future certifications of scales and systems based on our planned and ongoing testing.

■ [Jon Arnold](mailto:Jon.Arnold@intercompcompany.com) | [jona@intercompcompany.com](mailto:jona@intercompcompany.com)