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Item 6 of the provisional agenda
Reports of informal working groups

Informal working group on telematics: meeting in Vienna (12 to 14 November 2018)

Transmitted by the Government of France on behalf of the informal working group on telematics [*, **]

Summary

Executive summary: Information for the Joint Meeting on work in progress concerning "telematics"

Introduction

1. As mentioned in paragraph 46 of the report from the last session of the Joint Meeting (ECE/TRANS/WP.15/AC.1/152) the informal working group met from 12 to 14 November 2018 in Vienna.

2. The informal working group took note of the presentation by France concerning procedures and languages used for the webservice description (see informal document INF.3).

[*] In accordance with the programme of work of the Inland Transport Committee for 2018-2019, (ECE/TRANS/WP.15/237, annexe V, (9.2)).

[**] Circulated by the Intergovernmental Organisation for International Carriage by Rail (OTIF) under the symbol OTIF/RID/RC/2019/21.

3. The European Union presented an overview on a proposal for a Regulation of the European Parliament and of the Council on electronic freight transport information (eFTI; see informal document INF.4). It was noted that a cooperation with the work of the Digital Transport and Logistics Forum (DTLF) would be very helpful. The representative of the European Union informed the informal working group of a template produced by the European Union Agency for Railways (ERA) concerning the comparison of different approaches for using digital transport documents.

4. First it was considered that it would be better to have Guidelines instead of a Memorandum of Understanding (MoU), because the signing of the MoU could lead to some complex legal procedures in some countries. Furthermore, Guidelines have more flexibility to be implemented by the States.

5. The informal working group produced the Guidelines as laid out in the attached proposal and modified different parts of the initial draft MoU. Within that work, the informal working group decided that specific technical questions would be discussed by a technical working group where all the identified trusted party TP1 candidates would participate. It was agreed that they could meet in Aix en Provence from 11 to 12 December 2018.

6. Inter alia it was noted that two technical questions should be verified by the technical working group:

- Is it necessary to use the VIN number to identify vehicles in relation with eCall or is the registration number sufficient, because there is an unique relation between those two numbers?
- Further conditions for digital signing when communicating from trusted parties TP2 to TP1.

7. The informal working group briefly addressed issues concerning States wishing to use the Guidelines in the future. This should be discussed further in the yearly conference as defined in Section 2 points 7 to 9 of the Guidelines.

8. Logically the decision making is limited to users. However it is open to others Contracting Parties/Members States for information and comments by advertising the decisions. Non users should feel they are welcome to join and become users.

9. The working group noted that it would be very helpful that UNECE and OTIF could make available the list of Contracting Parties using these Guidelines the TP1s interfaces and the text of the Guidelines itself on their websites. Depending on the possibilities for using these website for instance under country information the guidelines may be adapted accordingly.

10. Some **COMMENTS** and other points to be clarified that are not part of the guidelines themselves appear in **bold underlined** in the proposal.

Proposal

“Guidelines for the use of 5.4.0.2 RID/ADR/ADN

Introduction

1. The purpose of these Guidelines is to support the development of a harmonised system for the use of electronic transport document during the carriage of dangerous goods, allowing a common understanding of 5.4.0.2 and fulfilling the conditions set out in 5.4.1 of RID/ADR/ADN.

2. The users of this Guidelines agree that the model and system architecture outlined here (Annex and technical documents) is the one that they will use.

3. The users of these Guidelines are ADR and/or ADN Contracting Parties and/or RID Member States. They will be referred as “user “in these guidelines. They are listed in annex B.

[COMMENT Alternative option (depending on possibilities with UNECE and OTIF):]

Users of this guidelines will inform the UNECE and/or OTIF secretariat.

4. Whereas:

(a) The system architecture outlined in annex A is based on the concept of 2 types of service providing systems called trusted party TP1 and TP2. The model envisages a number of TP1 and TP2;

(b) TP2 holds the data required in accordance with section 5.4.1 of RID/ADR/ADN. A TP2 may be operated by a carrier or operated by a third party service provider to a carrier;

(c) TP1 provides services for sharing this data from the TP2 to authorities and emergency services upon request;

(d) A TP1 also transmits the data from the TP2 to other TP1 upon request;

(e) eDG Transport Information is the acronym referring to the technical element which are describing the exchange format based on the Unified Modelling Language (UML) model, the eXtended Markup Language Schema Definition (XSD), the Web Service Description Language (WSDL) webservices.

5. UNECE and OTIF will publish the list of users, and TP1 notified by users of these guidelines as country information

[COMMENT: to be checked with UNECE and OTIF - It may be clearer to list these users in a separate comprehensive list]

Section 1 Scope

6. The provisions of 5.4.0.2 RID/ADR/ADN are deemed to be fulfilled under the conditions laid down in the annex. For the purpose of these Guidelines, an electronic transport document is an electronic documentation of the information required in the transport document in accordance with section 5.4.1 of RID/ADR/ADN.

Section 2 Principles for amending the Guidelines

General

7. The Guidelines may be amended at a yearly conference or through a written procedure.

8. Yearly conferences or written procedures should be scheduled so that amendments to the international transport regulations RID/ADR/ADN and/or relevant regulations can be taken into account.

9. A conference or a written procedure should be hosted by one of the users of these Guidelines usually in the following order: France, Germany and Italy . The chair host has the responsibility to organise the meeting and to take care of the reference documents

[COMMENT: the list of hosting countries may be adapted as appropriate during yearly conferences depending on the list of users that have notified the use of the guidelines]

10. Each **user** may propose amendments to the Guidelines. The users should agree on amendments by consensus.

11. The revised Guidelines should be reproduced and circulated by the host when new amendments have been adopted. The amended parts of the text should be indicated in the margin.

12. The revised Guidelines shall come into force six months after the new text is available or as otherwise decided.

13. Distribution and communication in general should be performed by electronic means.

Conference

14. Proposals should be sent to the host of the next conference at least three months before the conference takes place. The host should distribute the proposals to all users and as an information to all Contracting Parties/Member States and the members of the Joint Meeting (including NGOs and European Commission) at least two months before the conference. All users and the informed Contracting Parties/Member States or organisations shall have the opportunity to respond to the documents within a period ending two weeks before the conference.

15. Working groups for special issues may be arranged in the time between the conferences. The reports or proposals from such working groups should be presented at the conference in the same way as other proposals. Working groups may also take place during a conference, and this should, if possible, be notified in advance.

Written procedure

16. A written procedure can be used as an alternative to a conference providing this is proposed by the user designated to host the next conference. In such case the designated user will host the written procedure.

17. A written procedure can also be initiated if at least three users request it. In such case, the user who hosted the latest conference should host the written procedure.

18. The host shall distribute proposals to the users and announce the schedule for written comments. All users should respond to the proposals within a period of six weeks. If the initial proposal is amended on the basis of comments of the users, the revised proposal should be distributed again to the users. From the time when the revised proposal is distributed, the users shall declare within four weeks whether they agree to the amended text of the Guidelines.

19. The amendments are adopted if accepted by all users. The host shall then reproduce and circulate the revised Guidelines in accordance with item 11 of this section.

20. The revised Guidelines shall be kept by the host of the written procedure and he shall ensure that the updated UML, XSD and WSDL reference files named “eDG Transport Information” are made available online

[COMMENT: if so accepted, on the UNECE and OTIF websites]

Technical Working Group

21. TP1s shall have the responsibility for the day to day maintenance and management of the system and shall cooperate in a technical working group to support them in this work.

22. In case of severe communication problems technical changes, limited to UML, XSD, WSDL reference files and essential for the function of the system, agreed by the technical working group are accepted immediately. The technical working group shall send the updated reference files to the host of the last conference/written procedure to be made available on the website.

[COMMENT: depending on the possibilities, preferably UNECE/OTIF as mentioned before]

23. Proposals according to Annex A, 1. (b) (iv) can be submitted to the annual conference or as a written procedure for agreement.

Annex A

1. Principles for the communication between various TP1s and TP2s and competent authorities on transport documents

(a) A TP1 can be publicly or privately operated. The TP1 operator has to work under conditions of certification defined in (b). Access to information provided by TP1s shall be free of charge to other TP1s and authorities. There can be one or more TP1 for each user. A user is not obliged to establish a TP1 as it can decide to rely on the functions/services provided by foreign TP1(s). TP1s with no registered TP2s are also accepted.

(b) **Qualified TP1 entities ("TP1 certification"):**

(i) Austria, France, Germany and Italy have already identified an initial set of potential TP1s (currently DiGiDO in Austria, NeoGLS and Novacom Services in France, GBK in Germany and Italy's Ministry of Transport and UIRNet in Italy).

Users may nominate additional TP1s.

(ii) For future operations, this list of qualified TP1 entities (TP1 Trusted List) including all relevant information for identification should be deposited with UNECE for road transport and inland navigation, possibly ERA/OTIF for rail transport; UNECE/ERA/OTIF should also manage this list and publish extracts from it to the extent necessary for the system. As a consequence, these institutions would assume the responsibility of a Trusted List Manager.

(iii) All qualified TP1 entities are informed/updated about the TP1 Trusted List (i.e. they know which are the other qualified TP1 entities) by the trusted list managers.

(iv) More detailed requirements that are to be met by a TP1 still need to be defined and described and will be added in the future. To lay a sound foundation for defining these requirements, the aforementioned companies/entities are to develop rules and submit reports. These requirements for recognition would then be discussed and confirmed by the **user**s and need to be applied to interested companies.

(c) **The following "Rules" shall apply:**

(i) A user of this Guidelines may only nominate a TP1 candidate which is established in its own country. This TP1 conforming to the requirement of this Guidelines shall obtain the file "eDG Transport Information" from its nominating user. All qualified TP1 entities must support the entire XSD schema of the file "eDG Transport Information" for the data exchange.

(ii) TP1s must accept requests from other TP1s.

(iii) TP1s must accept all TP2 registration.

(iv) TP1s must accept requests for registration of authorities listed in accordance with (d).

(v) TP1s must accept requests from competent authorities that are registered with it.

(vi) After having been included in the Trusted List, new TP1s need to register with every existing TP1 providing all mandatory contact details.

(vii) The TP1 has discretion to determine its pricing policy, but has to follow a non-discriminating approach.

(d) **National procedure to define authorities entitled to submit queries:**

(i) Every **user** compiles its own list of authorities (e.g. enforcement bodies, emergency services) that are entitled to submit queries to a TP1. The **user** must also ensure that it includes the authority relevant certificate as set out in 2 (b). Only authorities on this list are entitled to register with a TP1.

(ii) The **user** is responsible for updating and managing the list.

2. Requirements to be met by TP1s with regard to their operation

(a) **TP1 services**

(i) TP1 and TP2 services are described using the WSDL. Mainly, services accessible from the outside are described together with their parameters and return values.

(ii) The TP1 service “getDGTDocument” procures a specific transport document from a specific TP2. The parameters for identifying the TP2 and the specific transport document are described in 3 (a). This service is only available to emergency services and enforcement authorities (see 1 (d)). The authority shall only request information from the TP1 for vehicles in its territory. The reason for seeking access must be specified by choosing from a predefined list (e.g. emergency services, enforcement bodies,).

(iii) Every access must be logged for a minimum period of three months to comply with 5.4.4.1.

(iv) TP1 must guarantee the function of its service from the start to the end of the carriage as set out in 3 (a) in order that the TP2 data set concerning every carriage can be transmitted on request to enforcement bodies or emergency services.

(b) **Certificates**

(i) TP1s must use an HTTPS protocol. TP1s must have a static IP address and an X509 V3 certificate, which will be included in the Trusted List. Authentication must take place by checking both IP address and certificate. Data protection must be achieved using http over TLS cryptographic protocol. Certificates have to be issued in accordance with national rules in the user of the users. Certificates must be directly exchanged through secure channels.

(c) **Registration procedures to a TP1 for authorities and TP2s:**

(i) To allow machine to machine communication, the TP1 shall define a registration procedure which may be manual or automatic.

If automatic, it shall be based on the method included in the WebService description mentioned in 1 (c) (i). In particular:

- TP2 candidates will invoke the method “sendTP2RegistrationRequest“ with this minimum set of data:
  - - URL: TP2 entry point for the TP1
  - - Public key of TP2 certificate
  - - TP2 name and address (street, postal code, locality)

- - Contact name, mail and phone number of the responsible person

- For the public bodies, the method is "sendPublicServiceRegistrationRequest" and the minimum set of data is:
  - - Public key of public body certificate
  - - Public body name and address (street, postal code, locality)
  - - Contact name, mail and phone number of the responsible person
  - Actor type: competent authority (e.g. emergency services, enforcement bodies,).

(ii) The registration procedure for TP2 is to be specified by the TP1.

(iii) In case the entity requesting to register is an authority its name and certificate must be in the list of 1 (d) and verification can be done automatically or manually.

In case the entity requesting to register is a TP2, two methods can be used:

- The official representative of the TP2 submits a digitally signed statement, including the public key, which is verified offline, or
- TP1 trusts the signer of the certificate on the basis of national laws, public registries or specific agreements, and then the verification is automatic.

3. Establishment and availability of the datasets to be used between TP2s, TP1s and the authorities/emergency services

(a) The following data set concerning every carriage has to be transmitted to a TP1:

(i) ADR: Country code (Vienna Convention) and registration number of the towing vehicle and the trailer(s)

ADN: ENI number

RID: UIC wagon number

(ii) BIC code for containers (if available or regulated)

(iii) Status: beginning/end of the carriage

(b) Transaction between a TP2 and a TP1 entity:

(i) For each carriage a TP2 must transact with only one TP1.

(c) The transport document information transmitted from TP2 to TP1 shall be digitally signed.

4. Requirements in the transitional phase

As long as there are emergency services and relevant authorities that are not connected to the TP1/TP2 system, on board information is in addition necessary.

Additional requirements concerning data storage and data output on board the vehicles/trains/ inland waterway vessels

(a) The data storage medium used in the on board data terminal must be suitable for permanently storing all the relevant dangerous goods information in accordance with section 5.4.1 of ADR/RID/ADN for the duration of carriage.

For this purpose, non-volatile storage media (currently EEPROM or flash memory) shall be used in all data terminals (e.g. tablets, scanners, smartphones, OBUs). The data storage media installed in the data terminals needs protection against the commonly occurring stresses during carriage.

(b) For carriage by road and rail, a portable data terminal and, for carriage by inland waterway, a portable data terminal or one permanently installed on-board is to be used. Where only one to three different dangerous goods (UN numbers) are carried in tanks or in bulk in vehicles subject to marking requirements in accordance with paragraph 5.3.2.1.2 or 5.3.2.1.4 of ADR, a permanently installed data terminal is permitted also for carriage by road.

The data terminal has to be designed in such a way that no loss of data can occur when the energy supply is interrupted. The energy storage device has to provide energy for the duration of the transport operation or be recharged during carriage by means of equipment on board.

(c) The data must be displayed on a screen that is equivalent to paper both in terms of character size and readability (visual representation without layout requirements (e.g. PDF format) on a screen of at least 10 inches or an optimized and structured representation that makes it possible to display on the respective screen (at least 3.5 inches) all substance-related required data of a dangerous goods entry) in different light conditions. The operation of the reader must be easy and intuitive and give inspectors/the emergency services unrestricted access to all relevant dangerous goods information.

(d) The vehicle drivers/train drivers/shipmasters shall be able to operate the data terminal and provide the necessary assistance to the enforcement authority or emergency services. For example, upon request, they must instruct the inspection staff in the operation of the data terminal or accompany them with the data terminal during the inspection. This also applies in an emergency in which they are able to do so.

(e) In case of a lack of mobile connectivity it must be accepted, that there may be a delay in synchronisation of the data on board and of the data set in the TP2.

5. Transitional requirements specific to road transport

Instructions shall be affixed in the drivers cab on how to access the electronic dangerous goods Data in case the driver is incapacitated.

- The front and back of the vehicle must be marked with a note indicating the use of an electronic transport document. If it is not possible to affix this mark to the back for structural or other obvious reasons, it may be affixed at both entrances to the driver's cab. Depending on the type of use of the vehicle, the mark can be detachable (folding or magnetic marks may be used) or permanently attached (fixed). The mark consists of an illustration (pictogram as attached to this Guideline)

6. Transitional requirements specific to rail transport

The carrier shall inform the infrastructure manager when it is using an electronic transport document. The carrier shall make available the data as required under 5.4.1 in accordance with 1.4.3.6 (b) RID.

Annex B

List of Contracting Parties using these Guidelines (14-11-2018):

France

Germany

Italy

[COMMENT: This annex may be deleted depending on the possibility to use UNECE and OTIF to publish information on their website]

Annex C

Chart showing the architecture of the Guidelines for the use of 5.4.0.2 RID/ADR/ADN to be completed.

Annex D

Pictogram “e” for using the electronic dangerous goods transport document (e DGTD)

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