**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**

**Thirtieth session**
Geneva, 10-11 March 2020
Item 5 (c) of the provisional agenda
**eTIR conceptual, functional and technical documentation Amendments**

## Amendments to the eTIR conceptual, functional and technical documentation - v.4.2a

### Note by the secretariat

## I. Introduction

1.      At its 140th session (June 2015), the Working Party on Customs Questions affecting Transport (WP.30) 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 the Group of Experts on Legal Aspects of Computerization of the TIR Procedure (GE.2) as well as for pilot projects. At the same time, WP.30 recalled that the eTIR Reference Model is not "carved in stone". WP.30 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.

2.      Further to the decisions taken by the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (GE.1) at previous sessions, questions/issues raised in the course of eTIR pilot projects and the ongoing work to improve the eTIR international system, the secretariat prepared this document, containing a revised list of issues for consideration by GE.1 and possible amendments to the eTIR specifications.

## II. Considerations and possible amendments

### (a) Accompanying document and fallback procedure

3. At its thirtieth session (September 2019), the Expert Group considered the draft accompanying document, the summary description of its usage, the revision of Chapter 1.2 (fallback) of the eTIR functional specifications and Chapter 3 of the eTIR concepts document as well as four amendments proposed under paragraph 5 of Informal documents GE.1 No. 5 (2019).

4. With minor editorial changes to the wording of the amendments proposed under paragraph 5 of Informal documents GE.1 No. 5 (2019), the Expert Group agreed with the proposed amendments. Further to a presentation by an expert from the European Commission, the Expert group also requested the secretariat to prepare activity diagrams to further clarify the fallback procedures, for its next session.

5. The secretariat will present sample activity diagrams at the session for consideration by the Expert Group.

### (b) Reconciliation procedure

6. At its thirtieth session, GE.1 thanked the experts from the European Commission for sharing the documentation regarding the National Service Desks, an essential element of the reconciliation procedure of the New Computerized Transit System (NCTS) and took note that the experts from the European Commission expressed doubts about the usefulness of a general reconciliation procedure in the framework of eTIR.

7. The Expert Group also pointed at the lack of legal basis in the TIR Convention (other than Annex 10) and in Annex 11 for setting up a general reconciliation procedure. However, considering the absence of IRU, which had been the main advocate of the introduction of a reconciliation procedure in the eTIR specifications, the Expert Group decided to postpone the discussion on this issue to a next session. The Expert Group my wish to continue its deliberations on the issue and instruct the secretariat on how to proceed further.

### (c) Validations performed by the eTIR international system

8. At its thirtieth session, the Expert Group took note that, according to the eTIR specifications, the eTIR international system is expected to perform strict validations with regard to the sequence of messages, the status of the holder, the mandatory nature of data elements, etc. While stressing the importance for all stakeholders to comply with standard eTIR messages, the Expert Group acknowledged that, during a transitional period, it could be envisaged, on a case by case basis, to accept messages which would not fully comply with the eTIR specifications, e.g. messages that would arrive out of sequence. Bearing that in mind, the Expert Group requested the secretariat to prepare a draft table presenting the possible transitional exceptions to the rules contained in the eTIR specification, for consideration at its next session.

9. Due to shifting priorities in the development roadmap of the eTIR international system, the secretariat was not in a position to prepare this draft table for the current session of the Expert Group and will prepare it for a future session.

### (d) Error codes

10. At its thirtieth session, the Expert Group welcomed a presentation by the secretariat highlighting the need to improve the code list for errors (CL99). It agreed with the proposal

by the secretariat and requested a revised code list of errors, for consideration at its next session.

11.     The expert group may wish to consider the revised code list contained in Annex I.

**(e)     Customs offices database**

12.     At its thirtieth session, the Expert Group decided to use the ITDB customs office database instead of developing one within eTIR and requested the secretariat to propose an interface between the eTIR international system and ITDB to extract information on customs offices approved for eTIR.

13. The Expert Group may wish to consider the draft interface proposed in Annex II. Furthermore, the Expert Group may wish to request the secretariat to make the necessary changes in Figure 10 of the eTIR concepts document to add a new "get customs info" use case connected to ITDB and introduce the necessary changes in the rest of Chapter 3.2.

**(f)     Declaration data and advance amendment data**

14.     At its seventy-first session, in order to clarify the difference between the data sent to the country of first departure and subsequent amendments to the declaration data, as well as the fact that the form and manner to submit them is contained in the eTIR specifications, AC.2 decided to make a distinction between:

- The term "advance TIR data" shall mean the data submitted to the competent authorities of the country of departure, in accordance with the eTIR specifications, of the intention of the holder to place goods under the eTIR procedure.

- The term "advance amendment data" shall mean the data submitted to the competent authorities of the country in which an amendment to the declaration data is requested, in accordance with the eTIR specifications, of the intention of the holder to amend the declaration data.

15.     As a consequence, the definition of the term "advance amendment data" should be added to the TIR glossary contained in Annex II to the Introduction of the eTIR conceptual, functional and technical documentation, with a reference to Annex 11 Article 2 (d).

16.     Furthermore, the introduction of this differentiation might have other consequences for the eTIR specifications, in particular for message E9, which is currently used to send advance TIR data, to cancel advance TIR data or to make amendments once a TIR transport has begun. The Expert Group might want to consider the need to create a separate message for advance amendment data and, possibly, one for the cancelation of advance TIR data. In this case, the E9 message would only be used for sending advance TIR data.

17.     Finally, considering that Annex 11 refers to "declaration data" for data that have been validated by the customs office of departure in the process of accepting the declaration, message I7 and I8 could possible be renamed "Record declaration data", and "Record declaration data results", respectively. In the eTIR concept document, the concept of recoding or amending a "consignment" could also be changed into recoding or amending a "declaration".

**(g)     Message Reference Number and Functional Reference**

18.     All eTIR messages can be identified by their Message Reference Number and all responses also include a Functional Reference, in which the Message Reference Number of the original message is indicated. While these attributes might not seem essential for messages exchanged using web services, they nevertheless allow to match and trace each message, with its response, regardless of the technology which is used to exchange them.

19.     Furthermore, the Functional Reference attribute is also part of the E9 messages and the rules and conditions indicate that it should be used in case of an amendment to reference the original advance TIR data message, sent to the country of the first customs office of departure.

20.     The Expert Group may want to discuss the need for uniqueness of the Message Reference Numbers across the eTIR system and possible ways to ensure this unicity. The usage of a Globally Unique Identifier (GUID) or a Universally Unique Identifier (UUID) could be a possible solution. These numbers are 128-bit numbers which do not depend on a central registration authority or coordination between the parties generating them. Alternatively, the uniqueness of Message Reference Numbers could be ensured by a combination of a unique user identification number and a number which unicity should be ensured by the users.

**(h)     Notifications to customs related to TIR operations**

21.     According to the data exchange use case diagram (contained in Figure 10 of the eTIR concepts document v.4.2a), information about TIR operations are notified to the guarantee chain but not to customs administrations. The sequence of messages, as contained in Annex I of Informal document GE.1 No.5 (2020), follows the same logic. However, the I15 message (notification to customs) contains sections dedicated to the notification of the start, refusal to start and termination of TIR operations.

22.     The Expert Group may wish to reconsider the need for the notification of TIR operations-related information to customs administrations, in particular in the case of changes of the seals and instruct the secretariat which amendments to include in the next version of the eTIR specification.

**(i)     Cancellation of the advance TIR data**

23.     The message E9 can be sent by a holder to a customs administration with a "Message Function" attribute set to one to cancel of a previously sent advance TIR data. Message I7 is very similar to message E9 and allows customs administration to forward the "declaration data" (i.e. advanced TIR data validated while accepting the declaration) to the eTIR international system. In the current version of the eTIR specifications, restricted codes for the "Message Function" attribute are identical in both messages and, thus, allow in both cases a cancelation. However, message I7 is only sent once the declaration has been accepted, not when the advance TIR data is received of cancelled. Consequently, the usage of code 1 in the Message Function attribute when sending an I7 message does not seem to make sense and should therefore be removed from the list of restricted codes in the definition of the message.

24.     The Expert Group might want to reconsider this aspect of the eTIR specification and instruct the secretariat on how to proceed.

**(j)     Issues related to cardinalities**

25     The IT experts working on the development of the eTIR international system have highlighted a number of possible discrepancies regarding the cardinality of the relationships between classes as well as those in the definitions of messages.

26.     The Expert Group might wish to guide the secretariat on how to resolve the following discrepancies:

*1.     Declaration - Guarantee*

27.     Figure 1.17 of the eTIR Functional specifications shows that a declaration can refer to multiple guarantees. This is confirmed in the definitions of the messages in Chapter 2.5,

e.g. in message E9, the cardinality of the guarantee is 0..unbounded. However, Figure 1.18 show that a TIR operation refers to one and only one guarantee. While this could serve to model the subsequent usage of two TIR Carnets in the paper TIR system, its possible usage for the eTIR procedure is unclear. Furthermore, in case it would it be possible to use multiple guarantees for a single declaration, it should be clarified in the eTIR specifications if their usage would be subsequent or simultaneous. In the latter case, Figure 1.18 should be amended, and some changes would have to be made to messages related to TIR operations.

*2.    Start - National itinerary*

28.    The same Figure 1.17 and the definitions of the messages I9 and I15 shows that for each start there can be zero or one national itinerary (cardinality of 0..1). However, in messages E6 and I6 the cardinality is 0..unbounded.

*3.    Start - Customs office*

29.    Except in message I6, all messages show that one and only one customs office starts a TIR operation (cardinality 1..1). In message I6, the cardinality 0..unbounded appears to be an error that needs to be corrected.

*4.    Consignment item - UCR*

30.    Figure 1.17 and the definition of the messages E9, I6 and I7 point towards a cardinality for the "UCR" class of 0..1. On the other hand, indications in the definition of the messages E6 and I15 point towards a cardinality for the "UCR" class of 0..unbounded.

*5.    Consignor - Address*

31.    Finally, in messages E6 and I15, a consignor can have multiple addressees (0..unbounded) while in all other messages and in Figure 1.17 the consignor can not have more than one address (0..1).

## III.    Next steps

32.    GE.1 is invited to discuss the considerations and amendments presented in this document and provide the secretariat with detailed instructions on how to further proceed.

# Annex I  Revised error code list (CL99)

| CL99 | Code | Name | Description |
|---|---|---|---|
| | 100 | Bad Message | The message is invalid and there is no additional precision on the error |
| | 101 | Missing Parameter | A required parameter is missing in the message |
| | 102 | Invalid Domain Value Parameter | A parameter is outside a defined list of accepted values |
| | 103 | Malformed Date | A parameter holding a date cannot be properly converted |
| | 151 | Condition C001 failure | The condition C001 is not fulfilled |
| | 152 | Condition C002 failure | The condition C002 is not fulfilled |
| | 154 | Condition C004 failure | The condition C004 is not fulfilled |
| | 155 | Condition C005 failure | The condition C005 is not fulfilled |
| | 158 | Condition C008 failure | The condition C008 is not fulfilled |
| | 200 | Bad State | The state of an internal object is invalid and there is no additional precision on the error |
| | 201 | Guarantee not acceptable | The guarantee is not in a state that allow to accept it |
| | 202 | Holder status exception | The state of the holder is not what it should have been to realize the current operation |
| | 203 | Guarantee not cancellable | The state of the guarantee does not allow for cancellation |
| | 204 | Guarantee already registered | The guarantee has already been registered |
| | 205 | Guarantee already cancelled | The guarantee is already cancelled or the request to cancel it has already been sent |
| | 210 | Operation already started | The operation is already started |
| | 211 | Operation already terminated | The operation is already terminated |
| | 212 | Operation already discharged | The operation is already discharged |
| | 213 | Operation not yet started | The operation is not yet started |
| | 220 | Declaration not yet received | The operation cannot start because the declaration was not received |
| | 299 | Duplicate message | The same message was already received from the same source |
| | 300 | Bad Operation | An invalid operation was performed and there is no additional precision on the error |
| | 301 | Guarantee not found | The guarantee was not found in the database |
| | 302 | Guarantee chain not found | The guarantee chain was not found in the database |
| | 303 | Guarantee type not found | The guarantee type was not found in the database |
| | 304 | Customs Office not found | The customs office was not found in the database |
| | 305 | Country not found | The country was not found in the database |
| | 306 | Control type not found | The control type was not found in the database |
| | 320 | Holder/Guarantee mismatch | The holder id parameter and the guarantee reference parameter do not match what is recorded in the database |
| | 321 | Holder not authorized | The holder is not authorized in the International TIR Data Bank (ITDB) |

| CL99 | Code | Name | Description |
|---|---|---|---|
| | **330** | Guarantee chain not authorized | The guarantee chain is not authorized in the database |
| | **331** | Guarantee chain/Guarantee mismatch | The guarantee chain code parameter and the guarantee reference parameter do not match what is recorded in the database |
| | **332** | Guarantee type/Guarantee mismatch | The guarantee type parameter and the guarantee reference parameter do not match what is recorded in the database |
| | **400** | eTIR Problem | An internal error in the eTIR international system occurred and there is no additional precision on the error |

# Annex II   Draft interface for the ITDB customs offices database

2.5.1 Classes (English Only)

s.   *I19 – Check customs offices*

Message
| | | | |
|---|---|---|---|
| Customs Office IDs | 1 | .. | unbounded |

t.   *I20 – Customs offices information*

Message
| | | | |
|---|---|---|---|
| Error | 0 | .. | 1 |
| Pointer | 1 | .. | 1 |
| Customs Office | 0 | .. | unbounded |
| Role | 0 | .. | unbounded |

2.5.2 Classes and attributes (English only)

s.   *I19 – Check Customs offices*

Figure 1.47: (English only)
**Check customs offices UML diagram**
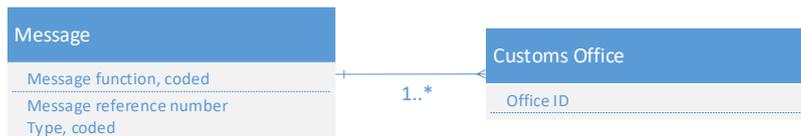


| eTIR Class/Attribute Name | Occurrences | | |
|---|---|---|---|
| **Message** | | | |
| Message function, coded | | | |
| Message reference number | | | |
| Type, coded | | | |
| **Customs Office** | 1 | .. | unbounded |
| Office ID | | | |

*t.* I20 – *Customs offices information*

Figure 1.48: (English only)
**Customs offices information UML diagram**
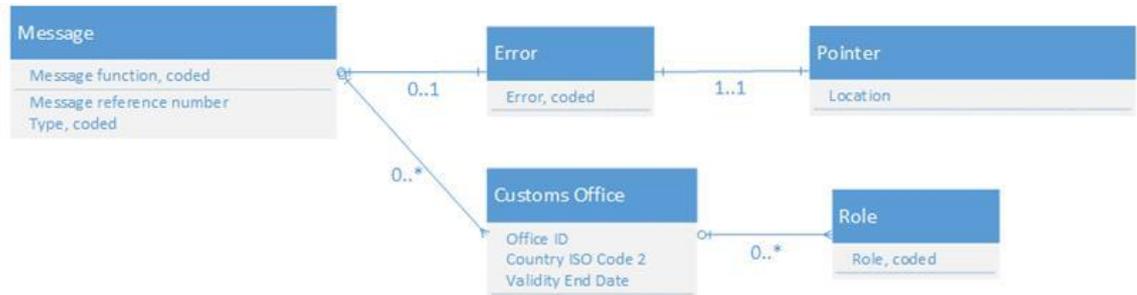


| eTIR Class/Attribute Name | Occurrences | | |
|---|---|---|---|
| **Message** | | **..** | |
| Message function, coded | | | |
| Functional reference | | | |
| Message reference number | | | |
| Type, coded | | | |
| **Error** | **0** | **..** | **1** |
| Error, coded | | | |
| **Pointer** | **1** | **..** | **1** |
| Location | | | |
| **Customs Offices** | **0** | **..** | **unbounded** |
| Office ID | | | |
| Country ISO Code 2 | | | |
| Validity End Date | | | |
| **Role** | **0** | **..** | **unbounded** |
| Role, coded | | | |

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