



**Economic and Social  
Council**

Distr.  
RESTRICTED

ExG/COMP/2002/7  
6 November 2002

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 the Computerization of the TIR Convention  
(14-15 November 2002,  
agenda item 4 (b) (i))

**INFORMAL AD HOC EXPERT GROUP ON  
CONCEPTUAL AND TECHNICAL ASPECTS OF THE  
COMPUTERIZATION OF THE TIR PROCEDURE**

**Activities of the Expert Group**

**Analysis of data elements**

**Note by the secretariat**

**A. BACKGROUND**

1. At its ninety-ninth session, the Working Party on Customs Questions affecting Transport (WP.30), mandated the secretariat to organize, *inter alia*, meetings of an Informal ad hoc Expert Group which 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, para. 67).

2. At its first meeting, the Expert Group endorsed the basic approach of the tables contained in documents ExG/COMP/2002/1 and ExG/COMP/2002/3, under the assumption that some of the information should be improved and/or amended. The underlying document contains the updated tables in the form of separate records (Annex 3). In addition, a hierarchical data model is presented to facilitate the understanding of the overall structure of the information contained in the TIR Carnet, in a similar way as the conceptual data model has been presented in other documents (Annexes 1 and 2).

## **B. DATA MODELS**

3. At its first meeting, the Expert Group was not able, due to lack of time, to discuss in detail the conceptual data model (entity-relationship model) as presented in document ExG/COMP/2002/1, but decided to revert to the matter at a later stage. In Annex 1 to the underlying document, two conceptual data models are presented for discussion.

4. The secretariat has introduced two terms that are not present in the TIR Convention: “TIR Consignment” and “TIR Consignment element”. The term "TIR Consignment" has been used to name one or several part-loads with a common destination. The term "TIR consignment element" is used to describe a part-load, or part of a part-load, composed of one specific type of goods, loaded in one single Customs office of departure.

5. Both models describe the structure of the information contained in the TIR Carnet but they differ in the way the goods manifest information is organised. In the first model, the information contained in the goods manifest is directly linked to the TIR transport. In the second model, the link between the goods and the TIR transport is made through the TIR operations.

6. Following a request of the Expert Group (ExG/COMP/2002/3 para. 21), the TIR secretariat has also prepared two hierarchical data models representing the structured information contained in the TIR Carnet. The models are presented in Annex 2 to the underlying document. The two models take account of the alternative options mentioned for the conceptual data models of Annex 1.

## **C. DATA ELEMENTS**

7. To facilitate the continuation of the work on the analysis of the data elements, started by the Expert group at its first meeting, the TIR secretariat has prepared separate records for each data element. The records, presented in Annex 3 to the underlying document, contain the data

elements described in the tables of documents ExG/COMP/2002/1 and ExG/COMP/2001/3, the amendments made by the Expert group and the results of the survey on the use of the data elements by the various actors. Up to date, the TIR secretariat has received answers from Czech Republic (Customs and national association), Hungary (national association), Netherlands (Customs and national association), Poland (Customs and national association), Russian Federation (national association), Ukraine (national association) and IRU. Their answers appear in the data records in the form of percentages.

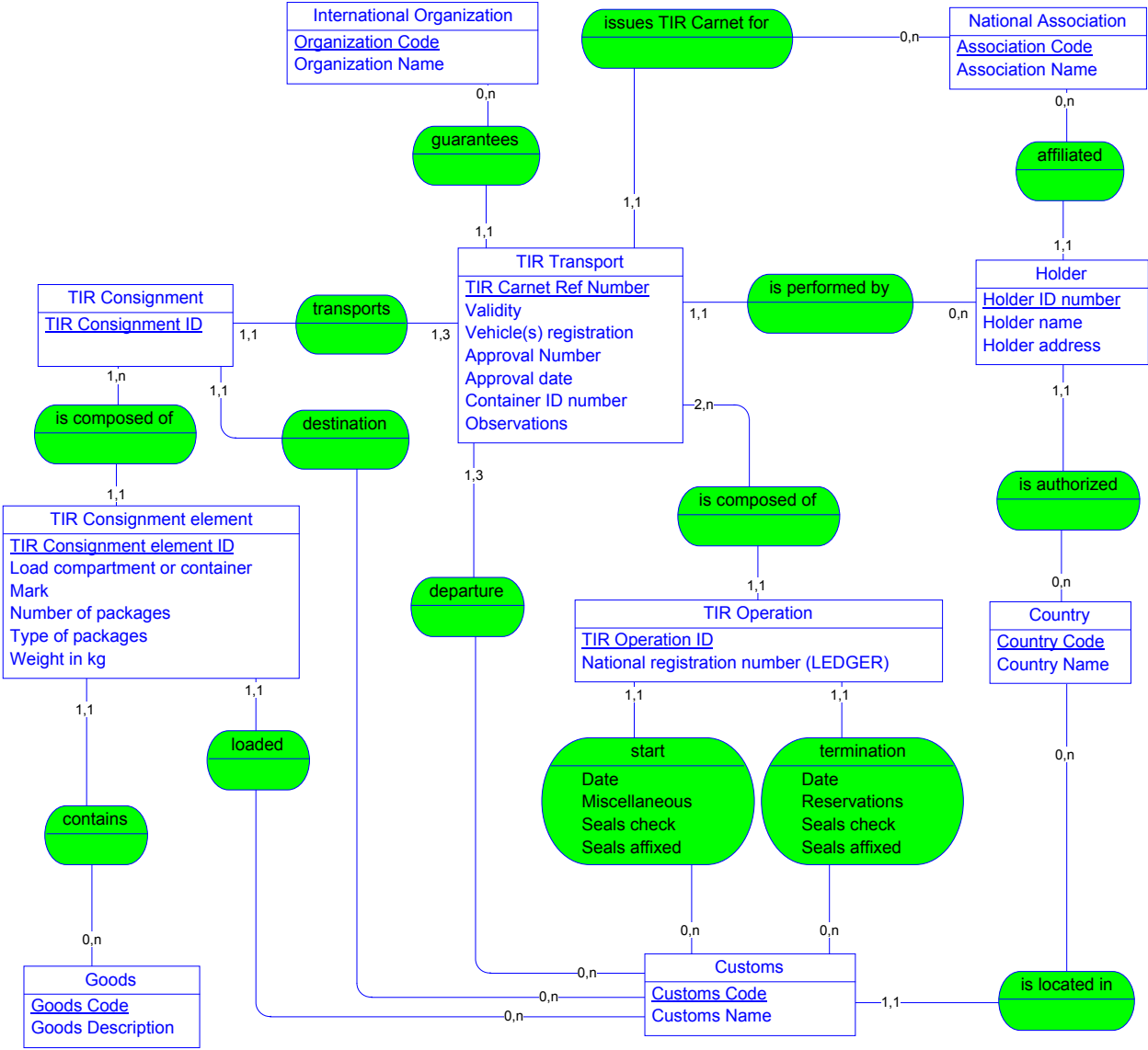
8. At its first meeting, the Expert Group decided to link discussion on the use of standardized codes to the analysis of the data elements. At this point, the Expert Group may wish to revert to this issue and amend the coding field in the data records.

#### **D. ACTIVITIES BY THE EXPERT GROUP**

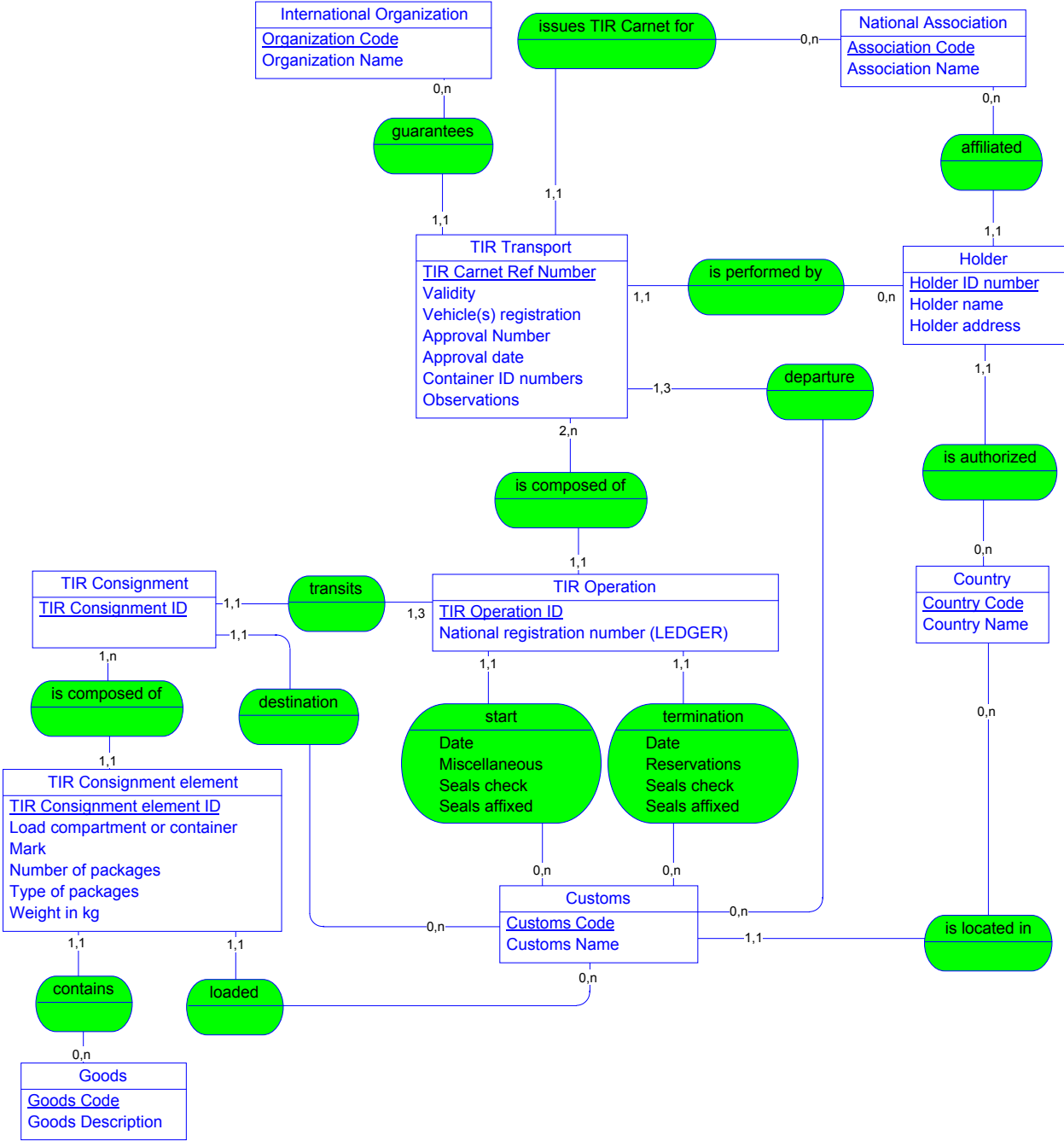
9. In preparation for the meeting, the members of the Expert Group are kindly requested to:

- Analyze and possibly amend the data models presented in Annexes 1 and 2, and select the most appropriate ones;
  - Analyze and possibly amend the data elements presented in Annex 3, amending and/or adding information where possible.
-

**Annex 1**  
**Conceptual data model 1**



Conceptual data model 2



**Annex 2**  
**Hierarchical data model 1**

<b>TIR Carnet</b>		
10 TIR Carnet Reference Number		1:1
11 Validity		1:1
18 Observations		1:1
30 Heavy or bulky goods		1:1
31 Tobacco and alcohol		1:1
<b>International organization</b>		1:1
ID		1:1
1 Name		1:1
<b>Association</b>		1:1
ID		1:1
3 Name		1:1
<b>Holder</b>		1:1
9 ID Number		1:1
6 Name		1:1
7 Address		1:1
<b>Country</b>		1:1
Code		1:1
8 Name		1:1
<b>Vehicle</b>		↻ 0:n
14 Vehicle registration		1:1
<b>Certificate of approval</b>		1:1
15 Approval Number		1:1
16 Approval date		1:1
<b>Container</b>		↻ 0:n
17 Container ID		1:1
<b>Customs office of departure</b>		↻ 1:3
<b>Customs</b>		1:1
Code		1:1
35 Name		1:1

<b>Country</b>		1:1
Code		1:1
12 Name		1:1

<b>TIR Consignment</b>		↻ 1:3
Consignment ID		1:1
21 Documents attached		1:1

<b>TIR Consignment element</b>		↻ 1:n
46 Load compartment or container		↻ 1:n
47 Marks		↻ 1:n
48 Number of packages		1:1
49 Type of packages		1:1
50 Quantity		1:1
Unit		1:1

<b>Customs office of departure</b>		1:1
Code		1:1
Name		1:1
<b>Country</b>		1:1
Code		1:1
Name		1:1

<b>Goods</b>		1:1
Goods ID		1:1
50 Goods Description		1:1

<b>Customs office of destination</b>		1:1
Code		1:1
19 Name		1:1
<b>Country</b>		1:1
Code		1:1
13 Name		1:1

<b>TIR operation</b>		↻ 1:10
Operation ID		1:1
36 National registration number		1:1
Rank		1:1
<b>Start</b>		1:1

39 Date	1:1
34 Time limit for transit	1:1
37 Miscellaneous	1:1
33 Seals check	1:1
25 Seals affixed	∪ 1:n
32 For official use	1:1

<b>Customs</b>	1:1
Code	1:1
35 Name	1:1
<b>Country</b>	1:1
Code	1:1
Name	1:1

<b>Termination</b>	1:1
45 Date	1:1
43 Reservations	1:1
41 Seals check	1:1
25 Seals affixed	∪ 1:n
42 No of packages unloaded	1:1
<b>Customs</b>	1:1
Code	1:1
40 Name	1:1
<b>Country</b>	1:1
Code	1:1
Name	1:1



## Hierarchical data model 2

<b>TIR Carnet</b>		
10 TIR Carnet Reference Number		1:1
11 Validity		1:1
18 Observations		1:1
30 Heavy or bulky goods		1:1
31 Tobacco and alcohol		1:1
<b>International organization</b>		1:1
ID		1:1
1 Name		1:1
<b>Association</b>		1:1
ID		1:1
3 Name		1:1
<b>Holder</b>		1:1
9 ID Number		1:1
6 Name		1:1
7 Address		1:1
<b>Country</b>		1:1
Code		1:1
8 Name		1:1
<b>Vehicle</b>		↻ 0:n
14 Vehicle registration		1:1
<b>Certificate of approval</b>		1:1
15 Approval Number		1:1
16 Approval date		1:1
<b>Container</b>		↻ 1:n
17 Container ID		1:1
<b>Customs office of departure</b>		↻ 1:3
<b>Customs</b>		1:1
Code		1:1
35 Name		1:1

Country		1:1
Code		1:1
12 Name		1:1

TIR operation		U 1:10
Operation ID		1:1
36 National registration number		1:1
Rank		1:1
Start		1:1
39 Date		1:1
34 Time limit for transit		1:1
37 Miscellaneous		1:1
33 Seals check		1:1
25 Seals affixed	U	1:n
32 For official use		1:1
Customs		1:1
Code		1:1
35 Name		1:1
Country		1:1
Code		1:1
Name		1:1

Termination		1:1
45 Date		1:1
43 Reservations		1:1
41 Seals check		1:1
25 Seals affixed	U	1:n
42 No of packages unloaded		1:1
Customs		1:1
Code		1:1
40 Name		1:1
Country		1:1
Code		1:1
Name		1:1

TIR Consignment		U 1:3
Consignment ID		1:1

21 Documents attached

☺ 1:n

<b>TIR Consignment element</b>		☺ 1:n
46 Load compartment or containers		☺ 1:n
47 Marks		☺ 1:n
48 Number of packages		1:1
49 Type of packages		1:1
50 Quantity		1:1
Unit		1:1
<b>Customs office of departure</b>		1:1
Code		1:1
Name		1:1
<b>Country</b>		1:1
Code		1:1
13 Name		1:1
<b>Goods</b>		1:1
Goods ID		1:1
50 Goods Description		1:1

<b>Customs office of destination</b>		1:1
Code		1:1
19 Name		1:1
<b>Country</b>		1:1
Code		1:1
13 Name		1:1