OTIF

ORGANISATION INTERGOUVERNEMENTALE POUR LES TRANSPORTS INTERNATIONAUX FERROVIAIRES

ZWISCHENSTAATLICHE ORGANISATION FÜR DEN INTERNATIONALEN EISENBAHNVERKEHR

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Item 6 of the provisional agenda: Reports of informal working groups

Report of the 9th session of the working group on telematics

(Paris, 16 – 18 January 2012)

Transmitted by the OTIF secretariat

1. At the invitation of France, the 9th meeting of the working group on telematics was held from 16 to 18 January 2012 in Paris. The meeting was chaired by Claude Pfauvadel (France).

2. The following States took part in the discussions at this meeting: France, Germany, Netherlands, Romania, Sweden and the United Kingdom. The Intergovernmental Organisation for International Carriage by Rail (OTIF), the International Federation of Freight Forwarders Associations (FIATA), the International Union of Railways (UIC), the International Road Transport Union (IRU) and the Association of the European Rail Industry (UNIFE) also took part (see Annex II).

Results of the German research project

3. Dr Kaltwasser (Albrecht Consult) informed participants of the results of each of the work packages in the German research project and the resulting recommendations for the working group's future work (see Annexes III and IV).

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Work package WP 200 (Relevant Standards)

4. In work package WP 200, relevant standardisation bodies, activities and standards had been identified. It was recommended that a cost/benefit analysis of potential telematics applications and available standardised technologies be carried out. In addition, the broad spectrum of applications concerning dangerous goods transport operations should be considered as part of a global programme with a coherent architecture. For this reason, the development of ISO standard 15638, Intelligent Transport Systems – Framework for Collaborative Telematics Applications for Regulated Commercial Freight Vehicles (TARV), should continue to be monitored, as it offered a solution as to how a number of applications could be subject to a global architecture (see also paragraph 9). It was also recommended that the exchange of information and the dialogue with relevant standardisation bodies be strengthened in order to ensure a consistent approach to the production of specifications for telematics applications for the transport of dangerous goods.

5. In reply to the Chairman's question as to whether the regulations should specify the xml format as the format in which the modelled data would have to be made available, Dr Kaltwasser replied that such an approach would mean that only a technical solution would be permitted. But it must be ensured that the model, and not the format, was laid down in the regulations.

Work package WP 300 (Certification)

6. In the framework of work package WP 300, an overview of the existing accreditation and certification structures in the field of dangerous goods transport was compiled. According to Dr Kaltwasser, continuous multidisciplinary collaboration between the various bodies concerned was necessary, in terms of accreditation and certification, in order to take account of dynamic technological developments. To strengthen system stability, it was also recommended that the data centres tasked with storing the data be certified in accordance with the existing standards (e.g. ISO 27001, SAS 70). For the vehicle components used to transmit the data (e.g. in eCall), the EC approval procedure could be used for certification.

Work package WP 400 (IT Security Concept)

7. In work package WP 400, an IT security concept had been developed, although this was based partly on assumptions, as the working group had not yet taken any decisions regarding the framework for the system design. Specific requirements for data protection and data security had been defined and the fundamental security mechanisms had been described in a generic process model. Furthermore, the concept of decentralised trusted parties had been introduced to ensure that no single party had access to all data (see also the report of the 8th session of the WG). For the working group's further discussions, one of the recommendations was to take decisions on access rights, communication models to be followed up, specifications concerning the content and format of the data to be transmitted and key public infrastructures. In a second step, the approach chosen should be coordinated with ongoing projects, particularly the eCall project.

Work package WP 500 (Data and Process Modelling)

8. In work package WP 500, a data model based on the "Who does what" table was developed using modern information and communication technologies, particularly UML (Unified Modelling Language); this data model is the starting point for future considerations in connection with the regulations concerning telematics applications in RID/ADR/ADN. This model could be used as a general reference model for dangerous goods data, including in conjunction with other telematics standardisation activities not specific to dangerous goods. As the model was developed by specialists not working in the dangerous goods field, it should be checked and continuously adapted in future. To this end, the working group should define a maintenance strategy.

TARV – Telematics applications for regulated commercial freight vehicles

9. Based on the presentation in Annex V, Dr Booth (Harrod Booth Consulting) informed the meeting of the work on ISO standard 15638 Intelligent Transport Systems – Framework for Collaborative Telematics Applications for Regulated Commercial Freight Vehicles (TARV), in which a general framework was to be defined for collaborative telematics applications to monitor freight vehicles. At present there were numerous telematics applications to monitor the carriage of dangerous goods by road, which fulfil very different functionalities. A global architecture should be defined in this project, based on which all these functionalities could be supported from a single platform. The system was set up in line with the Australian "Intelligent Access Programme" (IAP) and, as far as possible, was specified with the help of existing standards (e.g. CALM communications architecture for wireless communication in intelligent transport systems). Ultimately, the TARV standard should provide legal and regulatory input for the certification and auditing of providers of various telematics services.

SCUTUM

10. With the aid of the presentation in Annex VI, Mr Méchin (CETE SO) gave the participants information on further developments in connection with the SCUTUM project. The aim of the project was to achieve more accurate positioning using EGNOS technology. In the initial phases of the project, the additional value of EGNOS in terms of positioning was explored and confirmed, and the main task now was to start the process of technical standardisation and to define the market strategy in order to promote the use of EGNOS in various commercial applications.

GEOTRANSMD Project

11. On behalf of France, Mr André Reix offered to cooperate with a consortium intended to be set up in Germany. The work of the consortium had been presented at the last meeting in Tegernsee (project to work on eCall enhancement). He said that there were some opportunities to obtain funding in France in order to develop research on this subject, and the possibility of obtaining additional funding could be expected under DEUFRAKO. The project that might be developed (GEOTRANS MD) was introduced using the presentation in Annex VII. The project made use of experience gained in France through former projects such as VISU TMD (examining the possibility of monitoring moving vehicles carrying dangerous goods, with the involvement of infrastructure managers, emergency services and spatial planners), TRANSCONTROL (emergency report of an accident involving dangerous goods with precise information on the location of the accident) and GEOFENCE MD (alarm when a vehicle carrying dangerous goods enters a defined area). In this project, different data exchange possibilities (specification for platform architecture, and different database configuration) could be examined, as well as how access to data should be organised, and further operational trials could be carried out. Coordination with a German consortium would allow testing on how cross-border data exchange would work. The content of the project was still open, but for budget planning purposes a proposal would have to be made before the end of March 2012.

12. Several participants thought that the central database mentioned in the presentation was not the optimum solution. They called into question the cost/benefit ratio of such a database. According to Dr Kaltwasser, technical solutions in the form of a centralised database should not be placed to the fore. It would only have to be ensured that the data were available to different participants.

13. The chairman replied that the concept of a central database was only presented as an example. It was not intended to make this the reference for the future structure of the telematics system, and the main point to be studied was indeed data availability. But obviously the system should be flexible so as to allow each national solution to be implemented. As it was an open proposal, its future development would depend on how the German consortium is organised and what suggestions the WG on telematics put forward.

HGV eCall

14. Using the presentation in Annex VIII, Mr van Hattem (Netherlands) familiarised participants with the current status of the HGV eCall project. Just to recap, eCall is a system based on automatic emergency calls via the GSM network, which in Europe uses the standard emergency number 112 to alert the official emergency services' control centres (PSAPs – Public Safety Answering Points). Originally, the eCall system was only designed for cars and small delivery lorries, owing to the trigger mechanism (mostly airbags). Technical progress has meant that emergency calls can also be triggered by other mechanisms, thus enabling eCall to be used in HGVs as well.

French views on "panEuropean eCall"

15. Mr Janin (France) used the presentation in Annex IX to explain his country's views on the "panEuropean eCall" project. Firstly, he criticised the lesser reliability and sustainability of the in-band modem compared with SMS transmission technology, and secondly, the negative cost/benefit ratio of this solution. This had to be seen in connection with a lot of false alarms received by emergency call centres, which could not be filtered out completely. According to statistics collected in France, only 47% of all emergency responses by the emergency services triggered by eCall were justified. 80% of false alarms were the result of so-called "silent eCalls", in which, for various reasons, the operator was unable to speak to the driver. "Silent eCalls" always had to be treated as an emergency, even if they were not emergency situations. For these reasons, France would prefer more efficient safety equipment.

16. In the subsequent discussion on this subject, a question on the legal status of this project was raised. As the participants were not clear what its legal status was, the working group decided to address this question to the European Commission (see also paragraph 26).

TACOT Project

17. Using the presentation in Annex X, Mr Campagne (FDC) informed participants of the TACOT project (**T**rusted multi **a**pplication re**c**eiver f**o**r **t**rucks). The main idea behind this project was to add another function to the digital tachograph, which is now fitted to 95% of all HGVs, so that it includes satellite navigation on the basis of EGNOS. This two year project would start in January 2012 and would precede amendments to EEC Regulation No. 3821/85[1] on recording equipment in road transport (see also paragraph 26).

Digital Tachograph Network

18. The chairman of the working group, Mr Pfauvadel (France), used the presentation in Annex XI to explain how the data concerning personal driver cards, on which all the necessary records from the digital tachograph can be saved, can be safely exchanged among European States. This took place via the sTESTA network (**s**ecure **T**rans **E**uropean **S**ervices for **T**elematics between **A**dministrations), a private network under the responsibility of the European Commission, to which all the European States' national networks were connected. In the context of the project concerning the introduction of digital tachographs, the European Commission had provided specifications for xml-based data exchange interfaces. The sTESTA network was only used for the exchange of data; no national data were stored.

[1] Council Regulation (EEC) No. 3821/85 of 20 December 1985 on recording equipment in road transport

Use cases

19. In a brief presentation (see Annex XII), Mr Méchin explained how the possible uses of the data model set up on the basis of the "who does what" table could be described by means of the use cases. A use case described the interactions between the various actors and the system that are necessary to reach a defined aim. In so doing, the processes described should not become too complex. According to Dr Booth, the use cases should first be broken down into individual work items and should only be combined in a second step.

20. The representative of UIC pointed out that in the use cases, functions rather than organisational relationships should be at the fore.

21. The representative of the United Kingdom emphasised that first of all the working group should set out its aims and the use cases should only be used as a means to achieve these aims.

Aims to be achieved in the use of telematics

22. Following the discussion on the use cases, the representative of Germany proposed that work in the group be suspended for one year. The various delegations should use this year to present written submissions on their ideas for the future application of telematics in the transport of dangerous goods. In previous meetings, the working group had gained awareness of the possibilities that might exist in the use of telematics. What should next be discussed was which functionalities were necessary and desirable in the carriage of dangerous goods. The working group should also consider the cost/benefit ratio of these functionalities. In parallel with this, work on the data modelling should be concluded in cooperation with software undertakings and a type of structural architecture should be developed using the results of the German research project.

23. The participants had different opinions on the aims to be achieved in the use of telematics. While the United Kingdom thought the overall aim was to improve the speed and efficiency of emergency response in the event of an incident in the carriage of dangerous goods and had no interest in an electronic transport document, Germany thought the transmission of information to the emergency services only formed a small part of the aims to be achieved. However, the working group agreed that a text setting out provisions to be included in the regulations could only be drafted and submitted to the RID/ADR/ADN Joint Meeting when there was a consensus in the working group.

24. The representative of the United Kingdom saw no need to suspend the group's work. He proposed a model which should serve to establish the desired aims and the means to achieve these aims. He pointed out that the list of aims could also contain open questions.

25. It was agreed that for the next session of the working group, the various delegations should submit the aims they would like to achieve using the model proposed by the United Kingdom (see Annex I). It would be preferable to carry out this analysis on the basis of the "who does what" table. However, in so doing, it should also be remembered that formulating minimum aims could lead to the development of a costly infrastructure which might then only deliver a positive cost/benefit ratio if it could be used for several purposes.

Formulation of questions for the European Commission

26. As the representative of the European Commission did not take part in this meeting, the working group did not find any answers to the following questions raised during the discussions and asks the European Commission to provide this information for the working group's next session:

– What is the legal status of the eCall project? Will this system be made mandatory and if so, when and on what legal basis?

– The working group was made aware of the use of the digital tachograph to determine the position of HGVs, which was anticipated in draft amendments to EEC Regulation No. 3821/85[1]. The European Commission is asked to provide information on this draft and possible mandatory implementation.

– What issues in connection with the transport of dangerous goods are mentioned in the ITS Directive[2]? What are the consequences of this Directive for the transport of dangerous goods?

27. The chairman recalled that the work on telematics had been initiated by a proposal from the European Commission (see ECE/TRANS/WP.15/AC.1/2007/17). In response to this proposal a working group hosted by Germany had drafted the terms of reference on which the work is based (see ECE/TRANS/WP.15/AC.1/108/Add.3). These include a work programme proposed by the European Commission, and the answers to the above questions would have a major influence on carrying out the work programme.

Key identifier

28. The representative of the United Kingdom informed the working group of informal document INF.13, which he had submitted to the 40th session of the UN Sub-Committee of Experts (Geneva, 28 November – 7 December 2011). In this document, he proposed including a five digit identification number in column 1 of the dangerous goods list, with the aid of which a particular row in the dangerous goods list could be clearly identified. This would also make clear attribution possible for telematics applications where there was not enough capacity to transmit the UN number, proper shipping name, class, packing group and perhaps the applicable special provision. Further rows that only applied to a particular transport mode could be marked with a letter for the relevant mode and a four digit number.

29. Dr Kaltwasser commented that this identification number was helpful in the special case of eCall, but was not necessary in cases where there was access to databases.

30. Mr Pfauvadel, speaking as the delegate of France, explained that he supported this proposal to the UN Sub-Committee of Experts and that its main purpose was not related to any technical data limitation, but to the fact that currently, one UN number could be covered by a different number of rows in different modal regulations. This issue could not be resolved by any technical programming.

31. The working party recommended that in a new proposal to the UN Sub-Committee of Experts, the representative of the United Kingdom should propose that an international numbering system identifying all the possible mode-specific rows in a coherent and stable manner be produced. Such numbering could make things easier for intermodal transport. Instead of a random number, a self-reading number from which the class and packing group could be derived might be useful.

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[2] Directive 2010/40/EU of the European Parliament and of the Council of 7 July 2010 on the framework for the deployment of Intelligent Transport Systems in the field of road transport and for interfaces with other modes of transport

Next session

32. At the invitation of the United Kingdom, the next session of the working group will be held in Southampton on 3 and 4 September 2012. Topics for discussion will be the aims to be achieved in the use of telematics in the transport of dangerous goods and the future direction of the working group's work.

Annex I

UK PROPOSAL FOR A TEMPLATE FOR SETTING OUT PARTICIPANTS' VIEWS ON POSSIBLE TELEMATICS OUTCOMES FOR DISCUSSION AT THE NEXT WORKING GROUP MEETING ON 3-4 SEPTEMBER 2012

Suggested template headings are shown in red text; illustrative example of completion (as drafted by the UK) is in black text

OVERALL TELEMATICS OBJECTIVES

To improve the speed and efficiency of emergency response to dangerous goods incidents during transport

THE MEANS TO ACHIEVE THOSE OBJECTIVES

First means

A telematics system activated either automatically or by the transport unit crew in the event an incident.

Associated questions to be addressed:

What do we define as an incident?
How would be the system be activated?
- Collision/heat sensor?
- Air bag?
- Route deviation?
- Crew activation – what if the crew are incapacitated?

Who would receive the notification?

Second means

A telematics system that delivers information to emergency responders.

Associated questions to be addressed:

- Who inputs the initial data?
- What is the hardware or software that you input the data to?
- How is the data delivered or transmitted from one point to another?
- Is the information delivered directly to the emergency responders or through an intermediary?
- What does the emergency responder need to receive the information?

Third means

A standard set of information and a standard format for that information

Associated questions to be addressed:

Information could consist of:

- The geographical position of the transport unit (or would this be available by other systems?)
- Basic indication of the dangerous goods being carried and in what quantity?

Basic information could consist of:

1. A primary key identifier (PKI) linked to a single row in the Dangerous Goods List of RID/ADR/ADN.
2. Form of the dangerous goods: Packaged or in Bulk
3. The total quantity of dangerous goods for each Primary Key Identifier

- Where does the PKI come from?
- Who would have access and how?
- Who would assign new PKI's for instance when a new UN entry is adopted?
- How many PKIs can the system deal with?
- Is it necessary to differentiate dangerous goods packed in limited quantities?

What does [the UK] not want or need?

- A duplicate of the transport document
- Have the system managed by the Competent Authority
- Have the system accessible to Enforcement agencies
- Have the system accessible to Security agencies

Any other questions to address?

- Would the system be mandatory?[3]
- Would it be possible to keep a hard copy of any electronic document?

[3] If it's not mandatory, equivalent functionality must be clearly defined. If mandatory, would it be mandatory for all Dangerous Goods?

Annex II

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