

Distr.: General
5 September 2014

English only

Economic Commission for Europe

Inland Transport Committee

Working Party on Customs Questions affecting Transport

**Informal Ad hoc Expert Group on Conceptual and
Technical Aspects of Computerization of the TIR Procedure**

Twenty-fourth session

Antalya, 25-26 September 2014

Item 5 of the provisional agenda

Next steps

Activities of the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure

Note by the secretariat

I. Background

1. At its ninety-ninth session (October 2001), the Working Party on Customs Questions affecting Transport (WP.30), mandated the secretariat to organize, inter alia, meetings of the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1 or Expert Group). This expert group should study the conceptual and technical aspects of the computerization process of the TIR Convention, including the financial and administrative implications of its introduction, both at the national and at the international level, and prepare a draft set of electronic messages to allow for an interchange of electronic data, nationally, between Contracting Parties and with international organizations (TRANS/WP.30/198, paragraph 67).

2. On the basis of this mandate, the 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)

3. At its one-hundred-and-third session (February 2003), WP.30 endorsed the report of the first session of the Expert Group (TRANS/WP.30/206, paragraph 33).

4. Ever since the inception of the Expert Group, the Inland Transport Committee has supported its activities and prolonged its mandate (latest prolongation: ECE/TRANS/240, paragraph 69, February 2014).

5. Between 2002 and 2013, the Expert Group successfully conducted twenty-three sessions. At its twenty-third session (November 2013), the Expert Group was, inter alia, of the opinion that it was time to summarize the results of its work (i.e. the eTIR Reference Model). To this end, the Expert Group requested the secretariat to prepare a document, developing on its activities and the results achieved, for discussion and, possibly, adoption at its next session. The requested document should also contain some recommendations to WP.30 on how to further pursue the process of computerization of the TIR procedure, in particular, the construction and transition phases¹ (ECE/TRANS/WP.30/2014/4, paragraph 16).

6. The scope of this document is to provide an overview of the main activities and achievements of the Expert Group, including recommendations with regard to the termination of its mandate and follow-up activities by WP.30.

II. Main activities and achievements of the Expert Group

7. Since its inception in 2002, the Expert Group conducted twenty-three meetings: fourteen in Geneva, one in Belgrade, two in Bratislava, one in Brussels, one in Budapest, one in Helsinki, two in Prague and one in Warsaw. In total 715 delegates attended the sessions from 35 Contracting Parties (Albania, Austria, Azerbaijan, Belarus, Belgium, Bulgaria, Czech Republic, Denmark, Estonia, European Union, Finland, France, Germany, Greece, Hungary, Iran (Islamic Republic of), Italy, Jordan, Kazakhstan, Latvia, Lithuania, Netherlands, Norway, Poland, Romania, Russian Federation, Serbia, Slovak Republic, Spain, Sweden, Switzerland, the former Yugoslav Republic of Macedonia, Turkey, Ukraine, United Kingdom). The International Transport Union (IRU) was represented at all sessions. Further to twenty-three agendas and reports, the Expert Group discussed (including revisions) eighty-five official and forty-one informal documents. The Expert Group welcomed fifty-two presentations from delegates, IRU or the secretariat.

8. Once having established its programme overview (ExG/COMP/2002/5), GE.1, at the recommendation of IT specialists (convened for a special meeting on 2 July 2003) decided to apply the UN/CEFACT Modelling Methodology (UMM) as the methodology to model

¹ The construction and transition phases have been identified by the Expert Group as being beyond the scope of the eTIR Project (See Informal document GE.1 (2013), No.4, page 27).

the TIR procedure, both for the paper-based procedure (business domain modelling) as well as for the future (e-business requirements). To this end, GE.1 launched the so-called “eTIR Reference Model” as a tool to achieve a dynamic and interactive way of documenting all relevant information on the project to computerize the TIR procedure (eTIR project). Over time, various versions of the eTIR Reference Model have been released to, inter alia, also include further chapters and annexes, in particular the analysis and design chapters. The eTIR Reference model, in its current version (version 4.1) contains 774 pages of well documented description of the eTIR Project, including a step-by-step approach for its implementation (latest version: Informal document GE.1. No. 4 (2014)). So far, version 2.0 (September 2007), covering, in particular, the business requirements of the eTIR Project, has been validated by the Working Party as well as by the TIR Administrative Committee (AC.2). However, the Expert Group has regularly consulted with the Working Party to ensure the correct conduct of its mandate.

III. Key consultations with the Working Party

9. Throughout its activities to elaborate and complement the parts of the eTIR Reference Model, GE.1 encountered various challenges, which required guidance from WP.30. The first such challenge concerned the scope of the project, which initially had been defined as “the computerization of the TIR procedure”. WP.30 clarified this to mean “the computerization of the whole TIR Carnet life cycle from distribution, issuance and via the TIR transport to return and repository” and that computerization should “ultimately be aimed at replacing the current paper TIR Carnet”. In reply to a further request for clarification with regard to the approach of the project, WP.30 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, it was agreed that the management of data on guarantees, once the guarantor had issued a guarantee to an operator, should lie with customs”. These clarifications were confirmed by AC.2, with the addition that the development of the eTIR system should be realized with an appropriate level of connectivity with the existing TIR related IT systems.

10. Another request for clarification from the Expert Group concerned the method of information exchange within the eTIR system. After extensive discussions, the Expert Group had come to the conclusion that the so-called “push” approach, in which information is sent in real time from one system to another with a direct and traceable acknowledgement of receipt, was the only viable solution to ensure that the information exchange with and within the eTIR international system takes place in real time. This conclusion was endorsed by WP.30.

11. The Expert Group was further challenged by a proposal from the international guarantee chain to refer to its database in order to validate guarantees which have not yet been accepted by customs, rather than relying on the data available in the eTIR international system. After careful review, the Expert Group was of the opinion that, although 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. Thus, from a technical and conceptual perspective, the Expert Group saw no benefit in pursuing this proposal. The Working Party decided to follow the Expert’s Group advice not to amend the guarantee validation procedure, as described in the eTIR Reference Model.

12. The Expert Group also 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 and, ultimately, agreed to include various alternative

international declaration mechanisms, to be provided by (1) the eTIR international system (2) the private sector – such as IRU's TIR-EPD – or (3) customs authorities of the country of residence of the transport operator.

13. Finally, further to a comparison between the data contained in message E9 and national data requirements for the TIR procedure, the Expert Group established that there seems to be a considerable divergence in national requirements with regard to safety and security data accompanying a TIR (or eTIR) transport. In view of the many differences, the Expert Group even questioned whether it would still be possible to completely harmonize the data requirements for TIR, including those related to safety and security, knowing that so many countries already have a fully functional IT system in place with safety and security data defined nationally. The Expert Group decided to ask the Working Party if it should pursue its efforts to fully harmonize the eTIR data requirements or whether it has now become unavoidable to accept that transport companies would be required to electronically send safety and security related data directly to (all) customs administrations (involved in a TIR transport), despite the complications the Expert Group had previously underlined on the electronic submission of electronic information in foreign countries. In its instruction, 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 (in February 2014) to continue working with the standard eTIR declaration.

IV. eTIR Cost Benefit Analysis

14. In 2012, further to mandates by the Inland Transport Committee (ITC), WP.30 and the TIR Executive Board (TIRExB) and in conformity with the Terms of Reference of the Expert Group, the secretariat launched the Cost Benefit Analysis (CBA) of the eTIR Project. The CBA was conducted in 2012–2013 by a group of consultants, selected by the competent services of the United Nations Office at Geneva (UNOG) as conforming to the required specifications, while at the same time being the most cost-efficient for the United Nations.

15. When presented with the draft CBA, the Expert Group expressed general consent with the methodology used by the consultants, but requested that more realistic scenarios for the implementation of the eTIR Project were introduced, reflecting a gradual introduction of eTIR Carnets, both in time and in numbers. On the basis of comments received from the Expert Group, the consultants prepared their final version of the CBA. The Expert Group confirmed its support for the methodology used by the consultants, but felt that some costs, e.g. training, and indirect benefits were missing from the calculations. Therefore, the Expert Group, asked the secretariat to prepare its own assessment of the CBA.

16. In its assessment, the secretariat generally endorsed the technological options, scenarios and assumptions elaborated by the consultants, but agreed with the Expert Group that the absence of indirect benefits from the CBA negatively impacted the consultants' appreciation of the introduction of the eTIR Project. All in all, the secretariat concluded that the CBA provides, for the various technological options, a good estimation of the profitability of the eTIR Project as well as an approximation of the amounts that would be required to develop and maintain it, thus demonstrating that the eTIR Project could be

greatly beneficial for all the actors involved in the TIR procedure, in particular transport operators.

17. On the basis of the results of the CBA and its own expertise, the Expert Group is of the view that:

(a) Considering that the eTIR project seems to be highly profitable for all parties involved in the TIR procedure, it is recommended that the eTIR system should be implemented, including at national level, as soon as the legal provision would be prepared and ratified, the technical specification completed and a project road map agreed on;

(b) Considering the large benefits for TIR Carnet holders, a potential avenue to explore for the financing of the eTIR international system seems to be through a contributory system per TIR transport, similar to the one used for TIRExB;

(c) Considering the commercial sensibility of the data that will be handled by the eTIR international system and in view of the relatively small costs differences with the cloud solution recommended in the CBA, it is recommended that the eTIR international system be hosted at UNICC or UNOG data centres;

(d) Considering the availability of message broker software on the market, it is recommended to consider the use of “off the shelf” solutions, including open source, for the development of the eTIR international system.

18. At its 135th session, the 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.

V. Other activities of the Expert Group

19. In order to facilitate its work, the Expert Group, the network of eTIR focal points was established to ensure an adequate distribution of information on the eTIR Project at the national level as well as to allow countries which did not directly participate in its meetings GE.1 to provide national inputs on the eTIR Project. Since its inception in 2011, 32 countries have formally appointed eTIR focal points. Within the context of the future of the eTIR Project, an extension of the tasks and responsibilities of eTIR focal points is currently under discussion by the Working Party.

20. As contribution to the work of the Expert Group, the secretariat actively participated in and contributed to the activities of the World Customs Organization (WCO) Data Model Project Team (DMPT). This resulted in the submission and the ultimate acceptance of a set of so-called Data Maintenance Requests (DMR) ensuring that the TIR procedure is now fully included in the WCO transit data models. With the kind assistance of the Dutch customs administration, full alignment of the eTIR Reference Model with the latest version of the WCO data model (currently: version 3.4) is being ensured.

21. As part of this work, the Expert Group addressed, inter alia, the issue of dematerialization of attached documents, in order to find a solution, for the future, for the requirement that various documents need to be attached to the paper TIR Carnet in connection with a TIR transport. To that end, the secretariat, at the request of the Expert Group, requested (and obtained) an amendment of 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. As a consequence, a new class was added to the eTIR Reference Model so that eTIR messages could handle electronically attached documents.

22. Further to this result, the Expert Group recommended TIRExB to study the possibility of establishing, at the TIR secretariat, an international database for the

registration of certificates of approval, issued in compliance with Annexes 3 and 4 of the TIR Convention. Such a database would provide further facilitation for transport companies and, once an eTIR system would be in place, allow replacing the attachment of scanned versions of certificates of approval to each and every declaration by a simple reference (identification number) to the certificate, which information would be securely centrally stored. TIRExB decided to follow up on this recommendation and the launch of such a database is currently under preparation.

VI. Considerations by the Expert Group

23. In view of the above and awaiting the endorsement of the eTIR Reference Model by the Working Party and AC.2, the Expert Group is of the opinion that it has completed its mandate, subject to further adjustments or amendments to be made as a consequence of new instructions from the Working Party or Contracting Parties. To this end, the secretariat might be instructed, from time to time, to continue to convene meetings of GE.1, pending the establishment of a formal Group of Technical Experts in the future.

VII. Recommendations for the Working Party

24. As a consequence of the above, the Export Group recommends the Working Party to:

- (a) endorse the eTIR Reference Model, including the technical chapters 3 (Analysis), 4 (Design) as well as all annexes;
- (b) consider how – or to which extent – to attribute legal status to the eTIR Reference Model, so that it can contribute to the legal introduction of the eTIR Project, including, but not limited to, providing internationally approved messages and procedures for the exchange of data between transport operators and the international guarantee chain and customs authorities via the eTIR international system;
- (c) consider (subject to the approval by ITC and the Executive Committee of UNECE (EXCOM)) the establishment of a formal Group of Technical Experts which, for the future, would provide binding advice to Contracting Parties with regard to technical amendments to be adopted and accepted within the legal context of the implementation of the eTIR Project.
- (d) include the finalization of chapter 4 (Design) together with the construction and transition phases towards the establishment of the eTIR international system (software development, implementation, testing and deployment in its considerations when exploring the financing of the system, considering that, in the opinion of the Expert Group, they require the services of external experts, such as IT consultants.