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Translation

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Computer generation and exchange of tariff information of NRT and EWT volume II and III on computer medium

*Etablissement automatisé et échange des informations tarifaires des fascicules II/III du NRT et de l'EWT
sur supports de données*

*Maschinelle Erstellung und Austausch der Tarifinformationen der Hefte II/III der NRT und EWT auf
Datenträger*



UNION INTERNATIONALE DES CHEMINS DE FER
INTERNATIONALER EISENBAHNVERBAND
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Technical updating of the leaflet to adapt it to technological developments and with a view to eliminating TCV sections II/III (paper version). (Approval by the Passenger Commission, Munich, 3/6/99). A temporary version of this leaflet, drafted in the interim, was used as a basis in 2000 and 2001 for the first computerised exchanges of fare data between the railway companies.
Alignment with UIC Leaflet MI.

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Inclusion of the carrier into the leaflet's data structure due to the introduction of the new CIV. Updating of the leaflet to reflect new requirements for the data structure.

4th edition, January 2012

Inclusion of the Europrice Charter and the border point codes (replaces the information in UIC leaflet 106), adding a new table to take account of the interconnection of series.

The person responsible for this leaflet is named in the UIC Code

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Summary

The aim of this leaflet is to allow the transport companies participating both in NRT and in EWT to exchange information with standardised procedures by data media.

This information is required for calculating the fare of international transport governed by these tariff agreements and for issuing the corresponding tickets and constitutes Sections II and III (NRT or EWT) for the transport company concerned.

This information may also be used for computerised accounting or statistics applications.

The information exchanged shall include:

- the series for which the fare information is supplied,
- the corresponding list of stations and basic information,
- information related to the products and special schemes proposed,
- fare tables.

Application of this leaflet should facilitate in particular the computerised updating of the existing volume of data as well as its introduction into current sales systems.

1 - General remarks

This leaflet is obligatory for transport companies exchanging tariff data both in NRT or EWT Sections II/III (see [List of abbreviations - page 49](#)) for use in computer procedures including operations such as:

- automatic issue of NRT and EWT Sections IV,
- calculation of international fares,
- issue of tickets,
- revenue calculation and sharing,
- statistics.

Computerised generation of Sections II/III is designed to allow the following to be achieved:

- reduction in the input and outlay involved in implementing fare alterations,
- computerised generation of Section IV,
- improvement of the quality of data,
- updating of tariff data through computerised matching,
- more efficient sales procedures,
- accurate computerised settlement of accounts.

To ensure widespread application of the individual data, data redundancy has been deliberately chosen. Thus, users can read the contents of all files without any special IT know-how or IT technical support by simply repeating the designations.

2 - Joint provisions for the computer generation of NRT Sections II and III and exchange of information on a computer medium

2.1 - Volume of data

The regulations governing computer generation as the basis for exchanges on a computer medium are specified for the following fare details:

- TCV Section II :
 - Station list,
 - Series (see Glossary - page 48),
 - Non linking series,
 - Series information,
 - Product table,
 - Carrier codes
- TCV Section III:
 - Service table,
 - Fare table explanations,
 - Distance-based fare table,
 - Route-based fare table,
 - Set fare table.

In order to check that all data entries are complete and properly processed, a header file is also transmitted.

In addition to the data entries listed above, other fare-related information such as texts or tables may be exchanged. This data should be transferred either as a Word file (*.doc) or Excel file (*.xls).

2.2 - Presentation of fare alterations

If the sections II/III are to be produced by computer, alterations will need to be shown within a given data field. When presenting such changes, care must be taken to ensure consistency, particularly as regards those data fields which provide a link between tables (e.g. UIC station code). Amendments to fare data are signalled by flags, which simplify computer matching of existing and newly transmitted fare data.

Amendment flags must also be entered when a transport company exchanges data with another for the first time, since automated matching is impossible without this.

The amendment flag may have one of the following values:

- 0 = no amendment
- 1 = new entry
- 2 = deletion
- 3 = amendment

Amendment flags for data elements used as "access keys" can only have values 0, 1 or 2. A record marked with flag "2" should still be transmitted with all previous information even though it is no longer valid. The flag for all other data elements ("amendment" flag) may only have the value 0 or 3.

The following access keys are used:

File	Access Key
	UIC code for the supplying transport company
	plus:
Station list	UIC station code
Series	Series number
Non linking series	Series number
Series information	Info code
Product table	Product code
Product offer table	Service code + Fare table number
Carrier codes	Carrier code
Fare table explanations	Fare table number

A deleted record must be supplied in the fare version in which it has been deleted with all its information and marked with flag "2".

The record is not deleted until the following data version.

If a record is entered with flag "1" or deleted with flag "2", its information must remain unaltered and therefore all amendment flags should be set to "0".

Four examples are outlined below to illustrate how the amendment flags are being used:

Example 1

Change of distance in the route section

- Files affected:
- series,
 - where applicable, distance-based fare tables

The new distance is entered in the fields set aside for 1st and 2nd class distances (in kilometres) and the corresponding flags are switched to 3 (amendment).

Example SBB:

Series listing:

Series	Flag	Station A	Station Z	km 2 nd Cl.	Flag	km 1 st Cl.	Flag
--------	------	-----------	-----------	------------------------	------	------------------------	------

Former data version:

66670	0	Iselle transito	Locarno	147	0	147	0
-------	---	-----------------	---------	-----	---	-----	---

New data version:

66670	0	Iselle transito	Locarno	163	3	163	3
-------	---	-----------------	---------	-----	---	-----	---

Example 2

Station closure

- Files affected:
- station list,
 - series,
 - if possible, series info files,
 - if possible, route-based fare tables,
 - if possible, non linking series.

In the station list, the key flag attached to the UIC station code will be set at "2" (deleted), as well as all the key flags of the series beginning or ending at this station. Moreover, all route descriptions must be checked to see whether they include the station now closed to traffic.

Example TRENITALIA:

Station listing:

UIC Code	Flag	35-character designation	17-character designation	Flag
----------	------	--------------------------	--------------------------	------

Former data version:

07115	0	Ancona (fr)	Ancona (fr)	0
-------	---	-------------	-------------	---

New data version:

07115	2	Ancona (fr)	Ancona (fr)	0
-------	---	-------------	-------------	---

Series listing:

Series	Flag	Station A	Flag	Station Z	Flag	Route	Flag
--------	------	-----------	------	-----------	------	-------	------

Former data version:

01301	0	Ancona (fr)	0	Brindisi	0	Foggia	0
-------	---	-------------	---	----------	---	--------	---

New data version:

01301	2	Ancona (fr)	0	Brindisi	0	Foggia	0
-------	---	-------------	---	----------	---	--------	---

Example 3 Introduction of a new distance-based fare table

File affected: - distance-based fare tables.

If a new fare table is to be transmitted, the flag for the fare table number in the Fare table explanations file is set at "1" (new).

Example VR:

Description of the fare tables:

Fare table	Flag	Designation
4205	1	Sibelius

Example 4 Replacement of two old series by one new one

Files affected:

- series,
- if possible, series info files,
- where applicable, distance-based fare tables,
- where applicable, route-based fare tables,
- if possible, non linking series.

The key flag for the new series is assigned a value of "1" (new). Further the new record in both data elements for the series to be replaced must include the old series numbers in each case. The two old series will also be sent, with the series number flags set at "2" (deleted) in both cases.

Example PKP:

Series listing:

Series	Flag	Station A	Station Z	1. replaced series	2. replaced series
--------	------	-----------	-----------	--------------------	--------------------

Former data version:

01730	0	Brest (Gr)	Warsaw	00000	00000
06449	0	Francfort (O)(Gr)	Warsaw	00000	00000

New data version:

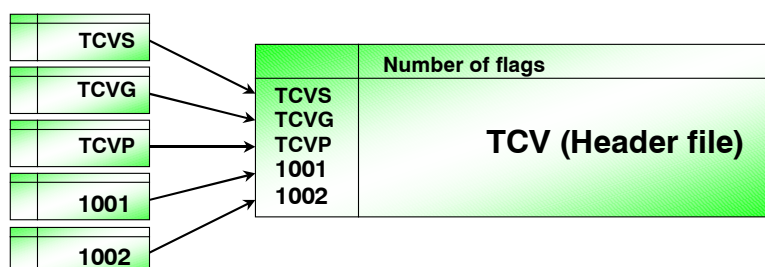
01730	2	Brest (Gr)	Warsaw	00000	00000
06449	2	Francfort (O)(Gr)	Warsaw	00000	00000
00070	1	Brest (Gr)	Francfort (O)(Gr)	01730	06449

2.3 - Data security

Given the vital nature of the fare information set out in the Sections II and III, which is used as a basis for calculating and issuing travel documents, additional security data should be transferred with each interchange, making it possible to check by computer that the body of data is intact and that the fares sent are correct. Such precautions are of particular importance when data are sent in compressed form or over the internet.

This information should be transferred in a special header file (list of the data sent). For each file sent with the header file, a data record is entered in the header file containing details of the flags for the various files. No details of the header file itself are included.

Example :



As a means of automating data reception by individual transport companies as far as possible, it is necessary to give files clearly defined names. With the exception of the individual fare tables, file names shall comprise a four-character upper-case fare-type code and the four-character UIC code for the supplying transport company.

A data record is also to be included in the header file for each fare table transferred. The eight-character file name for fare tables is made up of a four-character fare table number that may not begin with zeros placed before the four-character UIC code for the supplying transport company.

Table 1 : Illustrative file names: (UIC code 1181 = ÖBB)

File	File name	Comments
Station list	TCVG1181	G = Gare
Series	TCVS1181	S = Séries
Series info	TCVM1181	M = Mémo
Product table	TCVT1181	T = Train
Product offer table	TCVO1181	O = Offre
Carrier table	TCVC1181	C = Carrier
Fare-table explanations	TCVP1181	P = Prix
Individual fare table	XXXX1181	

2.4 - Attribution of access key

The access keys for deleted records (e.g. series numbers) may not be re-attributed for at least two years after the end of the calendar year in which deletion takes place. For example, the number of a series cancelled as of 30/5/2005 may not be used for a new series until 1/1/2008.

2.5 - Transfer conditions

Data is prepared and exchanged in a non system-specific manner so as to give each participating transport company the opportunity to operate with the systems at its disposal.

Fare data is thus always to be prepared and exchanged as ASCII text (*.txt) using a set record length. Data are exchanged over the website www.prifis.tsf.it where data quality is checked. In exceptional cases, data may be transmitted by e-mail or by post on CD, DVD or USB sticks.

Only amended files are transferred. Accordingly, a file whose contents have not been amended but which lists records that have expired or have been amended should be transferred.

Files which are not required by a transport company and hence would otherwise need to be transferred with nothing in them do not need to be sent. For instance, if a transport company does not use the info file, this file does not need to be sent.

Fare data should be exchanged using a latin character set.

In the "Info", "Product offer table" and "Fare table explanation" files, the "Description in the language of the country" and "Description in Russian" fields constitute an exception as Cyrillic characters may be used.

As it is not possible to portray both Latin and Cyrillic script together in ASCII format (*.txt), Cyrillic script should not be used in data exchanges between countries using either Latin script alone or both Latin and Cyrillic script until a solution is found to the problem. These fields are left blank here.

2.6 - Transfer deadline

Data should be supplied exclusively as at the official annual change-of-tariff date (15th September). The recipient transport company has to be in possession of the tariff data by this date each year.

Any fare version which has not been prepared in line with the agreed data structure or whose data contains errors, must not be accepted by the recipient transport company. The supplying transport company should immediately be informed of the errors and asked to send a corrected version.

If the corrected fare version is not in the recipient transport company's possession by deadline, it will be classified as "not delivered". The existing version shall remain in force until the period of validity expires (see point 2.8 - page 9). If the period of validity expires before a new valid version has been delivered, it will no longer be possible to sell routes operated by the delivering transport company.

To prevent a situation whereby a partially incorrect data version is rejected by some transport companies but not by others, this decision should be coordinated with the managing transport company to ensure that uniform action is taken.

Where an interim version is required for special circumstances, it shall only be bilaterally exchanged in 108-1 format with transport companies that require the new version.

The flags for each new version shall always be set to the most recent version officially sent.

2.7 - Field characters

All fields are defined in terms of character type and their length.

Numeric fields shall be right-justified and where appropriate completed with zeros at the beginning.

Alphanumeric fields shall be left-justified with the remaining positions left blank.

2.8 - Validity

Each file must contain three fields defining its validity:

- The field "First day of validity of the tariff" describes as of when the data record is valid. Fare data shall become valid at the earliest when the new version is transferred.
- The field "Last day of validity of the tariff" indicates until when the data will remain valid. An "open-ended" date may be entered in this field, in the form of an actual date a long way into the future (e.g. 20991231).

This means that the data would remain valid either until that date or until a version with an amended date is supplied.

NB : The fields "First day of validity" and "Last day of validity" are expressed using the format YYYYMMDD.

- In the field "Version number", the version number for the fare date shall be entered as a sequential number (the fare date is defined by the first day of validity).

3 - Charta Europrice

3.1 - Introduction

The main aim of an international fare policy is to contribute to the development of economically-optimised competition between carriers (see [Glossary - page 48](#)) in international transport.

To achieve this aim, it is important:

- to develop fares that are not part of a set tariff system but that reflect specific market features (customer requirements, rival offerings) and are tailored to each route,
- to give customers the possibility of selecting the most convenient offerings proposed by carriers at acceptable distribution costs,
- to conclude bi- or multilateral agreements with a view to setting market-tailored prices,
- to help cut distribution costs by harmonising processes,
- to promote the sale of international travel tickets,
- improve cooperation among all carriers at marketing level.

The Europrice Charter contains the principles of a European reference fare system that all transport companies party to the NRT can join. These principles complement the provisions of the TCV.

The Europrice Charter applies for the issuing of NRT travel tickets (through tickets and/or route tickets) for the lines of the participating transport companies.

3.2 - Principles

Fares shall be expressed in EUR.

Fare data shall be made available to all transport companies party to the NRT no later than 15 September each year.

3.3 - Fare stability

Fares shall remain guaranteed until the next fare change (subject to application of the "hedge clause" see - [page 11](#)).

The duration of the fare guarantee is the same for all carriers.

If a national currency is converted into EUR, the likely exchange rate development over the next 12 months may be taken into account in accordance with the rules set out in *UIC Leaflet 311, Art. 2.4* in order to avoid an inflation effect (see [Bibliography - page 50](#)).

During this period, carriers however still retain the possibility of reflecting any possible changes to domestic fares in the international travel tickets they sell.

Hedge clause

(only for participating companies whose countries are not part of the EMU)

Carriers whose countries are not members of the EMU may republish their fares in EUR within the price stability period if their domestic currency experiences a substantial fluctuation in relation to the EUR.

The new fares should be communicated to partners no later than 3 months before their date of application.

A substantial exchange rate fluctuation would be if - over a period of 30 days - a currency exchange rate fluctuated by more than 5 % from the rate used when the fares communicated to the partners were originally converted into EUR.

The hedge clause does not apply to RIT fares.

3.4 - Fare calculation

In the points below, abbreviations are used which are briefly explained as follows:

Bf	=	Basic fare (standard fare) in Part III in EUR. Fare can be for 1st or 2nd class, single or return journey.
% discount	=	discount coefficient which should be used for a carrier's route.
H/HR coefficient	=	coefficient for single trip / return journey:
	1 =	single trip if the basic fare is for a single journey; return journey, if the basic fare is for a return journey;
	2 =	return journey, if the basic fare is for a single journey.
Passenger coefficient	1 =	adult;
	0,5 =	child or dog.

3.4.1 - Fare for an international journey

The fare for an international journey is calculated by adding together the fares contained in the fare data of each participating company.

The fares of the participating companies should be calculated in accordance with the following points.

3.4.2 - Foreign portion

The sales prices are obtained by converting the fares listed by the partners in EUR into the currency of collection. They are calculated and updated in accordance with existing rules (see point 3.3 - page 10).

3.4.3 - National portion

Any participating company which alters its fares may also circulate these fares in international traffic to customers via its sales outlets.

3.4.4 - Basic fares

The basic fares (Bf) must be expressed to the nearest even number (0, 2, 4, 6, 8) after the decimal point.

3.4.5 - Fare calculation by means of 2 series

In case no series was transmitted for a requested connection, two consecutive series may be combined. In this connection, such series are to be used which in the direction of the destination are closest to the destination station - in case of detours, closest to the intermediate destination.

When issuing the ticket manually, the series used must be written on the voucher.

In case of distance-based fare calculation, the distances of both series are added. The fare is calculated in the respective fare table by adding together the distances of both series.

The following conditions for adding together the distance of two series have to be met:

- No fictitious kilometres have been used (series > 80000; code "Standard fare calculation" (TCVS, element 32) <> 2)
- Both series refer to the same fare table (TCVS, element 34).

3.4.6 - Calculation of 1st class basic fares on journey sections

In case the 1st class is only offered for a series on a journey section, this will be marked in the TCVS by indicating differing kilometres for the 1st and 2nd class (the distance in the 1st class may not be 0).

In order to calculate the correct fare, the 2nd class fare for the entire route will be determined and added together with the difference between 1st and 2nd class for the distance of the 1st class.

Fictitious example: DSB route from Puttgarden(MS) to Svendborg, 420 kilometres in the 2nd class, 370 kilometres in the 1st class. This means that on this 420 km-long route the 1st class will only be offered for 370 km.

Distance	2nd class fare	1st class fare
370 km	45,20 euro	66,40 euro
420 km	46,60 euro	68,60 euro

2nd class fare, 420 km = **46,60 euro**

Difference 1st class fare - 2nd class fare 370 km = 66,40 euro - 45,20 euro = **21,20 euro**

1st class fare from Puttgarden(MS) to Svendborg = 46,60 euro + 21,20 euro = **67,80 euro**

3.4.7 - Discounted fares

Discounted fare of a carrier =

Basic fares x X % Discount (commercially rounded to one decimal place after the decimal point**)
 x H/HR coefficient
 x Passenger coefficient

**) Rounding examples

X,00 - X,04 = X,0	X,45 - X,54 = X,5
X,05 - X,14 = X,1	X,55 - X,64 = X,6
X,15 - X,24 = X,2	X,65 - X,74 = X,7
X,25 - X,34 = X,3	X,75 - X,84 = X,8
X,35 - X,44 = X,4	X,85 - X,94 = X,9
	X,95 - X,99 = X+1,0

3.4.8 - Accounting with combined discounts

If there are specific fare offerings where one or several passengers on one travel document can travel with a combination of discounts, the fares compiled should be commercially rounded to the nearest amount divisible by 5 (Euro cents).

Two mathematical formulae can be used to calculate the total fare:

1. Application of an overall factor for all passengers

Overall factor = Sum of the discount factors for all passengers

Discounted fare of a carrier =

Basic fare x factor (commercial rounding to the nearest 5 Euro cents)
 x H/HR

2. Application of an individual factor per person with subsequent addition of the separately rounded individual fares

Discounted overall fare of a carrier = Sum of the rounded individual amounts per person

Discounted overall fare of a carrier =

(Basic fare x X % discount for the 1st person + commercial rounding to the nearest 5 Euro cents) +
 (Basic fare x X % discount for the 2nd person + commercial rounding to the nearest 5 Euro cents) +
 (Basic fare x X % discount for the 3rd person + commercial rounding to the nearest 5 Euro cents)
 (Basic fare x X % discount for every further person + commercial rounding to the nearest 5 Euro cents)

3.4.9 - Fare calculation during accounting

Discounted fare of a carrier =

Basic fares x X % Discount (commercially rounded to one decimal place after the decimal point**)
 x H/HR coefficient
 x Passenger coefficient

When applying the principles set out in point 3.4.7 and 3.4.8 - page 13 to calculate the fare it is important to ensure that the sales information encompasses all the necessary details to guarantee that the presentation of accounting documents complies with *UIC Leaflet 301* (see Bibliography - page 50).