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RID/ADR/ADN

Joint Meeting of the RID Committee of Experts and the
Working Party on the Transport of Dangerous Goods
(Genva, 19-29 September 2017)

Item 7: Reports of informal working groups

Report of the Working Group Meeting to Update the Architecture for Dangerous Goods Telematics (Munich, 11 May 2017)

Information by Germany on behalf of the working group

This informal document presents the report of the Working Group Meeting to Update the Architecture for Dangerous Goods Telematics (Munich, 11 May 2017), including the comments of a Technical Subgroup Meeting in Rome on 19 July 2017.

1) Participants: see enclosed list

2) Introduction – state of play

Mr Rein welcomed the participants and explained that this working group meeting was a follow-up to the meeting held in Brussels on 19 January 2017, which involved a small number of participants, too. The principle objective of these meetings is to examine the framework for a telematics architecture with various TP1s that cooperate in a coordinated manner.

3) Discussion of the framework governing transnational communication between various TP1s

The following preliminary definitions were discussed:

- a) A TP1 can be publicly or privately operated. In the case of a privately operated TP1, the private operator has to work under public entity's control/rules, furthermore data related to basic TP1's functions/services shall be provided free of charge. There can be one or more TP1 in a state, and a state is not obliged to develop a TP1 as it can decide to rely on the functions/services provided by foreign TP1(s). TP1s with no registered TP2s are also foreseen.
- b) Qualified TP1 entities ("TP1 certification"):
 - i. During the ongoing initial phase, the first TP1 entities are being identified via the authorities/companies that are known to the involved transport ministries from France, Italy and Germany and want to take part in the trial introduction (currently GBK as TP1 in Germany, Geoloc Systems and Novacom Services as TP1s in France, Italy's Ministry of Transport and UIRNet as TP1s in Italy). At present, this is a "closed list"; it can be re-opened to include additional TP1s, also from other states, at any time by mutual agreement.
 - ii. For future operations, this list of qualified TP1 entities (TP1 Trust List) including all relevant information should be deposited with UNECE (for road transport and inland navigation, ERA for rail transport); UNECE 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 Trust List (i.e. they know which are the other qualified TP1 entities).
 - 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 (see hereafter). These requirements for recognition would then need to be applied to other interested companies. As a recognition procedure for including the recognized classification societies in a list (of the ADN Administrative Committee) has already been introduced in ADN, it would be possible to use this procedure also in the given context with some adaptations.
 - v. On 19 July, the aforementioned companies/entities met and identified some requirements for TP1, which have been reported in this document (as word revisions). The companies/entities took the actions to check the aforementioned ADN's recognition procedure.

- c) For a start, the following basic “Rules of Procedure” have been identified:
- i. All qualified TP1 entities must support the entire XSD schema of the UMLModel for the data exchange.
 - ii. TP1s must not decline requests from other TP1s.
 - iii. TP1s must not decline registrations from other TP2 entities.
 - iv. TP1s must not decline requests from competent authorities that are registered with it. The requests must follow specific rules to be defined on the basis of practical results from the experimentation involving the aforementioned companies/entities.
 - v. After having been included in the Trusted List, new TP1s need to register with every existing TP1 providing all mandatory contact details.
 - vi. Functions/services of TP1s (including the relevant exchanged data) must be free of charge. The functions/services related to the management/operations of TP1 are subject to the pricing of the operator.
 - vii. TP1s can offers their services also to TP2s and authorities in states other than their own.
 - viii. (The members of the Working Group are called upon to define additional rules until the next meeting.) On 19 July, the aforementioned companies/entities met in Rome and identified some requirements for TP1, which have been reported in this document (as word revisions). Further requirements will be added/specified on the basis of practical results from the experimentation involving the aforementioned companies/entities.

4) Requirements to be met by TP1s with regard to their operation

The following preliminary definitions were discussed:

- a) National procedure to define authorities entitled to submit queries:
- i. Every Member State compiles its own list (specific or generic designation of bodies) of authorities of the corresponding state that are entitled to submit queries. Only authorities on this list are entitled to register for submitting queries with a TP1. The list must include also the authorities’ relevant certificate.
 - ii. The competent authority is responsible for managing the list.
 - iii. The list is to be made available to TP1s from other states upon request if an authority of another state wants to register there.
- b) TP1 services
- i. TP1 and TP2 services are described using the Web Service Description Language (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 5a). This service is only available to emergency services and enforcement authorities.
 - iii. If required, the TP1 service getDGTDocumentWithReason can be defined in addition for other authorities entitled to submit queries. This service procures a specific transport document from a specific TP2. The parameters for identifying the TP2 and the specific transport document are described in 5a). The reason for seeking access must be specified by choosing from a predefined list.
 - iv. Every access must be logged for the duration of the experimentation, and in future operations for a period of time that is still to be defined in order to understand whether the request was justified (the period will be specified on the basis of practical results from the experimentation).

- v. For the duration of the experimentation, the data storage at TP1 must perform recording from the start to the end of the transport.
- c) Certificates
- i. TP1 partners are invited to describe the authentication process (exchange of X.509 V3 certificates + URL). This includes both the authentication of a TP1 with another TP1 as well as the authentication of a TP1 with a TP2. During the 19 July's meeting, the aforementioned companies/entities agreed to adopt the procedure used by Geoloc Systems and Italy's' Ministry of Transport in the CORE's demonstrator. TP1s must use an HTTPS certificate. TP1s must have a static IP address and a X509 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 must be signed by Trusted List manager defined in section 3.b.ii. In the transition phase personal certificates are directly exchanged through secure channels.
 - i. In future operations, the certificates must be provided by UNECE and ERA, acting as Trusted List Managers.
- d) Registering with a TP1 entity (authorities, TP2)
- ii. A registration service was specified in GEOTRANSMD (document D3.3, chap. 2.3).
 - iii. The registration procedure for TP2 is to be specified by the TP1 (availability of data, in particular).
 - iv. To begin with, the current TP1 partners (GBK, Novacom Services, Geoloc Systems, Italy's' Ministry of Transport and UIRNet) could agree on a joint approach. Therefore, they are asked to clarify the process of registering with a TP1 and make a corresponding proposal. During the 19 July's meeting, the aforementioned companies/entities agreed to adopt the procedure described herebelow in the next point.
 - v. In the case the entity requesting to register is an authority (i.e. it is a TP1), its name and certificate must be in the list of section 4.a, and verification can be done automatically or manually. In case the entity requesting to register is a TP2, two methods can be used: - either TP2 will send separately a statement digitally signed by the entity official representative who declares the public key, and then the verification is done manually 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.

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

- a) Data set to be transmitted to a TP1 before the commencement of the journey
- i. Vehicle Identification Numbers (VINs), considering the VIN of truck and trailers
 - ii. BIC code for containers
 - iii. ADR: Registration number of the towing vehicle and the trailer(s)
ADN (if appropriate): ENI number
RID (if appropriate): UIC wagon number
 - iv. Start and end of the transport.

Note: If an authority requests a transport document from a TP1 (proxy mode), it is sufficient to specify the TP2 service access point as well as the VIN/registration number of the towing vehicle and of the trailer(s) to identify a specific transport document on a TP2. There is no need for a Universally Unique Identifier (UUID), because authorities do not access TP2s directly (Redirect Mode).

- b) Registering with a TP2 entity requirements:
 - i. One TP2 must be registered to one TP1 only at time.
 - ii. Every transport operation must only be registered with one TP2 at time.
 - iii. If there is more than one transport document available, these documents must be deposited with the TP2 of the carrier (or of its service provider) who provides the towing vehicle.

6) Considerations on requirements in the transitional phase

As long as there are fire brigades and supervising authorities that are not connected to the system architecture, the general requirements applicable for the purpose of legal certainty will be detailed at national level.

7) Next steps:

- a) The TP1 partners from I/F/GER (currently GBK as TP1 in Germany, Novacom Services and Geoloc Systems as TP1s in France, Italy's Ministry of Transport and UIR-Net as TP1s in Italy) will agree on a technical meeting in Bordeaux in July 2017 where the discussed definitions and requirements with regard to TP1 and TP2 are to be further developed and described. On 19 July, the aforementioned companies/entities met in Rome and identified some requirements for TP1, which have been reported in this document (as word revisions). As detailed in this document, further requirements will be added/specified on the basis of practical results from the experimentation involving the aforementioned companies/entities. In particular during the meeting the requirements related to the following two aspects were anticipated to be explored/analysed in the frame of the experimentation: - how to manage the case (and particularly the reason for no answer) of a TP2 not responding to a TP1 (and hence no data is provided from a TP2 to a TP1); - (more in general) how to manage the responsibility between TP1 and TP2 about the reliability of the data; - moreover, for future operations, the definition of Service Level Agreements (SLAs) for TP1 and TP2 (likely the EUAR TAF-TSI and the EUCARIS law enforcement services could be considered to look at).
- b) In October/November 2017, another meeting of this working group will take place in Germany to develop, for the RID/ADR/ADN Joint Meeting in March 2018, a proposal for a comment in sub-section 5.4.0.3 that makes a harmonized use of an electronic transport document possible.
Moreover, the use of the electronic transport documents for the rail mode will be intensified.
The RID/ADR/ADN Joint Meeting in September 2017 is to be informed of the progress of activities, and interest in participating at the next meeting of the working group is to be enquired.
- c) In June 2017, a meeting between Mr Varga and Mr Méchin is to take place to compare the TAF-TSI data models and the DATEX II dangerous goods data model. The meeting was done, the work is in progress, and the relevant results must be reported in the next meetings.
- d) In the next meetings, the ADR supervisory body is to be informed of the state of play with regard to the electronic transport document so that the supervisory authorities can prepare for the new situation accordingly.

**List of participants
of the Working Group on Telematics (Munich, 11 May 2017)**

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