

Notes on the workshop on Weigh-In-Motion for Enforcement

Date: February 27th 2013-02-28

Location: Brussels, Benelux building, Rue de la Regence 39

Organisers: Euro Contrôle Route, TISPOL, International Society for Weigh In Motion.

Participants:

- Weigh-In-Motion: ISWIM specialists and Vendors
- Enforcement: ECR and TISPOL members
- EU-Commission: DG Mobility and Transport

Information: The program of the workshop, a list with participants and the presentations are available on the websites of ECR (www.euro-controle-route.eu) and ISWIM (<http://iswim.free.fr>)

Opening of workshop

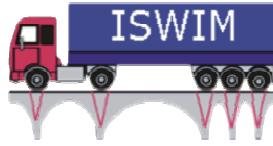
Gerard Schipper (ECR) welcomed all participants to the workshop, explained the goals of the workshop and gave a short introduction of TISPOL and Euro Contrôle Route. Bernard Jacob (ISWIM) gave an introduction of the International Society for Weigh-In-Motion and reported the status quo and on-going activities.

EU Directive 96/53/EC

Philippe Hamet (EC) gave an update on the new EU-directive on weights and dimensions for road transport. The adoption of the Commission proposal for the new directive is expected by April this year. It will then go through rounds of discussion in the EU-Parliament-Commission. The adoption by the three entities is expected in 2014 - 2015. Goal of the directive is to increase the effectiveness of the European road transport and to reduce the fuel consumption and CO2 and greenhouse gas emissions. The new directive will allow for a limited additional length (flaps and tractor shape) in order to improve aerodynamics, and will allow a few more cm to accommodate the 45 ft containers on semi-trailer in multi-modal transport. An additional weight of 1 is expected for 2-axle coaches and electrical or hybrid vehicles. However it does not allow for an increase of the payload. The proposal also aims at improving the enforcement of offences, as there are currently no provisions on this topic in the 96/53. It envisages different possibilities for enforcement, including : 1) using WIM stations for pre-selection and company profiling and 2) using on-board weighing equipment communicating with road side enforcement officers. There might be in the future an opportunity for a combination of the on-board weighing equipment with the digital tachograph and a DSRC equipment for vehicle identification. The new directive also proposes a definition of classes of infringements and of the related penalties and a shared responsibility for overloading between shipper and haulier.

Developments in Weigh in Motion

Hans van Loo (ISWIM) gave an overview of the developments in WIM technology, the applications for enforcement and a few examples of National projects in France, The Netherlands and Czech Republic. In conclusion he gave the main needs for the future: 1) the technical development of more reliable sensors, the development of a EU standard for WIM (incl. data format and data quality), the development of multiple purpose systems, the introduction of new ways of enforcement (e.g. company profiling) and the development of a EU standard and procedures for direct enforcement. Philippe Hamet indicated that the EC is interested in the development of a standard for international data



exchange and that an expert group will be started to develop this standard. Tomas Pospisek explained that the WIM systems for direct enforcement in the Czech Republic are operational but are not yet used for direct enforcement because of political discussions.

Victor Dolcemascolo (DGITM, French Ministry of Transports) presented an update on a new project in France, to be carried out by IFSTTAR to develop a High Speed WIM system and procedures for direct enforcement. He invited the WIM-vendors to participate to this project.

Developments in Enforcement of Heavy Goods Vehicles

Ad Hellemons (TISPOL) reported the main needs of the enforcement community: 1) more (WIM) technology for enforcement because of reduced budgets and staff, and 2) a harmonised and international cross-border enforcement. He mentioned various reasons why the implementation of enforcement technology in the EU is not successful. Among others, the lack of political will to achieve harmonisation is crucial since it results in regulations with many exceptions allowing the Member States to stick to their national legislation and procedures. He advocated a top-down approach to the right political and legal conditions first and then to the implementation of the WIM technology. Bernard Jacob suggested to combine top-down and bottom-up approaches, which was agreed by the participants.

Discussion

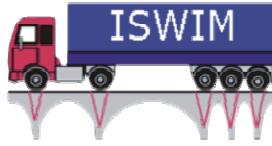
After the lunch the participants were divided into four separate working groups, all including end users, scientists and WIM-vendors to stimulate the discussion and the exchange of experiences. Each group had to address the following questions:

1. What development in the field of WIM and enforcement is most needed?
2. Describe the current situation, including the main limitations/problems.
3. Describe the ideal future situation as an objective to be reached.
4. What are the first steps necessary to start the required development and who will need to take the initiative?

After this the moderator of each group gave a short summary of the output of the discussion.

Group A, Gerard Schipper. The main arguments in the group A were underlining the importance of international cooperation between vendors, scientists and end-users. The words standardisation, harmonisation, normalisation and homologation were key in the discussions. It became quite clear that a majority of end-users believe that 'direct enforcement' is the ideal situation at the short term, while the relevance of multiple purpose WIM systems is seen as a mid and long term requirement of the end-users. The vendors emphasised that standardisation, harmonisation and normalisation in Europe will have a positive effect on the system prices. Quote: "European standardisation of WIM will make that the numbers of purchased systems will go up, while the price will go down". Better communication while showing results will have a positive effect on politicians and policy makers responsible for the procurement and deployment of WIM systems in particular and innovation in transport enforcement in general.

Group B, Bernard Jacob. The group underlined some issues with the registration technology, which is ready for use but not implemented because of a lack of legislation and political will. The data exchange is also an issue and mainly limits the enforcement to the National vehicles or companies. The staff reduction also refrains enforcement operations in most Member States. Technology may be an answer but is difficult to implement. The Czech representative reported that the data quality/validity was the reason why the direct enforcement implementation was postponed. The lawyers try to invalidate the evidences in court. It was agreed that it is better to enforce 30 or 50% of the vehicles with 100% of confidence, than all the vehicles with 95 to 98% of confidence. This is the aim of



the new French project. The North American representative underlined the lack of a certification process for the WIM systems and their installation. These systems are not "plug and play". The systems shall identify by themselves the measurement out of the legal tolerances. The maintenance is also an issue. In The Netherlands and Hungary, the maintenance is paid within the road works, while enforcement reduces the pavement damage. In CZ the vendors are responsible if the road is not suitable for WIM. In Brazil a new programme now combines HS-WIM pre-selection, medium speed (40 to 60 km/h) sorting and LS-WIM control. Most of the old systems are rebuilt using new technology. The challenge is to automate the systems. The Dutch and French governments implemented respectively networks of 20 and 30 video-WIM systems to make an accurate pre-selection and company profiling. In The Netherlands WIM data are used for many other purposes than enforcement, and it is planned to use the statistics to deliver administrative fines to some non compliant companies. P. Hamet declared that the ideal future situation would be harmonized legal weight limits in all the Member States and neighbouring countries, and all the trucks equipped with on-board weighing systems delivering messages to the authorities if the vehicle is overloaded. However, the Directive does not plan any provisions for the maintenance (e.g. penalties), because of the subsidiarity principle. Some participants claimed an automated weight enforcement (such as for the speed enforcement), using the AVI technology, where the fines are sent directly to the companies. However the British representative said that VOSA was not prepared to spend too much money to defend the system in the court. In North America there are several issues, e.g. safety, compatibility between different technologies, tire types detection, etc. For the communication between vehicles and road side systems, the DSRC/RFID technology seems to be fully adapted. Finally the participants agreed that the development of effective weight enforcement by WIM requires a strong political will, a bottom-up and top-down dialog, a reporting and publicity of the best practices and success stories (as in the NL) and technical and legal specs. The main challenge is the economy and fair competition. Visionaries are needed!

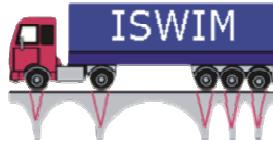
Group C, Andy Lees (TDC). The common theme that came from subgroup C was standardisation, harmonisation and communication in a number of fields including classification and calibration. Whilst direct enforcement was considered to be an "ideal world" it was felt that as a result of the diversity in national legislations throughout Europe it was extremely unlikely to be ever enforceable in a number of countries. It was also felt that the success of WIM needs to be broadcasted more widely and bring awareness to politicians that WIM can have on the economic benefits to the community and the infrastructure at large. If this increase in positive publicity is successful then the WIM community as a whole can only benefit with the growth in the number of high speed WIM sites being operated.

Group D, Hans van Loo. The main needs expressed in this group were to start with a EU-standard for WIM systems, enforcement procedures and the cross border exchange of WIM/enforcement data; to develop a solid business case (cost/benefit analysis) for the investment in the enforcement of overloading (using WIM) to improve political awareness and support for both enforcers and WIM-vendors; and to be more active in showing the success stories in the use of WIM for the enforcement of overloading to politicians.

Summary of the discussion

Hans van Loo gave a summary of the main results of the discussion groups:

1. Technical issues, like the integration of WIM in multiple purpose systems, the combination of WIM with vehicle identification technologies issues. Both WIM



vendors and enforcers expressed the need for users to be more active in the system development.

2. Harmonisation and Standards: this concerns WIM-technology in a standardized data format for data exchange, and enforcement procedures for pre-selection and controls, company inspections and finally EU-regulations on weights and dimensions, infringement classes with corresponding fines.
3. Political awareness and support, the active advertisement of the success stories of the use of WIM for enforcement and the development of a solid business case for the investment in the enforcement of overloading using WIM. On one side the calculation of the costs of overloading (damages to the road infrastructure, reduces traffic safety and unfair competition and on the other side the cost of investing in enforcement and WIM).

The question "Who will take the initiative for these issues?" could not be fully answered during this workshop.

Brazilian WIM Enforcement Program

Valter Tani and Gustavo Otto (UFSC) gave an overview of the architecture of the new network of weighing stations in Brazil. The overall architecture will consist of four levels: 1) measurement and signalling equipment, 2) roadside enforcement stations, 3) operations control centres and 4) data processing by end-users (penalties, traffic data and freight information). The national plan of weighing according to this new concept will be launched in April this year.

Conclusions and Closure of the Workshop

Bernard Jacob thanked all participants for their interest, active participation and input in the workshop. Both enforcers and WIM-vendors have expressed the wish to continue this exchange of experience in the future. A follow-up of this workshop was agreed:

- a report and an evaluation of the workshop will be made available to all participant and on the websites of ECR and ISWIM;
- based on the results of the discussions in the workshop concrete follow-up activities will be formulated, e.g. an initiative for a new COST action.
- all participants are encouraged to digest the outcome of today's workshop and to share their thoughts and ideas for possible follow-up actions, e.g. on the ISWIM web forum on "Enforcement by WIM";
- a meeting will be organised in Autumn to discuss concrete next steps based on today's workshop;
- a workshop or an invited session (panel discussion) may be organised during the next TRA conference (April 14-17 2014) in Paris.