



**Economic and Social
Council**

Distr.
GENERAL

ExG/COMP/2004/22
5 October 2004

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
(26-27 October 2004)

ACTIVITIES OF THE INFORMAL AD HOC EXPERT GROUP

Reference Model of the TIR Procedure

1.6 High level class diagram

Terminology used to model the goods manifest

Note by the secretariat

A. BACKGROUND

1. In the process of the elaboration and validation of the high-level class diagram of the “as-is” situation, the Expert Group decided, at its fourth session, to first focus on the analysis of requirements 1 to 19 on which the high-level class diagram is based. At its fifth session, the Expert Group reviewed these requirements, in combination with Informal document 4 (2004) in which the secretariat had explained the necessity for the introduction and use of the terms “TIR Consignment” and “TIR Consignment element” to model the goods manifest. Being unable to assess the necessity to introduce such new terms and wondering whether it would not be possible to cover all alternatives by using the terms “goods”, “load” and “part-load”, which are already today used in the TIR Convention, the Expert Group requested the secretariat to

prepare a document for its forthcoming session, addressing the implications of the use of the various terms (ExG/COMP/2004/18, para.10).

2. Underlying document contains a list of the terms used to describe the goods with examples of their use in the text of the TIR Convention, a summary description of the procedure in which the goods manifest is filled-in, a possible modelling of the goods manifest and a recommendation by the secretariat on the terminology to be used for the high level class diagram in Chapter 1 of the Reference Model (“as-is” situation).

B. TERMINOLOGY

3. The TIR Convention contains various terms to describe the goods transported, as single or as multiple elements. In general, they are used to describe the procedure and not to indicate how the goods manifest should be filled-in. Only a few descriptions deal specifically with the goods manifest. Underlying part identifies the meaning in which the various terms are used by giving examples of their use in the context of the goods manifest or the description of the TIR procedure. The examples are taken from the TIR Convention as well as from Explanatory Notes and comments.

Goods

4. In the title as well as in its whole text of the TIR Convention (Customs Convention on the International Transport of Goods under cover of TIR Carnets - TIR Convention, 1975) the meaning of the term “goods” is generic. The definition provided in the Reference Model (Commodity, Merchandise) and its use in the high-level class diagram reflect this generic meaning. The entity “Goods” encompasses all goods and could, for example, be classified according to international standards, such as the HS codification.

Example:

- *The term "TIR transport" shall mean the transport of **goods** from a Customs office of departure to a Customs office of destination under the procedure, called the TIR procedure, laid down in this Convention; (Article 1 (a))*

Load

5. The term “load” is used to indicate all goods contained in one or in various load compartments or containers, regardless of their loading or unloading points. As a consequence, the load will change in the course of the TIR transport at every intermediate loading or unloading place. The load is represented by all information written in (and not struck out of) the goods manifest. In its current meaning, this term is not useful for modelling purposes because it varies in the course of the TIR transport.

Examples:

- *The term “start of a TIR operation” shall mean that the road vehicle, the combination of vehicles or the container have been presented for purposes of control to the Customs office of departure or entry (en route) together with the **load** and the TIR Carnet relating thereto and that the TIR Carnet has been accepted by the Customs office; (Article 1 (c))*
- *The term "Customs office of departure" shall mean any Customs office of a Contracting Party where the TIR transport of a **load** or part load of goods begins; (Article 1 (k))*
- *The term "unloading" referred to, in particular, in Explanatory Note 0.18-2 does not necessarily imply physical removal of the goods from the vehicle or container, for example, in cases where a transport operation continues with the same vehicle or container after a TIR transport has ended. However, if a TIR transport has ended for a part-load of the goods and continues for the rest of the **load**, the former shall be physically removed from the sealed load compartment or container or, in case of heavy or bulky goods, shall be separated from the remaining heavy or bulky goods for which the TIR transport continues. (Comment to Explanatory Note 0.18-2 - Unloading of the goods)*
- *The road vehicle, the combination of vehicles or the container have been presented for purposes of control to the last Customs office of destination together with the **load** or the remaining load in case of previous partial termination(s) and the TIR Carnet relating thereto. (Comment to Article 21 - Final termination)*
- *In the event of an accident necessitating transfer of the **load** to another vehicle or another container, this transfer may be carried out only in the presence of one of the authorities mentioned in rule 13 above. The said authority shall draw up the certified report. Unless the carnet carries the words « Heavy or bulky goods », the vehicle or container substituted must be one approved for the transport of goods under Customs seals. Furthermore, it shall be sealed and details of the seal affixed shall be indicated in the certified report. However, if no approved vehicle or container is available, the goods may be transferred to an unapproved vehicle or container, provided it affords adequate safeguards. In the latter event, the Customs authorities of succeeding countries shall judge whether they, too, can allow the transport under cover of the TIR carnet to continue in that vehicle or container. (Rules regarding the use of the TIR Carnet N° 14)*
- *In the event of imminent danger necessitating immediate unloading of the whole or of part of the **load**, the carrier may take action on his own initiative, without requesting or waiting for action by the authorities mentioned in rule 13 above. It shall then be for him to furnish proof that he was compelled to take such action in the interests of the vehicle or container or of the **load** and, as soon as he has taken such preventive measures as the emergency may require, he shall notify one of the authorities mentioned in rule 13 above in order that the facts may be verified, the **load** checked, the*

vehicle or container sealed and the certified report drawn up. (Rules regarding the use of the TIR Carnet N° 15)

Part-load (or part load)

6. In the light of Article 1(k) and of the comment to Explanatory note 0.18-2, we see that the term “part-load” (or “part load”) is used indifferently to indicate a subset of the load which can be defined by either the Customs office of departure or the Customs office of destination. In other words, the same term is used to designate different subsets of the load. Therefore, it is not possible to use this ambiguous term to model the information stored in the goods manifest. Furthermore, providing a specific definition for the term would lead to discrepancies with the text of the TIR Convention.

Examples:

- *The term "Customs office of departure" shall mean any Customs office of a Contracting Party where the TIR transport of a load or **part load** of goods begins; (Article 1 (k))*
- *The term "unloading" referred to, in particular, in Explanatory Note 0.18-2 does not necessarily imply physical removal of the goods from the vehicle or container, for example, in cases where a transport operation continues with the same vehicle or container after a TIR transport has ended. However, if a TIR transport has ended for a **part-load** of the goods and continues for the rest of the load, the former shall be physically removed from the sealed load compartment or container or, in case of heavy or bulky goods, shall be separated from the remaining heavy or bulky goods for which the TIR transport continues. (Comment to Explanatory Note 0.18-2 - Unloading of the goods)*

Consignment

7. Explanatory Notes 0.18-2, paragraph 1, uses the term “consignment” to describe a set of goods having a single destination, regardless of the Customs office of departure. This term is not used in different way anywhere else in the TIR Convention. Therefore, it can be used to model the goods manifest. However, it would be preferable to provide a definition in the TIR Glossary because the term has different meanings and, thus, different definitions in other contexts (see Informal document 4 (2004)).

Example:

- *Goods should be so loaded that the **consignment** to be unloaded at the first unloading point can be taken out of the vehicle or the container without it being necessary to unload the other **consignment** or **consignments** of goods due to be unloaded at the other unloading points. (Explanatory Notes 0.18-2, paragraph 1)*

C. FILLING-IN THE GOODS MANIFEST

8. In the TIR Convention there is no detailed description of the procedure used to fill in the TIR Carnet. A few elements are provided in the “*Rules regarding the use of the TIR Carnet*” printed on the back of the cover of the TIR Carnet. The elements of the rules listed below have to be taken into consideration when modelling the information contained in the goods manifest.

- *When the TIR carnet covers a combination of vehicles or several containers, the contents of each vehicle or each container shall be indicated separately on the manifest. This information shall be preceded by the registration no. of the vehicle or the identification no. of the container (item 9 of the manifest). (Rule 10.d)*
- *Likewise, if there are several Customs offices of departure or of destination, the entries concerning the goods taken under Customs control at, or intended for, each Customs office shall be clearly separated from each other on the manifest. (Rule 10.e)*

9. The example of a duly filled-in TIR Carnet presented in the TIR Handbook demonstrates how the goods manifest is filled-in. The following example illustrates the filling-in process in more complex situations. Table 1 represents an example of TIR Transport:

- having two loading places (A and B);
- having two unloading places (C and D);
- performed by a truck with 2 load compartments (LC1 and LC2);
- transporting 3 types of goods (x, y and z).

| A | | B | | C | | D | |
|--------------------|---------|------|--------------------|------------------------|-----------|-----------|-------------------------------------|
| LC 1 | LC 2 | LC 1 | LC 2 | LC 1 | LC. 2 | LC 1 | LC 2 |
| Load 1x Load 2y | Load 3y | | Load 2x Load 1z | Unload 1x Unload 1y | Unload 1x | Unload 1y | Unload 3y Unload 1x Unload 1z |

Table 1. Example of a TIR transport

10. Table 2 shows the variation of contents of the goods manifest after each loading or unloading point, except at final destination. The changes performed at the last Customs office are in bold.

| After Customs office A | After Customs office B | After Customs office C |
|---|--|---|
| From A To C In load Compartment 1 -1 x -1 y To D In load Compartment 1 -1 y In load Compartment 2 -3 y | From A To C In load Compartment 1 -1 x -1 y To D In load Compartment 1 -1 y In load Compartment 2 -3 y From B In load Compartment 2 To C -1 x To D -1 x -1 z | From A To C In load Compartment 1 -1 x -1 y To D In load Compartment 1 -1 y In load Compartment 2 -3 y From B In load Compartment 2 To C -1 x To D -1 x -1 z |

Table 2. Various states of the goods manifest

11. Table 2 read in conjunction with Table 1, shows that information in the goods manifest is structured to allow Customs officers to identify and locate all parts of the load. The structuring criteria are:

- Customs office of departure,
- Customs office of destination,
- Location of the goods in the cargo and
- Goods type.

D. GOODS MANIFEST CLASS DIAGRAM

12. As pointed out in part C, the goods manifest provides a structured representation of the goods in the course of a TIR transport. This is also the purpose of the class diagram. Therefore, the criteria which apply to information in the goods manifest also apply to the elaboration of the class diagram.

13. Of all terms listed under part B, “consignment” is the only term specific enough to serve the purpose of modelling as it is used in a consistent way all through the TIR Convention. Therefore a possible definition, which comes out of the analysis of the text of the TIR Convention, could be: *Goods carried under cover of a TIR Carnet having a single Customs office of destination.*

14. The “consignment” can serve as a basis to model the information of the goods manifest. A consignment is composed of elements that can have different Customs offices of departure, that can be stored in different load compartments or containers and that can be of different types of goods. Therefore, a consignment can be defined as the sum of “consignment elements”, each of these elements having a single Customs office of departure, location in the cargo and good type.

15. When the TIR Carnet covers a combination of vehicles or several containers, each load compartment or container is sealed separately. Thus, they can be defined as separate “sealed loading units”.

16. A definition of the “consignment element” could be: *Part of a consignment composed of a single good type, having a single Customs office of departure and being transported in a single sealed loading unit.*

17. In the example described in part C, two consignments are transported (C1 and C2) and they are respectively composed of consignment elements CE1 to CE3 and CE4 to CE7. Table 3 shows the consignments and consignment elements, using the same visual representation as in Table 1.

| A | | B | | C | | D | |
|---------|---------|------|---------|--------------------|--------------------|--------------------|--------------------|
| LC 1 | LC 2 | LC 1 | LC 2 | LC 1 | LC. 2 | LC 1 | LC 2 |
| Load 1x | | | | Unload 1x (CE1) | | Unload 1y (CE4) | |
| Load 2y | | | | Unload 1y (CE2) | | | Unload 3y (CE5) |
| | Load 3y | | | | Unload 1x (CE3) | | Unload 1x (CE6) |
| | | | Load 2x | | | | Unload 1z (CE7) |
| | | | Load 1z | | | | |
| | | | | C1 | | C2 | |

Table 3. Example of consignments and consignment elements

18. In the light of the above, the high-level class diagram in Figure 1 can be used to model the goods manifest.

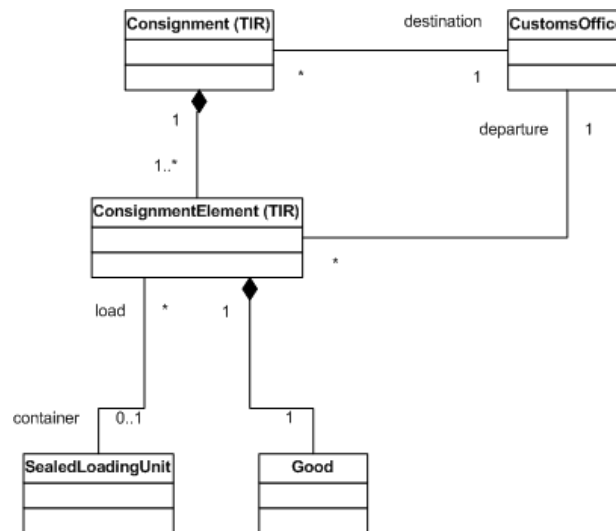


Figure 1. High-level class diagram of the goods manifest

19. Finally, in order to have a concrete representation of the class diagram, Annexes 1 and 2 show how the data used in the example in part C would be stored respectively in a relational database and in XML format.

D. RECOMMENDATION BY THE SECRETARIAT

20. The secretariat proposes to use the class diagram in Figure 1 to model the goods manifest part of the high-level class diagram. Nevertheless, it proposes to make a clear distinction between the different uses of the term "consignment". Informal document 4 (2004) shows the difference in the use of the term in the TIR context and in the trade or transport contexts.

21. In the modelling of the eTIR system, the use of a more standard definition of the term “consignment” would allow for a better integration of electronic data coming from different domains. Therefore, the secretariat recommends to add in brackets the suffix “TIR” to the terms “consignment” and “consignment elements” in order to underline that the use of the terms is limited to the TIR Procedure only and does not necessarily have a generic meaning. Hence the following terms and definitions are proposed:

| | |
|----------------------------------|---|
| <i>Consignment (TIR)</i> | <i>Goods carried under cover of a TIR Carnet having a single Customs office of destination.</i> |
| <i>Consignment element (TIR)</i> | <i>Part of a consignment (TIR) composed of a single good type, having a single Customs office of departure and being transported in a single sealed loading unit.</i> |

E. FINAL CONSIDERATIONS

22. The Expert Group is requested to discuss and, possibly, select a set of terms as well as their definitions to be used in the Reference Model. Furthermore, the group is requested to discuss and, possibly, validate the class diagram of the goods manifest in part C bearing in mind that it only describes the “as-is” situation.

Annex 1
Example of data in a relational database

| Good |
|------|
| x |
| y |
| z |

| Customs office |
|----------------|
| A |
| B |
| C |
| D |

| Sealed loading unit |
|---------------------|
| LC1 |
| LC2 |

| Consignment | Destination |
|-------------|-------------|
| C1 | C |
| C2 | D |

| Consignments element | Departure | Sealed loading unit | Good | Quantity | Consignment |
|----------------------|-----------|---------------------|------|----------|-------------|
| CE1 | A | LC1 | x | 1 | C1 |
| CE2 | A | LC1 | y | 1 | C1 |
| CE3 | B | LC2 | x | 1 | C1 |
| CE4 | A | LC1 | y | 1 | C2 |
| CE5 | A | LC2 | y | 3 | C2 |
| CE6 | B | LC2 | x | 1 | C2 |
| CE7 | B | LC2 | z | 1 | C2 |

Annex 2
Example of data in XML format

```
<Consignment>
<Destination>C</Destination>

<ConsignmentElement>
<Departure>A</Departure>
<Good quantity="1">x</Good>
<SealedLoadingUnit>LC1</SealedLoadingUnit>
</ConsignmentElement>

<ConsignmentElement>
<Departure>A</Departure>
<Good quantity="1">y</Good>
<SealedLoadingUnit>LC1</SealedLoadingUnit>
</ConsignmentElement>

<ConsignmentElement>
<Departure>B</Departure>
<Good quantity="1">x</Good>
<SealedLoadingUnit>LC2</SealedLoadingUnit>
</ConsignmentElement>

</Consignmment>

<Consignment>
<Destination>D</Destination>

<ConsignmentElement>
<Departure>A</Departure>
<Good quantity="1">y</Good>
<SealedLoadingUnit>LC1</SealedLoadingUnit>
</ConsignmentElement>

<ConsignmentElement>
<Departure>A</Departure>
<Good quantity="3">y</Good>
<SealedLoadingUnit>LC2</SealedLoadingUnit>
</ConsignmentElement>

<ConsignmentElement>
<Departure>B</Departure>
<Good quantity="1">x</Good>
<SealedLoadingUnit>LC2</SealedLoadingUnit>
</ConsignmentElement>

<ConsignmentElement>
<Departure>B</Departure>
<Good quantity="1">z</Good>
<SealedLoadingUnit>LC2</SealedLoadingUnit>
</ConsignmentElement>

</Consignmment>
```