UNNExT
United Nations Network of Experts for Paperless Trade and Transport in Asia and the Pacific

Brief No. 12, September 2014

Towards an Enabling Paperless Trade and Transport Environment

Towards Electronic TIR Customs Transit System (eTIR)

Over several decades, the TIR[1] Convention has proved to be an efficient facilitation tool for international transit and transport. With advances in technology, computerization of the TIR procedures and the replacement of the paper TIR Carnet by electronic messages will further secure the TIR system to the benefit of customs administrations, transport operators and the guarantee chain.

This brief provides a summary of the TIR system and introduces the most important attributes of the future eTIR system. It highlights the fact that, for many countries worldwide including those in the Asia-Pacific region, the TIR system is an important tool for international transit and transport facilitation. It also illustrates how, by incorporating modern ICT technologies, the eTIR system will further enhance transit and transport facilitation while further securing government revenues.

I. The TIR Customs Transit System

Geographical coverage

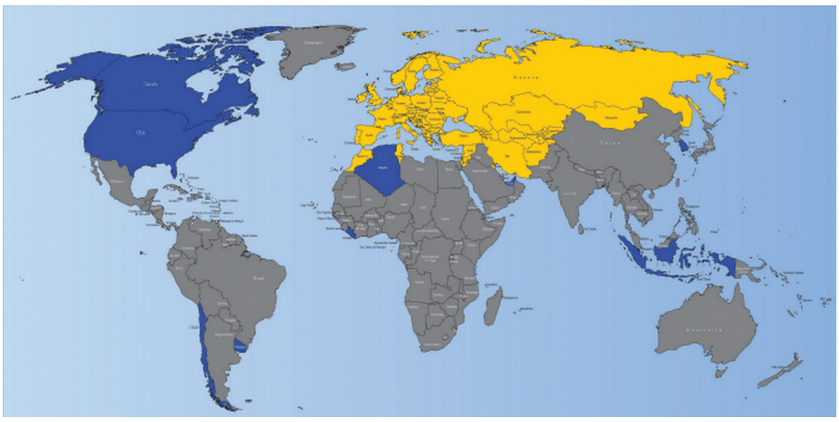
The Customs Convention on the International Transport of Goods under Cover of TIR Carnets (TIR Convention 1975) is one of the most successful international transport conventions and is, so far, the only universal customs transit system in existence. To date, it has 68 Contracting Parties, including the European Union. It covers Europe, a large part of Central Asia, and reaches out to North Africa and the Middle East (see Figure 1.). More than 35,000 operators are authorized to use the TIR system and around 3 million TIR transports are carried out each year.

[1] TIR is the abbreviation for Transports Internationaux Routiers. More information about the TIR system, TIR Handbook and eTIR project can be found at tir.unece.org, http://www.unece.org/tir/tir-hb.html, and etir.unece.org.

UNITED NATIONS ESCAP
Economic and Social Commission for Asia and the Pacific

UNECE
United Nations Economic Commission for Europe

Figure 1. Contracting Parties to the TIR Convention 1975



The TIR system is in operation

The TIR system is not in operation

Source: http://www.unece.org/tir/welcome.html

Of the 15 countries that are Contracting Parties to the TIR Convention (see Table 1.), in the ESCAP region, the TIR procedure is operational in all but Indonesia and the Republic of Korea. Some other countries in the region have also expressed interest in acceding to the TIR Convention but, so far, customs administrations, traders, and transport operators in South Asia, East Asia and South-East Asia cannot benefit from the facilitation and the protection provided by the TIR Convention.

Table 1. Contracting Parties to the TIR Convention, 1975 in the Asia-Pacific region

Contracting Party	Time of accession	Contracting Party	Time of accession
Afghanistan	23 Sep 1982	Mongolia	1 Oct 2002
Armenia	8 Dec 1993	Republic of Korea	29 Jan 1982
Azerbaijan	12 Jun 1996	Russian Federation	8 Jun 1982
Georgia	24 Mar 1994	Tajikistan	11 Sep 1996
Indonesia	11 Oct 1989	Turkey	12 Nov 1984
Iran (Islamic Republic of)	16 Aug 1984	Turkmenistan	18 Sep 1996
Kazakhstan	17 Jul 1995	Uzbekistan	28 Sep 1995
Kyrgyzstan	2 Apr 1998		

Source: United Nations Treaty Collection Database, Chapter XI Transport and Communications, A. Customs Matters, 16

How TIR works

The TIR Convention facilitates the international carriage of goods from one or more customs offices of departure to one or more customs offices of destination (up to a total of four customs offices departure and destination) and through as many countries as necessary. As a rule, the vehicle remains sealed throughout the TIR transport and, thus, goods are generally not inspected at border crossings. However, customs authorities remain entitled to perform inspections randomly or whenever they suspect irregularities. The Convention applies to transportation by road vehicles, combinations of vehicles as well as containers and allows for the use of the TIR Carnet for all modes of transport, provided that some portion of the journey is made by road. This, of course, requires a number of precautionary measures, such as strict customs control and secure sealing at the customs office of departure.

The TIR Convention also contains specific technical requirements for the construction of the load compartments of vehicles or containers, in order to avoid smuggling. In addition, only carriers authorized by customs are allowed to transport goods under the TIR procedure. To cover the customs duties and taxes at risk throughout the journey, the Convention has established an international guaranteeing chain that is managed by the International Road Transport Union (IRU). IRU is also responsible for the printing and distribution of the so-called TIR Carnet, which serves both as international customs declaration and proof of guarantee. The overall supervision of the TIR Convention and its application in all Contracting Parties falls under the responsibility of the TIR Administrative Committee, an intergovernmental body comprising all Contracting Parties and its TIR Executive Board (TIRExB), composed of nine elected members, each from a different Contracting Party. For more than 60 years, the TIR Convention has contributed significantly to the facilitation of international transport and trade throughout the UNECE region. In addition, more and more countries from outside the UNECE region (North Africa, Middle East, Asia) have joined the TIR Convention in recent years or are considering acceding to it.

In order to ensure that goods may travel with minimum interference “en route” and yet offer maximum safeguards to customs administrations, the TIR system contains five pillars (see figure 2.):

(1) Goods should travel in customs secure vehicles or containers;

(2) Throughout the journey, duties and taxes at risk should be covered by an internationally valid guarantee;

(3) Goods should be accompanied by an internationally accepted customs document (TIR Carnet) opened in the country of departure and serving as a customs control document in the countries of departure, transit and destination;

(4) Customs control measures taken in the country of departure should be accepted by all countries of transit and destination;

(5) Access to the TIR procedure should be granted to:

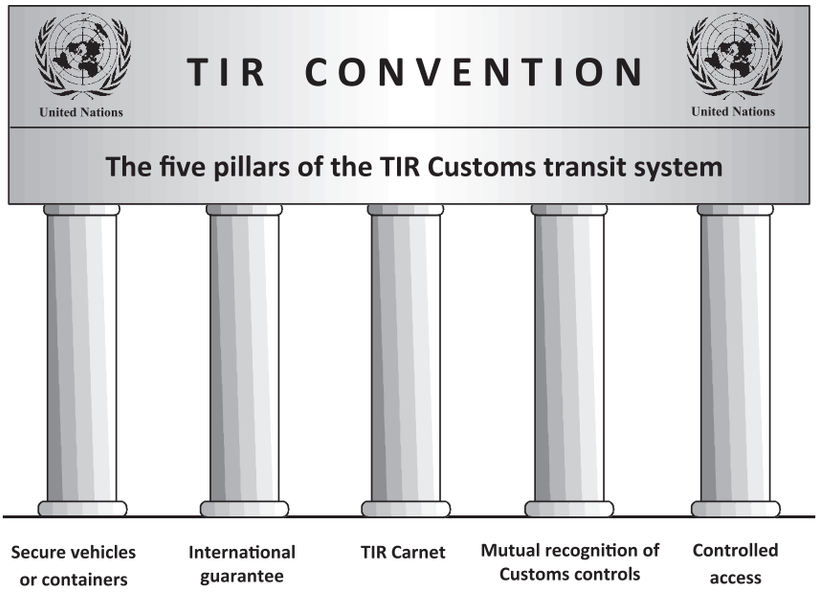
a) National associations which issue TIR Carnets and act as guarantor;

b) Natural and legal persons that utilize TIR Carnets; and

c) International organizations to take responsibility for the effective organization and functioning of an international guarantee system, authorised by competent national authorities or the TIR Administrative Committee.

[2] Source: http://www.unece.org/trans/tir/about.html

Figure 2. The five pillars of the TIR Customs Transit System



Source: http://www.unece.org/tir/welcome.html

The TIR system today – a partial computerization

Rapid ICT developments have led to simple and cost-effective data transmission possibilities on a world-wide level with increasingly secure authentication procedures. These technologies have and will continue to affect the ways and means by which international transport, trade operations and customs procedures are carried out.

Today, EDI technologies are used by all major freight forwarding companies and many transport companies engaged in international transport. In addition, customs authorities increasingly use these technologies to enhance efficiency of internal administrative and control mechanisms, and to improve service quality at border crossing points.

Moreover, customs IT systems of most contracting parties to the TIR Convention 1975 have a module allowing the national management of TIR operations (e.g., NCTS-TIR, ASYCUDA-TIR). Furthermore, among other reasons for managing safety and security issues, various contracting parties, including all European Union countries, have introduced an obligation for transport companies to submit, in advance and electronically, the data contained in the goods manifest and other additional data elements. For this purpose, specific IT applications have been developed.

The International Road Transport Union (IRU) and its member associations have also developed a number of applications to computerize various business processes in the TIR system. Some of these applications are used in close cooperation with customs administrations and include:

- SafeTIR and Real-Time SafeTIR (RTS), which allows customs administrations to check in real time the status of the TIR carnet, and report data concerning the termination of TIR operations (at destination), in accordance with Annex 10 of the Convention;
- TIR-Electronic Pre-Declaration (TIR-EPD) enables the submission of advanced cargo information to customs.

The TIR Executive Board (TIRExB) is also responsible for a number of ICT applications that contribute to the computerization of the TIR procedure. Applications such as ITDBonline+ allow customs administrations and national associations to interact with all natural and legal persons in the TIR system. This application helps with the management and consultation of these entities in utilizing TIR Carnets and the Electronic Register of Customs Sealing Devices and Customs Stamps. Furthermore, TIRExB has two ongoing projects to develop (a) an electronic register of approved customs offices for TIR operations and (b) an electronic register of approval certificates for vehicles to be used for TIR transports.

II. Towards full computerization of the TIR procedure – the eTIR Project

The contracting parties of the TIR Convention launched the eTIR Project in 2003; Its driving motivation was aimed at providing an exchange platform for all actors (customs authorities, holders,[3] guarantee chains) involved in the TIR system – known as the eTIR international system.

The eTIR international system's objective is to ensure the secure exchange of data between national customs systems related to the international transit of goods, vehicles or containers according to the provisions of the TIR Convention. It also allows customs to manage the data on guarantees, issued by guarantee chains, to holders authorized to use the TIR system. In addition to replacing the current international functions of the paper TIR Carnet (i.e., the proof of existence of an international guarantee and the exchange of information between customs administrations), the eTIR international system will provide further benefits such as the systematic availability of advanced information that would allow stakeholders to conduct risk assessments prior to the arrival of cargo. Additionally, the exchange of customs information in a secure environment will prevent false submission of customs declarations

Figure 3. Information flow between the actors of the eTIR system[4]

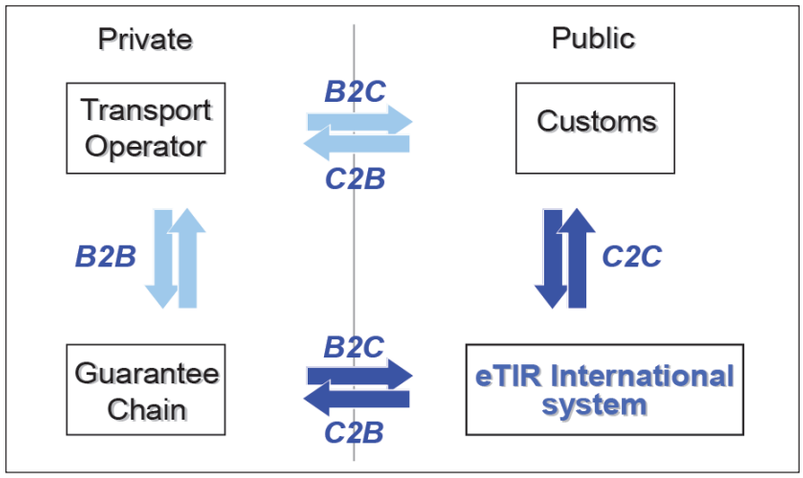


Figure 3 represents the information exchange between the actors in the eTIR system. It shows that the eTIR international system will receive information on the guarantees issued by the guarantee chain (B2C), provide the guarantee chain with information regarding the transports covered by guarantees it has issued (C2B) and allow the exchange of information between customs authorities of different countries (C2C).

The establishment of the eTIR system will require parallel efforts from contracting parties and the guarantee chains to develop, update and interconnect national and private IT systems.

The eTIR system will offer benefits to all actors involved in the TIR system. First, such a system brings additional security and risk management opportunities, thus reducing the risk of fraud. Second, advanced international cooperation will allow all actors to significantly reduce their administrative burden and maximize the benefits of integrated supply chain management. Third, the provision of advanced cargo information and the exchange of information in real time will speed up the TIR procedure.

[3] Holder refers to a legal or natural person authorized under the provisions of the TIR Convention to use the TIR system.
[4] It includes the following types of information flow: Business-to-business (B2B); business-to-customs (B2C); customs-to-business (C2B) and customs-to-customs (C2C)

III. The eTIR Pilot Projects

In order to demonstrate the feasibility of the eTIR concepts as well as proposed functional and technical specifications as contained in the eTIR Reference Model,[5] three pilots are currently ongoing.

Turkey-Italy eTIR pilot project

The purpose of the Turkey-Italy eTIR pilot project is to further facilitate legitimate trade and transport between Turkey and Italy through extended use of information and communication technologies (ICT); and to increase cooperation between the customs authorities concerned by means of customs-to-customs (C2C) electronic exchange of TIR related information. Customs authorities of Turkey and Italy take part in the pilot project on a voluntary basis.

The exchanges of information will allow customs authorities to carry out risk analysis at a central level in advance in order to facilitate and accelerate the border crossing of goods consignments to, from, and through Turkey and Italy. It also allows customs authorities to avoid the repetitious manual keying-in of TIR information.

Furthermore, the national guaranteeing association of Turkey (TOBB) will record the issuance of TIR Carnets with the pilot exchange platform in order to allow the automatic checking of the validity of guarantees. Similarly, the authorization of the TIR Carnet holder will be checked against the International TIR Data Bank (ITDB). Finally, the information exchanged between customs administrations will be made available to the involved national guaranteeing associations (C2B information exchange) to allow improved risk assessment by the private sector.

The pilot project is also aimed at demonstrating, on a reduced scale, the practical feasibility of the complete eTIR project and, possibly, identifying areas for improvement.

In the framework of this project, and to avoid having to deal with complex legal issues, customs administrations from both countries will continue to process the paper TIR Carnet.

UNDA Customs-to-Customs transit data exchange project[6]

The objective of this global project involving all United Nations Regional Commissions is to strengthen the capacities of developing countries as well as countries with transitioning economies to facilitate legitimate border crossing, by means of increased secure electronic exchange of information between customs administrations. Simultaneously, the project will further secure the supply chain and the government revenues related to the international transport of goods. Ultimately, this project will contribute