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Development of an electronic database for the exchange of type approval documentation (DETA)

Interim report and proposal for a roadmap on the development of an electronic database for the exchange of type approval documentation

Submitted by the informal group on the development of an electronic database for the exchange of type approval documentation *

At its March 2013 session, the World Forum for Harmonization of Vehicle Regulations (WP.29) noted the updated roadmap and interim report (WP.29-159-21) of the informal group on the Development of an Electronic database for the exchange of Type Approval documentation (DETA). WP.29 agreed to resume, at its June 2013 session, consideration on the proposed roadmap to pave the way for inserting appropriate amendments into the revision of the 1958 Agreement (ECE/TRANS/WP.29/1102, para. 54).

* In accordance with the programme of work of the Inland Transport Committee for 2010–2014 (ECE/TRANS/208, para. 106 and ECE/TRANS/2010/8, programme activity 02.4), the World Forum will develop, harmonize and update regulations in order to enhance the performance of vehicles. The present document is submitted in conformity with that mandate.

Proposal for a roadmap and interim report on the Development of an Electronic database for the exchange of Type Approval documentation (DETA)

I. Executive summary

1. The informal working group on DETA has developed proposals for a database to contain and communicate approvals issued according UN Regulations. This database will facilitate the development of the International Whole Vehicle Type Approval (IWVTA) procedure and ease the exchange of IWVTAs and, therefore, provide information for the registration of vehicles in the territory of the Contracting Parties to the 1958 Agreement. The establishment of DETA will also allow the simplification of approval markings. This interim report presents the draft main principles. The DETA informal working group seeks the endorsement of WP.29 on the following approach:
2. The DETA application shall be limited, in a first step, to the type-approval authorities for the exchange of type approval documentation as stipulated in the individual UN Regulations.
3. The access to the data shall be limited, in this first step, to the approval authorities, who will get writing and reading rights for all UN Regulations they apply. The access can be extended to manufacturers, and those who are authorized by the manufacturers, with reading rights only for relevant parts or all the information of their own approvals.
4. The nature of the data to be uploaded shall be specified in the individual UN Regulation (e.g. communication form, information document, etc.).
5. Starting with the exchange of IWVTAs, DETA may also be used for other UN Regulations.
6. UN Regulations may allow the type approval markings to be replaced by a Unique Identifier (UI). If so, the respective UN Regulation shall be amended accordingly. The UI is generated automatically by the proposed DETA application.
7. A draft user manual of DETA is described in document DETA-17-06 available on the DETA website at: www2.unece.org/wiki/display/trans/DETA+17th+session
8. The description of the UI is given in Annex 1.
9. The DETA system shall be developed under the license of the European Type Approval Exchange System (ETAES) and be made accessible, for a piloting out phase, on the same server without additional costs. Once it is operational, it shall definitely be converted to the server of the United Nations (UN) as from March 2015.
10. As from March 2015, the United Nations will take over the hosting of the hardware for DETA, software licenses and further maintenance, if necessary, including its administration.
11. The informal working group on IWVTA shall consider the proposals transmitted by DETA as given in documents IWVTA-SG58-04-05-Rev2 (see Annex 2) and IWVTA-SGR0-04-04-Rev.1 (see Annex 3) to be taken in account for Revision 3 of the 1958 Agreement and draft UN Regulation No. 0 on IWVTA.

II. General information on DETA

A. Introduction

12. The informal working group on the installation of a Database for the Exchange of Type Approval documentation (DETA) had been established by WP.29 at its 142nd session. The frequency of the informal group meetings is three times a year. Since the first meeting (held on 16 November 2007), DETA convened sixteen times. The Chair of DETA reported to WP.29 on the outcome of each meeting.

13. The terms of reference for DETA, as approved by WP.29 at its 146th session, are in document ECE/TRANS/WP.29/2008/117. The establishment of DETA would be an essential step forward to simplify approval markings under the UN Regulations annexed to the 1958 Agreement. The current marking of lighting devices is complex and can be replaced by a simplified UI provided that countries can access the database to find further technical details.

14. The development of the IWVTA system gives further justification for establishing DETA.

B. Questionnaire

15. An inventory of the expectations of potential future DETA users was based on a questionnaire (document DETA-05-03). The evaluation of the replies to that questionnaire showed (document DETA-05-04) a high interest in establishing the DETA system, not only from Contracting Parties, their type approval authorities (TAA), technical services (TS) and registration offices, but also from manufacturers and their suppliers, periodical technical inspection (PTI) organizations, enforcement police, consumers, etc. It also clarified that the expectations and objectives from "governmental organizations" and the "industry" on the DETA system differ significantly.

1. Objectives

16. The objectives expected by national authorities (including technical services) and manufacturers (including their associations) differ substantially.

17. National authorities indicated in most cases the following objectives:

Table 1

Objectives by the national authorities for DETA

<i>Objective</i>	<i>Percentage of national authorities and technical services</i>
Reference source of information	67
Facilitate the approval process for vehicles, parts and components (for both manufacturers and technical services)	39
Regulatory exchange of information facilitation	39
PTI/roadside/used cars approval (reference values, technical data source, spare parts verification, vehicle modification identifying, vehicle features check)	33
Approval validity check	28
Vehicle registration/authorisation	28

18. While industry focused on the following objectives:

Table 2

Objectives by industry for DETA

<i>Objective</i>	<i>Percentage of manufacturer/industry associations</i>
Simplify marking (interrogation of vehicle system approvals using only a single reference number)	57
Reference source of information	29
Possible future IWVTA facilitation	29
Marking validity check	29

2. Contribution to the database

19. The enquiry also indicated that the national authorities might contribute more to the system than industry as follows:

Table 3

Expected use of DETA

<i>Contribution</i>	<i>Percentage of national authorities and technical services</i>	<i>Percentage of manufacturer/industry associations</i>
Retrieval	56	29
Submitting	50	14
None	0	29

3. Preferred data type

20. The position of authorities and industry on the need for including specific data differs. The data that was most frequently indicated:

Table 4

Types of Data to be shared with DETA

<i>Data type</i>	<i>Percentage of national authorities and technical services</i>	<i>Percentage of manufacturer/industry associations</i>
Communication form	61	43
Information document	61	14
Test report	61	0
Annexes to the communication form	56	14
Pictures and drawings	33	14
All the data necessary	22	43

4. Ownership of the data

21. The view on the ownership of the information stored in DETA differs as well:

Table 5

Expected ownership of data

<i>Who is the owner of the DETA data (with regard to your domestic law)?</i>	<i>Percentage of national authorities and technical services</i>	<i>Percentage of manufacturer/industry associations</i>
National authority only	39	14
Applicant/manufacturer/representative only	28	43
TAA and applicant (specific data)	11	0
Applicant, TAA and TS	6	0
TAA and TS only	6	0
Public property (although restricted publication)	6	0

5. Restriction of access

22. Most of the respondents indicated that there should be a method available to restrict and control the reading access. The confidentiality of the data stored in the database and its access by users may require a multilayer approach where certain groups of users might or might not be permitted to see all information.

6. Other system features

23. Especially industry indicated the need for the following additional features of the system:

Table 6

Expected additional features for DETA

<i>Other important system features</i>	<i>Percentage of national authorities and technical services</i>	<i>Percentage of manufacturer/industry associations</i>
Notification/communication system for new input	6	29
Rapid access for the authorized agencies (if simplified marking)	0	29
Security	6	29
Multilanguage interface	0	14
Standard software requirements	6	0
Keeping historical approvals	6	0

7. Financing

24. Both national authorities (56 percent) and industry (29 percent) think that the system should be financed by the users. For the national authorities, 29 percent support a flat fee for all users.

8. Further applications

25. DETA does not need further integration with other system applications with global databases, the inclusion of European Union (EU) type approvals or progress in data information on Intelligent Transport Systems (ITS).

9. Outsourcing of responsibilities

26. Outsourcing responsibilities are not supported in the field of general policies, development strategy and legal assessment. Support for outsourcing of the maintenance, administration, distribution and technical support to DETA can be accepted by the majority of all respondents.

27. The results of the questionnaire can be summarized as: the governmental organizations focus on the administration of the type approval process including the electronic exchange of a wide range of information. Industry is more reserved, which might be related to the ownership and confidentiality of and the access to the information, and focuses on simplifying complicated type approval marking via a unique number or Unique Identifier and the development of the IWVTA within UNECE. The informal group on DETA discussed a step by step approach, where the approval authorities will upload only documents requested by the UN Regulation for circulation between the approval authorities. In the first step the access to the data will be limited to the approval authorities or to those parties as authorized by the manufacture. On a voluntary basis more information related to the type-approval may be uploaded as well. Such a first step would take into account the common aims of industry and government as expressed in the questionnaire.

28. The DETA informal group discussed extensively how the financing of the system should be divided fairly among the users: an equal rate for all users or a fee for every access to upload or download data. Directly related to a mandatory fee for the users of DETA was the need to establish a steering board for decision-making purposes on operational items, including the financing of all costs. These problems on the financing and steering board were resolved with the offer of UNECE to finance the whole application of the DETA system once it is operational (including the costs for the hardware, the license fee for the software and maintenance costs). Further development of DETA can be initiated, if necessary, by WP.29.

C. European Type Approval Exchange System (ETAES) and Hosting of DETA

29. The DETA informal group noted several demonstrations of the European Type-Approval Exchange System administered by the European Union (EU) in which all whole vehicle type approval certificates and their attachments are uploaded to a centralized server in one of its member States. All uploaded documents are accessible by all approval authorities of the EU. The DETA informal group concluded that this application fulfils all the needs as expressed by the participants of the informal group, including the automatic generation of the Unique Identifier as a possible replacement of the approval marking and the rights for access to the information. The informal group proposes to use the same platform for the DETA application as for ETAES.

30. At its fifteenth meeting, the DETA informal group noted the offer by the UNECE to host the DETA server application from 2015 onwards after the critical piloting out phase of a time period of two years. The German type approval authority, currently hosting the ETAES server and application, offered to develop the DETA system under the ETAES license, thus closing the financial gap until the Information System Unit of UNECE would

take over the hosting of the DETA system. This financing of DETA would be subject to the approval by WP.29.

31. A provisional description and draft user manual of the DETA application are available as document DETA-17-06 at: www2.unece.org/wiki/display/trans/DETA+17th+session.

D. Implementation of DETA in the provisions of the 1958 Agreement and the IWVTA

32. The informal working group on DETA is of the opinion that there should be a legal basis for the application of the DETA system to permit the electronic distribution of type approval documentation and the use of the Unique Identifier as an alternative to complicated approval markings. Document IWVTA-SG58-04-05 (reproduced in Annex 3 to this report) is the proposal of the IG-DETA in which it proposes:

- (a) to include the use of the UI in article 2 of the text of the 1958 Agreement that is under revision as an alternative for the present approval marking,
- (b) to include the possibility to apply the electronic distribution of type approval document, and
- (c) to include in an Appendix to the 1958 Agreement further details.

These details will include:

- (i) the establishment of a secure internet database by the UNECE,
- (ii) the mandatory circulation of documentation by means of DETA, if so requested by a UN Regulation, especially UN Regulation No. 0 on the IWVTA,
- (iii) the inclusion of the Communication form, and
- (iv) the optional use of the UI for those approvals, where the relevant UN Regulation permits, provided that the approval is stored in the DETA database.

33. The informal working group on DETA seeks WP.29's consent, for a smooth use of the IWVTA scheme for whole vehicle type approvals and the registration of vehicles, the DETA system should be used on a mandatory basis for UN Regulation No. 0 (see Annex 4 to this report reproducing the proposal IWVTA-SGR0-04-05 mandating the use of DETA for the distribution of the Communication forms for all IWVTAs granted according to UN Regulation No. 0).

34. The informal working group on DETA supports the view that DETA simplifies the approval marking and the faster distribution of IWVTA, a mandatory use of the DETA system is necessary to enable as soon as possible the use of such approvals for national or regional purposes. Document IWVTA-SGR0-04-05 proposes the use of DETA for the distribution of the communication forms for all IWVTA granted according UN Regulation No. 0. Taking into account the time line for the introduction of the IWVTA, the DETA system needs to be established in 2015. Therefore, an introduction phase of at least two years seems to be necessary.

35. Thus, WP.29 needs to urgently consider the principles of the two aforementioned proposals to allow the informal group on DETA to develop together with the informal group on IWVTA the necessary amendments of the revised text to the 1958 Agreement and to prepare the text concerned for UN Regulation No. 0.

5. Further developments

36. The informal working group on DETA agreed to hold developments awaiting endorsement by WP.29.

Annex I

Model of the Unique Identifier for the DETA application

Key point for the application of DETA is the possible marking with a Unique Identifier of each product that has been type approved and that meets the provisions of national legislation of Contracting Parties to the 1958 and 1998 Agreement. According to the applicable UN Regulation, the Unique Identifier replaces the type approval marking. A Unique Identifier is needed for getting access to the data that is stored in the DETA database. The sequence number of such a Unique Identifier is automatically generated by the software of the system. To be recognizable as a Unique Identifier the sequential number shall be preceded by a symbol. The informal group on DETA concluded at its 12 informal meeting in June 2011 to use a similar symbol as the truncated approval mark according UN Regulation No. 37. An example of a Unique Identifier on a product will look as follows:

UI 0987654321

Annex II

Implementation of the DETA system in the draft text of Revision 3 to the 1958 Agreement

A. Introduction

1. At its sixteenth meeting, the informal working group on DETA discussed the required amendments for incorporating DETA in the revised 1958 Agreement as based on document DETA-16-04. The informal group concluded on further amendments which were reflected in document DETA-16-04-Rev.1. After some comments, this document can be considered as the final proposal for the IWVTA subgroup SG58. SG58 was requested to incorporate the proposals as reproduced below (text of DETA-16-04-Rev.1) into the draft text of the revised 1958 Agreement and as tabled at the fourth meeting of SG58 on the basis of document IWVTA-SG58-03-02-Rev.1.

2. Meanwhile, the draft amendment of the 1958 Agreement has been further corrected:

(a) In its original proposal (document IWVTA-SG58-04-05), DETA proposed to add at the end of article 2, a new sentence which gave the possibility to replace the type approval marking by a Unique Identifier. With the change of article 2 agreed at the third meeting of SG58, it is preferable to insert the additional sentence at the end of the new article 2(3).

(b) In its original proposal (document IWVTA-SG58-04-05), DETA also proposed to add, at the end of article 5, a new sentence which stipulates that according to the provisions of appendix [X] the distribution of type approval documentation may also be done via an electronic file. In the meantime, article 5 has been amended and the additional sentence can still be positioned at the end of article 5.

(c) The drafting group of SG58 discussed on 3 March 2013 document IWVTA-SG58-04-05rev.1 and requested improving the wording for the heading of the placeholder and a more precise wording for the establishment of the database by the Executive Secretary of UNECE. This document proposes the requested improvement and replaces document IWVTA-04-05rev.1.

B. Proposal for amendments to draft Revision 3 to the 1958 Agreement (marked in bold characters)

Article 2, paragraph 3., amend to read:

"3. The type approvals and approval markings for the types of wheeled vehicles, equipment and parts shall be granted in accordance with the procedures set out in Appendix 2, Chapter 3.

Unless the Regulations specify otherwise, Regulations may permit the type approval markings may be replaced by a Unique Identifier (UI) in accordance with Appendix [X]."

Article 5, amend to read:

"Article 5

The approval authorities of each Contracting Party applying a UN Regulation shall send upon request from the approval authorities of the other Contracting Parties applying the said UN Regulation, a list of the wheeled vehicles, equipment or parts, for which it has refused to grant or has withdrawn approvals.

In addition, on receiving a request from the approval authority of another Contracting Party applying the said UN Regulation, it shall send forthwith, in accordance with the provisions of [Appendix 2], to that approval authority a copy of all relevant information on which it based its decision to grant, refuse to grant, or to withdraw an approval of a wheeled vehicle, equipment or part pursuant to that UN Regulation.

The paper copy may be replaced by an electronic file in accordance with Appendix [X]."

New appendix [X], amend to read:

"Appendix [X] (The Placeholder)

Exchange of type approval documentation:

- 1. Where an approval authority is required to or is requested to provide a copy of an approval and its attachments it may send the documents as paper copy or by e-mail in electronic format or by using the secure internet database established by the Executive Secretary of the United Nations Economic Commission for Europe.**
- 2. Documents stored on the UNECE secure internet database shall consist of at least, the documents specified in each UN Regulation. These should include information communicating to Contracting Parties a notice of approval, of extension, of refusal, or withdrawal of approval or where production is definitely discontinued of a type of vehicle, equipment or to a part pursuant to the UN Regulation.**
- 3. If the approval applicable to a vehicle, an equipment or to a part is stored on the UNECE secure internet database, the approval marking required by the UN Regulation for that product may be replaced by a Unique Identifier (UI) [unless specified otherwise in the UN Regulation], preceded by the symbol **(UI)**. Such unique identifier shall be generated by the database automatically.**
- 4. All Contracting Parties applying a UN Regulation shall have access to the information for that UN Regulation contained in the database using the Unique Identifier and this will provide access to the relevant information relating to the specific approval(s).**
- 5. UN Regulations annexed to this Agreement may require, where necessary, these provisions for the distribution of electronic copies using the UNECE secure internet database for the efficient operation of the approval process, subject to the access rights as defined by the Contracting Parties."**

C. Justification

It is common practice for Approval Authorities to store electronically approval documents and, if a copy of an approval is requested, it is usual to send an electronic copy by e-mail. With the development of a whole vehicle approval process (IWVTA) under the 1958 Agreement, the timely circulation of IWVTA documentation would be crucial to ensure prompt acceptance of vehicles for registration in Contracting Parties that recognize IWVTA. A database of whole vehicle approvals is already established in the European

Union (EU) and a similar UN database would offer significant efficiencies in circulating IWVTAs between the Approval Authorities. The informal working group on DETA has developed the concept for such a database.

A simple provision to allow circulation of electronic copies is added to Article 5. Detailed provisions, including the possibility of establishing a database, are provided in a new Appendix [X] (the Placeholder) rather than in the articles of the 1958 Agreement.

DETA has developed the concept of the Unique Identifier (UI) to offer the possibility of simplifying the current approval marking requirements, particularly on lamps. Instead of the current complex markings, the UI will be fixed on devices and will give access to the approvals for the device(s) that are stored on the database. The UI will be generated automatically by the database. A provision for the use of the UI is added to Article 2(3).

Annex III

Draft proposal for the development of UN Regulation No. 0

A. Introduction

At its sixteenth meeting, the WP.29 informal working group on DETA discussed the required amendments incorporating provisions for the use of the DETA system into UN Regulation No. 0. The informal group agreed on a proposal for new provisions to be included into draft UN Regulation No. 0 as reflected in document DETA-15-03-Rev.1 which was forwarded to the IWVTA subgroup SGR0. SGR0 was requested to incorporate the proposal reproduced below (DETA-15-03-Rev.1) into the draft text for UN Regulation No. 0. The proposed amendments were based on document IWVTA-09-09 that contained the first proposal for UN Regulation No. 0 prepared by the International Organization of Motor Vehicle Manufacturers (OICA) on IWVTA.

B. Proposal for amendments to draft UN Regulation No. 0 (marked in bold characters)

Paragraph 4., amend to read:

- "4. Approval
- 4.1. If the vehicle type submitted for approval pursuant to this UN Regulation meets the requirements of the UN Regulation, approval of that vehicle type shall be granted.
- 4.2. An approval number shall be assigned to each type approved. Its first two digits (at present 00 for the UN Regulation in its original form) shall indicate the series of amendments incorporating the most recent major technical amendments made to the UN Regulation at the time of issue of the approval. The same Contracting Party shall not assign this number to another vehicle type.
- 4.3. Notice of approval or of extension or refusal of approval or production definitely discontinued of a vehicle type pursuant to this UN Regulation shall be communicated, **by means of a secure internet database in accordance with Appendix [X] to the 1958 Agreement**, to the Parties to the 1958 Agreement applying this UN Regulation, ~~by means of~~ **using** a form conforming to the model in Annex 1 to this UN Regulation.
- 4.4. An international approval mark shall be affixed, conspicuously and in a readily accessible place specified on the approval form, to every vehicle conforming to a vehicle type approved under this UN Regulation. Such international approval mark shall consist of:
 - 4.4.1. A circle surrounding the letter "E" followed by the distinguishing number of the country which has granted approval;
 - 4.4.2. The number of this UN Regulation, followed by the letter "R", a dash and the approval number to the right of the circle prescribed in paragraph 4.4.1.
- 4.5. If the vehicle conforms to a vehicle type approved according to this UN Regulation, no approval marks with regard to approvals granted for the UN Regulations listed in Annex 4 need to be affixed to the vehicle.

- 4.6. The approval mark shall be clearly legible and be indelible.
- 4.7. The approval mark shall be placed close to or on the vehicle data plate affixed by the manufacturer.
- 4.8. Annex 2 to this UN Regulation gives an example of the arrangement of the approval mark."

C. Justification

The same justification as specified in Annex II to this document applies here. This amendment aims at mandating in UN Regulation No. 0 the use of DETA for the circulation of IWVTAs.
