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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**

Informal preparatory meeting for the second session
Geneva, 22 January 2021
Item 2 (a) of the provisional agenda
**eTIR conceptual, functional and technical specifications version 4.3
Amendments**

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

Note by the secretariat

I. Introduction

1.   With the objective to further improve the eTIR specifications, on the basis of the questions/issues raised in the course of eTIR connection projects and the ongoing work to improve the eTIR international system, the secretariat prepared this document, containing a list of draft amendment for consideration.

II. Considerations and possible amendments

(a) Minor corrections

2.   During the development and improvement of the eTIR international system, the secretariat has identified several minor issues of editorial, consistency or logical nature. For the sake of transparency, the secretariat listed all the required corrections in the table below. The Group of Experts may wish to note that these corrections will be included in version 4.3 of the eTIR functional specifications.

Please recycle

ID	Issue	Correction
1	The "Seal type code" attribute in Guarantee/TIROperation/Termination/Consignment/TransportEquipment/Seal is missing in message I15 whereas it is available as an optional attribute in other related TIR operation messages (E6, I6 and I11).	The "Seal type code" will be added as an optional attribute in Guarantee/TIROperation/Termination/Consignment/TransportEquipment/Seal in message I15.
2	The "Customs office, coded" attribute available in message E6 in LPCO/Guarantee/TIROperation/Start/NationalItinerary/NationalItineraryCustomsOffice and in message I6 in Guarantee/TIROperation/Start/CustomsOffice have a wrong cardinality of 0..1 (optional).	As for the other instances of this attribute in all other messages, its cardinality will be set to 1..1 (required).
3	The "Amendment" class in message I15 in AdvanceTIRData has a wrong cardinality of 1..unbounded.	As for the other instances of this class in messages E6, I6 and I7, its cardinality will be set to 0..unbounded.
4	There is a typographic mistake in message I6 where an attribute is named "Valitity".	This attribute will be renamed "Validity" to correct the mistake.

(b)   Issues related to cardinalities

3.   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.

4.   The Group of Experts might wish to guide the secretariat on how to resolve the following discrepancies:

1.   Consignment Item – Delivery Destination

5.   Except in message I6 and I15, all messages show that the "Delivery Destination" class is optional (cardinality 0..1). In messages I6 and I15, the cardinality 1..1 appears to be an error that needs to be corrected.

2.   Holder – Code

6.   Except in message E3, all messages show that the "code" attribute of the "Holder" class is required (cardinality 1..1). In message E3, the cardinality 0..1 appears to be an error that needs to be corrected.

3.   Seal – Seal number

7.   Except in message E9, all messages show that the "Seal number" attribute of the "Seal" class is required (cardinality 1..1). In message E9, the cardinality 0..1 appears to be an error that needs to be corrected.

4.   Guarantee – Guarantee Status

8.   Except in message I6, all messages show that the "Guarantee status" attribute of the "Guarantee" class is required (cardinality 1..1). In message I6, the cardinality 0..1 appears to be an error that needs to be corrected.

5.   Consignment Item – Packaging

9.   The current cardinality of this relation is 1..1. However, eTIR stakeholders may wish to list more than one package in a consignment item, especially since the attribute "Marks and number" is mentioned in the "Packaging" class. As a result, the cardinality of this relation should be changed to 1..unbounded and a new "Sequence number" attribute should be added in the "Packaging" class as it becomes a potential list.

(c)   Validity of the Guarantee

10.   While working with the European Commission on the Proof of Concept to interconnect NCTS and the eTIR international system, a discrepancy has been identified with the I7 message (Record Declaration Data) where the sender (the Customs Authorities) would have to send the Validity (date) attribute qualifying the Guarantee class.

11.   Since this information is already recorded in the eTIR international system by the IRU using the E1 message (Register Guarantee), and customs receive the validity date upon accepting the guarantee, it does not seem to make sense to send back the validity date while recording the declaration data. Therefore, the secretariat proposes to remove the Validity attribute from message I7 and only keep the Reference attribute which allows to uniquely identify the guarantee to be used for the TIR transport.

12.   The Group of Experts may wish to consider this proposal and instruct the secretariat on whether the "Validity" attribute should be removed from the Guarantee class in the I7 message.

(d)   Status of the Postcode identification

13.   While working with the European Commission on the Proof of Concept to interconnect NCTS and the eTIR international system, it has been proposed to change the status of the "Postcode identification" from Required to Optional, in all instances of the "Address" class. The rationale was that not all countries use Postcodes in addresses.

14.   The Group of Experts may wish to consider this proposal and instruct the secretariat on whether the status of the "Postcode identification" attribute should be updated to Optional in all messages.

(e)   Type of the Binary File

15.   During the development and improvement of the eTIR international system, the secretariat has identified an attribute which is not useful nor completely described in the eTIR functional specifications: the Type attribute of the Binary File class.

16.   This attribute does not have a code list associated with it and there are already three other attributes which characterize various aspects of the file: MIME, Encoding and Character Set. The secretariat proposes to remove the Type attribute from the Binary file class in all messages.

17.   The Group of Experts may wish to consider this proposal and instruct the secretariat on whether the Type attribute should be removed from the Binary File class.

(f)   Type of the Classification

18.   During the development and improvement of the eTIR international system, the secretariat has identified a problem with v4.2 of the eTIR functional specifications: the Type attribute of the Classification class had disappeared. The secretariat proposes to re-instate the

Type attribute as it was defined in v4.1 of the eTIR functional specifications. Moreover, in order to make it clear that this attribute depends on a code list (CL03), the secretariat proposes to rename it "Type, coded"

19.   The Group of Experts may wish to consider this proposal and instruct the secretariat on how to proceed with the improvement of the Classification class.

(g)   Renaming codes and identifiers

20.   During the development and improvement of the eTIR international system, the secretariat has identified several inconsistencies in the naming convention of attributes that are representing codes (therefore linked to a code list) and identifiers (that are linked to an external master reference database).

21.   In order to improve the consistency of the eTIR specifications, the secretariat proposes to add the suffix ", coded" to all names of attributes representing codes and to name "Identifier" all attributes that represent identifiers. The proposals for renaming are listed in the following table. The attributes that are already following this naming convention are not represented in the table.

ID	Parent class	Old name	New name
1	TransportEquipment	Size and type identification	Size and type, coded
2	Classification	Type	Type, coded
3	TransportMeans	Nationality	Nationality, coded
4	Seal	Seal type code	Seal type, coded
5	CustomsOfficeOfDestination	Code	Identifier
6	NationalItineraryCustomsOffice	Customs office, coded	Identifier
7	CustomsOffice	Customs office, coded	Identifier
8	CustomsOfficeOfDeparture	Code	Identifier
9	CustomsOfficeOfDestination	Code	Identifier
10	Holder	Code	Identifier
11	Subcontractor	Code	Identifier
12	Amendment	Amendment code	Type, coded
13	N/A	Language. Identifier	Language, coded
14	N/A	Measure Unit. Code	Unit, coded
15	Guarantee	Guarantee status	Status, coded
16	Authorization	Current status	Current status, coded
17	Control result	Code	Result, coded

22.   The Group of Experts may wish to consider this proposal and instruct the secretariat on how these attributes should be renamed.

(h)   Updated list of error codes

23.   During its thirty-first session, GE.1 welcomed a presentation by the secretariat on a proposal for a new code list for errors (CL99) and agreed with it. GE.1 noted that this list was a living document and that, whenever necessary, the secretariat would propose revisions of the code list to the Group of Experts.

24.   The secretariat has produced a revised version of the code list for errors (CL99) which is available in Annex I. The Group of Experts may wish to consider and take note of this revised code list.

(i)   Add a Sequence number in the Transport Means class

25.   The TransportMeans class, which is present in messages E6, E9, I6, I7 and I15, . is used to list the means of transport used in the course of the TIR transport. However, it does not have a "Sequence number" attribute which would allow to order the means of transport from departure to destination. While the use of complex rules attached to the CountriesOfRouting class in the TransportMeans class could allow to a identify the order in which the transport means are used, the addition of a "Sequence number" attribute would greatly simplify this task. A new rule should also be added to ensure that the means of transport are given sequential number ordered from departure to destination (see (k)).

26.   The Group of Experts may wish to consider this proposal and instruct the secretariat on whether the "Sequence number" attribute should be added in the TransportMeans class in all relevant messages.

(j)   Versions of external code lists

27.   There are currently 10 code lists managed by other entities that the secretariat (CL01, CL02, CL03, CL04, CL05, CL06, CL07, CL16, CL20, and CL21). This raises the question on how their versions should be managed for a given version of the eTIR specifications.

28.   The secretariat has identified the following two potential options:

- Each version of the eTIR specifications would be bound to a specific version (or date of publishing) of each and every of these external code lists. This would allow the eTIR international system to validate the values entered in attributes that are bound to these external code lists. However, this could pose a problem in case a code list changes and that this change would need to be used in the eTIR messages (e.g. in "CL04 – Country name code", in the case of the change of a country code that is connected to the eTIR international system);

- The versions of the eTIR specifications would not be bound to a specific version of each and every of these external code lists. This would allow the eTIR international system to be more flexible by allowing recently added values in external code lists. However, if this option is selected, this could pose a problem for the validation of the values entered in attributes that are bound to these external code lists.

29.   The Group of Experts may wish to consider these options and guide the secretariat on how to proceed on this aspect.

(k)   Review of the Rules and Conditions

30.   The secretariat performed a review of the rules and conditions used in version 4.2 of the eTIR specifications and proposed a few amendments. The Experts, which discussed the first proposal during the informal preparatory meeting, welcomed the suggestion of the secretariat to add clear definitions for the notions of conditions and rules, and to review the

existing conditions and rules with these new definitions. However, the Experts suggested, inter alia, to consider the definitions of the rules and conditions in the NCTS documentation.

31.   Consequently, the secretariat has reviewed its proposal and presents the following new definitions to differentiate rules and conditions:

- A **rule** is an instruction that specifies how attributes must be filled in. It places a constraint on the content. It can sometimes be validated by an information system;

- A **condition** is an instruction that specifies whether a dependent class or attribute becomes required, optional or shall not be used, depending on other information within the same message. It constrains when the data shall be filled in and not its content. It can always be validated by an information system.

32.   Would the Group of Experts agree with these definitions, the secretariat proposes the following changes to the chapter Conditions and Rules of the eTIR functional specifications document:

- The **rule R001** (which is applied on the CountryOfRouting class) could be rephrased to "Each country of ~~transit~~ routing shall have a unique sequence number. They ~~should~~ shall be numbered from 1 to the number of countries through which the mean of transport travels ~~involved in the transport~~ and represent the order in which countries are travelled, from departure to destination. ~~In case of multiple means of transport, this will also allow to determine in which order the means of transport are used.~~";

- The **rule R002** could be amended and applied to the TransportMeans class to ensure the order of the means of transport used in the course of a TIR transport and read as follows: "Each transport mean shall have a unique sequence number. They shall be numbered from 1 to the number of transport means involved in the transport and represent the order in which transport means are used, from departure to destination.";

- The current **rule R002** could become the **new condition C010** which should only be applied to the AdvanceTIRData class in message I16 (which status becomes Dependent and the cardinality becomes 0..1). New condition C010 is expressed as follows: IF (EMPTY(ERROR)) THEN NOT EMPTY(ADVANCETIRDATA);

- The **rule R006** could be rephrased to "~~Mandatory~~ Required in case ~~the~~ seals have been changed, added or removed.". It should also only be applied to the Consignment class in LPCO/Guarantee/TIROperation/Start and LPCO/Guarantee/TIROperation/Termination in message E6, in Guarantee/TIROperation/Start in messages I6, I9 and I15, in Guarantee/TIROperation/Termination in messages I6 and I11 and I15;

- The **rule R007** could be rephrased to: "Even in case of multiple consignments in the declaration, only the first consignment is used, and all transport equipment used must be listed only in that ~~the first~~ consignment";

- The **rule R008** could be rephrased to: "The first occurrence of GOODS.CLASSIFICATION must be of type "HS"";

- The **condition C009** is currently not used and could become the **new rule R009** which should be applied to the Consignment class in Guarantee/TIROperation/Start in message I9 and in Guarantee/TIROperation/Termination in message I11. New rule R009 could read as follows: "The first TIR operation should contain the information about the transport equipment previously transmitted through the declaration, as well as seals used in the transport, when goods transported are not of heavy or bulky nature.";

- The **condition C002** could be modified to update the ELSE part from "ELSE (PACKAGING.Number of packages) > 0" to "ELSE NOT EMPTY (PACKAGING.Number of packages)";

- After having discussed about the scenarios related to the "Refusal to Start TIR Operation", the secretariat is of the view that a rule should be added to clarify that this message cannot be sent for the first TIR operation (since in this case, the TIR transport using the eTIR procedure should not begin in the first place). A **new rule R010** could be created and applied to the "Sequence number" in the Guarantee/TIROperation class in the I17 message and read as follows: "The Sequence number cannot be 1."

- Following the removal of the cancellation scenario on the message I7 (ECE/TRANS/WP.30/2020/5, para. 34) and to the split of the E9 message (ECE/TRANS/WP.30/2020/5, para. 28), the **condition C008** could be rephrased as follows: "IF (MESSAGE.Message function, coded) = '4' THEN NOT EMPTY (MESSAGE.FunctionalReference, AMENDMENT, ADDITIONALINFORMATION, CONSIGMENT, GUARANTEE, HOLDER) ELSE IF (MESSAGE.Message function, coded) = '9' THEN EMPTY (MESSAGE.FunctionalReference, AMENDMENT) AND NOT EMPTY (ADDITIONALINFORMATION, CONSIGMENT, GUARANTEE, HOLDER)". Furthermore, it should now only be applied on the relevant attributes and classes of the I7 message which status are affected by this condition.

33. Would the Group of Experts agree with these changes, the new list of conditions and rules would become the one listed in Annex II. The Group of Experts may wish to consider these proposals and instruct the secretariat on the possible amendments to the rules and conditions.

III. Next steps

34. The Group of Experts 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)

In order to better spot the changes applied since the first session of the GE.1, the following conventions apply:

- New codes are displayed with a grey background (4 occurrences);

- Changes to code names or descriptions are highlighted as follows: additions are <u>underlined</u> and deletions are ~~stroked~~ (No occurrences).

CL99	Code	Name	Description
	100	Invalid message	The message is invalid and no additional details are available for this error
	101	Missing parameter	A required parameter is missing in the message
	102	Invalid domain value parameter	A parameter value is out of a defined list of acceptable values
	103	Malformed date	A parameter holding a date cannot be properly converted
	104	Not an integer	A numeric field is containing data that is not numeric
	105	Parameter length exceeded	A String field contains too many characters
	151	Condition C001 failure	The condition C001 is not fulfilled
	152	Condition C002 failure	The condition C002 is not fulfilled
	153	Condition C003 failure	The condition C003 is not satisfied
	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
	168	Rule R008 failure	The rule R008 is not satisfied
	200	Invalid state	The state of an internal object is invalid and no additional details are available for this error
	201	Guarantee not acceptable	The guarantee is not in a state that allow to accept it
	203	Guarantee not cancellable	The guarantee is not in a state that allow to cancel it
	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 has already been completed
	212	Operation already discharged	The operation is already discharged
	213	Operation not yet started	The operation is not yet started
	214	Operation sequence already registered	The Refusal to start is an operation on its own and must have a unique operation number
	220	Declaration not yet received	The operation cannot be started because the declaration was not received
	299	Duplicate message	The same message was already received from the same source
	300	Invalid operation	An invalid operation was performed and no additional details are available for this 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

CL99	Code	Name	Description
	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)
	322	Holder not found	The holder is not found in the International TIR Data Bank (ITDB)
	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
	340	Multiple operations found	This code is used when operations are duplicated in the database
	400	eTIR problem	An internal error in the eTIR international system occurred and no additional details are available for this error

Annex II   New list of Rules and Conditions

Conditions

Condition ID	Pseudo code
C001	IF EXIST (PARTY.code) THEN NOT EMPTY (PARTY.code) ELSE NOT EMPTY (PARTY.name, PARTY.ADDRESS)
C002	*(Modified)* IF (PACKAGING.Type, coded) = "VQ", "VG", "VL", "VY", "VR" OR "VO" THEN EMPTY (PACKAGING.Number of packages) ELSE NOT EMPTY (PACKAGING.Number of packages)
C003	IF (ADVANCETIRDATA.ADDITIONALINFORMATION.Heavy and bulky goods indicator) = 0 THEN NOT EMPTY (TRANSPORTEQUIPMENT) ELSE EMPTY (TRANSPORTEQUIPMENT)
C004	IF EMPTY (GOODS.CLASSIFICATION) OR (GOODS.CLASSIFICATION.Type) <> 'HS' THEN NOT EMPTY (GOODS.Description)
C005	IF (ADVANCETIRDATA.ADDITIONALINFORMATION.Heavy and bulky goods indicator) = 0 THEN NOT EMPTY (TRANSPORTEQUIPMENT.CERTIFICATEOFAPPROVAL) ELSE EMPTY (TRANSPORTEQUIPMENT.CERTIFICATEOFAPPROVAL)
C006	IF (MESSAGE.Message function, coded) = '6' OR '11' '44' OR '45' THEN EMPTY (ERROR) ELSE IF (MESSAGE.Message function, coded) = '10' OR '27' THEN NOT EMPTY (ERROR)
C007	IF (MESSAGE.Message function, coded) = '44' THEN NOT EMPTY (ADVANCETIRDATA.Acceptance date) AND EMPTY (ADVANCETIRDATA.Rejection date) ELSE IF (MESSAGE.Message function, coded) = '27' THEN NOT EMPTY (ADVANCETIRDATA.Rejection date) AND EMPTY (ADVANCETIRDATA.Acceptance date)
C008	IF (MESSAGE.Message function, coded) = '4' THEN NOT EMPTY (MESSAGE.FunctionalReference, AMENDMENT, ADDITIONALINFORMATION, CONSIGMENT, GUARANTEE, HOLDER) ELSE IF (MESSAGE.Message function, coded) = '9' THEN EMPTY (MESSAGE.FunctionalReference, AMENDMENT) AND NOT EMPTY (ADDITIONALINFORMATION, CONSIGMENT, GUARANTEE, HOLDER)
C009	*(Removed)*
C010	*(Added)* IF (EMPTY(ERROR)) THEN NOT EMPTY (ADVANCETIRDATA.NATIONALREFERENCE)

Rules

Rule ID	Description	Testable
R001	Each country of routing shall have a unique sequence number. They shall be numbered from 1 to the number of countries through which the mean of transport travels and represent the order in which countries are travelled, from departure to destination.	Yes
R002	*(Modified)* Each transport mean shall have a unique sequence number. They shall be numbered from 1 to the number of transport means involved in the transport and represent the order in which transport means are used, from departure to destination.	Yes
R003	Re-use a sequence number to indicate that a seal has been replaced.	No
R004	Use new sequence number only to mention additional seals.	No
R005	Indicate that a seal has been removed and not replaced with an "X" in the "seals number" field of the transport equipment sequence corresponding to the removed seal.	No
R006	*(Modified)* Required in case the seals have been changed, added or removed.	No
R007	*(Modified)* Even in case of multiple consignments in the declaration, only the first consignment is listed, and all transport equipment used must be listed only in that consignment.	No
R008	*(Modified)* The first occurrence of GOODS.CLASSIFICATION must be of type "HS".	Yes
R009	*(Added)* The first TIR operation should contain the information about the transport equipment previously transmitted through the declaration, as well as seals used in the transport, when goods transported are not of heavy or bulky nature.	No
R010	*(Added)* The Sequence number cannot be 1.	Yes