



Economic Commission for Europe**Inland Transport Committee****Working Party on Customs Questions affecting Transport****Group of Experts on Conceptual and
Technical Aspects of Computerization of the TIR Procedure****First session**

Geneva, 27–29 January 2021

Item 7 (a) of the provisional agenda

eTIR conceptual, functional and technical documentation version 4.3:**Introduction****History of GE.1 decisions****Note by the secretariat****Introduction - Mandate**

The Inland Transport Committee during its eighty-second session (23–28 February 2020) approved (ECE/TRANS/294, para. 84¹) the establishment of the Group of Experts on Conceptual and Technical Aspects of Computerization of the TIR Procedure (WP.30/GE.1) and endorsed its ToR ² (ECE/TRANS/WP30/2019/9 and ECE/TRANS/WP.30/2019/9/Corr.1) pending approval by UNECE Executive Committee (EXCOM). EXCOM during its Remote informal meeting of members of the Executive Committee (20 May 2020) approved the establishment of the Group of Experts on Conceptual and Technical Aspects of Computerization of the TIR Procedure (WP.30/GE.1) until 2022, based on the terms of reference included in document ECE/TRANS/WP.30/2019/9 and Corr.1, as contained in document ECE/TRANS/294 (ECE/EX/2020/L.2, para 5(b)).³

The terms of reference of the Group stipulate that the Group should focus its work on preparing a new version of the eTIR specifications, pending the formal establishment of TIB. More specifically the Group should (a) prepare a new version of the technical

¹ Decision of the Inland Transport Committee para. 84 / ECE/TRANS/294
www.unece.org/fileadmin/DAM/trans/doc/2020/itc/ECE-TRANS-294e.pdf

² Terms of reference of the newly established Group approved by the Inland Transport Committee and the Executive Committee (EXCOM) of UNECE
www.unece.org/fileadmin/DAM/trans/bcf/wp30/documents/2019/ECE-TRANS-WP30-2019-09e.pdf
and corrigendum www.unece.org/fileadmin/DAM/trans/bcf/wp30/documents/2019/ECE-TRANS-WP30-2019-09c1e.pdf

³ Decision of EXCOM, ECE/EX/2020/L.2 / para. 5(b)
www.unece.org/fileadmin/DAM/commission/EXCOM/Agenda/2020/Remote_informal_mtg_20_05_2020/Item_4_ECE_EX_2020_L.2_ITC_Sub_bodies_E.pdf



specifications of the eTIR procedure, and amendments thereto, ensuring their alignment with the functional specifications of the eTIR procedure; (b) prepare a new version of the functional specifications of the eTIR procedure, and amendments thereto, ensuring their alignment with the conceptual specifications of the eTIR procedure; (c) prepare amendments to the conceptual specifications of the eTIR procedure, upon requests by Working Party on Customs Questions affecting transport (WP.30).

This document presents the history of WP.30, the Administrative Committee of the TIR Conversion (AC.2) and the Informal Ad Hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) decisions related to the eTIR project until February 2018.

Background

At its ninety-fifth session, the Working Party expressed the view that, following the conclusions of Phases I and II of the TIR revision process, the next logical step was to provide the TIR regime with the legal and administrative basis to allow for the use of modern information, management and control technology based on highly automated and secured electronic procedures. The Working Party recognized that computerization of the TIR procedure was inevitable (a) in the light of today's extremely rapid technological developments, based on Internet and Smart Card technologies, particularly affecting international transport and trade, (b) the ever-increasing need for improved efficiency of customs transit procedures and (c) the fight against fraudulent activities which must be conducted with the most appropriate and effective means (TRANS/WP.30/190, para. 26).

The Working Party felt that the existing and widely varying national customs procedures, administrative practices and legal requirements in the Contracting Parties to the Convention should be taken into account during this process. Computerization of the TIR procedure, based on the TIR regime as revised during Phases I and II of the TIR revision process, would therefore have to focus on the possibility of linking national customs transit procedures via a standard electronic and/or paper-based data file containing all information of the TIR Carnet. The newly to be created electronic data file would need to be compatible with most if not all possible technical EDI solutions applied or yet to be applied in the Contracting Parties (TRANS/WP.30/190, para. 27).

The link between national customs procedures and the transfer of data files should be possible via (a) international EDI systems, as is being done in the New Computerized Transit System (NCTS), (b) Smart Cards that could be filled-in and carried along by the transport operator as well as filled-in, read and validated by customs authorities or (c) the present paper-based TIR Carnets, possibly supplemented by bar-code and TIR Carnet holder identification system (TRANS/WP.30/190, para. 28).

The Working Party was of the view that, whatever system is to be used, the approach taken in computerization of the TIR regime must be courageous and forward looking and should be able to accommodate all possible technological solutions likely to be implemented in the years ahead (TRANS/WP.30/190, para. 29).

In order to make solid progress in this complex field, the Working Party decided to follow established practice and to establish an ad hoc group of experts on the computerization of the TIR regime which should be composed of experts from interested countries and industry groups (TRANS/WP.30/190, para. 30).

The Working Party, at its ninety-sixth session, felt that the expert Group, after having highlighted weaknesses and limitations of the current system, should, in particular:

- identify the objectives, procedures and required resources for the computerization of the TIR procedure and determine the role of the various actors (secretariat, governments, IRU, etc.) in this process;
- analyze all administrative and legal requirements relevant for the computerization of the TIR regime;
- study suitable technological solutions in this respect, and

- take account of experiences made with similar automated systems at the national as well as at subregional levels, such as the NCTS, with a view to preparing possible alternative solutions and scenarios, specifying the benefits as well as the disadvantages of the various approaches (TRANS/WP.30/192, para. 37).

The ad hoc Expert Group (hereafter referred to as “Ad hoc Group”) met twice in 2001, on 19 February and on 21 June.

With regard to the objectives of the computerization process, the Ad hoc Group decided that those identified by the Working Party at its ninety-fifth session had kept their validity TRANS/WP.30/2001/13, paras. 13-14).

The Ad hoc Group reconsidered the fundamental approaches for computerization of the TIR procedure and agreed that, knowing that computerization of the TIR procedure was a continuing process, involving various stages of development, none of the options could be excluded for the time being. Efforts should be pursued at the national level to prepare the national customs legislation for the acceptance of electronic data processing and interchange techniques and the electronic signature (TRANS/WP.30/2001/13, paras. 18 and 19).

The Ad hoc Group acknowledged that, regardless of the finally selected approach, from a legal point of view, the amount of changes to be made to the TIR Convention could be limited and that it would basically be sufficient to amend the Convention with either a definition of the TIR Carnet, that would include the use of portable electronic files or introduce one new article which would allow for the use of new technologies in general, including the acceptance of electronic signatures, leaving the existing text of the Convention as it stands. Special provisions dealing with the legal and technical specification of the accepted new technologies could be inserted into a separate, newly created Annex (TRANS/WP.30/2001/13, para. 23).

With regard to the role played by the various actors in the computerization process, the Ad hoc Group agreed that the computerization process would have consequences for the persons and organizations dealing with the issuance and organization and functioning of the guarantee system, as well as for customs authorities, whose task is to check and process the provided data and ensure the goods’ unaltered arrival at the customs office of destination. In addition, the use of automated risk management would influence the work of customs authorities and associations at the national level, as well as the work of the international organizations, the insurers and the TIRExB. However, the Ad hoc Group felt that at that time it was not appropriate to pursue this subject, as it depended on a variety of, as yet unknown, factors (TRANS/WP.30/2001/13, paras. 26 and 27).

On the basis of the outcome of the work performed by the Ad hoc Group, the Working Party mandated the secretariat to convene meetings of special expert groups. These special groups should address the two major problems the Ad hoc Group had encountered in the pursuit of its work:

- To study the conceptual and technical aspects of the computerization process of the TIR Procedure, including the financial and administrative implications of its introduction, both at the national and at the international level, and prepare a draft of electronic messages to allow for an interchange of electronic data, nationally, between Contracting Parties and with international organizations;
- To study in detail the impact of the various approaches that had been identified by the Ad hoc Group on the existing legal text of the TIR Convention as well as the repercussions it could have on international private law, national administrative procedures and to draft a description of the role that the various actors (in particular: national associations, international organization, insurers and TIRExB) could play in the TIR Convention, once the paper-based system would be complemented and/or replaced by a system functioning on the basis of the electronic interchange of information (TRANS/WP.30/2001/13, para. 31).

On the basis of this mandate, the Informal ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (hereafter referred to as

“Expert Group), at its first session, adopted its Terms of Reference, which stipulate that the Expert Group shall:

- List and analyse the data elements required for the operation of a TIR transport at the national and international level, as stipulated in the TIR Convention as well as in resolutions and recommendations, adopted by the Administrative Committee (in particular Annexes 1, 4, and 9 of the TIR Convention) and make an inventory of possible new features which could be included into the electronic version of the TIR procedure. On that basis, the group shall draw up flow charts reflecting the actual and future stages of the TIR procedure. Within the context of its work, the group shall also study the use of standardized codes, ensuring a uniform understanding and interpretation of the data elements in the TIR Carnet.
- List and analyse the existing information and telecommunication systems and study to what extent the experiences gained at the national and international level can be included in the development of a computerized TIR procedure.
- Prepare conclusions with regard to the computerization of the TIR procedure, reflecting the results of the work under (a) and (b) and taking account of the financial implications they might have on the national and international level (TRANS/WP.30/2002/11, annex 1)

The Informal ad hoc Expert Group on the Legal Aspects of Computerization of the TIR Procedure shall:

- Study in detail the impact of the various approaches of the computerization process on the existing legal provisions of the TIR Convention as well as the repercussions it could have on national administrative procedures;
- Draft a description of the role the various actors (in particular: national association, international organization, insurers and TIRExB) could play in the TIR Convention, once the paper-based system would be complemented and/or replaced by a system functioning on the basis of the electronic interchange of information.
- Both informal ad hoc Expert Groups shall report to the Working Party on the progress of their work. At the completion of its work, each ad hoc Expert Group shall draw up a working document containing concrete proposals for further action, to be discussed and approved by the Working Party.

At its second meeting, the informal ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure discussed at length the conceptual and hierarchical data models, describing the information contained in the TIR Carnet, but felt it could not reach agreement on any of them. Some experts questioned the usefulness of such complex models, whereas others expressed the view that they were not in a position to judge to what extent the models actually represented the structure of information in the current TIR Carnet. For these reasons, the Expert Group decided to revert to this matter at a later stage and mandated the secretariat to organize a meeting with some IT specialists to study which model is best suited for the purposes of the Expert Group. The Expert Group further welcomed the secretariat’s proposal to use in the future the Unified Modelling Language-standard (UML) (ExG/COMP/2002/10, paras. 11 and 12).

At their meeting which took place on 3 July 2003, the IT specialists held an extensive exchange of views on the suitability of the UML based, UN/CEFACT Modelling Methodology (UMM) as a methodology to model business processes like the TIR procedure. As such, UMM provides a procedure for specifying, in an implementation-independent manner, business processes involving information exchange. Although the IT specialists noted that it could be worthwhile to study other methodologies, they recognized that the process of selecting a methodology is very complex and time consuming. They agreed that this work has already been done by the UN/CEFACT team in the elaboration of UMM and that UMM offers the necessary tools to describe the TIR business process, a uniform approach for the work of the Expert Group and a valuable base for future improvements in the TIR procedure. Seeing that the activities, undertaken by the Expert Group so far, fitted well into UMM, and that the approach endorsed by the Expert Group in the project overview was in line with the UMM, they invited the secretariat to prepare a

first draft document for discussion by the Expert Group at its forthcoming meeting. The scope of the first phase of the work of the Expert Group being the analysis of the current system - the 'as-is' description of the TIR procedure - the IT specialists decided to limit this first document to the Business Domain Modelling, the first step in UMM. Furthermore, the IT specialists recommended having a full implementation of the methodology, including a first descriptive part describing the so-called 'vision' of the project. Moreover, they emphasized the necessity to adapt UMM, as it would be necessary with any other methodology, to the particulars of the TIR business process (ExG/COMP/2003/2, para. 6).

At its one-hundred-and-fifth session, the Working Party was informed orally of the progress made by the Expert Group at its third meeting, which took place on 1 and 2 September 2003 in Budapest. The Working Party endorsed the work undertaken by the Expert Group and took particular note of three issues, where the Expert Group had expressed that it needed further guidance from the Working Party. These issues were:

(a) The definition of the scope of the project, which had been formulated by the Working Party as being "the computerization of the TIR Procedure". The Expert Group felt that the Working Party should clarify in more detail what was meant exactly by this wording. Within this context, the Expert Group also noted that the term "TIR Procedure" was an undefined term, making it impossible to describe exactly the boundaries of the project;

(b) The description of the approach on how to achieve the computerization of the TIR Procedure. In view of political and technical developments, having taken place over the last few years, the Working Party was requested to provide a more detailed guidance to the Expert Group on which approach the computerization project should pursue;

(c) The title of the project. For practical reasons, the secretariat had proposed to refer in the future to the "eTIR Project" as a short name for the project to computerize the TIR Procedure. The Expert Group felt it was not in a position to decide on this issue and decided to refer the matter to the Working Party for further discussion (TRANS/WP.30/210, paras. 27-31)

At its one-hundred-and-sixth session, the Working Party confirmed that:

(a) the final objective of the computerization of the TIR procedure encompasses the computerization of the whole TIR Carnet life cycle from distribution issuance and via the TIR transport to return and repository and that it should, ultimately be aimed at replacing the current paper TIR Carnet. The Working Party agreed that the process to achieve this objective may be challenging, requiring the input of considerable human and financial input, both at the international and the national level. Therefore, the Working Party agreed that a step-by-step approach seemed the only feasible alternative to achieve any tangible results in the near future. To that end, it mandated the secretariat, as a first step, in cooperation with the Expert Group (a) to work out concrete proposals on how to exchange the so-called 'static' data-elements contained in the TIR Carnet (data elements which remain unchanged throughout the TIR Transport) between the competent authorities of Contracting Parties, possibly also including the data contained in the ITDBOnline as a preliminary step, (b) to conduct a feasibility study on the practicability of such proposals and, ultimately, (c) to propose a pilot along one of the major transit corridors to implement them.

The Working Party agreed that, as a next step, the integration of the so-called 'dynamic' data elements (data elements which may be amended or updated in the course of the TIR Transport) should be considered. Further steps should then address the issue of inclusion of additional features, such as security related information and advance cargo information.

Once these tangible steps had been achieved, the Expert Group could focus its attention on further, outstanding, issues in relation to the computerization of the TIR procedure.

(b) The Working Party agreed that the approach of the computerization process should, until further notice, be focused on the establishment of an international, centralized

database, whose aim should be to facilitate the secure exchange of data between national customs systems. At a later stage, the sharing and exchange of data with other bodies concerned (such as TIRExB, international organizations, national associations and the international guarantee), should not be excluded.

(c) The Working Party agreed that the Project to Computerize the TIR Procedure could, in future, be referred to as “eTIR-project” (TRANS/WP.30/212, para. 26).

At its thirty-sixth session, the Administrative Committee was informed about progress made in the preparation of Phase III of the TIR revision process within the UNECE Working Party (WP.30) and its Ad hoc Group of Experts on Computerization of the TIR Procedure. The Committee endorsed the mandate given by the Working Party to the Informal Ad hoc Expert Group (a) to work out concrete proposals on how to exchange the so-called ‘static’ data elements contained in the TIR Carnet (data elements which remain unchanged throughout the TIR Transport) between the competent authorities of Contracting Parties, possibly also including the data contained in the ITDB Online as a preliminary step, (b) to conduct a feasibility study on the practicability of such proposals and, ultimately, (c) to propose a pilot along one of the major transit corridors to implement them. As a next step, the integration of the so-called ‘dynamic’ data elements (data elements which may be amended or updated in the course of the TIR Transport) should be considered. Further steps should then address the issue of inclusion of additional features, such as security and advance cargo information.

Once these tangible steps have been achieved, the Expert Group could focus its attention on further outstanding issues in relation to the computerization of the TIR procedure.

The Administrative Committee endorsed the opinion of the Working Party that the approach of the computerization process should, until further notice, be focused on the establishment of an international, centralized database, whose aim it should be to facilitate the secure exchange of data between national customs systems. At a later stage, the sharing and exchange of data with other bodies concerned (such as TIRExB, international organizations, national associations and the international guarantee), should not be excluded.

The Administrative Committee endorsed the Working Party’s decision that the Project to computerize the TIR Procedure could, in future, be referred to as “eTIR-project” (TRANS/WP.30/AC.2/73, paras 38–41).

At its sixth session, the Expert Group established that, with the exception of Chapters 1.1.7 and 1.1.8, it had completed its work on Chapter 1 of the Reference Model and that it would dedicate its future work to the remaining Chapters, unless new, as yet unknown, information would require a re-assessment of Chapter 1 (ExG/COMP/2004/24, para. 15).

At its one-hundred-and-tenth session, the Working Party took note that the first part of the work of the Expert Group, encompassing the description of the current TIR procedure, had been finalized (TRANS/WP.30/220, para. 30).

At its one-hundred and thirteenth session, the Working Party adopted document TRANS/WP.30/2005/32-TRANS/WP.30/AC.2/2005/18, containing Chapter 1 of the Reference Model for the eTIR Project, with the understanding that further chapters will be included at a later stage of the project, subject to approval by the Working Party, and that a number of points of the document will be updated to reflect recent developments and as the eTIR Project develops over time.

The Working Party was of the opinion that there was no reason to review the mandates and opinions provided, so far, by the relevant TIR bodies in the computerization process. The Working Party felt that the mandate should remain dynamic, thus providing full freedom to the Expert Group to analyze and develop its ideas on a technical level and to take into account technical innovations that could be advantageous for the development of the project.

The Working Party confirmed that the eTIR Project should evolve around the establishment of an international centralized database in order to facilitate the secure exchange of data between national customs systems. Furthermore, Contracting Parties agreed that the management of data on guarantees, once the guarantor had issued a guarantee to an operator, should lie with customs (ECE/TRANS/WP.30/226, paras. 34, 35 and 41).

At its forty-second session, the Administrative Committee considered document ECE/TRANS/WP.30/AC.2/2006/13, containing an overview of the mandates and opinions provided, so far, by the relevant TIR bodies in the computerization process. The Administrative Committee noted the concerns of some Contracting Parties with regard to the legal and financial aspects linked to the introduction of the eTIR system and the differences in technological developments between countries, which might lead to possible complications and delays at the time of implementation at the national level. The Committee also noted the concerns by the international organization and its member associations with regard to their role in the eTIR system. The Administrative Committee stressed that the eTIR system should meet the requirements of all Contracting Parties to the Convention. The Committee decided to include in the guidelines for the computerization of the TIR system the part of the statement of the UNECE Executive Secretary at the opening of the present session referring to the computerization of the TIR system. The Committee endorsed the document and the following list of guidelines:

- Maintenance of the basic philosophy and structure of the TIR procedure, safeguarding and, possibly, strengthening the provisions of the TIR Convention, particularly those prepared under Phases I and II of the TIR revision process (TRANS/WP.30/194, para. 36);
- Computerization of the whole TIR Carnet life cycle from distribution, issuance and via the TIR transport to return and repository, aimed at, ultimately, replacing the current paper TIR Carnet (TRANS/WP.30/212, para. 26);
- The establishment of an international, centralized database, the aim of which should be to facilitate the secure exchange of data between national customs systems (TRANS/WP.30/212, para. 26);
- The management by customs of data on guarantees, once the guarantor has issued a guarantee to an operator (ECE/TRANS/WP.30/226, para. 41);
- The development of the eTIR system, which connects existing and future customs IT systems, should be realized with an appropriate level of connectivity with the existing TIR related IT systems (ECE/TRANS/WP.30/AC.2/85, para. 38).

At its one-hundred-and sixteenth session, the Working Party requested to start working on Chapter 3 of the Reference Model, dedicated to the analysis of the e-Business-Requirements as contained in Chapter 2 (see ECE/TRANS/WP.30/232, para. 32).

At its one-hundred-and-seventeenth session, the Working Party considered document ECE/TRANS/WP.30/2007/16-ECE/TRANS/WP.30/AC.2/2007/15, submitted by the secretariat, containing Chapter 2 of the eTIR Reference Model and adopted the document, subject to the deletion of the asterisks and corresponding footnotes in Chapter 2.1.2.2.3. and 2.1.2.4.2. The Working Party decided that the adopted Chapter 2 could be revised at any time (see ECE/TRANS/WP.30/234, para. 22). The Administrative Committee, at its forty-fourth session, endorsed the Working Party's decision (see ECE/TRANS/WP.30/AC.2/91, para. 19).

At its thirteenth session, the Expert Group welcomed a first draft of Chapter 3 of the Reference Model as contained in document ECE/TRANS/WP.30/GE.1/2007/13. After an in-depth discussion, the Expert Group mandated the secretariat to align draft Chapter 3 with its findings, to propose data elements and a structure for the identified electronic messages and to draft the fall-back scenarios sequence diagram, for consideration at its next meeting (ECE/TRANS/WP.30/GE.1/2007/16, paras. 7–9).

At its fourteenth session, the Expert Group welcomed the revised Chapter 3, contained in document ECE/TRANS/WP.30/GE.1/2007/13 Rev.1 as well as the proposals for additional security elements in Informal Document GE.1 No.2 (2008). It reviewed the draft fall-back scenarios and the messages. It also mandated the secretariat to align Chapter 3 with its findings, to propose code lists for messages and to amend the class diagrams and messages with security data elements in a revised Chapter 3, for consideration at its next meeting (ECE/TRANS/WP.30/GE.1/2008/3, paras. 8 and 9).

At its fifteenth session, the Expert Group mandated the secretariat to organize a drafting group whose task would be to finalize the draft of Chapter 3, taking into account the findings of the Expert Group. At the kind invitation of Serbian customs, the drafting group met in Belgrade on 28-29 January 2009. The drafting group reviewed each and every UML diagram, revisited the fall-back procedure and revised the messages. It provided the secretariat with clear instructions on how to further revise document ECE/TRANS/WP.30/GE.1/2007/13 Rev.2.

At its one-hundred-and-twenty-first session, the Working Party considered document ECE/TRANS/WP.30/2008/8/Rev.2, containing clarifications on the method of submission of the customs declaration as described in Chapter II of the eTIR Reference Model, prepared by the secretariat on instructions from GE.1 at its fifteenth session. There was general consensus that the document provided the necessary clarifications. At the request of the Working Party, these clarifications will be added as Annex to the eTIR Reference Model (See ECE/TRANS/WP.30/242, para. 27).⁴

At its sixteenth session, the Expert Group revised documents ECE/TRANS/WP.30/GE.1/2007/13 Rev.3, ECE/TRANS/WP.30/GE.1/2009/3 and informal document GE.1 No. 1(2009), containing the various parts composing Chapter 3 of the Reference Model. It also requested experts to provide further inputs to the secretariat after the meeting and before a new revision of Chapter 3 would be issued.

At its one-hundred-and-twenty-second session, the Working Party was informed that GE.1 was of the firm opinion that the so-called “push approach was the only viable solution to ensure that the information exchange with and within the eTIR international system takes place in real time. Only the “push” approach would allow that information is sent in real time from one system to another with a direct and traceable acknowledgement of receipt. The Working Party endorsed this opinion, thus ensuring that the information sent in real by the customs office of departure, after it has accepted the customs declaration, will be duly acknowledged upon receipt of the advance cargo information, by all customs authorities involved in the TIR transport (See ECE/TRANS/WP.30/244, para. 28).

At its seventeenth session, the Expert Group welcomed the final version of Chapter 3 of the eTIR Reference Model, contained in document ECE/TRANS/WP.30/GE.1/2010/2, and took note of the amendments brought to the messages thanks to the kind assistance of Mr. Hans Greven from the Dutch customs authorities, thus ensuring full alignment with version 3 of the WCO transit data model.

At its eighteenth session, the Expert Group extensively discussed version 3.0a of the eTIR Reference Model, as contained in document ECE/TRANS/WP.30/GE.1/2011/3, as well as the additional amendment proposals contained in Informal document GE.1 No.1 (2011). The Expert Group took note of the two amendments proposals. It decided to further discuss the first proposal, i.e. to include international declaration mechanisms, at its next session on the basis of a revised document to be prepared by the secretariat. The Expert Group decided to forward the second proposal, i.e. to make use of the guarantee chain’s database to validate guarantees which have not yet been accepted by customs, to the Working Party on Customs Questions affecting Transport (WP.30), together with version 3.0 of the eTIR Reference Model. Furthermore, the Expert Group mandated the secretariat to request the views of the network of eTIR focal points on the second proposal, which then, after review, could be transmitted to WP.30 as a technical recommendation by the network of eTIR focal points (ECE/TRANS/WP.30/GE.1/2011/6, paras. 10–11).

⁴ Annex VI

At its nineteenth session, the Expert Group took note of requests by WP.30 at its one-hundred-and-twenty-eighth session and reconsidered two proposals to amend the eTIR Reference Model, version 3.0a, as contained in document ECE/TRANS/WP.30/2011/4.

On the basis of the proposal contained in document ECE/TRANS/WP.30/2011/5 and the recommendations by the eTIR focal points, contained in document ECE/TRANS/WP.30/GE.1/2011/8, the Expert Group reconsidered the proposal to make use of the guarantee chain's database(s) to validate guarantees which have not yet been accepted by customs. The Expert Group was of the view that, though technically feasible, the proposal would increase the complexity of the eTIR system without there being any indication or justification given with regard to possible benefits. On the contrary, this proposal does not entail a necessity for the guarantor to register guarantees with the eTIR international system in the first place, nor is there any consequence attached to the guarantor's failure to do so. This could have very negative consequences on the functioning of the backup procedures. In conclusion, it was decided to inform WP.30 that, from a technical and conceptual perspective, the Expert Group recommended not pursuing this proposal, leaving it up to WP.30 to decide if, for political reasons of the system, this option could nevertheless be maintained.

The Expert Group also reconsidered the proposal to include international declaration mechanisms in the scope of the eTIR project on the basis of document ECE/TRANS/WP.30/GE.1/2010/9, prepared by the secretariat in collaboration with experts from Czech customs. While highlighting the absence of global international agreements on electronic signatures, the Expert Group took note that some countries impose the use of national certification authorities when it comes to signing electronic documents intended for governmental agencies. The Expert Group felt that there was insufficient information to take a decision on the issue and requested the secretariat to launch a survey among both TIR and eTIR focal points, aimed at gathering information from all TIR Contracting Parties on the current and expected practice, rules and regulations on electronic signatures. In the absence of internationally recognized certification authorities, the Expert Group also considered two alternative options: on the one hand, the Expert Group envisaged that the advanced cargo information could be signed by a representative (an entity that would assist transport operators to submit their data electronically and sign on their behalf), and, on the other hand, it also considered that authentication of the electronic advance cargo information by means of a hash code could be sufficient. In the latter case, transport operators would not need to be authenticated to be able to send their electronic information and the actual act of submission of the declaration would be accomplished by means of the presentation of the vehicle, the goods and the reference to the information submitted electronically by the transport operator at the customs office of departure or entry (en route) (ECE/TRANS/WP.30/2012/1, paras. 8–10).

At its one-hundred-and-twenty-ninth session, the Working Party reaffirmed the importance of computerization of the TIR procedure. Some delegations stressed the need to proceed step-by-step in order to avoid a possible disruption of the TIR procedure in less technically developed countries. WP.30 took note that a progressive introduction of the eTIR system was already foreseen in the eTIR Reference Model, thus allowing countries to join a computerized system as soon as they are ready. The Working Party noted that GE.1 had made sure that not only all functionalities provided in the current paper-based TIR system would be available in the eTIR system, but also the use of modern technologies to bring numerous additional benefits to the customs and transport industry, as identified in the eTIR Reference Model. The secretariat also recalled that the concepts contained in version 3.0 of the eTIR Reference Model (ECE/TRANS/WP.30/2011/4) were the very same that had already been approved in version 2.0. WP.30 accepted version 3.0 of the eTIR Reference Model as a basis for its work, without prejudice to the outcome of its deliberations on the whole eTIR project.

The Working Party reconsidered the amendment proposal contained in document ECE/TRANS/WP.30/2011/5 and decided to follow the recommendation of GE.1 not to amend the guarantee validation procedure described in the eTIR Reference Model.

Some delegations stressed that the eTIR project has multiple aspects and that the acceptance of version 3.0 of the eTIR Reference Model only addresses the conceptual and

technical aspects of the project, leaving aside its legal, administrative and financial dimensions. The importance of capacity-building and transfer of technology was also underlined. Therefore, these delegations were of the view that, once those issues had been addressed, WP.30 would need to reconsider the eTIR Reference Model. Some other delegations did not agree with this view and highlighted the considerable efforts and time spent by the dedicated experts in GE.1 developing the eTIR Reference Model, in line with the mandates of the Working Party. They pointed out the necessity for rapid progress on eTIR and felt that less technologically advanced countries should neither be left aside nor block the computerization. Countries having additional technical proposals were invited to bring those before GE.1 for consideration. In this context, WP.30 reiterated its standing invitation to all countries to participate in the work of GE.1 and contribute to the eTIR project by nominating an eTIR focal point (ECE/TRANS/WP.30/258, paras. 19–21).

At its twentieth session, the Expert Group reconsidered the proposal to introduce international declaration mechanisms in the eTIR project, as presented in document ECE/TRANS/WP.30/GE.1/2011/9, in the light of the results of the survey on the use of electronic signatures in the framework of the eTIR project, contained in Informal document GE.1 No. 3 (2012), as well as comments by eTIR focal points, contained in Informal document GE.1 No. 2 (2012).

The Expert Group acknowledged the necessity to provide the transport industry with a variety of options to submit electronic information to customs. Considering that, despite the introduction of a standard declaration message in the eTIR Reference Model, national declarations mechanisms might still differ between countries, in particular when it comes to authentication of the sender of the information, the Expert Group felt that it was essential to include international declaration mechanisms in the eTIR project. The survey on the use of electronic signatures in the framework of the eTIR project confirmed that most countries require the use of electronic signatures or other authentication mechanisms for the transmission of advance cargo information. In most countries, only national (or at best: regional) electronic signatures are accepted and, at present, only a few countries recognize foreign certification authorities (CA) for the issuance of legally binding electronic signatures. The Expert Group confirmed that, as long as internationally recognized CA have not been developed and recognized, it will be extremely difficult to implement the cross-border use of electronically signed documents. The Expert Groups noted that 50% of respondents to the questionnaire indicated that an international CA could be used if recognized by an international agreement and half of those considered that the TIR Convention could be considered as providing an appropriate platform for that purpose. Consequently, the secretariat was requested to further explore the possibilities to include international declaration mechanisms, for example by means of trusted third-party solutions and directly in the eTIR international system, possibly linked with the authorization procedure of TIR Carnet holders. Finally, the Expert Group requested the secretariat to redraft a proposal to include international declarations mechanisms in the eTIR Reference Model for its next meeting, underlining that a realistic proposal should be based on authentication mechanisms (e.g. user/password) and trusted system-to-system information exchanges (e.g. Virtual Private Network), rather than on electronic signatures.

The Expert Group took note of minor errors in the eTIR Reference Model. It requested their correction (including in the XML schemas published on the eTIR website) and the issuance of a version 4.0 of the eTIR Reference Model containing Chapters 1 to 4, as already published in documents ECE/TRANS/WP.30/2011/4, ECE/TRANS/WP.30/GE.1/2011/4 and ECE/TRANS/WP.30/GE.1/2011/10 and available at the TIR and eTIR websites (ECE/TRANS/WP.30/2012/7, paras. 9–11).

At its 130th session, the Working Party endorsed the report of the nineteenth session of the Informal Ad hoc Expert Group on Conceptual and Technical aspects of Computerization of the TIR Procedure (GE.1) (Belgrade, 13 and 14 September 2011), contained in document ECE/TRANS/WP.30/2012/1. The delegations of Iran (Islamic Republic of) and Kazakhstan were of the view that WP.30 should only take note of this report without any endorsement. The secretariat recalled that the endorsement of the GE.1 report does not imply the approval by WP.30 of the outcome of GE.1 work, i.e. additions and/or amendments to the eTIR Reference Model, but rather indicates the support of the

Working Party for GE.1 activities and a request to continue the work along the lines presented in the report. As in the past, amendments and additions to the eTIR Reference Model will be submitted separately to the Working Party for approval (ECE/TRANS/WP.30/260, para. 26).

WP.30 also noted that, in line with the joint mandates by WP.30, TIRExB, GE.1 and ITC, the secretariat, with the assistance of the UNOG competent services, had issued a tender for a cost-benefit analysis (CBA) of the eTIR project. On the basis of the offers received, a consultant had been selected. To date, a detailed inception report was produced and agreed upon. The CBA report should be finalized on time to be presented at the twentieth session of the GE.1 and will be later submitted to WP.30 and TIRExB for consideration (ECE/TRANS/WP.30/260, para. 29).

At its 131st session, the Vice-Chair of the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1), Mrs. Özyazici Sunay of Turkey, informed the Working Party of the results of GE.1 at its twentieth session, which was held in Prague on 19 and 20 April 2012, at the kind invitation of the Czech customs administration. The main issues discussed at the session were the inclusion of international declaration mechanisms in the eTIR Reference Model, the draft Cost-Benefit Analysis (CBA) of the eTIR Project as presently conducted by a consultancy firm at the request of TIRExB and the dematerialization of documents attached to the TIR Carnet (ECE/TRANS/WP.30/262, para. 26).

At its twenty-first session, the Expert Group welcomed the new proposal to introduce international declaration mechanisms in the eTIR project, as presented in Informal document GE.1 No. 10 (2012). Recalling a key principle of the eTIR project, i.e. that the eTIR international system avoids the multiplicity of direct customs to customs connections, the Expert Group requested removing the direct secure system to system connections between customs administrations from the customs international declaration mechanisms option (ECE/TRANS/WP.30/2013/5, para. 8).

At its 132nd session, WP.30 took note of the results of the twenty-first session of the Expert Group which took place on 25 and 26 September 2012 in Bratislava, at the kind invitation of the Slovak customs. The meeting considered a proposal to complement the existing national declaration mechanism, as contained in the eTIR Reference Model, with an international component, in order to provide the transport industry with a variety of options to submit electronic information to customs. The Expert Group agreed to include in the eTIR Reference Model, various alternative international declaration mechanisms. A first option would be provided by the eTIR international system (web services only), another one by the private sector, with systems such as IRU's TIR-EPD, and a last option could be provided by the customs authorities of the country of residence of the transport operator, thus taking advantage of national authentication mechanisms. The Expert Group also delivered comments (Informal document GE.1 No. 12 (2012)) on the final draft of the Cost Benefit Analysis (CBA) of the eTIR Project. In particular, the Expert Group agreed with the methodology applied by the consultants, but, at the same time, felt that some costs, e.g. for training, and indirect benefits, like the improved facilitation for trade and increased security, were missing in the calculations. The Expert Group requested the secretariat to prepare a new document, containing a summary of the consultants' findings, in combination with an assessment by the secretariat of the limitations of CBA as well as recommendations by the Expert Group. With regard to the dematerialization of attached documents, WP.30 noted that the secretariat had submitted a request to the Data Model Project Team of WCO to amend the "attached documents" class of the WCO Data Model, so that it no longer only allows the attachment of image files but can also handle various options which were considered by the Expert Group. As a consequence, a new class had been added which would be used in eTIR messages to handle electronically attached documents. The eTIR Reference Model will be amended accordingly (ECE/TRANS/WP.30/264, para. 26).

At its 133rd session, the Working Party endorsed the report of the twenty-first session of the Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) (ECE/TRANS/WP.30/2013/5). WP.30 was also informed about the finalization of the CBA of eTIR (Informal document GE.1 No.12/Rev.1 (2012)) and its non-technical summary (Informal document GE.1 No.1

(2013)), prepared by the secretariat at request by GE.1 and containing an assessment of the CBA limitations and recommendations. Both documents have been distributed to GE.1 participants and eTIR focal points for consideration, published on the UNECE website and on the agenda of the twenty-second session of GE.1. The Working Party noted that, having addressed financial and most of technical aspects of eTIR, GE.1 was nearing the end of its mandate and considered that this work should be followed by consideration of legal and policy aspects of eTIR by WP.30 (ECE/TRANS/WP.30/266, para. 24).

At its twenty-second session, the Expert Group took note of the final version of the Cost Benefit Analysis of the eTIR Project (CBA) carried out by an independent contractor, as contained in Informal document No. 12 (2012)/Rev.1. It also welcomed Informal document GE.1 No. 2 (2013), containing a summary of the consultants' CBA, in combination with an assessment by the secretariat of the limitations of the analysis as well as recommendations. It discussed and slightly revised the wording of the recommendations.

The IRU expressed the reservations with regard to the final CBA, the corresponding assessment made by the TIR secretariat and the recommendations by the Expert Group.

The Expert Group confirmed that the assessment of the CBA in Informal document GE.1 No. 2 (2013) already takes into account most of the remarks made by the IRU at earlier sessions and, thus, acknowledged that some cost elements might be slightly underestimated, in particular labour costs, depending on where the eTIR international system would be hosted. Nevertheless, the consultant has calculated the costs based on the requirement contained in the eTIR Reference Model where, for example, an international 24/7 helpdesk is not envisaged. Furthermore, it is not correct to say that managerial and technical costs are not considered, as in most of the options a significant share of those costs are included in the hosting costs. With regard to the cost to the IRU and the associations, the Expert Group recalled that the consultant has taken into account that the largest part of the issuance of TIR Carnets has already been computerized by the IRU and its associations, thus limiting the costs for the guarantee chain to connect to the eTIR international system. The Expert Group was of the view that, since only maximum estimated costs were used and the fact that costs have been increased by 20 per cent to factor in the risk of a possible underestimation, the estimation should be sufficiently accurate to for the sake of the CBA. Furthermore, the Expert Group requested the secretariat to look into the possibility to use off-the-shelf solutions (including open-source solutions) for the development of the eTIR kernel, thus, possibly, reducing the costs of development of the eTIR international system.

The Expert Group requested the secretariat to include a revised version of Informal document GE.1 No. 2 (2013) as an annex to the eTIR Reference Model and submit it to WP.30 for consideration (ECE/TRANS/WP.30/2013/10, paras. 15–18).

At its 134th session, the Working Party took note of the outcome of the twenty-second session of GE.1 as presented orally by its vice-Chair. In particular, it took note that GE.1 had finalized the introduction of an international declaration mechanism into the eTIR project and that it had extensively discussed the results of the Cost Benefit Analysis, its summary and its assessment in order to prepare recommendations. (ECE/TRANS/WP.30/268, para. 29).

At its 135th session, WP.30 took note of the finalization of the CBA of the eTIR project, together with its summary, assessment and the resulting recommendations by GE.1 (ECE/TRANS/WP.30/2013/10). The secretariat gave a presentation on this document and, in reply to questions by various delegations, further clarified a number of issues concerning some of the assumptions and results of CBA.

At its twenty-third session, the Expert Group welcomed version 4.0a of the eTIR Reference Model. It took note of the various changes introduced in this version, in particular: the inclusion of the latest references to decisions by the Expert Group and WP.30 in the Introduction, the alignment of all message to the WCO data model v.3.3 (including customs to customs (C2C) messages), the reorganization of the various Chapters containing the message descriptions, the introduction of figures to better visualize messages, the integration of Chapter 4 and its Annex as well as the insertion of a new Annex entitled "Cost Benefit Analysis of the eTIR system: summary, limitations and

recommendations". The Expert Group expressed its great appreciation for the extensive contribution by Mr. Hans Greven (Netherlands) in preparing the descriptions of the eTIR messages.

Furthermore, the Expert Group reconsidered if it was necessary to keep UN/EDIFACT message descriptions for a newly devised system such as eTIR, in particular considering that it could ultimately further complicate the process envisaged to ensure the integrity of the data submitted, i.e. the use of hash codes. Taking into account that some countries will use legacy systems based on UN/EDIFACT to allow for the submission of eTIR data (e.g. Belgium) the Expert Group decided to keep UN/EDIFACT as a possible option for communicating TIR data to customs administrations. As a consequence, and while taking into account the outcome of its discussion under agenda item 3.b, the Expert Group decided it should consider if the direct submission of TIR data by the transport operator to customs administrations could replace the hash code mechanism to ensure the integrity of the data. The Expert Group acknowledged that, today, this is a current practice in all countries requiring the submission of electronic advance cargo information, either using nationally provided declaration mechanisms or the TIR-EPD system of the IRU. The Expert Group requested the secretariat to present an informal document on this issue to WP.30 at its February 2014 session and ask WP.30 whether the eTIR project should abandon the objective to request the submission of electronic information only in countries with customs offices of departure. It also requested the secretariat to analyse the consequences of such a change on the eTIR reference model as a whole, including on the fall-back scenarios.

The Expert Group also considered Informal document GE.1 No. 10 (2013), containing a proposal by the secretariat to include in the eTIR Reference Model tables cross-referencing the functional message descriptions and the tags used in XML schemas. The Expert Group recognized the usefulness of such tables and requested the secretariat to include them in Chapter 4.2.3.1. The Expert Group also pointed out that UN/EDIFACT message descriptions (Chapter 4.2.3.2) should be amended and be aligned to the WCO data model v.3.3. It requested the secretariat to issue a version 4.1a of the eTIR Reference Model that would include the changes requested above, for consideration by WP.30, possibly at its June 2014 session.

Finally, the Expert Group considered all tasks and activities listed in its Terms of Reference (TRANS/WP.30/2002/11, Annex 1). After extensive discussions, the Expert Group was of the opinion that the eTIR Reference Model fully covers the mandate that WP.30 had entrusted it with. At the same time, the Expert Group was conscious that, ultimately, it is the task of the WP.30 to endorse the eTIR Reference Model and consider if the Expert Group has satisfactorily fulfilled its mandate (ECE/TRANS/WP.30/2014/4, paras. 11–14).

At its 136th session, WP.30 noted that GE.1 was of the view that it was nearing completion of its mandate and had requested the secretariat to start preparing a document summarizing its achievement and recommendations (ECE/TRANS/WP.30/272, para. 24).

At its 137th session, the Working Party, at the request of GE.1, extensively discussed document ECE/TRANS/WP.30/2014/5. In particular, it took note that the submission of diverging safety and security data to each country en route might represent an added complexity for transport operators conducting TIR (or eTIR) transports. The Working Party stressed that the principle of a single TIR declaration in the country of departure should be respected and decided that the declaration mechanisms designed in the eTIR Reference Model should not be amended. Considering that safety and security data requirements have their own legal basis and in view of the difficulty in agreeing on common requirements, the Working Party also decided that, even if they are related to TIR transports, those requirements should be left optional in the standard eTIR declaration. As a consequence, the Working Party instructed GE.1 to continue to work on the development of a standards eTIR declaration (ECE/TRANS/WP.30/274, para. 15).

At its 138th session, the Working Party noted that, at its twenty-fourth session (Antalya (Turkey), September 2014) GE.1 had endorsed, provisionally, version 4.1a of the eTIR Reference Model and had requested the secretariat to circulate it among eTIR focal

points. Furthermore, the Working Party noted that GE.1 had held first technical considerations on proposals by Turkey to slightly amend the standard eTIR declaration message, including a proposal to make the HS code mandatory. The secretariat informed the Working Party that the final report of the GE.1 session would be submitted for endorsement at its next session (see ECE/TRANS.WP.30/276, para. 11).

At its 139th session, the Working Party endorsed the report of GE.1 on its twenty-fourth session (ECE/TRANS/WP.30/2015/3 and Corr.1) (see ECE/TRANS/WP.30/278, para. 16).

At its 140th session, the Working Party considered and supported document ECE/TRANS/WP.30/2011/4/Rev.1, containing version 4.1 of the eTIR Reference Model, as a basis for future work of GE.3 as well as for pilot projects. The Working Party recalled that the eTIR Reference Model is not “carved in stone”. Some Contracting Parties indicated they are still analysing the technical details of the document. The Working Party thanked the United Nations Office at Geneva (UNOG) documentation services for having provided a translation into French and Russian of such technically complex and extensive document. The Working Party also took note of the comments provided by various countries, as reproduced in Informal document WP.30 (2015) No. 10 and agreed that the eTIR Reference Model might require further improvements, in particular, as a follow-up to pilot projects and the outcome of the work of the legal Expert Group (see ECE/TRANS/WP.30/280, para. 9).

At its 61st session, AC.2 endorsed the Joint Statement on the computerization of the TIR procedure contained in Annex VII (ECE/TRANS/WP.30/AC.2/125, para. 29).

At its 144th session, the Working Party took note of the oral report of the twenty-fifth session of GE.1 on 19-20 September 2016 in Geneva. It noted that GE.1 had reviewed and welcomed the results from both eTIR pilot projects, acknowledging their contributions toward a fully-fledged eTIR system. GE.1 had also assessed the first findings of GE.2 and acknowledged the need of close collaboration between both groups, in particular when dealing with issues such as electronic signatures. Furthermore, GE.1 had considered a number of pending amendments to the eTIR Reference Model v.4.1a. The Working Party noted that the final report of the twenty-fifth session would be submitted as a formal document for its February 2017 session and approved the continuation of GE.1 in 2017, in particular to make the necessary amendments to the eTIR Reference Model v.4.1a and to deal with the technical issues related to proposals prepared by GE.2. In the context of extending the mandate of GE.1, the Working Party requested the secretariat to also raise the issue of financing the development and maintenance of the eTIR international system at the level of ITC (see ECE/TRANS/WP.30/288, para. 14).

At its twenty-fifth session, GE.1 welcomed Informal document GE.1 No. 4 (2016) by the European Commission (EC). The Expert Group discussed the proposal to split the eTIR Reference Model into functional and technical parts and, in order not to revert to the decision on the modelling methodology used for the project but to, however, facilitate the consultation and maintenance of the reference model, it requested the secretariat to prepare a separate document for each chapter, also including the annexes that are specific for that chapter. The Expert Group further decided to add an annex to the introduction to include the Joint Statement on the computerization of the TIR procedure, as endorsed by AC.2 on 11 June 2015. The Expert Group questioned the need of chapter 1.1.4 and requested the secretariat to consider its deletion in future versions. It instructed the secretariat to consider the need to amend chapters 1.1.6, 1.1.7 and 1.1.8. Furthermore, it welcomed various minor amendments proposed by EC and requested the secretariat to make the necessary changes in the next version. Finally, it requested the secretariat to look into the possible replacement of the Unified Modelling Language (UML) activity diagrams by diagrams following the Business Process Model and Notation (BPMN) standard.

The Expert Group was of the view that a number of issues raised by EC would also require legal expertise. The Expert Group particularly referred to the fact that Annex 10 of the TIR Convention is considered out-of-scope for the eTIR project, whereas countries which would fully implement eTIR, in particular the sending of termination messages (I11), would automatically comply with it. Furthermore, the Expert Group discussed the

possibility of using the paper TIR Carnet as a fallback procedure. On this issue, it was pointed out that if, in future, the eTIR legal provisions would be included in a legal instrument that would be separate and unconnected to the original TIR Convention of 1975, it would be impossible for Contracting Parties to use the paper TIR Carnet as a fall-back unless the whole paper procedure would be included in the new legal instrument. In this context, the Expert Group recalled that Annex VIII chapter 3.1 should contain the printing guidelines for the paper accompanying document, which would function as a fall-back document, and mandated the secretariat to start working on a template for the paper accompanying document.

The Expert Group also carefully considered the various amendment proposal contained in Informal document GE.1 No. 5 (2016) and took the following decisions.

- Turkish proposal to amend the eTIR Reference Model – The Expert Group considered the Turkish proposals and highlighted that, since the proposals are about changes to data requirements, they first should be considered at the procedural or legal level. Even though some data elements could be extremely useful, in particular for risk assessment (e.g. the HS code), making those data elements mandatory would require the addition of those data requirements to the eTIR legal provisions. With regard to the inclusion of additional optional elements, the Expert Group acknowledged, in the light of the findings related to the UNECE-IRU eTIR pilot project (see para. 6), in particular the fact that eTIR messages do not yet allow the transmission of required safety and security information, that using solely the standard eTIR message would not be possible. However, gathering each and every specific national data requirement might require the assistance of IRU which has already gone through this process while devising TIR-EPD. The Expert Group requested the secretariat to submit the proposal to WP.30.
- Mutual recognition of electronic signatures – After thorough analysis of the various options listed in the Annex of Informal document GE.1 No. 5 (2016) as well as a new option proposed by the Turkish customs administration, the Expert Group decided to maintain its recommendation on this issue, i.e. that, on the basis of the TIR Convention principle of mutual recognition of customs controls, the authentication of the transport operator shall be performed in the country of departure and, since the information will then be transmitted in a secure customs environment (including the eTIR international system), other countries shall recognize that this authentication was performed correctly and that the holder whose name is contained in the electronic messages is the person liable for the TIR transport. The Expert Group acknowledged that this would need to be included specifically in the eTIR legal provisions.
- UN/EDIFACT message format – In view of the answers received from eTIR focal points, the Expert Group decided that all eTIR message will be only exchanged in XML format and that the UN/EDIFACT message descriptions will be taken out of the next version of the eTIR Reference Model.
- Metadata class and Core data types – The Expert group accepted the proposal and requested the secretariat to amend the next version of the eTIR Reference Model accordingly.
- Changes to Table 0.3 - The Expert group accepted the proposal.
- Code lists - The Expert group accepted the proposal. However, further to indicating the responsible agency for the code lists in the eTIR Reference Model, the Expert Group requested the secretariat to keep those complete code lists on the eTIR website for reference.
- Minor Changes - The Expert group accepted the proposal. (ECE/TRANS/WP.30/2017/3, paras. 12-23).

At its 145th session, the Working Party endorsed the report of the twenty-fifth session (19-20 September 2016, Geneva) of GE.1, as contained in document ECE/TRANS/WP.30/2017/3. Note was taken that the delegation of the Russian Federation

did not agree with the conclusions of GE.1 in para. 16 thereof on the mutual recognition of electronic signatures (see ECE/TRANS/WP.30/290, para. 19).

At its 26th session, the Expert Group carefully considered the various amendment proposals contained in Informal document GE.1 No. 9 (2017) and took the following decisions: (ECE/TRANS/WP.30/2017/22, para. 17-35)

1. Safety and security data elements in eTIR messages

The Expert Group welcomed the presentation by the secretariat and extensively discussed data requirements other than those contained in the TIR Carnet, which can include, inter alia, safety and security data requirements. The Expert Group was of the view that since those data requirements result from alternative legislation they could not be included as such as TIR data requirements. However, the Expert Group recalled that the data elements recommended for transit by the World Customs Organization (WCO) SAFE2 Framework of Standards have already been included as optional data elements in eTIR messages. Consequently, countries that wish to include other data elements, required nationally for transit operations, could request their inclusion in the list of data elements required for transit by SAFE. Those data elements could then be included as optional in later versions of the eTIR messages so that eTIR messages could serve to make a single data submission for the purpose of eTIR transports.

Recognizing that additional data required for transit could stem from a whole range of laws and regulations, e.g. phytosanitary or veterinary, the Expert Group recommended, for the time being, leaving the responsibility of the submission of those additional data to the transport operator. The group further proposed that only the data contained in the eTIR messages would be exchanged between customs administrations via the eTIR international system.

However, the Turkish delegation raised concerns with regard to the idea of not including all safety and security data elements in eTIR messages and the Iranian delegation made the following statement: “The objective of the TIR Convention is facilitation of transit and trade. If we leave the issue of additional information open, then it will be easy for each Contracting Party to interpret it independently. We believe that we should concentrate on simplification, standardization and unification of the data needed as additional information if need be. It means that the data exactly relevant to TIR should be targeted, defined and accepted by all. In this way, the TIR objective of facilitation of transit and trade will come true.”

The delegation of the EU indicated that, further to the introduction of the new Union Customs Code (UCC), a new comparison between the messages of eTIR and the New Computerized Transit System (NCTS) was necessary.

2. Accompanying document

The Expert Group considered the draft accompanying document prepared by the secretariat and requested the following amendments:

- add a bar code (guarantee number);
- include a box with the itinerary (possibly with national references to the transport);
- include a box for the HS code;
- clarify that the parts for the stamps is reserved for the fallback procedure;
- include the certified report on the back side of the accompanying document;
- include detailed printing instructions for the accompanying document (box dimensions, font, font size, ...);
- include guidelines for the use of the accompanying document in case of fallback.

Furthermore, the Expert Group considered whether the accompanying document could also be printed by the transport company but could not take a decision on the issue. Finally, the Expert Group mandated the secretariat to prepare a new version of the

accompanying document, taking into account the discussions and requests made at this session.

3. Usage of the eTIR functional and technical specifications

The Expert Group took note of the lack of clear instructions with regard to the usage of the eTIR material (documents and Schema Definitions (XSDs)). The Expert Group was of the general view that this material should remain in the public domain.

The delegation of the EU and other delegations from EU member states shared their experience with regard to the NCTS documentation. In the EU, the European Commission shares the documentation with Member States only and it is up to Member States to distribute the relevant documents to the private sector (taking into account the specificities of their national IT customs system).

The Expert Group mandated the secretariat to propose wordings for a usage clause and a disclaimer, in consultation with the Office of Legal Affairs, and to submit it directly to WP.30 for consideration at its October 2017 session.

4. Direct submission of advance cargo information by transport operators

The Expert Group discussed the possible consequence of the requirement to submit advance cargo information prior to the arrival of the vehicle, in particular in cases where the office of departure is very close to the border and the customs-to-customs exchange of data would not arrive sufficiently in advance. The Expert Group pointed out that the requirement to submit advance information originated from safety and security regulation and does not apply to the standard TIR data. Consequently, and recalling the decision taken earlier with regard to the submission of additional information (see paras. 18-21), the Expert Group was of the view that no changes were required in the eTIR documentation.

5. Refusal by customs to begin a TIR transport or to start a TIR operation

The Expert Group discussed the need to include new messages to notify that a TIR transport does not begin or that a TIR operation is not allowed to start, the later meaning that the TIR transport is interrupted. The Expert Group agreed that there was no reason to include a message that a TIR transport does not begin but recognized the need to notify the interruption of a TIR transport. The following reasons were put forward to justify the need for such message: (1) to avoid that the guarantee status would remain "in use" in the eTIR international system, (2) to ensure that, as in the paper system, the guarantee chain would be made aware of the interruption of a TIR transport, and (3) to notify subsequent countries that the transport will not reach them. Consequently, the Expert Group mandated the secretariat to propose a new message to be sent by customs in case of refusal to start a TIR operation. The Expert Group requested the secretariat to include in such a message the reason(s) that had led to the refusal to start the TIR operation.

6. Attribute for the termination type

The Expert Group took note that the current termination message does not allow to specify the type of termination, i.e. partial unload, final unload, exit or intermediate loading place. The Expert Group pointed out that the type of termination is a data element related to the application of Annex 10 of the TIR Convention and that this Annex was out of the scope of the eTIR project. However, the Expert Group stressed that, once fully implemented, eTIR would render the provisions of Annex 10 superfluous if all data elements customs need to transmit to the guarantee chain would be included in the termination messages. Consequently, the Expert Group requested the secretariat to introduce a "termination type" field in the termination message and, if necessary, to request the necessary amendment of the WCO data model.

7. Change of seals en route

The Expert Group considered and discussed the need to include an additional message to notify the changes of seals in the course of a TIR operation. It concluded that

the transmission of new seals by means of the termination message at the end of the TIR operation is sufficient to inform the following countries about the number and type of the new seals affixed. At the same time, the Expert Group requested the secretariat to clarify this case in the guidelines for the use of the attached documents in case of fallback procedures.

8. Sequence of messages

The Expert Group took note of the remarks of software developers that worked for the pilot project, which had indicated that the eTIR documentation is not clear enough when it comes to understanding the possible sequences of the various eTIR messages. Consequently, the Expert Group requested the secretariat to include diagrams in the functional specifications to clarify this matter.

9. Holder and guarantee information in TIR operation related messages

The Expert Group acknowledged that messages related to TIR operations do not require detailed information about the guarantee and the holder, in particular when this information does not change in the course of the transport. Consequently, it requested the secretariat to simplify those messages accordingly.

10. Compatibility with standards

The Expert Group took note that eTIR messages could be based on the latest version of the WCO data model. The delegation of the Netherlands stressed that, while version 4.1a of the eTIR messages is based on version 3.5 of the WCO data model, version 4.2a should be based on version 3.7, which includes changes requested by UNECE to provide for the possibility to provide a reference to the certificate of approval (for each vehicle or container) in the messages. Consequently, the Expert Group requested the secretariat to use version 3.7 or 3.8 of the WCO data model for version 4.2a of the eTIR messages.

Furthermore, the Expert Group asked the secretariat to consult with the United Nations Centre for Trade Facilitation and Electronic Business (UN/CEFACT) secretariat to consider the feasibility and the usefulness of an eTIR data model based on the Core Components Library (CCL) and to report on this issue at the next session of the Expert Group.

11. Amendments related to the GE.2 findings

The Expert Group took note of the proposal by GE.2 to include in the optional annex a minimum duration for the storage of information in the eTIR international system of 10 years and requested the secretariat to include such requirement in the eTIR documentation.

At its 146th session (June 2017), WP.30 took note of the outcome of the twenty-sixth session of the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) (Geneva, 18 and 19 May 2017). The Working Party took note, inter alia, of (a) the subdivision of the eTIR Reference Model into four documents, i.e. eTIR introduction, eTIR concepts, eTIR functional specifications and eTIR technical specifications; (b) the recommendation to leave, for the time being, the responsibility of the submission of any additional information to the transport operator; (c) the fact that GE.1 was of the view that all the outcome of its work (eTIR specifications and Extensible Markup Language (XML) schemas) should be in the public domain and this should be clarified by means of a usage note to be attached to all the documentation and artefacts, whenever necessary, and requested the secretariat to prepare a draft of such usage note, as well as a disclaimer, for consideration at the October 2017 session of WP.30 and (d) the request for a new message to be sent by customs in case of refusal to start a TIR operation. Finally, WP.30 took note that the report of the twenty-sixth session of GE.1 would be submitted to the October 2017 session of WP.30 and that the twenty-seventh session was tentatively scheduled to take place in Geneva on 4 and 5 December 2017 (ECE/TRANS/WP.30/292, paras. 20-21).

At its 147th session (October 2017), the Working Party endorsed the report of the twenty-sixth session of the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) (18 and 19 May 2017, Geneva) (see ECE/TRANS/WP.30/2017/22). It took note that the twenty-seventh session of GE.1 would take place on 4 and 5 December 2017 in Geneva. The Working Party requested the secretariat to seek extension from ITC for the mandate of GE.1 for 2018. The Working Party considered and adopted document ECE/TRANS/WP.30/2017/23, containing proposals for a usage note and disclaimer clause for both the eTIR specifications and the XML schemas. The proposals followed the recommendation of the Expert Group that the eTIR functional and technical specifications as well as the XML schemas should be in the public domain. The Working Party requested the secretariat to apply the usage and disclaimer clause where appropriate. (ECE/TRANS/WP.30/294, paras. 19–20).

At its twenty-seventh session, the Expert Group carefully considered the various amendment proposals contained in Informal document GE.1 No. 13 (2017): (ECE/TRANS/WP.30/2018/10, 15–34)

1. Accompanying document

The Expert Group welcomed the revised draft accompanying document contained in Annex I of Informal document GE.1 No. 13 (2017). It first considered whether it would be preferable to use a barcode or a QR code on the attached document. Taking into account that most customs offices are already equipped with barcode readers, the Expert Group decided that a barcode would be sufficient to enable a quick read of the guarantee reference. Furthermore, the Expert Group extensively discussed who should be allowed to print the accompanying document, whether it should be stamped by the customs office of departure and whether it should be mandatory for all modes of transport.

While considering whether the accompanying document could also be printed by the holder, the Expert Group recalled that, at this stage, it is not foreseen to include any security elements in the accompanying document that would ensure the authenticity of a document printed by customs. However, considering that national references of the TIR operations and the reference to the seals are only known after the acceptance of the declaration, the holder would not be in a position to print them on the accompanying document. With that in mind, the Expert Group was of the view that it is the responsibility of customs administrations to provide the holder with an accompanying document.

With regard to the question of whether customs should stamp the accompanying document at departure, the Expert Group decided that it would be preferable not to stamp it to avoid giving the accompanying document an official nature. The Expert Group was of the view that despite the fact that the accompanying document is essential for controls outside of customs offices (for example, but not limited to, road controls by the police), including in case of accidents or incidents, as well as in case of fallback, the eTIR procedure should be based on the electronic exchange of data and not on the paper accompanying document.

The Expert Group also extensively discussed whether the accompanying document should be mandatory. It was of the view that, for en route control purposes as well as in case of accidents or incidents (the certified report being printed on the verso of the accompanying document), it is essential that the holder would carry this document at all times. However, the Expert Group also noted that in the case of intermodal use of the eTIR procedure, the requirement to carry an accompanying document could lead to complications that could jeopardize the use of the eTIR procedure for containerized transports.

In conclusion, the Expert Group mandated the secretariat to prepare a revised version of the accompanying document, together with a summary description of its usage and to circulate it among TIR focal points (with copy to eTIR focal points) to gather their expert view on any potential procedural issue.

2. Sequence of messages

The Expert Group considered the sequence diagrams contained in Annex II of Informal document GE.1 No. 13 (2017) and requested their inclusion in the next version of the eTIR specifications.

3. Status of guarantees

The Expert Group took note that the status of the guarantee could not remain “in use” in case of accidents or incidents as well as in the case of a refusal to start a TIR operation. Consequently, it requested the secretariat to introduce two new codes for the guarantee status and the required rules for the eTIR international system in the next version of the eTIR specifications.

The Expert Group also asked IRU about the potential reasons that could lead to a request for cancellation of the guarantee. IRU agreed to produce a document for the next session of the Expert Group to clarify this issue.

4. Core data types

The Expert Group agreed with the secretariat that only the core data types used in eTIR messages should be listed in the eTIR specifications and that additional core data types could be added in the future, if necessary.

5. Refusal to start TIR operation

The Expert Group took note that version 4.2a of the eTIR concepts document, which had already been published in April 2017, did not contain the description of the “refusal to start a TIR operation” message and its response message. It instructed the secretariat to include them in the next version of the document.

6. Definition of the declaration

The Expert Group decided to amend the definition of the term “declaration” in the next version of the TIR glossary contained in Annex II to the introduction of the eTIR conceptual, functional and technical documentation as follows: “Act whereby the holder, or their representative, indicates in the prescribed form and manner the intent to place goods under the TIR or eTIR procedure”.

7. Conformance testing

The Expert Group agreed to the need to devise extended conformance testing scenarios as well as a validation test environment to allow countries to verify the syntax of their messages. It also stressed the importance of the help desk to assist countries in undertaking the required tests and in solving issues identified during the tests. The Expert Group was of the view that the conformance test procedure, test cases and scenarios should be devised as a separate document (i.e. not included in the eTIR specifications) and only after the technical specifications would be finalized.

8. WCO data model version 3.8 28

The Expert Group took note that the current eTIR messages are based on the WCO data model version 3.7 but that extensions were included in them to accommodate the new messages I17 and I18 as well as a new attribute in the termination class to indicate the termination type. It further noted that the secretariat would submit a Data Maintenance Request (DMR) to the WCO Data Model Projects Team, requesting those amendments to be included in version 3.8 of the WCO data model.

The Expert Group also took note of the scope of the WCO data model version 3.8, in particular the inclusion of a unique trader reference as well as information packages for eCMR, hazardous wastes and ePhyto certificates.

9. Storage of information

The Expert Group agreed with the proposal to include the minimum duration for the storage of information in the eTIR international system in chapter “1.2.5.1 Central platform”.

10. Mutual recognition of the authentication

The Expert Group took note that extensive discussions on the mutual recognition of the authentication of the holder performed by the country of departure had taken place during meetings of GE.2 and WP.30 but that, at this stage, no practical alternative had been identified. From a technological perspective, the Expert Group was of the view that the blockchain technology could potentially provide an alternative and welcomed the proposal by the European Union to invite an expert to present, at the next session, how this technology could be used in a customs environment.

11. Hash code

The Expert Group recalled the idea to use a hash code to ensure the integrity of the declaration data from the time the holder sent the declaration to the country of departure until the moment it is received by the customs office of destination. The Expert Group was of the view that, in practice, it did not seem feasible to use the hash code in the course of the eTIR procedure but that, in case of legal procedures, the hash code could ensure the integrity of the data as originally submitted by the holder. Consequently, the Expert Group considered the inclusion of the hash code in the envelope of the E9 message and requested the secretariat to prepare, for its next session, a document exploring this possibility.

12. Reconciliation procedure

The Expert Group took note that GE.2 had discussed the possible need to devise a special reconciliation procedure (Annex 10, paragraph 2) for eTIR. IRU stressed that, in its view, an automatic reconciliation procedure for eTIR (by means of a new message) was necessary, in particular in case of missing messages. The European Union stressed that, while NCTS had a built-in procedure in case of discrepancies, in view of the possibly large number of customs offices involved in an eTIR transport, it would be preferable to leave the reconciliation procedure on paper and limit any automatic procedure to missing messages.

The Expert Group requested the secretariat, possibly with the assistance of IRU, to prepare a document for its next meeting, presenting various options for a reconciliation procedure in eTIR.

At its 148th session (February 2018), the Working Party took note that the twenty-seventh session of Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) took place in Geneva on 4 and 5 December 2017. It further noted that GE.1 had discussed a number of amendments to the eTIR specifications resulting from the pilot projects and from the outcome of the work of the Group of Experts on the Legal Aspects of Computerization of the TIR Procedure (GE.2). GE.1 made progress on a number of issues, inter alia, the design of an accompanying document, the clarification of the sequence of eTIR messages, the introduction of new guarantee status codes and the introduction of a refusal to start message. The draft report of the twenty-seventh session had been uploaded on the UNECE website and would be submitted as an official document for adoption at the 149th session of the Working Party. Subject to confirmation of the extension of the GE.1 mandate by ITC, the twenty-eighth session was scheduled for 28 and 29 June 2018 (ECE/TRANS/WP.30/296, para. 14).