INTEROPERABILITY UNIT

TAP TSI: ANNEX B.1

COMPUTER GENERATION AND EXCHANGE OF TARIFF DATA MEANT FOR INTERNATIONAL OR FOREIGN SALES – NON RESERVATION TICKETS

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1.1.1	27.09.2011	Appendix M	Table L introduced
1.2	28.05.2013	All sections	Incorporation of the changes from TAP TSI phase one
1.3	16.07. 2019	Annexes A, K, L, M	Reorganisation of annexes K, L, M Appendix A - New field 15
1.4	15.12.2020	All sections	Changes concerning the company code change to alphanumeric

Introduction

The present document belongs to the set of Technical Documents described in Annex III ‘List of Technical Documents referenced in this TSI’ of the COMMISSION REGULATION (EU) No 454/2011.

Computer generation and exchange of tariff data meant for international or foreign sales – Non Reservation Tickets

Application :

With effect from 08 March 2012.
All actors of the European Union falling under the provisions of the TAP TSI.

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Summary

The aim of this Technical Document is to allow the railway undertakings (RU) subject to the COMMISSION REGULATION (EU) No 454/2011 “Technical specification for interoperability relating to the subsystem ‘telematics applications for passenger services’ of the trans-European rail system” to make available with standardized procedures all their tariffs (including fare tables) meant for international or foreign sales, as far as Non Reservation Tickets (NRT) are concerned.

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

The information made available 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 offers proposed,
- fare tables.

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

General remarks

This Technical Document is mandatory for RUs falling under the provisions of the TAP TSI making available of tariff data for international and foreign sales for use in computer procedures including operations such as:

- calculation of international fares,
- issue of Non Reservation Tickets

Computerized generation of tariffs is designed to allow the following to be achieved:

- Reduction of the input and outlay involved in implementing fare alterations,
- Improvement of the quality of data,
- Updating of tariff data through computerized matching,
- More efficient sales procedures
- Accurate computerized 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 and exchange of tariff data meant for international or foreign sales – Non Reservation Tickets

2.1 Volume of data

The regulations governing computer generation as the basis for publication on a computer medium are specified for the following data elements:

- Station list,
- Series (see Glossary),
- Non linking series
- Series information,
- Product table,
- Carrier codes,
- Service tables,
-
- 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 made available.
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 Word-file (*.doc) or Excel-File (*.xls).

2.2 Presentation of fare alterations

Since the data made available are to be used by computer systems, alterations need to be shown within a given data field. When presenting such changes, care shall be taken to ensure consistency, particularly as regards those data fields which provide a link between tables (e.g. station codes). Amendments to fare data are signalled by flags, which simplify computer matching of existing and newly made available fare data.
Amendment flags shall also be entered when an RU publishes 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 a "2" flag should still be made available 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
	company code for the supplying RU **plus**:
Station list	station code
Series	Series number
Not 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 2nd Cl.	Flag	km 1st 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 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 shall be checked to see whether they include the station now closed to traffic.

Example TRENITALIA:

Station listing:

Station 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:

Serie	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,
- where applicable, 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 shall 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:

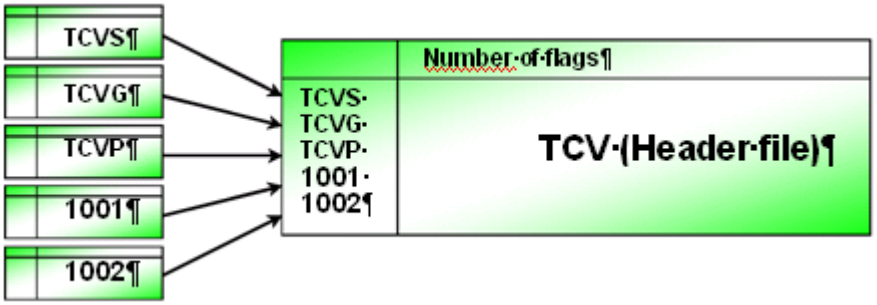
Series listing:

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, which is used as a basis for calculating and issuing travel documents, additional security data shall be produced in order to allow other RUs to be sure that the data obtained from another RU are correct and complete. Such precautions are of particular importance when the data are sent in compressed form over the internet.

This information shall be made available in a special header file (list of the data files made available). For each file made available 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.



As a means of automating data usage by individual RUs 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 (with exception of header file, with three character) upper-case fare-type code and the four-character code for the supplying RU.

A data record shall also 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 contain leading zeros, and the four-character code for the supplying RU.

Table 1: Illustrative file names: (RU code 0081 = ÖBB)

File	File name	Comments
Station list	TCVG0081	G = Gare
Series	TCVS0081	S = Séries
Series info	TCVM0081	M = Mémo
Product table	TCVT0081	T = Train
Product offer table	TCVO0081	O = Offre

Carrier table	TCVC0081	C = Carrier
Fare-table explanations	TCVP0081	P = Prix
Individual fare table	XXXX0081	

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 Data availability conditions

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

Fare data shall thus always be prepared and made available as ASCII text (*.txt) using a set record length.

Only amended files are additionally made available. Accordingly, a file whose contents have not been amended but which lists records that have expired or have been amended shall be additionally made available.

Files, which are not relevant for an RU and hence would otherwise need to be made available with nothing in them do not need to be made available. For instance, if an RU does not use the info file, the latter does not need to be made available.

Fare data shall be made available using a Latin character set (format ISO-8859-1).

In the “Info”, “Product table offer” 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 for the problem. These fields are left blank there.

2.6 Data availability deadline

Data shall be made available by the deadlines set out in Annex III to the COMMISSION REGULATION (EU) No 454/2011 – “Technical specification for interoperability relating to the subsystem ‘telematics applications for passenger services’ of the trans-European rail system”.

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

2.7 Field characters

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

Numerical 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 shall 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 made available.

- 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).

2.9 Data supplier

All data tables require in the first field the code of the supplying RU (sometimes called delivering or supplier RU). This code must always be the one of the RU making available the data: in case RU A makes available data also for RU B, the first field contains the code of A while the code of B goes elsewhere (e.g. field 24 of TCVS).

Appendix A - File: TCVG (Gare)

A.1 - Station list

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	station code	numeric	5	M	*TAP TSI Technical Document B.9*	5-9	
3	Key flag for station code	numeric	1	M		10	0, 1 or 2 (see point 2.2)
4	Old railway code	numeric	5	O	*TAP TSI Technical Document B.9*	11-15	This field is only used when stations are first introduced.
5	35-character station designation	alpha numeric	35	M		16-50	Station designation in the national language including accents and in upper and lower case.
6	Flag 1 for the 35-character station designation	numeric	1	M		51	0 or 3 (see point 2.2)
7	17-character station designation	alpha numeric	17	M		52-68	Computer notation with no accents but in upper and lower case. The file is to be transferred in the ascending alphanumeric order of this field.
8	Flag 2 for the 17-character station designation	numeric	1	M		69	0 or 3 (see point 2.2)
9	17-character route description of station	alpha numeric	17	O		70-86	Field 7 notation for route instruction purposes.
10	Flag 3 for the 17-character route description of the station	numeric	1	M		87	0 or 3 (see point 2.2)
11	Zone	numeric	4	O		88-91	
12	Flag 4 for zone	numeric	1	O		92	0 or 3 (see point 2.2)
13	border-point code	numeric	4	O	*Code List B.1.3*	93-96	Where a station has the status of a border station, the border point code must be entered in this field and may not be omitted.
14	Flag 5 for border- point code	numeric	1	M		97	0 or 3 (see point 2.2)
15	reserved	alpha numeric	2	M		98-99	
16	reserved	alpha numeric	1	M		100	
17	reserved	numeric	2	M		101-102	
18	reserved	numeric	1	M		103	
19	1st pictogram code	numeric	4	O		104-107	numeric pictogram code as listed in Appendix L.
20	2nd pictogram code	numeric	4	O		108-111	
21	3rd pictogram code	numeric	4	O		112-115	
22	Flag 7 of pictogram codes	numeric	1	O		116	This field relates to fields 19-21; 0 or 3 (see point 2.2).
23	Font	numeric	1	M		117	Determines font for printing of fare only 1 = normal 2 = bold

							3 = italics
24	Flag 8 for font	numeric	1	M		118	0 or 3 (see point 2.2)
25	Designation for third party RU	alpha numeric	10	O		119-128	Details of private transport company entitled to use the station.
26	Flag 9 for third party RU	numeric	1	M		129	0 or 3 (see point 2.2)
27	code for fare reference station	numeric	5	O	*TAP TSI Technical Document B.9*	130-134	code for station setting fare/price in respect of field 2.
28	Flag 10 for fare reference station	numeric	1	M		135	0 or 3 (see point 2.2)
29	code for accounting station	numeric	5	O	*TAP TSI Technical Document B.9*	136-140	This field is only used if there is a separate accounting station.
30	Flag 11 for accounting station	numeric	1	M		141	0 or 3 (see point 2.2)
31	Station latitude	numeric	10	O		142-1 51	Latitude using Gauss-Krüger coordinate system 10-digit figure with 6 decimal places
32	Station's longitude	numeric	10	O		152-161	Longitude using Gauss-Krüger coordinate system 10-digit figure with 6 decimal places
33	Flag 12 for geographic details	numeric	1	M		162	This field relates to fields 31-32; 0 or 3 (see point 2.2)
34	First day of validity of fare	numeric	8	M		163-170	Expressed as: 'YYYYMMDD'
35	Version number	numeric	2	M		171-172	Sequential version number related to the fare date; '01' for the first issue, '02' for the second, etc.
36	Last day of validity of fare	numeric	8	M		173-180	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

A.2 - Notes to the station list

In addition to proper stations, the station list shall also contain all other details (particularly border-points) pertaining to the series, including route descriptions.

A number of data fields which may not be self-explanatory are clarified below:

A.2.1 - Field 4 - Previous station code

If the station code has been altered, the code previously used shall be entered in this field.

A.2.2 - Field 9 - 17-character station designation in the Route description

This field must be left always blank with three exceptions:

- When the station is contained in one of the "station in route" fields of table TCVS (fields 42 to 56), the content of field 9 is used to create the whole route description of a ticket. It can contain at maximum the same name present in field 7 but, since for a long journey the whole route description can become long, and given the space limits on a ticket, it is recommended to use in field 9 a shortened name with as few as possible of the allowed 17 characters, possibly not exceeding 10. Of course the remaining positions must be filled with blanks
- When the station is one referencing another station (see A.2.7), the field 9 must contain the 17-character name of the reference station
- When the station is a border station, the field 9 must contain the 17-character name of the

border point (same as in field 7)

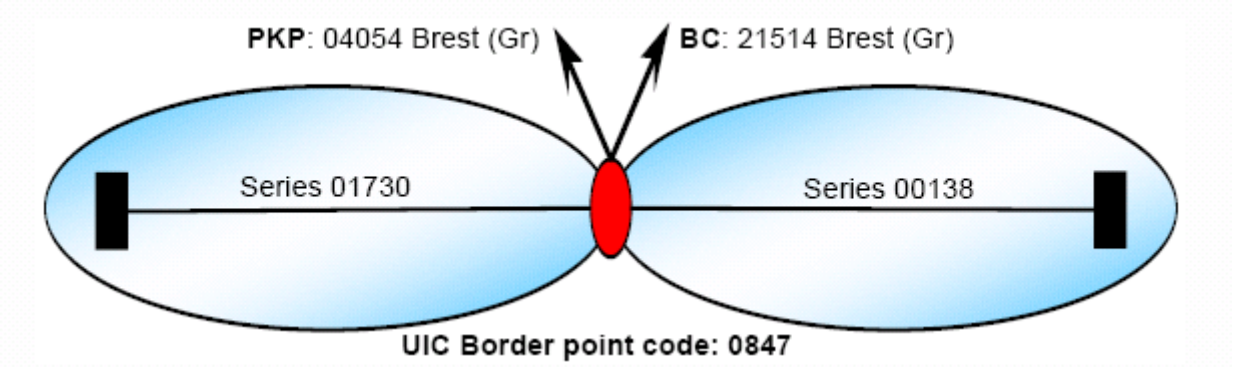
A.2.3 - Field 11 – Zone

This field is not used with a common meaning, it must be left set to zero unless used for special bilateral agreements (content ≠ 0 must be ignored and not considered an error).

A.2.4 - Field 13 - border point code

If the station is also a border-point, this field should contain the corresponding border-point code in line with *code list B.1.3* in ERA document "*Code List*".

Fare points with the status of a "border point" shall be used jointly by the RUs involved in the point. Specific rules need to be observed for this as shown in the following example of Brest (Gr).



	Code	Flag	Designation	Border point code
PKP:	04054	0	Brest (Gr)	**0847**

	Code	Flag	Designation	Border point code
BC:	21514	0	Brest (Gr)	**0847**

Fig. 1 - Example citing Brest

The Brest (Gr) fare point is included both in PKP data under code 04054 and in BC data under code 21514.

Moreover, the Brest (Gr) fare point is held in the location database as a border point with its border point designation in the form of a four-character border point code in accordance with TAP TSI Technical Document B.9.

It is important that both RUs involved in the border point use the same border point designation and the same border point code. Only in this way is it possible to interconnect computer series involving several countries.

In the example above PKP's 01730 series may be connected by means of border point code 0847 with BC's 00138 series via the border point "Brest (Gr)".

Some RUs use so called "alternative border points" (for example Chiasso/Iselle).

To allow this amalgamated designation to be processed, a fictitious fare point (station) with a location code shall first be created that contains this designation and, by dint of its border point status, is also assigned a border point code.

Table 1 : Example: border-point code

Location Code	Station	Border-point code
0160801608	Iselle Transito	0324
0530705307	Chiasso	0321
01302	Chiasso o Iselle	0400

If new border points are required in future, requests shall be processed complying with the Change Control Management of TAP TSI. The ERA shall, in agreement with UIC, lay down the coding for the border point and publish it on its web site.

Use of the suffixes "(Gr)" or "(Fr)" shall be determined by the RUs party to the border point themselves. It is important that the notation used for border points and their suffixes be uniform.

Border point numbers and names are published by ERA on their website in the ERA passenger code list document code list B.1.3 and their use is mandatory.

A.2.5 - Fields 19 to 21 - Pictogram codes

If required, these fields should be filled with the code for the printing of symbols as detailed in Appendix L.

A.2.6 - Field 23 - Font

Bold-coded stations and border points (font 2) are included in the series as departure, destination or intermediate stations. Stations written in standard font (font 1) appear in route descriptions only and do not constitute either departure or destination points. Italics (font 3) are used for stations run by third-party RUs as well as for bus stops and shipping company landing stages.

A.2.6 - Field 25 - Designation for third party RU

This field is not used with a common meaning, to be left blank unless used for special bilateral agreements (content ≠ blank must be ignored and not considered an error)

A.2.7 - Field 27 - code for the fare reference station

If several other stations are referenced on a station for fare purposes, this field obligatorily shall be filled with the code for the fare reference station.

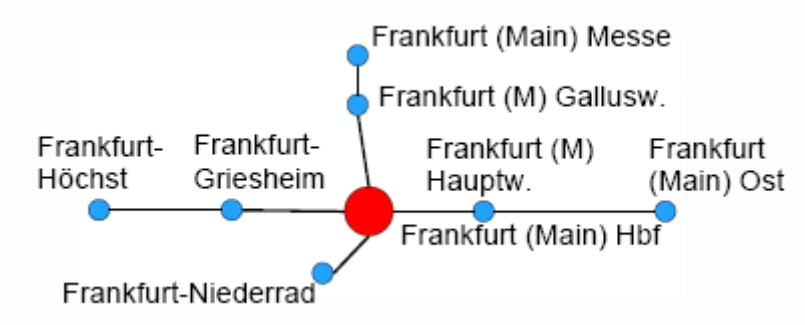


Fig. 2 - Example: Frankfurt (Main)

Table 2 : Example – Location code for fare reference station

Code	Designation	Fare reference station	Route descr.
11068	Frankfurt (Main) Hbf	11068	Frankfurt (M)
11704	Frankfurt (M) Galluswarte	11068	
32564	Frankfurt (M) Messe	11068	
11097	Frankfurt-Griesheim	11068	
11101	Frankfurt-Höchst	11068	
11088	Frankfurt-Niederrad	11068	
11139	Frankfurt (M) Hauptw.	11068	
11080	Frankfurt (Main) Ost	11068	

As no fictitious station may be entered for the fare reference station, the latter in this instance should be entered in the route description column. It will therefore appear as the departure or destination station when issuing the ticket.
Series are only generated from or to a fare-reference station. No other stations referenced upon that station for fare purposes may be contained in the series.

Appendix B - File: TCVS – Series

B.1 - Series

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Series number	numeric	5	M	*TAP TSI Technical Document B.8*	5-9	Coding for distance and routing between two stations or two fare points within a given country.
3	Key flag for series	numeric	1	M		10	0, 1 or 2 (see point 2.2)
4	Type of series	numeric	1	M		11	1 = transit 2 = border - destination station 3 = station - station 1st sorting criterion
5	Flag 1 for series type	numeric	1	M		12	0 or 3 (see point 2.2)
6	code for departure station	numeric	5	M	*TAP TSI Technical Document B.9*	13-17	
7	Connecting code for departure station	numeric	2	O		18-19	cf. Notes to Appendix B, point B.2.
8	17-character designation for departure station	alpha numeric	17	M		20-36	17-character designation in station list (17-character route description in case of fare reference stations) 2nd sorting criterion
9	Flag 2 for departure station designation	numeric	1	M		37	0 or 3 (see point 2.2)
10	code for destination station	numeric	5	M	*TAP TSI Technical Document B.9*	38-42	
11	Connecting code for destination station	numeric	2	O		43-44	cf. Notes to Appendix B, point B.2.
12	17-character designation for destination station	alpha numeric	17	M		45-61	17-character designation in station list (17-character route description in case of fare reference stations) 3rd sorting criterion
13	Flag 3 for destination station designation	numeric	1	M		62	0 or 3 (see point 2.2)
14	Route number	numeric	1	M		63	4th sorting criterion
15	Product code	numeric	2	O		64-65	cf. Notes to Appendix B, point B.2.
16	Product offer code	numeric	2	O		66-67	cf. Notes to Appendix B, point B.2.
17	Symbol marking usual route	alpha numeric	1	O		68	Usual route indicated by means of '+' if applicable
18	Flag 4 for usual route	numeric	1	M		69	0 or 3 (see point 2.2)
19	Bus code	alpha numeric	1	O		7 0	'B' entered here in the case of bus services
20	Flag 5 for bus code	numeric	1	M		71	0 or 3 (see point 2.2)
21	Ferry code	alpha numeric	1	O		7 2	'S' entered here in the case of ferry services
22	Flag 6 for ferry code	numeric	1	M		73	0 or 3 (see point 2.2)
23	Carrier code separator 1	'<'	1	M		74	This field always contains the symbol '<'.
24	Carrier code	numeric	4	M	*TAP TSI Technical Document* B.8	75-78	4-character -code for the contractual carrier on this route

25	Carrier code separator 2	'>'	1	M		79	This field always contains the symbol '>''
26	Itinerary	alpha numeric	58	O	*TAP TSI Technical Document B.5*	80-1 37	
27	Flag 7 for combination of carrier code and itinerary	numeric	1	M		138	Indicates combination of fields 24 and 26; 0 or 3 (see point 2.2)
28	Kilometres in 2nd Class	numeric	5	M		139-1 43	
29	Flag 8 for kilometres in 2nd Class	numeric	1	M		144	0 or 3 (see point 2.2)
30	Kilometres in 1st Class	numeric	5	M		145-1 49	
31	Flag 9 for kilometres in 1st Class	numeric	1	M		150	0 or 3 (see point 2.2)
32	Standard fare calculation	numeric	1	M		151	1 = Kilometre-based 2 = route-based
33	Flag 10 for standard fare calculation	numeric	1	M		152	0 or 3 (see point 2.2)
34	Standard fare table number	numeric	4	M		153-1 56	
35	Flag 11 for standard fare table number	numeric	1	M		157	0 or 3 (see point 2.2)
36	Ferry link code	numeric	2	O		158-159	
37	Flag 12 for ferry link code	numeric	1	M		1 6 0	0 or 3 (see point 2.2)
38	Info code	numeric	4	O		161-164	Completed if the info file contains specific references to the series
39	Flag 13 for info code	numeric	1	M		165	0 or 3 (see point 2.2)
40	1st replaced series	numeric	5	O		166-1 70	
41	2nd replaced series	numeric	5	O		171 -1 75	
42	code for 1st station in route description	numeric	5	O	*TAP TSI Technical Document B.9*	176-1 80	
43	Position of 1st station	numeric	1	O		181	1 = centre 2 = left 3 = right
44	Abridging code for 1st station	numeric	1	O		182	
45	code for 2nd station in route description	numeric	5	O	*TAP TSI Technical Document B.9*	183-187	
46	Position of 2nd station	numeric	1	O		188	1 = centre 2 = left 3 = right
47	Abridging code for 2nd station	numeric	1	O		189	
48	code for 3rd station in route description	numeric	5	O	*TAP TSI Technical Document B.9*	190-1 94	
49	Position of 3rd station	numeric	1	O		195	1 = centre 2 = left 3 = right
50	Abridging code for 3rd station	numeric	1	O		196	
51	code for 4th station in route description	numeric	5	O	*TAP TSI Technical Document B.9*	197-201	
52	Position of 4th station	numeric	1	O		202	1 = centre 2 = left 3 = right

53	Abridging code for 4th station	numeric	1	O		203	
54	code for 5th station in route description	numeric	5	O	*TAP TSI Technical Document B.9*	204-208	
55	Position of 5th station	numeric	1	O		209	1 = centre 2 = left 3 = right
56	Abridging code for 5th station	numeric	1	O		210	
57	Flag 14 for computerised route	numeric	1	M		211	Relates to Fields 40-54 or 3 (see point 2.2)
58	First day of validity of fare	numeric	8	M		212-219	Expressed as: 'YYYYMMDD'
59	Version number	numeric	2	M		220-221	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.
60	Last day of validity of fare	numeric	8	M		222-229	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

B.2 - Notes to the series

Series are transmitted in the following order:

1st sorting criterion	Field 4, ascending order
2nd sorting criterion	Field 8, ascending order
3rd sorting criterion	Field 12, ascending order
4th sorting criterion	Field 14, ascending order

A number of data fields which may not be self-explanatory are clarified below:

B.2.1 - Fields 7 and 11 - Connecting code

This field is required to generate through connections by computer. Any sequencing of series shall be seamless, i.e. the destination station for the first series shall also be the departure station for the second series.

However, this is not possible in some large cities such as Paris, where one series ends in Paris Est and another begins in Paris Austerlitz.

There is no series bridging the gap between Paris Est and Paris Austerlitz.

To allow the computer to recognise which series can be interconnected, a notional code (connecting code) shall be assigned to the stations involved in the series (destination station of one series and departure station of the other) meaning that series involving stations with the same connecting code may be linked up.

In such cases, "0" may not be used and shall not authorise any interconnection (in other terms, a value "0" in fields 7 or 11 means that those departure or destination stations cannot be used to interconnect series).

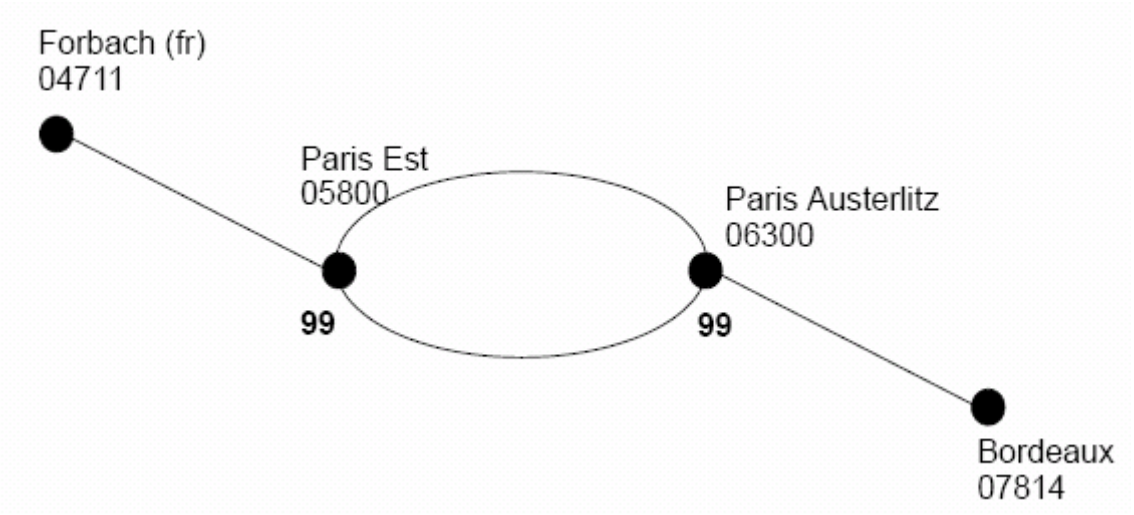


Fig. 3 - Example of a through connection from Forbach (fr) to Bordeaux (notional code)

Series 01034		Series 02317	
Forbach (fr) 04711	Paris Est 05800 99	Paris Austerlitz 06300 99	Bordeaux 07814

NB : Before carrying out this time-consuming procedure, a check should be made to establish whether it is possible to create one continuous series.

B.2.2 - Fields 8 and 12 - 17-character designation for the departure/arrival station

A distinction is made between transit series (border station - border station), incoming series (border station - domestic station) and domestic series (domestic station - domestic station). To prevent series from becoming unwieldy, a half matrix is always transferred when generating them. This means, there is a series from station A to station B but not in the vice versa direction.

So as not to jeopardize clarity during generation and further processing, there are rules on how stations are to be classified.

In the case of transit and domestic series, the station appearing first in alphabetical order in the 17-character station description is always deemed to be the departure station.

With incoming series, the border point is always the departure station. If the departure or destination station is a fare reference station, the value "17-character route description" will be used for the name of departure or destination station.

B.2.3 - Field 14 - Route number

If there are several series linking two stations, they are listed serially in this field.

If there is only one series, then this element is set to value "1".

B.2.4 - Field 15 - Product code

This field is only filled if the series in question is exclusively reserved for a given product (train type, e.g. Thalys). In such cases, the product code is entered, thus referring users to the product table for further details. The delivering RUs are free to encode products as they see fit. The sales procedures used by other RUs have to be organised in such a manner as to ensure that this series is only sold with the train type defined by the product code.

B.2.5 - Field 16 - Product offer code

This field is only filled if the series in question is exclusively reserved for a given product offer (e.g. RAILPLUS). In such cases, the product offer code is entered, thus referring users to the product offer table for further details. Transport companies are free to encode product offers as they see fit. The sales procedures used by other RUs have to be organised in such a manner as to ensure that this series is only sold with the product offer identified by that particular product offer code.

B.2.6 - Field 17 - Symbol marking the usual route

RUs are free to decide whether they fill this field. If there is more than one series with both identical stations of departure and of destination, the series can be defined by filling this field as the "usual route of traffic".

B.2.7 - Fields 23 to 25 - Carrier code

In accordance with PRR regulations, the RUs performing carriage (carriers) shall be indicated on tickets. The "Carrier code" comprises the four-position RU code (element 24) enclosed by the separators "<" and ">" (elements 23 and 25).

Example ÖBB:

Separ	Code for the RU	Separ
<	0081	>

The separators are displayed in the data inventory to enable the user to read the contents of data without any specialized IT backup. Each RU is thus independently able to decide whether to process the carrier code in the "Route description" field or in a separate one, and whether the carrier code will be used with or without the specified separator.

B.2.8 - Field 26 - Route

The route description for a series shall consist of the station designations which are to be taken from the column "17-character route description of the station" of the TCVG. Individual station designations shall appear separately without blanks and be separated by an asterisk ("*"). Names in optional routes (see note below) are to be separated by the symbol "/" and the beginning and end of such sections denoted by round brackets.

Example: (Erfurt/Hof)*Halle*Schwerin.

Departure stations and stations of destination may not be contained in the route description of a series. It must be noted that the field 26 contains the route description of a series as a whole; the fields 42 to 56 contain the single elements that allow creating the same description via software. The RU making available the B.1 data must fill up correctly both field 26 and fields 42 to 56. The RU using the B.1 data to establish an NRT ticket is free to use any of the two systems.
The content of field 26 and fields 42 to 56 is provided by the RU making available the B.1 data with reference to the nominal departure and destination stations of the series A and B. The RU using the B.1 data to establish an NRT ticket is responsible for reversing the order of the route when establishing a ticket from B to A.
A journey between stations A and D indicated on the ticket with the route description (B/C) does not mean that the passenger must take a train passing exactly by either B or C, it means that the passenger has a choice of all routes between a “tariff border” of a station on the left and a station on the right (route range).
For example, if the rail network is very interconnected, the situation could be as in the following figure:[see figure B.1.1 below]
A ticket A > D with route description (B/C) would allow travel along any of the following routes: [see figures B.1.2, B.1.3, B.1.4, B.1.5 below]

B.2.9 - Fields 28 and 30 - Kilometres in 2nd/1st class

Special note: If there is a route-based fare for a series, the correct kilometre figure is nevertheless entered in this field. In the field "Standard fare table number" (field 34) is registered, in which fare table the fare to this series is to be found.

If in a volume of data of almost exclusively distance-based fares a route-based fare has to be indicated, then, alternatively to the above described procedure, notional kilometres (> 80 000) can be used. For the notional kilometres, associated fares will have to be found in one of the distance-based fare tables.

B.2.10 - Field 32 - Standard fare calculations

This code indicates to users whether the standard fares for this series were calculated on a distance or route basis. In the latter case, the standard fare for the series is given with the corresponding notional kilometres in the distance-based fare table as well as in the actual route-based table.

B.2.11 - Field 34 - Standard fare table number

This field refers to the fare table listing the standard fare for this series.

B.2.12 - Field 36 - Ferry link code

TheThe ferry link codes may be entered here.

B.2.13 - Field 38 - Info code

Notional numbering is used to refer users to the info file containing specific details concerning the series.

B.2.14 - Fields 40 and 41 - 1st and 2nd series replaced

If the series in question is derived from one or two previously valid series, the former series numbers are entered here.

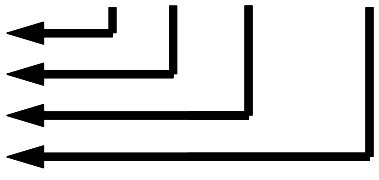
B.2.15 - Fields 42 to 56 - Code for the station in the route description, position and abridging code

These fields are used to computer-generate route descriptions covering at most five stations. They should be completed for all series with an existing route. In this way, it is possible for RUs to produce the required routing details based on strictly defined rules, using real-time procedures for instance.

Computer-generated route descriptions are laid out in the same way as their manually produced counterparts.

(Erfurt/Hof)*Halle*Schwerin.

	Station Code	
1st Station	16043	(Erfurt)
2nd Station	26002	(Hof)
3rd Station	23002	(Halle)
4th Station	27359	(Schwerin)
5th Station	00000	



Position details define where a station appears in the route description.

The value"1" explicitly indicates that the station shall be served, i.e. that it is not on an optional route.

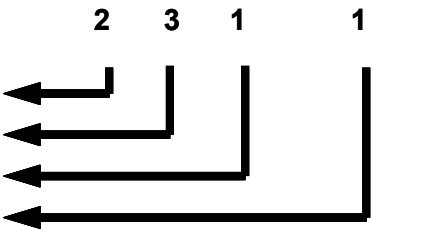
If the station is on an optional route to the left, it is given the value "2".

If, however, it is to the right, it is given the value "3".

Where there is no station at all, "0" is entered.

(Erfurt/Hof)*Halle*Schwerin.

	Station Code	Position	
1st Station	16043	2	(Erfurt)
2nd Station	26002	3	(Hof)
3rd Station	23002	1	(Halle)
4th Station	27359	1	(Schwerin)
5th Station	00000	0	



As a means of enabling the computer-generated route description to be correctly re-assembled when producing tickets, the position codes need to be set to specified rules:

- If an intermediate station is given, its position may not be "0".
- The first intermediate station may not be assigned the position "3".
- If an intermediate station's position is "1 ", the following station may not be position "3".
- If an intermediate station's position is "2", the following position may only be "2" or "3". There must be a following station!
- Where an intermediate station's position is "3", the following position may be "1", "2" or "3".

The abridging code indicates which station can be omitted when defining the route if there is not enough space for the full route description on the ticket (where international series are interconnected, for instance).

The relevant station may only be omitted if the abridging code is given.

This field may only be filled if "1" (centre) is entered in the "Station position" column.

The abridging code is generally "1", although it is also possible to indicate priorities, in which case the first station to be deleted is given the code "1", the second "2" etc.

Table 3 : Example - Abridging code

Complete route:	Koeln*(Darmstadt/Karlsruhe)*Stuttgart			
Position:	1	2	3	1
Abridging code:	1			2
Prioritized abridged version:	(Darmstadt/Karlsruhe)*Stuttgart			
Completely abridged version:	(Darmstadt/Karlsruhe)			

The following examples help to clarify the meaning of codes 1, 2 and 3 referred to the position of a station in the route description: [see figures B.1.6, B.1.7, B.1.8, B.1.9, B.1.10, B.1.11, B.1.12, B.1.13, B.1.14, B.1.15 below]
Figure B.1.1

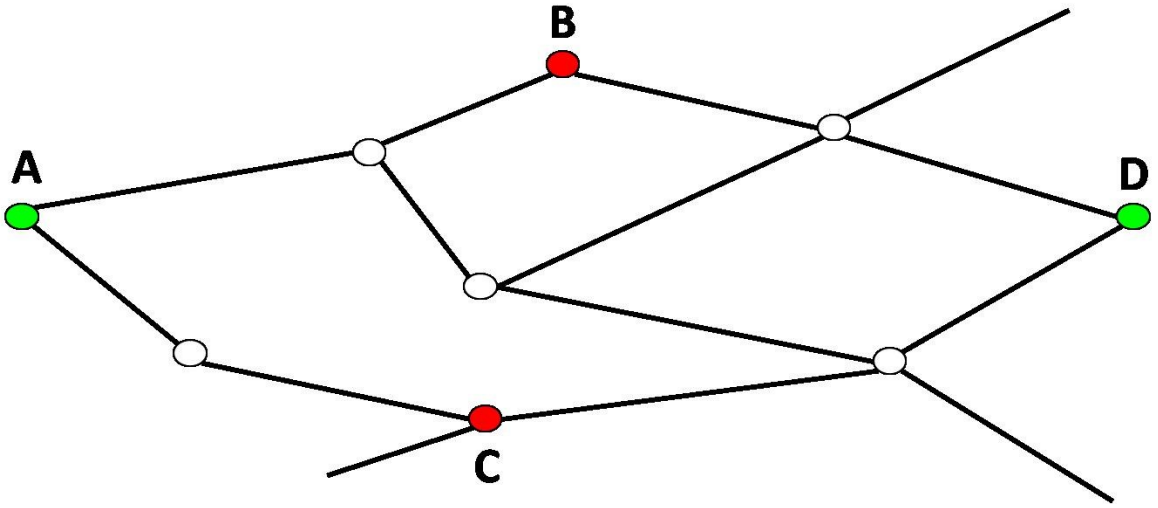


Figure B.1.2

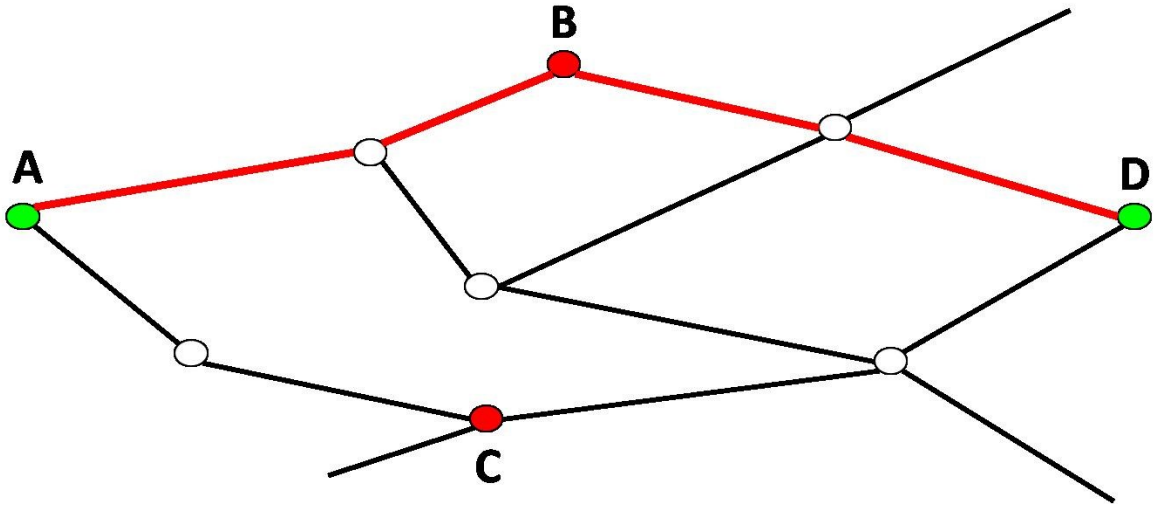


Figure B.1.3

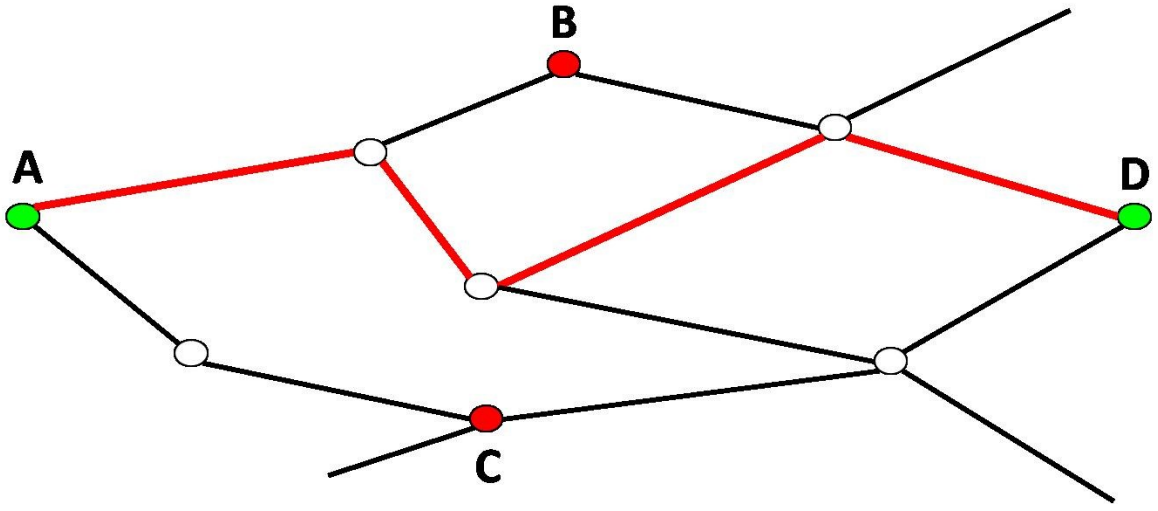


Figure B.1.4

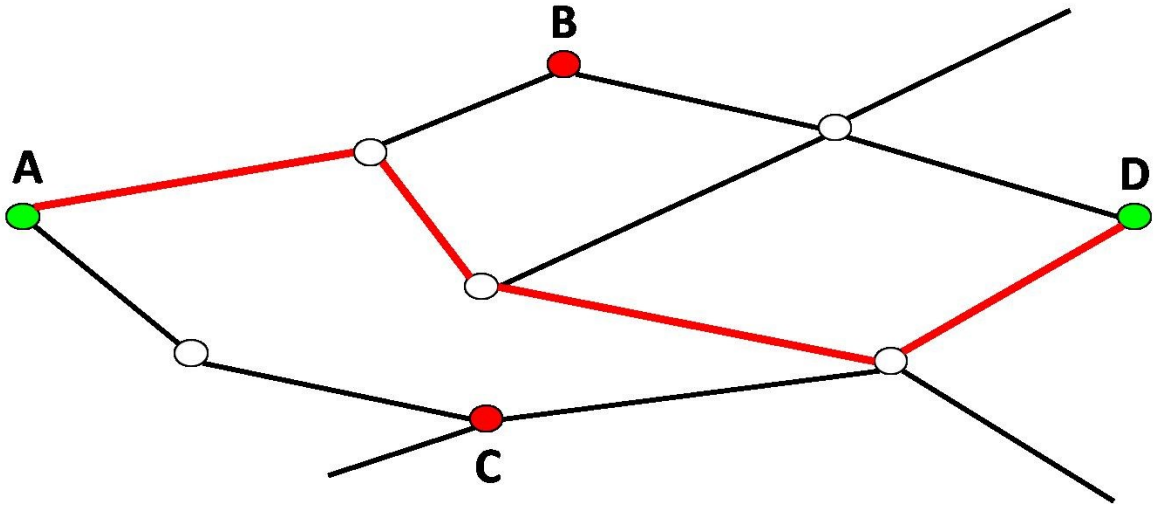


Figure B.1.5

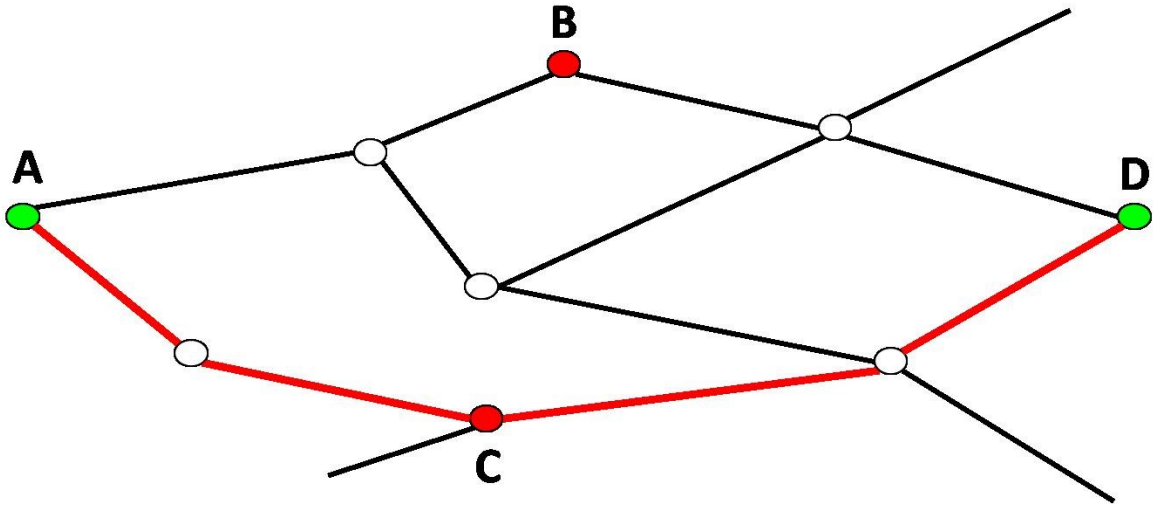


Figure B.1.6

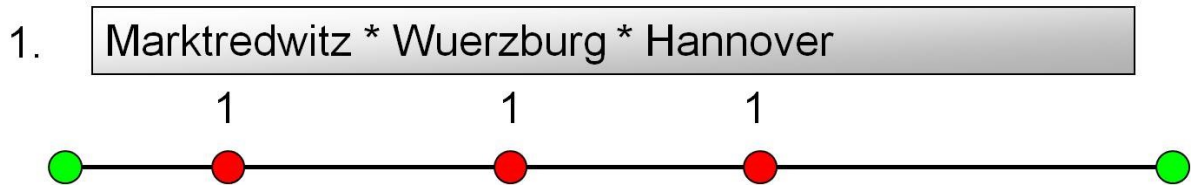


Figure B.1.7

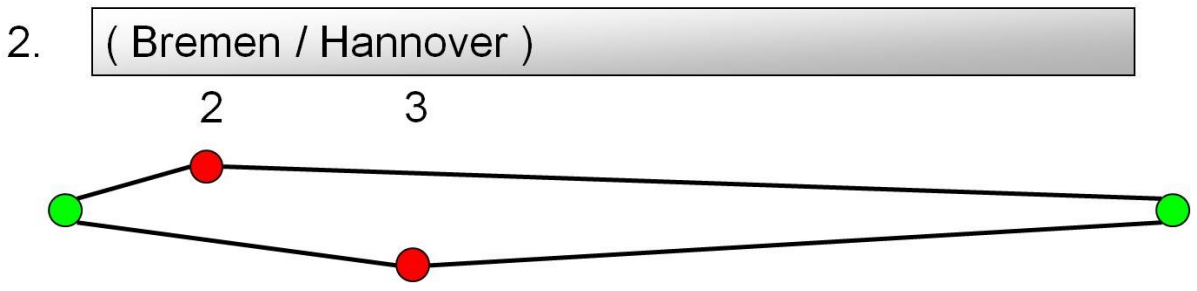


Figure B.1.8:

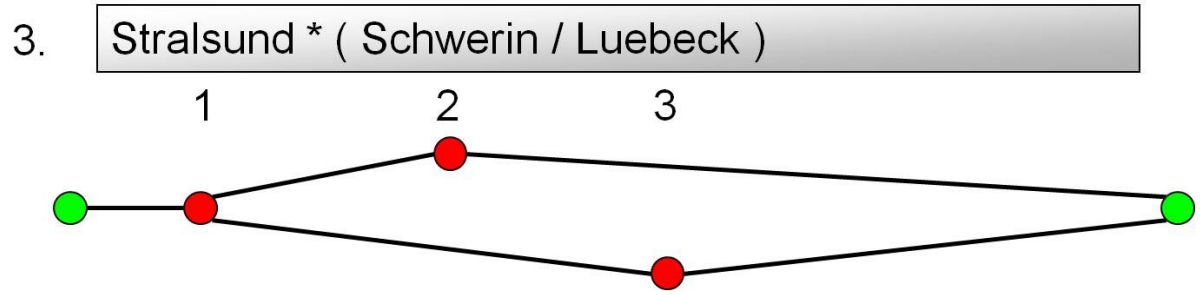


Figure B.1.9:

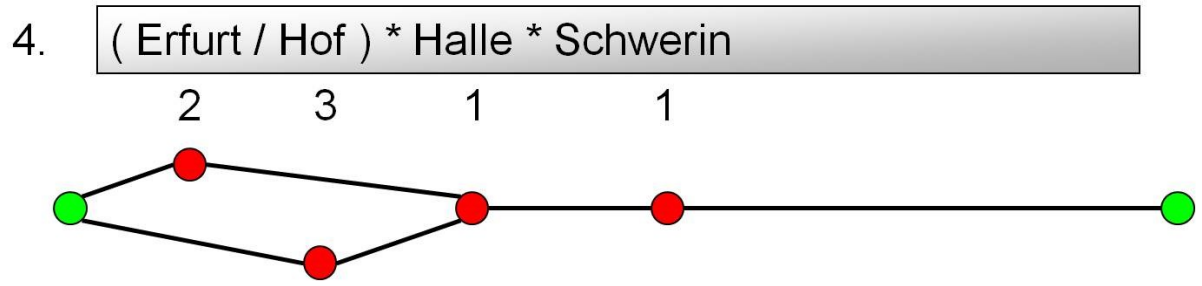


Figure B.1.10

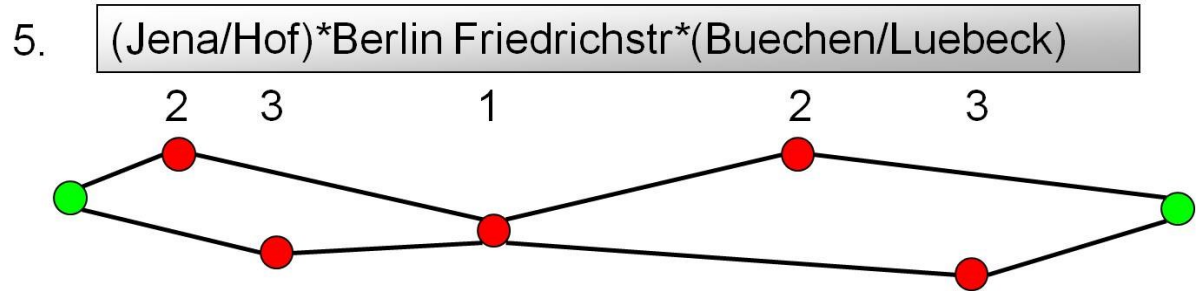


Figure B.1.11

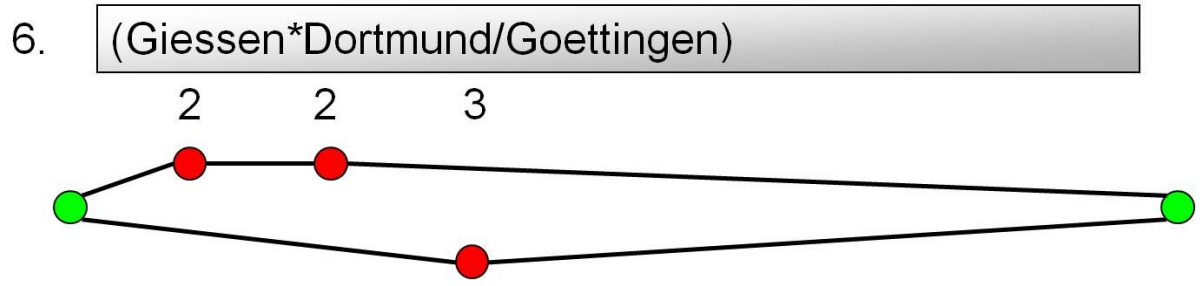


Figure B.1.12

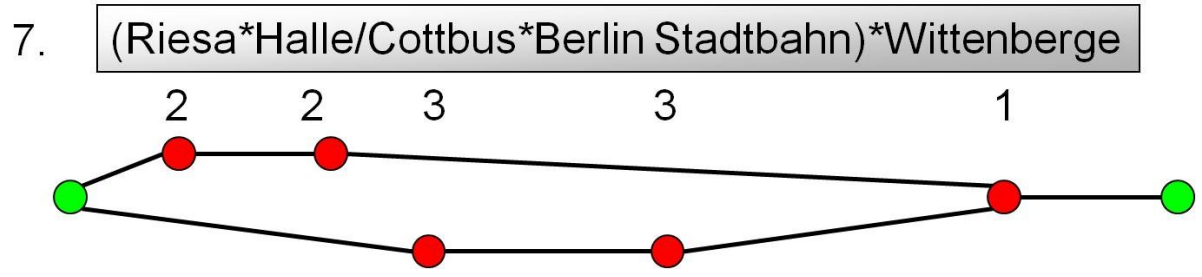


Figure B.1.13

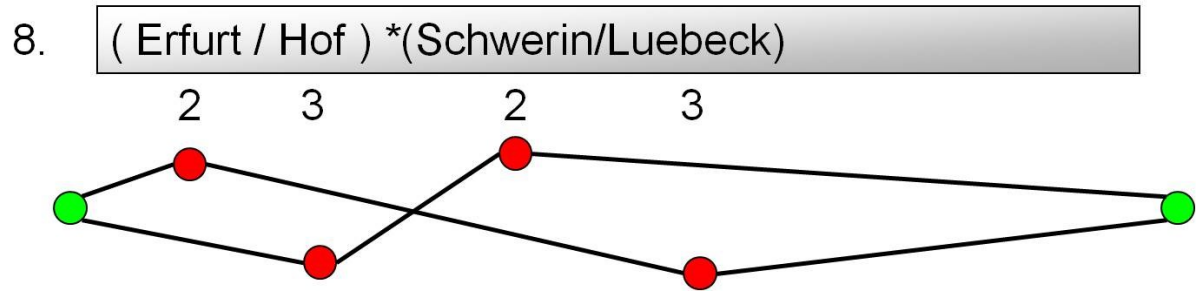


Figure B.1.14

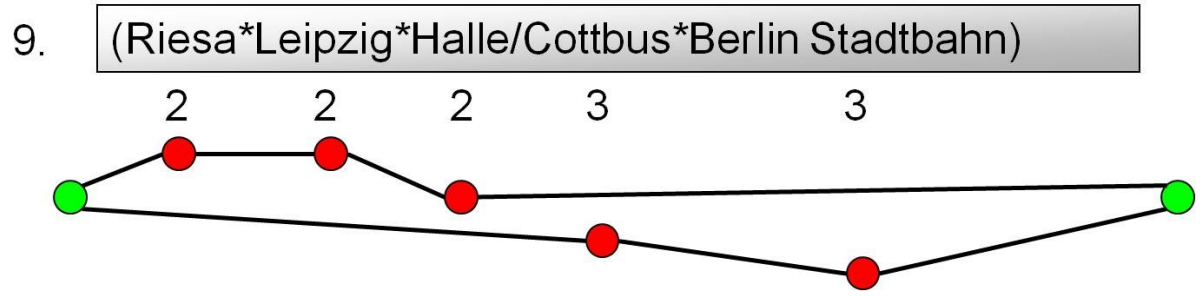
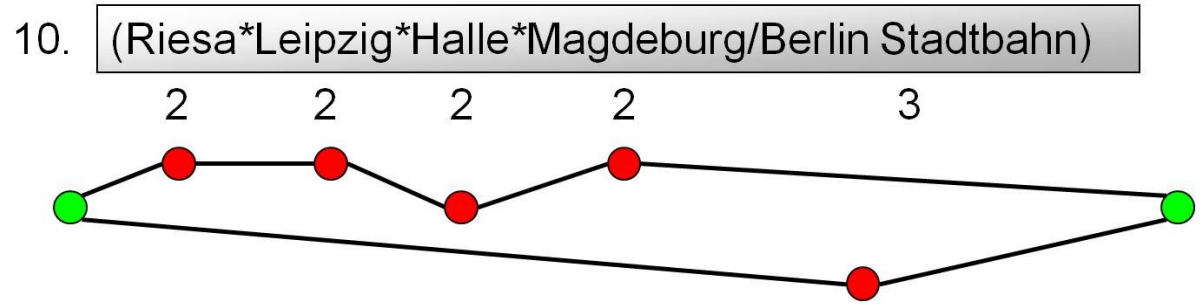


Figure B.1.15



Appendix C - File: TCVM (Memo)

C.1 - Series info

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Info code	numeric	4	M		5-8	Info data are consecutively number-coded. The file is to be made available in ascending order of the code.
3	Key flag for info code	numeric	1	M		9	0, 1 or 2 (see point 2.2)
4	Line 1 in country's official language	alpha numeric	60	M		10-69	
5	Line 2 in country's official language	alpha numeric	60	O		70-1 29	
6	Line 3 in country's official language	alpha numeric	60	O		130-1 89	
7	Line 4 in country's official language	alpha numeric	60	O		190-249	
8	Line 1 in French	alpha numeric	60	O		250-309	
9	Line 2 in French	alpha numeric	60	O		310-369	
10	Line 3 in French	alpha numeric	60	O		370-429	
11	Line 4 in French	alpha numeric	60	O		430-489	
12	Line 1 in German	alpha numeric	60	O		490-549	
13	Line 2 in German	alpha numeric	60	O		550-609	
14	Line 3 in German	alpha numeric	60	O		610-669	
15	Line 4 in German	alpha numeric	60	O		670-729	
16	Line 1 in English	alpha numeric	60	O		730 - 789	
17	Line 2 in English	alpha numeric	60	O		790 - 849	
18	Line 3 in English	alpha numeric	60	O		850 - 909	
19	Line 4 in English	alpha numeric	60	O		910 - 969	
20	Reserved	alpha numeric	60	O		970 - 1029	
21	Reserved	alpha numeric	60	O		1030 – 1089	
22	Reserved	alpha numeric	60	O		1090 - 1149	
23	Reserved	alpha numeric	60	O		1150 – 1209	
24	Flag 1 for info text	numeric	1	M		1210	0 or 3 (see point 2.2)
25	First day of validity of	numeric	8	M		1211 – 1218	Expressed as: 'YYYYMMDD'
26	Version number	numeric	2	M		1219 – 1220	Sequential version number related to the fare date; '01' for the first issue, '02' for the second, etc.

27	Last date of validity of fare	numeric	8	M		1221 - 1228	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

C.2 - Notes to the Info file

A number of data fields which may not be self-explanatory are clarified below:

C.2.1 - Field 2 - Info code

This field establishes a reference to the relevant series.

C.2.2 - Fields 4 to 23 - Info text in various languages

The various languages are always placed in the same position in the record. If the official language of the country in question is French, fields 4-7 and 8-11 are identical.

Appendix D - File: TCVT Train(Train)

D.1 - Product Table

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Product identifier	numeric	2	M		5-6	The product identifier is coded with consecutive numbering. The file is to be made available in ascending order of the code.
3	Key flag for product identifier	numeric	1	M		7	0, 1 or 2 (see point 2.2)
4	Product description	alpha numeric	20	M		8-27	Description of product/train (e.g. Thalys)
5	Flag 1 for product description	numeric	1	M		28	0 or 3 (see point 2.2)
6	Fare table number	numeric	4	M		29-32	Number refers to the fare table valid for this product. Fares of this fare table are valid in addition to the standard fares (for example: Supplements).
7	Flag 2 for fare table number	numeric	1	M		33	0 or 3 (see point 2.2)
8	First day of validity of fare	numeric	8	M		34-41	Expressed as: 'YYYYMMDD'
9	Version number	numeric	2	M		42-43	Sequential version number related to the fare date; '01' for the first issue, '02' for the second, etc.
10	Last day of validity of fare	numeric	8	M		44-51	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

Appendix E - File: TCVO Offer(Offer)

E.1 - Product offer table

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code for supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Offer identifier	numeric	2	M		5-6	An offer identifier should be issued for all offers in respect of which a fare table is transferred. The file is to be made available in ascending order of this field.
3	Offer description in country's official language(s)	alpha numeric	30	M		7-36	Name of product offer, e.g. RES
4	Offer description in French	alpha numeric	30	M		37-66	
5	Offer description in German	alpha numeric	30	M		67-96	
6	Offer description in English	alpha numeric	30	M		97-126	
7	Reserved		30	O		127-156	
8	Flag 1 for name of product offer	numeric	1	M		157	0 or 3 (see point 2.2)
9	Fare table number	numeric	4	M		158-161	The fare table number refers to the fare table valid for this offer. This fare table replaces the Normal Price- table indicated in the TCVS.
10	Key flag for combination of offer identifier and fare table number	numeric	1	M		162	0, 1 or 2 (see point 2.2)
11	First day of validity of fare	numeric	8	M		163-170	Expressed as: 'YYYYMMDD'
12	Version number	numeric	2	M		171-172	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.
13	Last day of validity of fare	numeric	8	M		173-180	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

Appendix F - File: TCVC (Carrier)

F.1 - Carrier Codes

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Carrier code separator 1	'<'	1	M		5	This field always contains the value '<'
3	Carrier code	alpha numeric	4	M		6-9	4-letter alphanumeric code for the RU (e.g. 0081 for ÖBB) The file is to be made available in ascending order of this field.
4	Carrier code separator 2	'>'	1	M		10	This field always contains the value '>'
5	Key flag for carrier code	numeric	1	M		11	0, 1 or 2 (see point 2.2)
6	Carrier's shortened name	alpha numeric	17	M		12-28	
7	Flag 1 for carrier's shortened name	numeric	1	M		29	0 or 3 (see point 2.2)
8	Carrier's full name	alpha numeric	60	M		30-89	
9	Flag 2 for carrier's full name	numeric	1	M		90	0 or 3 (see point 2.2)
10	Address - street	alpha numeric	60	M		91-1 50	
11	Address - postcode	alpha numeric	10	M		151-160	
12	Address - place	alpha numeric	60	M		161-220	
13	Address - country	alpha numeric	60	M		221-280	
14	Flag 3 for address	numeric	1	M		281	0 or 3 (see point 2.2).
15	Carrier code separator 1	'<'	1	M		282	This field always contains the value '<'
16	Carrier code of the RU managing the system	numeric	4	O		283-286	If an RU is appointed by a number of others to manage the system, its carrier code should be entered into this field, failing which the field will be given the value '0000'.
17	Carrier code separator 2	'>'	1	M		287	This field always contains the symbol '>'
18	Flag 4 for the carrier code of the RU managing the system	numeric	2	M		288	0 or 3 (see point 2.2)
19	First day of validity of fare	numeric	8	M		289-296	Expressed as: 'YYYYMMDD'
20	Version number	numeric	2	M		297-298	Sequential version number related to the fare date; "01" for the first issue, "02" for the second etc.
21	Last day of validity of fare	numeric	8	M		299-306	Expressed as: "YYYYMMDD"

a. M = Mandatory; O = Optional.

F.2 - Explanations on the carrier codes

The "Carrier codes" file contains information about the RU performing carriage of a series.

A number of data fields which may not be self-explanatory are clarified below.

F.2.1 - Fields 2 to 4 - Carrier code

The code of the RU performing carriage is entered in this field.

The Carrier code comprises the 4-position company code (element 3) and the separators "<" and ">" (elements 2 and 4).

Example ÖBB:

Separator 1	Code for the RU	Separator 2
<	0081	>

F.2.2 - Fields 6 to 14 - Carrier's data

The RU making available the B.1 data must input in these fields the address of its department competent for the NRT subjects (e.g. customer services, compensation requests for delays). This address is often different from the address of the RU's Headquarters, contained in the Companies reference database.

F.2.3 - Fields 15 to 17 - System-managing carrier

If an RU is agreed upon as system manager by several RUs, the carrier code of this RU is to be entered into this field.

The system-managing carrier code as well consists of the 4-position RU code (element 16) and the separators "<" and ">" (elements 15 and 17).

If there is no system-managing carrier the value "0000" is to be entered into element 16.

Separator 1	Code for the RU	Separator 2
<	0000	>

Appendix G - File: TCVP (Prix)

G.1 - Fare table description

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code for delivering RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Fare table number	numeric	4	M		5-8	The file is to be made available in ascending order of this field.
3	Key flag for fare table number	numeric	1	M		9	0,1 or 2 (see point 2.2)
4	Type of table	numeric	1	M		10	1 = distance-based 2 = route-based 3 = set fare
5	Description in country's official language(s)	alpha numeric	30	M		11-40	
6	Description in French	alpha numeric	30	O		41-70	
7	Description in German	alpha numeric	30	O		71 -1 00	
8	Description in English	alpha numeric	30	O		101 -1 30	
9	Reserved	alpha numeric	30	M		131 -1 60	
10	Flag 1 for fare table description	numeric	1	M		161	0 or 3 (see point 2.2)
11	Currency acronym	alpha numeric	3	M	*ISO 4217*	162-164	'EUR'
12	Flag 2 for currency acronym	numeric	1	M		165	0 or 3 (see point 2.2)
13	Fare type	numeric	2	O	*code list B.1.1*	166-167	
14	Reserved	numeric	1	M		168	
15	Reserved	numeric	1	M		169	
16	Number of adults	numeric	2	O		170-171	Not to be completed if '3' is entered in Field 4.
17	Number of children	numeric	2	O		172-173	Not to be completed if '3' is entered in Field 4.
18	Discount on standard fare	numeric	3	O		174-176	2 digits before the decimal point and one after; e.g. 125 for 12.5% discount
19	Flag 4 for discount	numeric	1	O		177	
20	File name	alpha numeric	8	M		178-1 85	
21	Fare table replaced	numeric	4	O		186-189	Number of fare table being replaced.
22	First day of validity of fare	numeric	8	M		190-197	Expressed as: 'YYYYMMDD'
23	Version number	numeric	2	M		198-199	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.
24	Last day of validity of fare	numeric	8	M		200-207	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

G.2 - Explanations on the fare table

The 'Fare table description' file provides additional information for all fare tables sent. Each record contains the file name and title of the fare table.

A number of data fields which may not be self-explanatory are clarified below:

G.2.1 - Field 2 - Fare table number

The fare table number is encoded using four characters, which may not contain leading zeros (i.e. the lowest value possible is 1000).

G.2.2 - Field 4 - Type of table

This field indicates which format has the fare table :
1 = distance based (fare table compliant with Appendix H of B.1)
2 = route based (fare table compliant with Appendix I of B.1)
3 = set fare (fare table compliant with Appendix J of B.1)

G.2.3 - Field 10 - Flag 1 for offer description

Flag 1 must be set to “3” when anyone of the fields 5 to 8 has been modified versus the previous version

G.2.4 - Field 13 - Fare type

If the fare table in question is indicated in the TCVS in the field “fare table number, standard fare” (TCVS, field 34) the fare type in this field will be always indicated as “01” NRT standard fare.
The other entries apply to fare tables, which are transmitted by means of the TCVO or TCVT tables (see code list B.1.1)

This field indicates how to use the fare table:
01 = TCV full fare = the fare for a full flexible ticket.
02 = distance based fare = fare for using as offer fare (without offer conditions, see B.3)
03 = market fare / global fare = is a reserved value, because these fares are set in B.2
04 = group fare = fare for using as offer fare for groups (without offer conditions, see B.3)
05 = surcharges = in combination with another ticket, same like 06 = supplements
06 = supplements = in combination with another ticket, same like 05 = surcharges

G.2.6 - Fields 16 and 17 - Number of adults/children

For distance and route-based fare tables, the number of adults and children shall be entered in the TCVP.

The number of adults and children given indicates to whom the fares in the fare table are to apply. Standard fare tables always apply to one adult.

Where more than one person is indicated, the fare table only applies to this number of persons.

G.2.7 - Field 20 - File name

The eight-character file name for the individual fare table comprises the four-character fare table number, which may not contain leading zeros, and the four-character code for the supplying RU.

For each fare table sent, a data record containing its general characteristics is to be included in the TCVP file.

G.2.4 - Field 21 - Fare table replaced

This field can be used to indicate that a fare table of a previous version must be completely discarded, instead of repeating the same table with all lines having the key flag set to “2” (record deleted).

Appendix H - Distance-based fare tables file

H.1 – distance based fare table

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Fare table number	numeric	4	M		5-8	The fare table number can be used to locate key information on this fare table in the 'Fare table description' file
3	Distance	numeric	5	M		9-13	Upper limit of distance range 1st sorting criterion, ascending
4	Flag 1 for distance	numeric	1	M		14	0 or 3 (see point 2.2)
5	2nd Class single fare	numeric	7	M		15-21	5 digits before the decimal point, 2 digits after the decimal point
6	Flag 2 for 2nd Class single fare	numeric	1	M		22	0 or 3 (see point 2.2)
7	1st Class single fare	numeric	7	M		23-29	5 digits before the decimal point, 2 digits after the decimal point
8	Flag 3 for 1st Class single fare	numeric	1	M		30	0 or 3 (see point 2.2)
9	2nd Class return fare	numeric	7	O		31-37	5 digits before the decimal point, 2 digits after the decimal point
10	Flag 4 for 2nd Class return fare	numeric	1	M		38	0 or 3 (see point 2.2)
11	1st Class return fare	numeric	7	O		39-45	5 digits before the decimal point, 2 digits after the decimal point
12	Flag 5 for 1st Class return fare	numeric	1	M		46	0 or 3 (see point 2.2)
13	First day of validity of fare	numeric	8	M		47-54	Expressed as: 'YYYYMMDD'
14	Version number	numeric	2	M		55-56	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.
15	Last day of validity of fare	numeric	1	M		57-64	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

H.2 – notes on distance based fare table

A number of selected data fields which may be not self explanatory are clarified below :

Fields 5 to 11 – 1st and 2nd class fares

If the fare table should only reflect the 2nd or the 1st class fares, a value 0 in a class fare element indicates that this fare is not provided and this fare must not be used for tickets.
The value 0 does not indicate a zero price!.

Appendix I - Route-based fare tables file

I.1 - Route based fare table

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Fare table number	numeric	4	M		5-8	The fare table number can be used to locate key information about this fare table in the 'Fare table description' file
3	Series	numeric	5	M		9-13	Serves to assign fares to a specific series.
4	code for departure station	numeric	5	M	*TAP TSI Technical Document B.9*	14-18	
5	17-character designation for departure station	alpha numeric	17	M		19-35	1st sorting criterion, ascending
6	Flag 1 for departure station designation	numeric	1	M		36	0 or 3 (see point 2.2)
7	code for destination station	numeric	5	M		37-41	
8	17-character designation for destination station	alpha numeric	17	M		42-58	2nd sorting criterion, ascending
9	Flag 2 for destination station designation	numeric	1	M		59	0 or 3 (see point 2.2)
10	Carrier code separator 1	'<'	1	M		60	This field always contains the symbol '<'
11	Carrier code	numeric	4	M		61-64	Coding for contractual carrier on this line
12	Carrier code separator 2	'>'	1	M		65	This field always contains the symbol '>'.
13	Route	alpha numeric	58	O	*TAP TSI Technical Document B.5*	66-123	
14	Flag 3 for combination of carrier code and route	numeric	1	M		124	Relates to Fields 11 and 13; 0 or 3 (see point 2.2)
15	2nd Class single fare	numeric	7	M		125-131	5 digits before the decimal point, 2 digits after the decimal point, 3rd sorting criterion, ascending
16	Flag 4 for 2nd Class single fare	numeric	1	M		132	0 or 3 (see point 2.2)
17	1st Class single fare	numeric	7	M		133-139	5 digits before the decimal point, 2 digits after the decimal point
18	Flag 5 for 1st Class single fare	numeric	1	M		140	0 or 3 (see point 2.2)
19	2nd Class return fare	numeric	7	O		141-147	5 digits before the decimal point, 2 digits after the decimal point
20	Flag 6 for 2nd Class return fare	numeric	1	M		148	0 or 3 (see point 2.2)
21	1st Class return fare	numeric	7	O		149-155	5 digits before the decimal point, 2 digits after the decimal point
22	Flag 7 for 1st Class return fare	numeric	1	M		156	0 or 3 (see point 2.2)
23	First day of validity of fare	numeric	8	M		157-164	Expressed as: 'YYYYMMDD'
24	Version number	numeric	2	M		165-166	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.

25	Last day of validity of fare	numeric	8	M		167-174	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

I.2 – notes on route based fare table

A number of selected data fields which may be not self explanatory are clarified below :

Fields 5 to 11 – 1st and 2nd class fares

If the fare table should only reflect the 2nd or the 1st class fares, a value 0 in a class fare element indicates that this fare is not provided and this fare must not be used for tickets.
The value 0 does not indicate a zero price!

Appendix J - Set fare tables file

J.1 – Set fare table

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	Code of the supplying RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Fare table number	numeric	4	M		5-8	The fare table number can be used to locate key information on this fare table in the 'Fare table description' file
3	Number of adults	numeric	2	M		9-10	1st sorting criterion, ascending
4	Number of children	numeric	2	O		11-12	2nd sorting criterion, ascending
5	2nd Class single fare	numeric	7	M		13-19	5 digits before the decimal point, 2 digits after the decimal point if set fares do not relate to a specific route (e.g. Swiss pass) element 9 is left blank.
6	Flag 1 for 2nd Class single fare	numeric	1	M		20	0 or 3 (see point 2.2)
7	1st Class single fare	numeric	7	M		21-27	5 digits before the decimal point 2 digits after the decimal point if set fares do not relate to a specific route (e.g. Swiss pass) element 11 is left blank.
8	Flag 2 for 1st Class single fare	numeric	1	M		28	0 or 3 (see point 2.2)
9	2nd Class return fare	numeric	7	O		29-35	5 digits before the decimal point 2 digits after the decimal point if set fares do not relate to a specific route (e.g. Swiss pass) element 9 is left blank.
10	Flag 3 for 2nd Class return fare	numeric	1	M		36	0 or 3 (see point 2.2)
11	1st Class return fare	numeric	7	O		37-43	5 digits before the decimal point 2 digits after the decimal point if set fares do not relate to a specific route (e.g. Swiss pass) element 11 is left blank
12	Flag 4 for 1st Class return fare	numeric	1	M		44	0 or 3 (see point 2.2)
13	First day of validity of fare	numeric	8	O		45-52	Expressed as: 'YYYYMMDD'
14	Version number	numeric	2	M		53-54	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.
15	Last day of validity of fare	numeric	8	M		55-62	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

J.2 – notes on set fare table

A number of selected data fields which may be not self explanatory are clarified below :

Fields 5 to 11 – 1st and 2nd class fares

If the fare table should only reflect the 2nd or the 1st class fares, a value 0 in a class fare element indicates that this fare is not provided and this fare must not be used for tickets.
The value 0 does not indicate a zero price!

Appendix K - File: TCVL (linking series)

K.1 – not linking series

Serial no on record	Field	Characters	No of char's	M or O [a)]	reference	Pos. Of char's	Comments
1	Code of the supplying RU	alpha numeric	4	M	ERA TD B.8	1-4	e.g. 1181 for ÖBB
2	Series	numeric	5	M		5-9	Serves to assign fares to a specific series
3	Flag for series	numeric	5	M		10-14	0, 1 or 2 (cf. Subsection 2.2)
4	First day of validity of fare	numeric	8	M		15-22	Expressed as: "YYYYMMDD"
5	version number	numeric	2	M		23-24	Serial numbering for versions on the fare date; "01" for the first issue; "02" for the second
6	Last day of validity of fare	numeric	8	M		25-32	Expressed as: "YYYYMMDD"

a) M = Mandatory; O = Optional.

K.2 - Notes to the not linking series

In this file, all series will be entered, which must not be linked with other series. These series may only be sold, if a separate ticket for this series will be printed.

Series are transmitted in the following order:
1st sorting criterion, Field 2, ascending order

A number of selected data fields which may be not self explanatory are clarified below :

Field 3 – Flag for series

Enter Flag “1”, if a series should be added, which shall not be linked to other series.

Enter flag “2”, if from now on, a series may be linked with other series on the same ticket at once or if a series will be marked as deleted (Flag 2) in the series file (TCVG).

Appendix L - File: TCV

L.1 - Header file

Serial no. in record	Field	Type	Field length	M or O[a]	Reference	Position	Comments
1	Code of the supplier RU	alpha numeric	4	M	*TAP TSI Technical Document B.8*	1-4	e.g. 0081 for ÖBB
2	Shortened name of the supplier RU	alpha numeric	30	M		5-34	e.g. ÖBB
3	File name	alpha numeric	8	M		35-42	e.g. TCVG0081 The file is to be made available in ascending order of this field
4	Number of records	numeric	6	M		43-48	
5	Number of new records	numeric	6	O		49-54	
6	Number of deleted records	numeric	6	O		55-60	
7	Number of amendments to Flag 1	numeric	6	O		61-66	
8	Number of amendments to Flag 2	numeric	6	O		67-72	
9	Number of amendments to Flag 3	numeric	6	O		73-78	
10	Number of amendments to Flag 4	numeric	6	O		79-84	
11	Number of amendments to Flag 5	numeric	6	O		85-90	
12	Number of amendments to Flag 6	numeric	6	O		91-96	
13	Number of amendments to Flag 7	numeric	6	O		97-102	
14	Number of amendments to Flag 8	numeric	6	O		103-108	
15	Number of amendments to Flag 9	numeric	6	O		109-114	
16	Number of amendments to Flag 10	numeric	6	O		115-120	
17	Number of amendments to Flag 11	numeric	6	O		121-126	
18	Number of amendments to Flag 12	numeric	6	O		127-1 32	
19	Number of amendments to Flag 13	numeric	6	O		133-1 38	
20	Number of amendments to Flag 14	numeric	6	O		139-144	
21	First day of validity of fare	numeric	8	M		145-152	Expressed as: 'YYYYMMDD'
22	Version number	numeric	2	M		153-154	Sequential version number related to the fare date; '01' for the first issue, '02' for the second etc.
23	Last day of validity of fare	numeric	8	M		155-162	Expressed as: 'YYYYMMDD'

a. M = Mandatory; O = Optional.

L.2 - Notes to the header file

A number of data fields which may not be self-explanatory are clarified below: **Fields 7 to 20 -**

Number of amendments to the various flags

The amendment flags are to be listed in the order in which they appear in the record; access key flags are not included (values 0, 1 or 2).

Appendix M - Pictogram codes

See *code list B.1.2*

Appendix N – Border point codes

See *code list B.1.3*

3 Glossary

Border point	Border, transition, adjacent point or point of tariff-intersection. The border point indicates the point, where the tariff of one RU begins or ends
Carrier	RU performing the carriage service for a series
Incoming series	Journey section between a border point and a national station of an RU
National series	Journey section between two national stations of an RU
Railway undertaking (RU)	(within the meaning of this Technical Document) any RU subject to the COMMISSION REGULATION (EU) No 454/2011 - "Technical specification for interoperability relating to the subsystem 'telematics applications for passenger services' of the trans-European rail system" .
Route	Journey section, national or international, between the station of departure and the station of destination
Series	Route between a departure point and a destination point (stations or border points) of a single RU which is coded with a series number
Supplier RU	RU that prepares fare information in accordance with this Technical Document and makes it available to other RUs and/or third parties authorized to sell
Transit series	Journey section between two border points of an RU

4 List of abbreviations

CIV	Convention Internationale Voyageur
ERA	European Rail Agency
RU	Railway Undertaking
UIC	International Union of Railways

5 Bibliography

5.1 ERA Technical Documents

European Rail Agency

TAP TSI Technical Document B.5: Electronic seat reservation and electronic compilation of travel documents - Message exchanges, V 1.3.1 (10. February 2016)

TAP TSI Technical Document B.6: Electronic seat reservation and electronic compilation of travel documents. Travel documents (RCT2 Standard), V 1.2 (30. September 2013)

TAP TSI Technical Document B.8: Standard numerical coding for railway undertakings, infrastructure managers and others companies involved in rail transport chains, V 1.4 (15. December 2020)

TAP TSI Technical Document B.9: Standard numerical coding of locations, V 1.4 (15. December 2020)