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## **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-first session**

Bratislava, 25-26 September 2012

Item 3 (b) of the provisional agenda

##### **Reference Model of the TIR procedure**

## **International declaration mechanisms**

### **Note by the secretariat**

#### **I. Introduction**

1. At its previous session, the Informal Ad hoc Expert Group on Conceptual and Technical Aspects of Computerization of the TIR Procedure (further referred to as "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, 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 and, in particular, internationally standard declaration mechanisms. Consequently, the Expert Group requested the secretariat to redraft a proposal to include international declaration 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

2. Further to this request, the secretariat prepared a revised proposal to include international declaration mechanisms in the eTIR reference model, as contained in Annex.

## II. Introduction of international declaration mechanism

3. So far, in the Reference Model, declaration mechanisms are considered to be out of scope of the eTIR project. The Reference Model describes a single declaration mechanism, i.e. the direct submission of Advance Cargo Information to the Customs system of the country of departure. In various places the Reference Model also acknowledges that the private sector will also play a role in the submission of information to Customs (e.g. TIR-EPD, Customs brokers ...). On the basis of document ECE/TRANS/WP.30/GE.1/2011/9, the comments by the Expert Group at its nineteenth and twentieth sessions as well as the comments by eTIR Focal Points, various types of declaration mechanisms have been identified and has their inclusion in the Reference Model been recommended.

4. The amendments proposed in the Annex aim at introducing the following declaration mechanism in the scope of the eTIR project:

- A declaration web service will be developed in the eTIR international system and made available to authorized holders, Customs systems and authorized third party declaration mechanisms (see fig. 1);

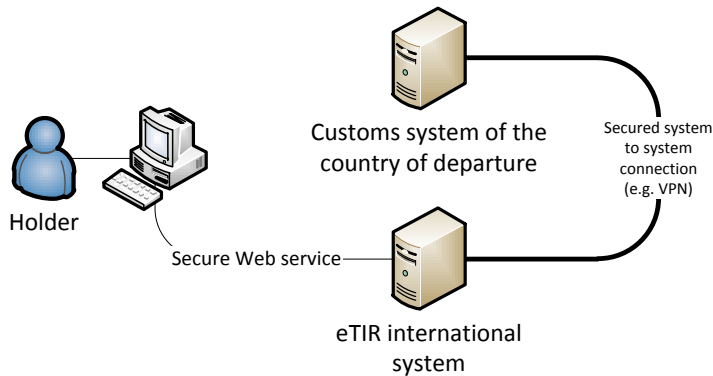


Figure.1 – eTIR declaration mechanism

- National declaration mechanisms could allow national holders to send advance cargo information to other Customs systems when the TIR transport starts abroad (making use of the eTIR international system declaration web service or not) (see fig. 2);

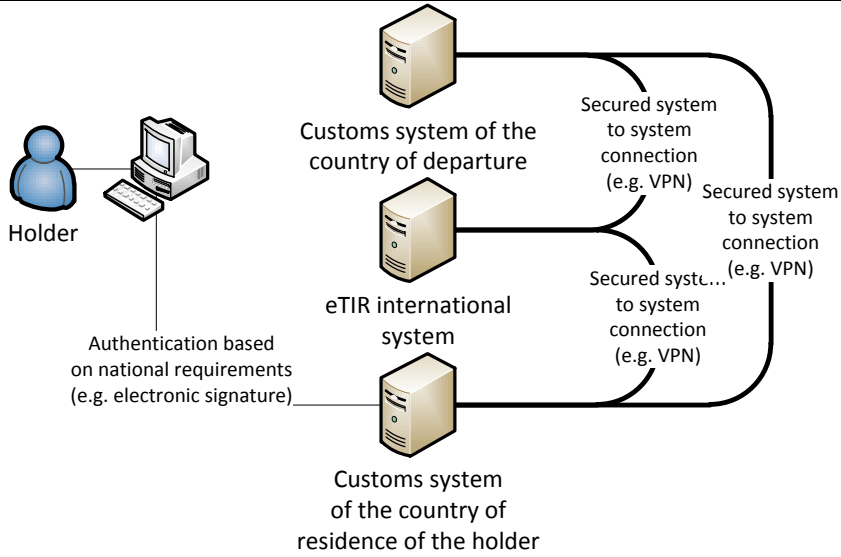


Figure 2 – Customs international declaration mechanism

- Third party solutions (like TIR-EPD or Customs brokers services) will transmit the advance cargo information directly to Customs or via the eTIR international system declaration web service (see fig. 3).

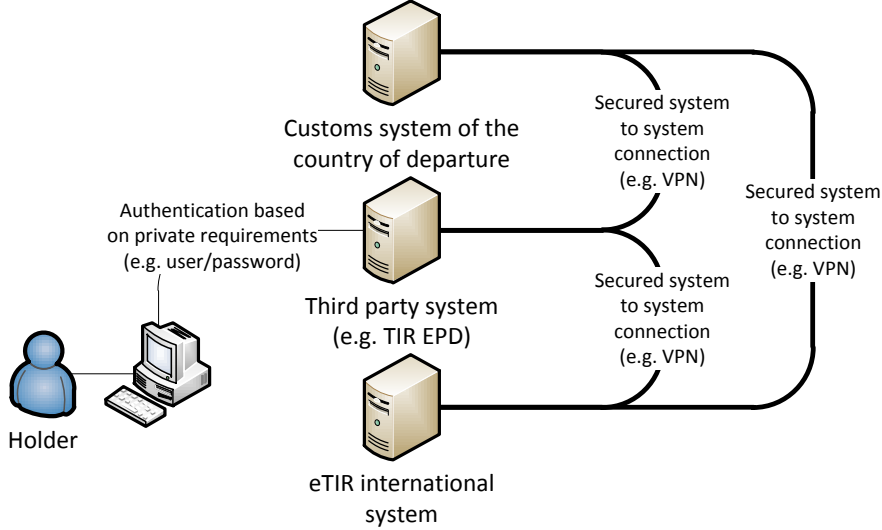


Figure 3 – Third party declaration mechanism

**III. Authentication aspects**

5. Apart from potential language issues, the major reason for including international declaration mechanisms in the eTIR Reference Model is to resolve the possible problem that holders would encounter when required to electronically authenticate themselves with foreign IT systems. The results of the survey on the use of electronic signatures in the framework of the eTIR project (Informal document GE.1 No. 3 (2012)) showed clearly that, so far, electronic signatures cannot really be used across borders. Therefore, all national declaration mechanisms that are based on electronic signatures or complex

authentication mechanisms will not allow, or at least complicate, the submission of electronic information by foreign holders.

6. The authentication does not concern other eTIR internal (C2C) and external (B2C and C2B) messages exchange. The eTIR system will have a secure system-to-system connection with Customs systems and the guarantee chain system. The web site used for the fall-back, will nonetheless require the authentication of Customs officers and authorized staff from guarantee chains.

7. The authentication of holders for the submission of information will depend on the declaration mechanism used (see figures 1, 2 and 3). In the case of the eTIR international system declaration web service, holders will obtain, on request, the necessary credentials to securely connect their IT systems to the eTIR international system and enable their systems to automatically send advance cargo information with minimal human intervention. When the declaration system of the country of residence of the holder is used to send information to other Customs system, holders will use the authentication mechanisms chosen in their country. The country of departure will then receive this information via secured connections (via the eTIR international system or not), relying on the fact that the Customs of the country of residence of the holder have adequately authenticated the holder. In the last option it is the responsibility of the private third party to authenticate the user adequately.

#### **IV. Further steps**

8. The Expert Group may wish to request the amendment of the Reference Model in line with the proposals in the Annex.

## Annex

### Proposed amendments to the eTIR Reference Model

#### 1. Declaration mechanisms

Considering that various national electronic declaration mechanisms require some type of authentication, the electronic submission of declarations by transport operators to foreign Customs authorities might, at times, be difficult or requiring the paid services of third parties, such as Customs brokers. Bearing this in mind, it seems appropriate to include alternative declaration mechanisms in the eTIR project.

Subject to the acceptance of the below amendments, this proposal could be included in version 4.1 of the eTIR Reference Model:

##### 2.1 High-level description of the eTIR project

[...]

Holders will be required to send their advance cargo information / declaration only to countries of departure of the TIR Transports. The holder can send his declaration directly to the country of departure using the national declaration mechanisms. Alternatively, the holder can use the national Customs system in his country of residence to send declarations to third countries (this functionally is optional for Customs system), use the declaration web service in the eTIR international system or use other private services. ~~the development of an electronic declaration system is outside the scope of the eTIR project. However~~ Moreover, the eTIR project will define a standard declaration messages. ~~The technical realization of declaration mechanisms will be left up to initiatives at national or private level.~~ Other elements falling outside the scope of the eTIR project concern the approval of international organizations, national associations, transport operators and vehicles, the organization and functioning of the guarantee system, the management of a control system under Annex 10 and the administration of the TIR Convention.

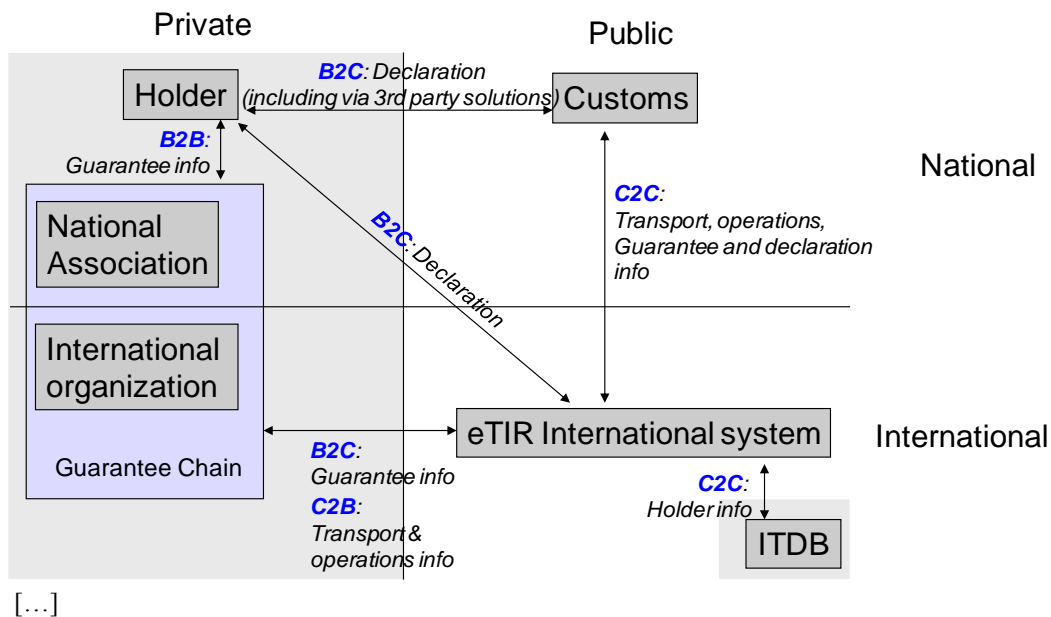
[...]

##### Chapter 2.1.2.1. eTIR International System brief

[...]

Figure 2.1

**The new public private partnership**



#### Chapter 2.1.2.4.2. Declaration

The holder submits the advance cargo information by electronic means to the Customs office of departure, making reference to a guarantee issued by a Guarantee Chain, using authentication mechanisms. The declaration shall be submitted prior to the presentation of the goods at the Customs office of departure. **Alternatively, the holder can make use of declaration mechanisms provided by the eTIR international system, the Customs system of his country of residence (if available) or third party solutions provided by the private sector (including by the guarantee chains). National Customs systems and authorized international private sector declaration systems can use the declaration web service of the eTIR international system to forward the declaration to the country of departure.**<sup>1</sup>

Customs authorities shall, if satisfied, validate and accept the Customs declaration and transmit it to the eTIR International system. The eTIR international system forwards this information to the following Customs authorities involved in the TIR transport.

~~The declaration is dealt with at national level between the holder and the Customs authorities, according to the standards defined by the eTIR project.~~ The following elements shall be provided in the declaration since these elements are also part of the registration of the TIR transport information (see 2.1.2.3.1.a).

#### Chapter 2.1.3.2.2. Web services

Web services implemented at the central platform allow authorized computer systems to interact securely with the eTIR international system. The web services provide, in a standard format, the functions which allow querying and updating the central database, **as well as the centralized submission of advance cargo information.**

<sup>1</sup> Amendments to the text of version 3.0 are in **bold (new text is underlined, text for deletion is in strikethrough)**. All figures presented in this document describe the alternative procedures.

### 2.1.3.2.3 eTIR website

The eTIR website, made available internationally, is an alternative secure connection to the eTIR international system. It has the same functionalities as the web services **(except for the centralized declaration mechanism)**.

### 2.1.3.2.10 Authentication database

In order to technically restrict access to the eTIR international system to those users who have been authorized, **an authorization security database is used. This database is used to secure the web services as well as the website (for the fall-back scenarios). Consequently, it will contain the credentials of guarantee chains' IT systems and users as well as Customs central systems and specific Customs offices/officers. Furthermore, holders credentials will also be included to enable the use of the centralized declaration mechanism by means of web services.**

## 2.2.4 Parallel projects

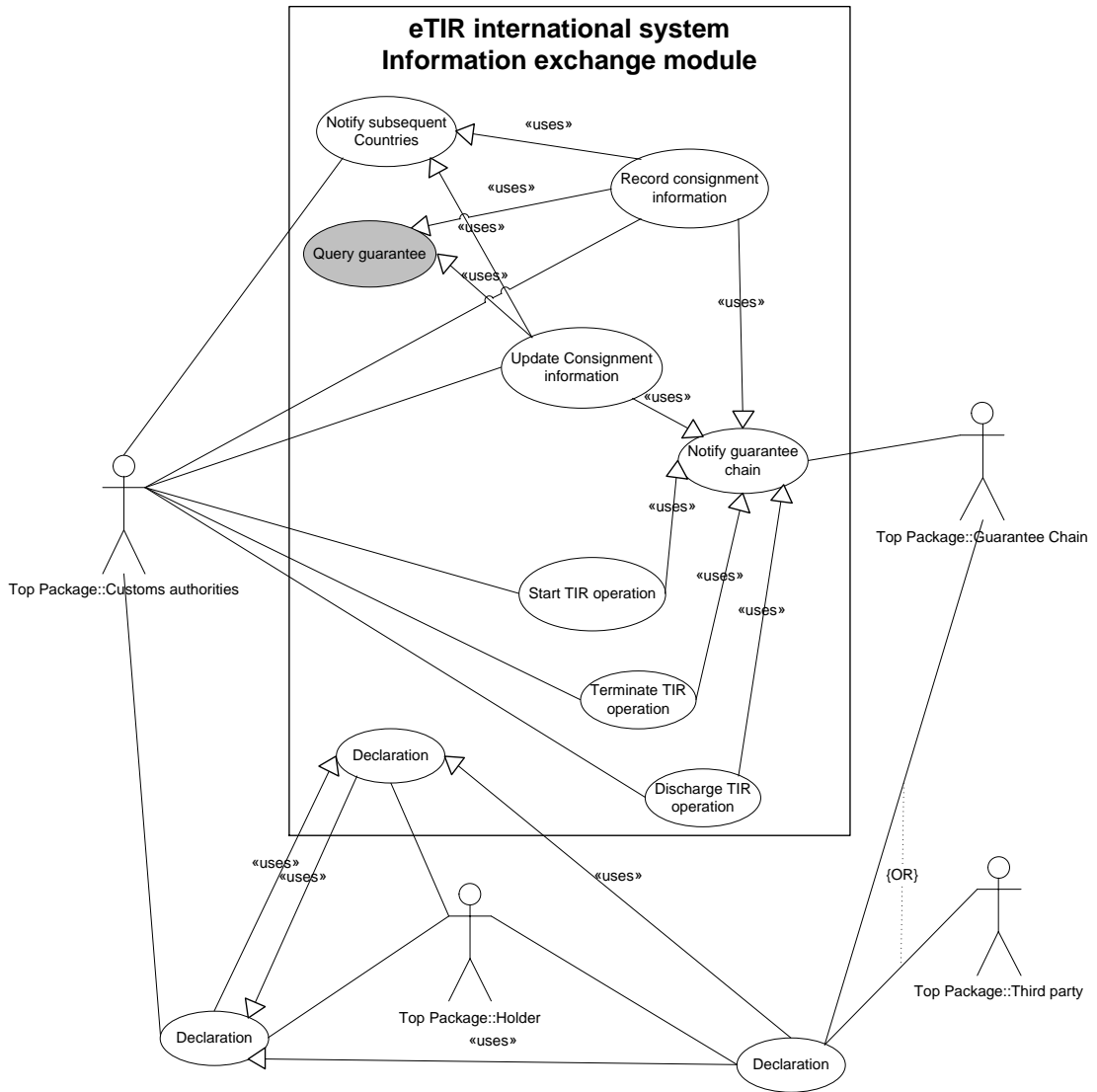
### 2.2.4.1 Declaration mechanisms

In parallel to the **development and** implementation of the eTIR international system (including a web service for submitting advance cargo information/declarations), ~~standard eTIR~~ national **and international** electronic declaration mechanisms will also have to be developed, aided by guidelines established in ~~this~~ **Reference Model analysis chapter. In this context, it can also be envisaged that standard declaration mechanisms are facilitated by developments from Customs administrations or from the private sector, nationally or internationally.**

Chapter 2.3.2. Data exchange use case

Figure 2.10

Data exchange use case diagram



[...]



New Chapter 2.3.2.16. Advance cargo information use case description

Table 2.15

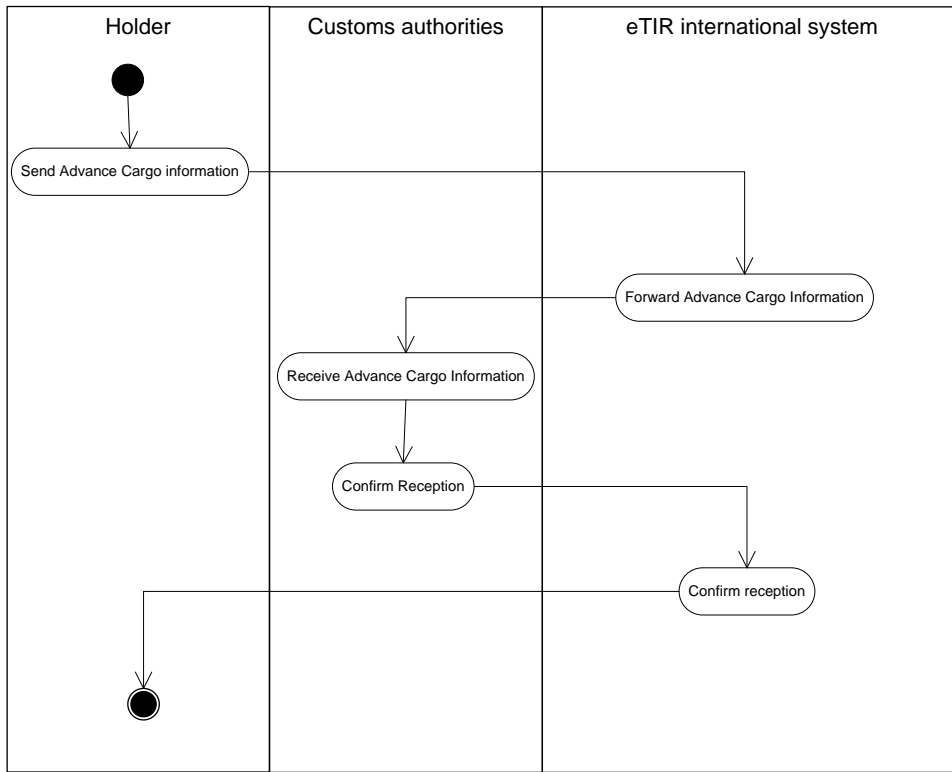
Advance cargo information use case description

|                                    |  |
|------------------------------------|--|
| <b><u>Name</u></b>                 | <b><u>Declaration use case</u></b>   |
| <b><u>Description</u></b>          | <b><u>The holder transmits an advance cargo declaration to the eTIR international system that then forwards it to the Customs authorities of the country of first Customs office of departure.</u></b> |
| <b><u>Actors</u></b>               | <b><u>Holder, Customs authorities</u></b>  |
| <b><u>Performance Goals</u></b>    |  |
| <b><u>Preconditions</u></b>        | <b><u>The holder is registered in the authentication database (see 2.1.3.2.10)</u></b>   |
| <b><u>Postconditions</u></b>       | <b><u>:</u></b>  |
| <b><u>Scenario</u></b>             | <b><u>:</u></b>  |
| <b><u>Alternative Scenario</u></b> | <b><u>Fallback scenario</u></b><br><b><u>In case transmission by means of web services is not available, the holder can use other available declaration mechanisms.</u></b>                            |
| <b><u>Special requirements</u></b> | <b><u>:</u></b>  |
| <b><u>Extension Points</u></b>     | <b><u>:</u></b>  |
| <b><u>Requirements Covered</u></b> | <b><u>:</u></b>  |

**New Chapter 2.3.2.17. Advance cargo information activity diagram**

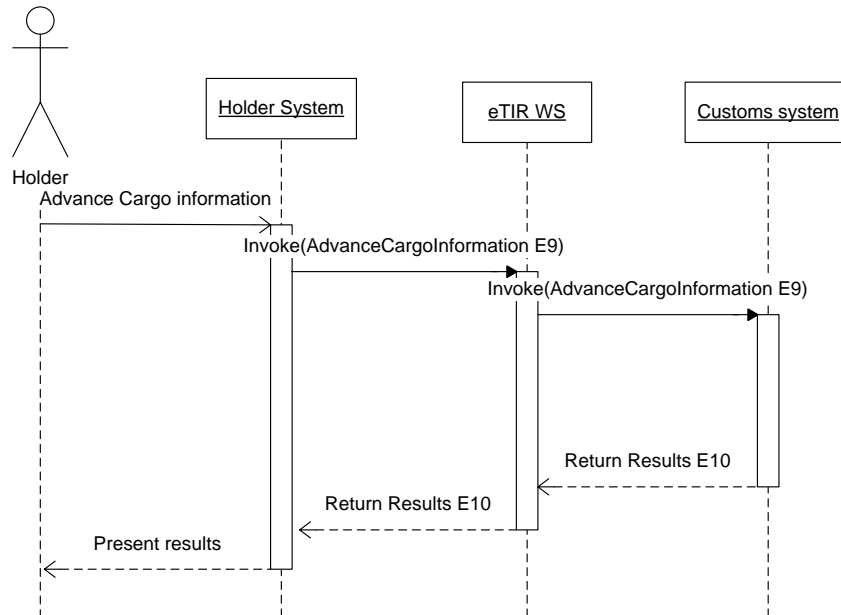
Figure 2.17

**Advance cargo information activity diagram**



**New Chapter 3.1.1.2.8 Advance cargo information**

Figure 3.15:  
**Advance cargo information sequence diagram**



**New Chapter 3.1.2.2.8. Advance cargo information**

**Potential problems:**

1. **The Customs system is not functioning.**
2. **The connection between the Customs system and the eTIR international system is broken.**
3. **The eTIR international system is not functioning.**

**Fall-backs:**

1. **The eTIR international system notifies the holder that the declaration could not be forwarded and proposes the use of alternative declaration mechanisms.**
2. **The eTIR international system notifies the holder that the declaration could not be forwarded and proposes the use of alternative declaration mechanisms.**
3. **The holder must try to use alternative declaration mechanisms.**

**Annex VI**

**eTIR declaration mechanism**

Chapter 2.1.2.4.2, stipulates “that the holder submits the declaration by electronic means to the Customs office of departure, making reference to a guarantee issued by a guarantee chain, using authentication mechanisms. The declaration shall be submitted prior to the presentation of the goods at the Customs office of departure. **Alternatively, the holder can**

make use of declaration mechanisms provided by the eTIR international system, the Customs system of his country of residence (if available) or third party solutions provided by the private sector (including by the guarantee chains). National Customs system and authorized international private sector declaration systems can use the declaration web service of the eTIR international system to forward the declaration to the country of departure.

[...]

#### 1. The eTIR declaration at the first Customs office of departure

[...]

5. After having generated the “key” to ensure the integrity of the advance cargo information, the holder sends the advance cargo information to the ~~Customs office of departure or to a~~ central Customs system in the country of departure, using the national declaration mechanism **of the country of departure (if he has the required credentials) , the declaration mechanism of his country of residence (if available for declarations made in other countries), the web service made available in the eTIR international system or a declaration mechanism provided by the private sector;**~~(outside scope of the eTIR project);~~<sup>24/</sup>

[...]

#### 3. The eTIR declaration at the following Customs offices of departure

[...]

2. After having generated the “key” to ensure the integrity of the advance cargo information, the holder sends the advance cargo information, regarding the totality of the goods, to the ~~Customs office of departure or to a~~ central Customs system in the country of departure, using the national declaration mechanism **of the country of departure (if he has the required credentials) , the declaration mechanism of his country of residence (if available for declarations made in other countries), the web service made available in the eTIR international system or a declaration mechanism provided by the private sector;**~~(outside scope of the eTIR project);~~

[...]

#### 4. Remarks

~~In addition to the procedural aspects explained above, the Working Party may also wish to consider the following remarks related to the eTIR declaration mechanism.~~

##### A. Submission of the declaration in foreign countries

A major issue with regard to the declaration submission procedure as contained in the eTIR Project seems to be the requirement for the holder to send advance cargo information to Customs administrations in other countries than the holder’s country of residence. The responsibility to provide an adequate submission procedure lies at the national level and is a matter between the holder and the Customs authorities, falling outside the scope of the eTIR Project. ~~Nevertheless, further to –The eTIR project only provides defining for–~~ a standard set of elements to be contained in the advance cargo information message, the eTIR international system will provide a declaration web service that will be made available to authorized holders and third party service providers as well as to Customs. ~~since these elements are also part of the TIR transport information to be exchanged internationally through the eTIR international system.~~

~~Although –~~There is general agreement that the requirement of a national electronic declaration system does not pose a problem in the relationship between holder and Customs

authorities of the country in which he is established or resident. There seems, however, to be ~~confusion~~ **a potential problem with regard** as to how the holder can establish secure electronic communications with Customs authorities in other countries where the beginning of the TIR transport could take place, without having to call upon the paid services of a Customs broker or any other third party. In order to achieve this, Customs administrations will have to ensure not only that their national declaration submission system is accessible by all holders (**in particular when considering authentication requirements**), but that it is also available in, at least, one of the three official languages of the TIR Convention (English, French or Russian). A generalized use of standard codes will **also** further simplify this issue. **In order to provide holders with additional options to submit their declaration to Customs, a declaration web service is also available in the eTIR international system and made available to authorized holders, Customs systems and authorized third party declaration mechanisms. This web service allows to forward advance cargo information to the Customs system of the country of departure. Furthermore, Customs administrations may wish to extend the scope of their national declaration mechanism to allow their national holders to send advance cargo information to other Customs systems when the TIR transport starts abroad (making use of the eTIR international system declaration web service or not). Finally, third party solutions (like TIR-EPD or Customs brokers services) may also be used to transmit the advance cargo information directly to Customs or via the eTIR international system declaration web service.**

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