



Fahrplan

Customer handbook **Requesting paths on DB Netz via PCS Timetable 2018**

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Change Log

Version	Remarks
1.0 06.02.2015	Published only in German language
1.1 26.02.2015	Initial version in English language.
2.0 08.12.2016	Updated version for timetable year 2018

1 Preface

Dear readers,

the Path Coordination System (PCS) makes available for you an international ordering tool for your cross-border path requests, which had been developed jointly by the infrastructure managers (IMs) brought together in RailNetEurope (RNE) so as to simplify the path planning and assignment for international traffic.

PCS makes it possible for you to agree across borders in the planning phase on international paths that you are planning on your own initiative or in cooperation with partner railway undertakings (RUs)

- and to form them into a harmonized international "requested timetable";
- to hand it in as a harmonized request in a single operation to all the infrastructure managers that are involved
- to maintain the international overview of the Draft Offer and the Final Offer of the infrastructure managers that are involved.

The use of PCS presupposes to a large extent full and correct entry of the required data and parameters. We therefore wish to explain with this handbook which details are required and in what form these details are to be saved in PCS, especially at the borders between the infrastructure managers. The handbook also illustrates how frequent sources of error can be avoided at the time of data input.

Please note that PCS can currently be used in the first instance for international path requests in the annual timetable. For IT-related reasons it is not recommended that you use PCS for changes to the annual timetable and for ad-hoc path requests.

We hope that the use of PCS will be made easier with this handbook and look to any comments and suggestions for improvement that you might have.

2 Disclaimer

2.1 Standards of quality, editorial deadline

The editorial work on that handbook took several months and it features all technical and procedural rules and all the specifics that were known at the time of the editorial deadline.

Both systems PCS and TPN are characterized by their complexity and, in case of PCS, for their ongoing agile development. Hence we have decided to limit this handbook to the most common use cases in order to keep some clarity.

While preparing and writing this handbook, a maximum of accuracy was prevailed. Nevertheless, we cannot preclude the fact that there might be some mistakes. Ongoing development on the IT system may also lead to subsequent changes to the contents of the handbook.

Thus we shall revise and update this handbook regularly at the beginning of each new timetable year at X-13.

RNE is planning to introduce the feature “Empty Envelope concept” to PCS for the Major Release 2017. It's based on the current “Empty Master” structure and will fully replace both “Empty Master” and “Detailed Master”.

2.2 Technical requirements

PCS is an internet-based application and thus is supported by the commonly used browsers. To use the full functionality of PCS and for the sake of data security, we strongly recommend to keep your web browser always up to date. Newly developed functions might not be executable in outdated browser versions and may lead to incorrect data display or even loss of data in the worst case.

Hence we recommend to use PCS with the latest versions of the following browsers:

- Mozilla Firefox
- Google Chrome
- Apple Safari

Based on user experience in the production systems, the usage of Microsoft Internet Explorer is not recommended without limitations.

If your computer system is subject to a companywide IT policy and thus centrally administrated, we recommend to contact your company's system administrator and to clarify together with him or her how regular updates of the browser versions can be assured.

3 Operation points

3.1 Basic principles

Correct input of the operation point is of crucial importance for the error-free editing of your path request in PCS.

DB Netz AG has provided all timetable-relevant operation points with a "Location Primary Code" and put the operation point designation into ASCII format. In this way it is possible to avoid input problems involving the German umlauts or the special character for double s.

Please ensure when creating your PCS dossier that you only work with valid operation points. This is especially important if you wish to update existing dossiers in the next timetable period.

If an operation point that is no longer valid or is invalid for other reasons is updated or used in the IM requested timetable of the dossier, PCS puts out an error text. In this case, it is technically prevented that you can submit a Path Request

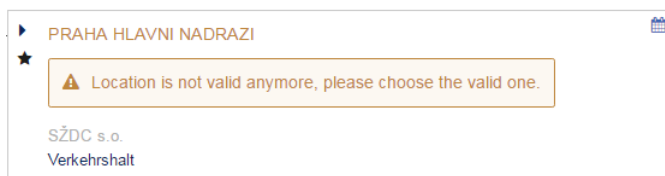


Figure 1: Example of an invalid operation point in the RU requested timetable. The operation point "PRAHA HLAVNI NADRAZI" either does no longer exist in PCS or is unavailable for the requested validity period of the path.

We recommend using the IM timetable as a basis when forwarding a dossier from a previous timetable period because it will only contain valid operation points. In this way you can be sure that you are working with the correct operation point data. Subsequently you can edit all the required timetable details again according to your wishes.

You can recognize valid DB Netz operation points

- by the Location Primary Code in the "Reference Code" field
- if applicable, by the substituted umlauts (ae instead of ä, oe instead of ö, ue instead of ü, ss instead of ß)
- by the use of the DS 100 long name

3.2 Timetable-relevant operation points on external infrastructure

Operation points for which the DB Netz AG is responsible within the meaning of the relevant border agreement but are not located on the infrastructure of DB Netz are subject to a special ruling. Since these operation points involve "external infrastructure" from the point of view of DB Netz, no Location Primary Codes could be assigned for them. Instead, the DS100 abbreviation of the corresponding operation point is used as the reference ID.

This is clear in the case of operation point Padborg in Denmark, for example:

The screenshot shows a web-based interface. On the left, there is a blue star icon and a dropdown menu with 'Padborg' selected. Below the dropdown, three options are listed: 'Padborg; n/a; XDPA; DB-Netz', 'Padborg; 86000169; 169; BS', and 'Padborg graense; 86000661; 661; BS'. To the right of the dropdown, there are two input fields: 'Zug-Nr.' and 'Tr-Nr.'.

Figure 2: Padborg is a station on the infrastructure of Banedanmark. At the same time, Padborg is the bilaterally agreed handover point between DB Netz and Banedanmark. Since Padborg is thus relevant for DB Netz AG in the timetable planning, the operation point was taken into the operation point register of DB Netz and given the associated DS100 abbreviation "XDPA" instead of a Location Primary Code. Directly beneath the operation point "Padborg" of Banedanmark is shown.

Please note:

Relevant for the choice of the correct operation point is not the geographical position of this point, but instead the IM responsibility for the timetabling process.

Example:

The operation point Stobno is located in Poland. Due to the IM border contract, DB Netz is responsible for the timetabling on the border-crossing line. Thus, in the RU requested timetable, the operation point of the portfolio of DB Netz is to be taken. There must not be a second operation point Stobno of the PLK portfolio in the timetable.

You will find important information on the setup of timetables on border-crossing railway tracks in the subsequent chapter 3.3. To see which IM is responsible for which operation point on a border-crossing railway section, please refer to the annex.

3.3 Rail sections across borders

The peculiarities of the rail sections across borders must be taken into consideration when requesting paths in international traffic. The significant point here when drawing up your RU requested timetable is the relevant handover point at which the coordination of the IM timetable is done between the IMs that are involved.

There are three different variations for the handover point:

A – Handover point is on the national boundary

Examples: Aachen West Grenze, Aachen Süd Grenze, Sebnitz Grenze

B – National border runs exactly through the border station

Example: Bayerisch Eisenstein

C – Handover point is at a bilaterally agreed station near the border, one IM is responsible for timetable elaboration on the infrastructure of the other

D – Handover points are not adjacent to each other

Example: Puttgarden / Rödby

In the case of variation C a distinction is made between

C1 – Handover point is on the infrastructure of DB Netz

Examples: Emmerich, Bad Bentheim, Lindau Hbf, Passau Hbf, Basel Bad Bf

C2 – Handover point is on external infrastructure

Examples: Venlo, Padborg, Cheb, Salzburg Hbf, Kufstein

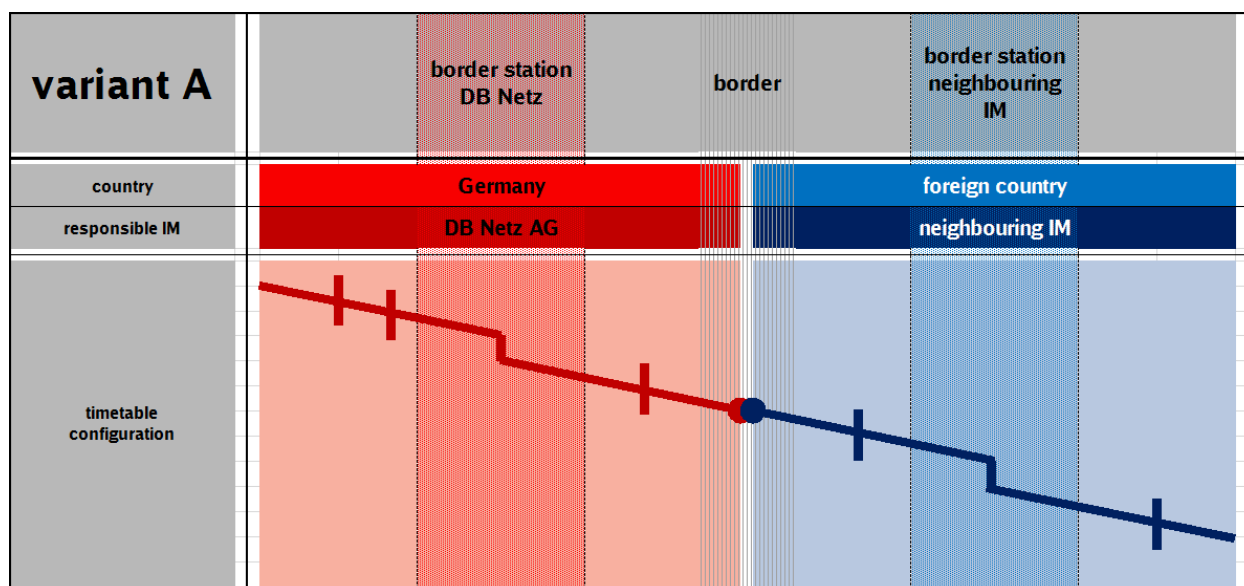
In addition to these variations there are also special points on the border sections

- Dortmund / Münster – Enschede
- Seebad Ahlbeck – Swinoujście

These railway lines end at Enschede respectively Swinoujście at a buffer, hence there is no direct connection to the other IM's network. Although an IM network border is passed, this is no international traffic in the sense of the timetabling business. Timetable elaboration is solely done by DB Netz on both lines.

The following rules must be noted for the dossier structure, depending on the border procedure.

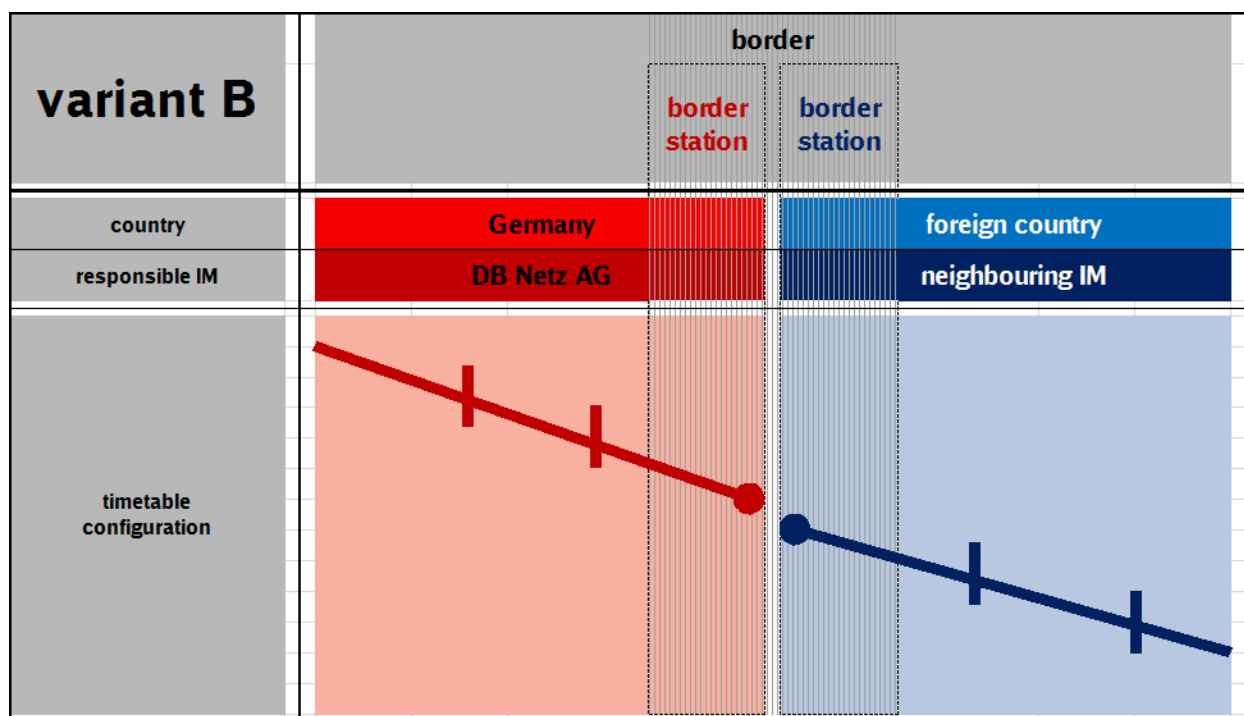
3.3.1 Border type A – handover point is on the national border



08:23 dwell [30]	▶ Duisburg-Ruhrort Hafen DB Netz AG	operation points at DB Netz <i>by your choice</i>	
10:07 10:45 dwell [30]	▶ Aachen West Gbf DB Netz AG		
10:47	▶ Aachen West Pbf DB Netz AG		operation point “close to border” please insert in RU timetable if no activity is needed, use run-through
10:49	▶ Aachen West Westkopf DB Netz AG		border area (DB Netz part) <i>insert if needed</i>
10:52	▶ Aachen-Gemmenich DB Netz AG	IM network boundary pair of two operation points one point per IM only run-through permissible only fill out departure times with the same time on both points	
10:57	▶ Aachen West Grenze DB Netz AG		
10:57	▶ MONTZEN-FRONTIERE Infrabel		
11:07 11:23 dwell [10]	▶ MONTZEN Infrabel	operation point “close to border”	
13:55 dwell [30]	⊙ ▶ BRUGGE Infrabel	operation points at foreign IM <i>by choice, follow resp. IM’s rules</i>	

Handover Point

3.3.2 Border type B - state border runs exactly through the border station



15:23 dwell [10]	<div> <div>Praha hl.n.</div> <div> <div>★ SŽDC s.o.</div> <div>Commercial stop</div> </div> </div>
19:44 dwell [2]	<div> <div>Žel.Ruda-Alžbětín</div> <div> <div>SŽDC s.o.</div> <div>Commercial stop</div> </div> </div>
19:46 dwell [2]	<div> <div>Bayerisch Eisenstein</div> <div> <div>DB Netz AG</div> <div>Commercial stop</div> </div> </div>
19:52	<div> <div>Ludwigsthal</div> <div> <div>DB Netz AG</div> <div>Run through</div> </div> </div>
19:57	<div> <div>Zwiesel (Bay)</div> <div> <div>DB Netz AG</div> <div>Run through</div> </div> </div>
21:05 dwell [5]	<div> <div>Plattling</div> <div> <div>DB Netz AG</div> <div>Commercial stop</div> </div> </div>

operation points at foreign IM

by choice, follow resp. IM's rules

border station

pair of two operation points
one point per IM

in case of **stop**:

- 1st point (inbound) only **arrival** time
- 2nd point (outbound) only **departure** time
- dwell time **equal** on both points

in case of **run-through**:

- only equal **departure** time on both points

Handover Point

border area (DB Netz part)

insert if needed

operation point "close to border"

please insert in RU timetable
if no activity is needed, use run-through

operation points at DB Netz

by your choice

3.3.3 Border type C1 – bilaterally agreed border station (1)

variant C		border station DB Netz	state border	border station neighbour. IM	
country	Germany			foreign country	
responsible IM	DB Netz AG			neighbouring IM	
timetable configuration variant C1					

05:14 dwell [5]	▶ ALKMAAR ★ ProRail Commercial stop
07:52	▶ ZEVENAAR GRENS ProRail Run through
08:01 dwell [2]	▶ EMMERICH (DE) ProRail Commercial stop
08:03 dwell [2]	▶ Emmerich DB Netz AG Commercial stop
08:09	▶ Empel-Rees DB Netz AG Run through
08:43 dwell [5]	▶ Oberhausen Hbf DB Netz AG Commercial stop

operation points at foreign IM

by choice, follow resp. IM's rules

IM network boundary

als Betriebsstellen-Element
des Nachbar-IB einfügen

border station

pair of two operation points
one point per IM

in case of **stop**:

1st point (inbound) only **arrival** time

2nd point (outbound) only **departure** time

dwell time **equal** on both points

in case of **run-through**:

only equal **departure** time on both points

Handover Point

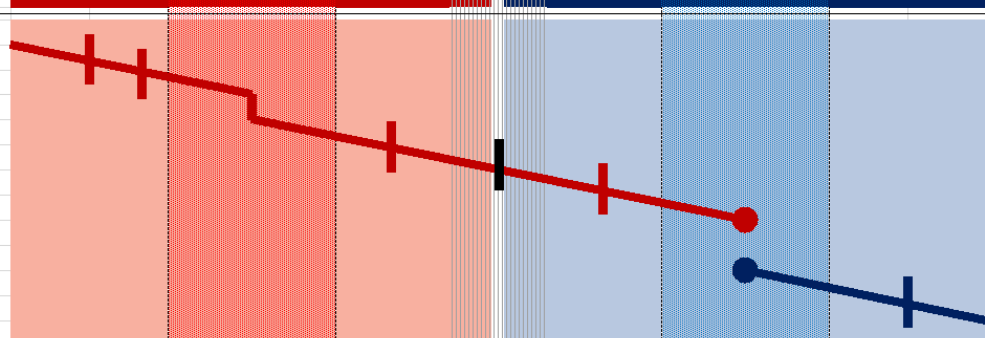
operation point “close to border”

please insert in RU timetable
if no activity is needed, use run-through

operation points at DB Netz

by your choice

3.3.4 Border type C2 – bilaterally agreed border station (2)

variant C		border station DB Netz		state border		border station neighbour. IM	
country	Germany					foreign country	
responsible IM	DB Netz AG					neighbouring IM	
timetable configuration variant C2							

Arrival Departure

11:50 dwell [5]	<ul style="list-style-type: none"> Tuerkismuehle ★ DB Netz AG Commercial stop
12:24 12:30 dwell [5]	<ul style="list-style-type: none"> Saarbruecken Hbf DB Netz AG Commercial stop
12:34	<ul style="list-style-type: none"> Saarbruecken Saardamm DB Netz AG Run through
12:36	<ul style="list-style-type: none"> Saarbruecken Grenze DB Netz AG Run through
12:39	<ul style="list-style-type: none"> Stiring-Wendel DB Netz AG Run through
12:44 dwell [15]	<ul style="list-style-type: none"> Forbach DB Netz AG Commercial stop
13:05 dwell [15]	<ul style="list-style-type: none"> FORBACH - BAT VOYAGEURS SNCF Reseau Commercial stop
13:12	<ul style="list-style-type: none"> BENING - BAT VOYAGEURS SNCF Reseau Run through
16:32 dwell [10]	<ul style="list-style-type: none"> PARIS-EST SNCF Reseau Commercial stop

operation points at DB Netz
by your choice

operation point “close to border”
please insert in RU timetable
if no activity is needed, use run-through

IM network boundary

border area

border station

pair of two operation points
one point per IM

in case of **stop**:
1st point (inbound) only **arrival** time
2nd point (outbound) only **departure** time
dwell time **equal** on both points

in case of **run-through**:
only equal **departure** time on both points

Handover Point

operation points at foreign IM
by choice, follow resp. IM's rules

4 Standardized dossier structure methods

PCS still allows an individual and completely free structuring of the dossier. The contents of the dossier are not checked for subject or technical plausibility. PCS only gives warning messages if you are using Subsidiary Timetables and it finds inconsistencies relating to the Main Timetable.

We therefore require a standardized dossier structure based on certain rules to allow us to process your path requests automatically.

You can fundamentally set up your dossiers in two different ways:

1. according to TPN Master and Subsidiary Timetable logic ("Detailed Master Dossier")
2. according to TAF/TAP-TSI logic ("Empty Master Dossier")

"Detailed Master"

The technical term "Detailed Master" describes how in this dossier structure there is a central "Master Timetable" into which all the details such as stops en route, "wing" timetables, train characteristics and validity period sections are entered.

This largely corresponds to the logic that you might be familiar with from Trassenportal Netz.

"Empty Master"

"Empty Master" literally means "blank Main Timetable".

Here it involves a completely different dossier philosophy. Here the "Main Timetable" only serves as an envelope, all the information is in one or more Subsidiary Timetables. This corresponds to the object model of TAF/TAP TSI.

It is precisely in complex cases such as, for example, changing circulation days patterns in the routing of the train that an Empty Master dossier must be set up in a completely different way from a usual TPN request. On the other hand, the advantage is that an Empty Master that has been set up correctly can be understood by TAF/TAP-TSI-conforming interfaces of downstream IT systems, and in the medium to long term all timetable IT throughout Europe will be changed over to TAF/TAP-TSI.

Note:

According to present IT planning on RNE side, a functionality called "Empty Envelope" shall be introduced to PCS for the Major Release 2017 and hence become mandatory for timetable 2019. With the introduction of Empty Envelope, the here mentioned methods will become obsolete and PCS will no longer allow an individual setup.

DB Netz recommends using the "Empty Master"-method for now, because it shall be much easier to transfer such dossiers later to the "Empty-Envelope"-format.

4.1 Dossier structure with the "Detailed Master" method

If you decided to use a Detailed Master dossier, you must note the Master and Subsidiary Timetable known from the TPN system world. Startflügel, Zielflügel and Doppelfahrpläne can be created via PCS in the form of Subsidiary Timetables.

However, please note that the TPN logic does not match the PCS logic exactly.

The main difference between TPN and PCS logic lies in the calendar.

While it is possible in TPN to create multiple circulation periods and sets of circulation days per Stammfahrplan and Ergänzungsfahrplan, the calendar in PCS must be the same as the calendar of the reference operation point per path for all operation points¹.

4.1.1 Basic structure

The Main Timetable of a Detailed Master dossier must fulfil the following requirements:

DM 1 - The Main Timetable must be made up of at least 3 PCS operation points².

DM 2 - Not all the circulation days are to be covered by Subsidiary Timetables in at least one of the Main Timetable operation points.

You can request Startflügel, Zielflügel and Doppelfahrpläne via PCS, as in TPN by creating Subsidiary Timetables for them PCS allows considerably more freedom and requires a careful and circumspect manner of working.

Note the following basic rules concerning the creation of supplementary timetables as Subsidiary Timetables in PCS:

DM 3 - If at all possible, do not create any international (cross-border) Subsidiary Timetables.

Exception: if as a result of changing validity period sections in the route of the path there are no other display options for the calendar in PCS.

DM 4 - The Main Timetable and a Subsidiary Timetable must be linked with one another at least one operation point ("conjunction point").

DM 5 - At the conjunction point (start of a Zielflügel, end of a Startflügel, start and end of a Doppelfahrplan) the number of circulation days of the Subsidiary Timetable in PCS must be equal to or less than the number of circulation days in the Main Timetable.

DM 6 - The conjunction point may not be a "run-through"-operation point. The national parameter 23 - (see 5.4.2.17) must be set at this operation point either to "C - Kundenhalt" or to "+ - Betriebshalt".

DM 7 - Multiple supplementary timetables that are to run on the same circulation days may not share a conjunction point.

¹ "Midnight jumps" do not represent a change of the calendar in the sense of this rule, but only the reference calendar with another day offset.

² If need be, an additional operation point is to be input with run-through. If for factual reasons no more than 2 operation points can be input (e.g. for paths in the immediate vicinity of the border), then please run the dossier if at all possible in Empty Master mode.

Example for rule DM 7:

In a Subsidiary Timetable in the function of a Startflügel that goes within the validity period January to December on circulation days Monday to Friday into the conjunction point e P may not put up an additional Subsidiary Timetable in the function of a Doppelfahrplan or Zielflügel within the same validity period that has the same circulation days pattern.

dossier structure																					Remarks	
category	foreign section					DB Netz section											foreign section					
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y	Z		
traffic relation																					Invalid combination of Ergänzungsfahrplänen. Startflügel ends in conjunction point Q, while another Doppelfahrplan begins there as well. This contradicts to the rules for TPN-Ergänzungsfahrpläne!	
Main Timetable																					Two overlapping subsidiary timetables share one common conjunction point (Q).	
Subsidiary Timetables																					In PCS, the shown dossier structure would be technically possible. The running days tuesday, wednesday and thursday would be marked by PCS as inconsistent in yellow colour. Also, a warning message will be thrown. Although this structure is technically possible, it is subject-specifically prohibited.	

figure 1

4.1.2 Detailed Master application cases

4.1.2.1 Stammfahrplan without Ergänzungsfahrlagen and changes of circulation days

Application case:

A simple circulation relation with a continuous validity period and a continuous uniform set of circulation days without Ergänzungsfahrpläne.

Dossier structure in PCS:

Set up a dossier with operation points as per clause 3 and fill the calendar as desired.

4.1.2.2 Stammfahrplan without Ergänzungsfahrlage and with changes of circulation days

4.1.2.2.1. Once-only changing of the circulation days pattern

Application case:

Routing A - T with circulation days Monday to Sunday, path runs between P and T but only on circulation days Monday to Friday (i.e. the train ends on Saturday and Sunday at P).

Kategorie	Dossier-Struktur																				Bemerkungen				
	Ausland					DB Netz										Ausland									
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y	Z					
Verkehrsrelation										Jan - Dez											Ein Wechsel der Verkehrszeitregelung				
Element										Mo-So				Mo - Fr											
Verkehrszeitraum										Main Timetable															
Verkehrstage										Jan - Dez															
										Mo-So															
Element																									
Verkehrszeitraum																									
Verkehrstage																									

Figure 3

Dossier structure in PCS:

- Set up a dossier with operation points as per clause 3.3 of the handbook.
- The Main Timetable is to be set up from A to P.
- The calendar of the Main Timetable must include circulation days Mo-Su within the desired validity period.
- Next a Subsidiary Timetable from P to T that includes the circulation days Mo-Fr must be created.

4.1.2.2.2. Repeated changing of the circulation days pattern

Application case:

Routing A – T, path runs between A and P on circulation days Mo-Su, between P and T Mo-Fr and between P and R in addition on Sa.

Kategorie	Dossier-Struktur																				Bemerkungen
	Ausland					DB Netz										Ausland					
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y	Z	
Verkehrsrelation						<div>Jan - Dez</div> <div>Mo-So</div> <div>Mo-Sa</div> <div>Mo-Fr</div>															Mehrfacher Wechsel der Verkehrszeitregelung
Element						Main Timetable															
Verkehrszeitraum						Jan - Dez															
Verkehrstage						Mo-So															
Element						Subsidiary 1															
Verkehrszeitraum						Jan-Dez															
Verkehrstage																					
Element						Subsidiary 2															
Verkehrszeitraum						Jan-Dez															
Verkehrstage																					

Figure 4

Dossier structure in PCS:

- Set up a dossier with operation points as per clause 3.3 of the handbook.
- The Main Timetable is to be set up from A to P.
The calendar of the Main Timetable must include circulation days Mon-Sun within the desired validity period.
- Next a Subsidiary Timetable from P to T that includes the circulation days Mon-Fri must be created.
- Next, create an additional Subsidiary Timetable from P to R that covers circulation days Sa within the validity period.

Important Information:

Please note that in the path routing you may only request either an ascending or a descending circulation days pattern:

If the path starts with circulation days pattern Mo-Su, the circulation days pattern is permitted to reduce at the following respective operation points (e.g. Mon-Sat, then Mon-Fri, then Mon-Thu), but not increase again.

Vice versa, a route that begins with circulation days pattern Mo is permitted to exhibit at the following operation points an increasing circulation days pattern (first Mon-Tue, then Mon-Wed, then Mon-Thu), but which may not reduce again after that.

Application case:

Routing A - T from January to December on Mo-Su, route runs between P and T but only from August to December on Mo-Su.

Kategorie	Dossier-Struktur																					Bemerkungen
	Ausland					DB Netz											Ausland					
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y	Z		
Verkehrsrelation						Jan - Dez					Aug - Dez										Wechsel des Verkehrszeitraums	
Element						Main Timetable																
Verkehrszeitraum						Jan - Dez																
Verkehrstage						Mo-So																
Element						Subsidiary 1																
Verkehrszeitraum											Aug - Dez											
Verkehrstage											Mo - So											

Figure 5

Dossier structure in PCS:

- Set up a dossier with operation points as per clause 3.3 of the handbook.
 - The Main Timetable is to be set up from A to P.
- The calendar of the Main Timetable must then include the validity period January to December and the circulation days Mon-Sun.
- Next a Subsidiary Timetable from P to T with validity period August to December that includes the circulation days Mon-Sun must be created.

4.1.2.3.2. Repeated changing of the validity period

Application case:

Routing A – T.

The path ends in P from January to July and in August, September, November and December it runs until R. In October, the path runs until T.

Kategorie	Dossier-Struktur																								Bemerkungen		
	Ausland					DB Netz																Ausland					
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y	Z							
Verkehrsrelation									Jan - Dez		Aug-Dez		Okt													Wechsel des Verkehrszeitraums	
Element									Main Timetable																		
Verkehrszeitraum									Jan - Dez																		
Verkehrstage									Mo-So																		
Element											Subsidiary 1																
Verkehrszeitraum											Aug-Sep																
Verkehrstage											Mo - So																
Element											Subsidiary 2																
Verkehrszeitraum											Okt																
Verkehrstage											Mo - So																
Element											Subsidiary 3																
Verkehrszeitraum											Nov-Dez																
Verkehrstage											Mo - So																

Figure 6

Dossier structure in PCS:

- Set up a dossier with operation points as per clause 3.3 of the handbook.
- The Main Timetable is to be set up from A to P.
- The calendar of the Main Timetable must then include the validity period January to December and the circulation days Mon-Sun.
- Next, two Subsidiary Timetables with the same contents (Subsidiaries 1 and 3 in the graphic) are each created between P and R, once for August to September and once again for November to December. As a result, two disjunct validity periods are created.
- Finally, a third Subsidiary Timetable must be created for the section P-T with validity period October.

When doing this, it is essential to check in the PCS calendars of the two Subsidiary Timetables that validity periods that are to be input at the upper edge of the graphic are disjunct to one another.³

³ Important note: PCS does not check the details of the validity periods of the individual Subsidiary Timetables for disjunction! Please carefully check for this manually.

4.1.2.4 Master Timetable with Subsidiary Timetables, time frames

Subsidiary Timetables can be used in the function of a Startflügel, Zielflügel or Doppelfahrplan.

If you wish to use a Subsidiary Timetable as a Startflügel, the last operation point of the Subsidiary Timetable must be the same as an operation point of the Main Timetable.⁴

If you wish to use a Subsidiary Timetable as a Zielflügel, the first operation point of the Subsidiary Timetable must be the same as an operation point of the Main Timetable.⁵

If you wish to use a Subsidiary Timetable as a Doppelfahrplan, the first and last operation points of the Subsidiary Timetable must be the same as an operation point of the Main Timetable.⁶

When requesting so-called "Zeitscheiben" ("time frames", i.e. splitting up of the path request into multiple single requests with disjunct validity periods arranged one after another) it is necessary to use the Empty Master dossier structure.

4.1.2.5 Combinations of the above application cases

The above application cases can also be combined with one another. Thus there can be Subsidiary Timetables in their function as Ergänzungsfahrpläne with various validity periods and circulation days patterns, however, not every possible combination of these elements could be explained in this handbook.

The fundamental principle is that most of the typical application cases are supported by the PCS interface if the above-mentioned basic rules are applied carefully and hence can be processed automatically.

In very complex dossier structures with multiple Subsidiary Timetables nested inside one another there can be problems under certain circumstances in automatic processing.

⁴ Exception: a Subsidiary Timetable in the function of a Startflügel may not go into the last DB Netz operation point of the Main Timetable.

⁵ Exception: a Subsidiary Timetable in the function of a Zielflügel may not go into the first DB Netz operation point of the Main Timetable.

⁶ Exception: a Subsidiary Timetable in the function of a Doppelfahrplan may not branch off at the first DB Netz operation point of the Main Timetable and/or go into the last DB Netz operation point of the Main Timetable.



4.1.3 Cases in which the "Detailed master" method does not work

Please note that the following cases that are listed cannot be illustrated or supported via the Detailed Master logic

4.1.3.1 Operation point touched more than once

This problem can crop up if you request a path with a change in the direction of travel. Under certain geographical circumstances it may occur that there is an operation point that is touched two times by the path.

From user experience we know that PCS has got some difficulties managing such traffic relations. We therefore ask you to contact us beforehand if at all possible if you intend to make a path request of this kind.

Arrival	Departure	
04:00 dwell [15]		 ▶ Bebra Rbf ★ DB Netz AG Commercial stop
04:35 dwell [2]	04:37	▶ Baunatal-Guntershausen DB Netz AG Commercial stop
04:52 dwell [30]	05:32	▶ Kassel-Wilhelmshoehe DB Netz AG Commercial stop
05:42 dwell [2]	05:44	▶ Baunatal-Guntershausen DB Netz AG Commercial stop
07:18 dwell [10]		 ▶ Giessen Gbf DB Netz AG Commercial stop

4.2 Dossier structure with the "Empty-Master" method

If you decide for an "Empty Master" dossier, then create the Main Timetable as an "envelope"; i.e. practically all the relevant information is in one or more Subsidiary Timetables.

4.2.1 Basic rules of the Empty Master dossier structure

4.2.1.1 Operation points

4.2.1.1.1. Rules for the Main Timetable

Note the following basic rules for operation points:

- EM 1 - There must be exactly 2 operation points per IM section in the Main Timetable.
- EM 2 - Only the reference operation point in the Main Timetable is permitted to be filled with times.⁷
- EM 3 - In both operation points of the Main Timetable there must be a complete train characteristics set in each case.

4.2.1.1.2. Operation points in the Main Timetable

In the case of international circulation relations there are three options as to which operation points are to be input in the Main Timetable:

EM 1A - Handover point abroad / DB Netz and destination operation point

Paths that come in from external infrastructure and end on DB Netz infrastructure (bilateral paths).

Kategorie	Dossier-Struktur																			Bemerkungen	
	Externe Infrastruktur					DB Netz Infrastruktur										Externe Infrastruktur					
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y		
A Bilaterales Dossier mit Einbruch aus externer Infrastruktur																					
Main Timetable	ganzjährig täglich					ganzjährig täglich															Im Main Timetable müssen exakt 2 Betriebsstellen erzeugt werden, nämlich Grenze (G1) und Ziel (T).
Subsidiary Timetables	Subsidiary 1 13.12.2015 - 01.03.2016					Subsidiary 3 13.12.2015 - 31.12.2015															Im Bereich der externen Infrastruktur können ein oder mehrere Subsidiaries existieren.
						ZCH 1 ZCH 2															Die Subsidiaries für den Bereich der DB Netz müssen jeweils an der Grenzbetriebsstelle G1 beginnen und an der Zielbetriebsstelle T enden.
						LPW LPW															
	Subsidiary 2 02.03.2016 - 10.12.2016					Subsidiary 4 01.01.2016 - 31.05.2016															Die Verkehrszeiträume der einzelnen Subsidiaries müssen zueinander disjunkt sein, d. h. dürfen sich nicht überlappen.
						ZCH 3															Jeder Subsidiary kann ansonsten individuell gestaltet werden, unterschiedliche Zugcharakteristiken, Laufwege und Haltekonzepte aufweisen.
						Subsidiary 5 01.06.2016 - 10.12.2016															Subsidiary Timetables, die über die Grenzbetriebsstelle G1 hinweg verlaufen oder andere DB-Netz-Betriebsstellen vor G1 enthalten, sind unzulässig.
						ZCH 4															
						LPW ZW ZU															

Figure 7

⁷ I.e., one or both operation points must have blank fields for the desired times (hence the name "Empty Master").

EM 1B – Starting operation point and handover point DB Netz / abroad

Paths that start on DB Netz infrastructure and then go off to external infrastructure (bilateral paths).

Kategorie	Dossier-Struktur																			Bemerkungen	
	Externe Infrastruktur					DB Netz Infrastruktur										Externe Infrastruktur					
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y		
B Bilaterales Dossier mit Ausbruch in externe Infrastruktur																					
Main Timetable																					Im Main Timetable müssen exakt 2 Betriebsstellen erzeugt werden, nämlich Start (L) und Grenze (G2).
Subsidiary Timetables																					Im Bereich der externen Infrastruktur können ein oder mehrere Subsidiaries existieren.
																					Die Subsidiaries für den Bereich der DB Netz müssen jeweils an der Startbetriebsstelle L beginnen und an der Grenzbetriebsstelle G2 enden.
																					Die Verkehrszeiträume der einzelnen Subsidiaries müssen zueinander disjunkt sein, d. h. dürfen sich nicht überlappen.
																					Jeder Subsidiary kann ansonsten individuell gestaltet werden, unterschiedliche Zugcharakteristiken, Laufwege und Haltekonzepte aufweisen.
																				Subsidiary Timetables, die über die Grenzbetriebsstelle G2 hinweg verlaufen oder andere DB-Netz-Betriebsstellen nach G2 enthalten, sind unzulässig.	

Figure 8

EM 1C – Handover points abroad / DB Netz and DB Netz / abroad

Paths that come in from external infrastructure, transit the infrastructure of DB Netz and then go out again to another point on external infrastructure again.


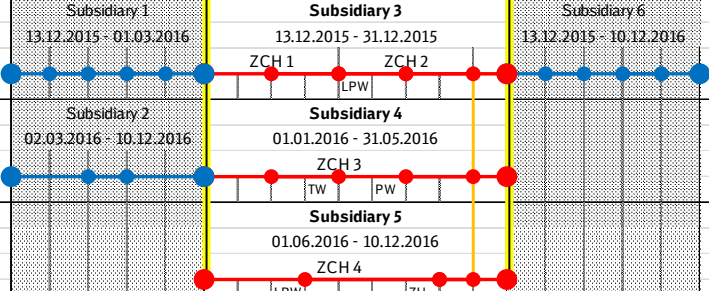
Kategorie	Dossier-Struktur																Bemerkungen			
	Externe Infrastruktur					DB Netz Infrastruktur						Externe Infrastruktur								
	A	B	C	D	E	G1	L	M	O	P	Q	R	S	T	G2	V	W	X	Y	
C Multilaterales Dossier																				
Main Timetable																				Im Main Timetable müssen exakt 2 Betriebsstellen erzeugt werden: Grenze Einbruch (G1) und Grenze Ausbruch (G2)
Subsidiary Timetables																				<p>Im Bereich der externen Infrastrukturbetreiber können jeweils ein oder mehrere Subsidiaries existieren.</p> <p>Die Subsidiaries für den Bereich der DB Netz müssen jeweils an der Grenzbetriebsstelle G1 beginnen und an der Grenzbetriebsstelle G2 enden.</p> <p>Die Verkehrszeiträume der einzelnen Subsidiaries müssen zueinander disjunkt sein, d. h. dürfen sich nicht überlappen.</p> <p>Jeder Subsidiary kann ansonsten individuell gestaltet werden, unterschiedliche Zugcharakteristiken, Laufwege und Haltekonzepte aufweisen.</p> <p>Subsidiary Timetables, die über eine oder beide Grenzbetriebsstellen hinweg verlaufen oder andere DB-Netz-Betriebsstellen vor G1 oder nach G2 enthalten, sind unzulässig.</p>

Figure 9

4.2.1.1.3. Rules for Subsidiary Timetables

Next, Subsidiary Timetables must be created according to the following basic rules:

- S1 - **At least one** Subsidiary Timetable must be created.
- S2 - A **maximum** of as many Subsidiary Timetables can be created as there are individual circulation days in the Main Timetable. However, we request you to keep the number of Subsidiary Timetables down to the absolute minimum that is necessary.
- S3 - **Each** Subsidiary Timetable must cover the **complete** Main Timetable of DB Netz, i.e. it must start at the first DB Netz operation point of the Main Timetable and end at the second (last) DB-Netz operation point of the Main Timetable.
- S4 - A calendar must be defined for all Subsidiary Timetables (for details see section 4.2.1.2).
- S5 - In all Subsidiary Timetables there must be the same pattern of at least two stopping operation points one after another.

4.2.1.1.4. Explanation of the basic rule S5 –:

When it comes to the automatic processing of your path requests at DB Netz by means of the Empty Master method, for technical reasons it is necessary to identify a "common subset" in all Subsidiary Timetables.

This pattern must fulfil the following conditions:

- at least two operation points with a scheduled or operational stop⁸.
- these operation points must be arranged in all Subsidiary Timetables in the same order without any breaks
- arrival, departure and minimum stopping times are mandatory to be put in and they must be exactly the same in all Subsidiary Timetables.
- one of the operation points is permitted to be the handover point (exception: border type A).
- The train characteristics are permitted to differ between the Subsidiary Timetables.

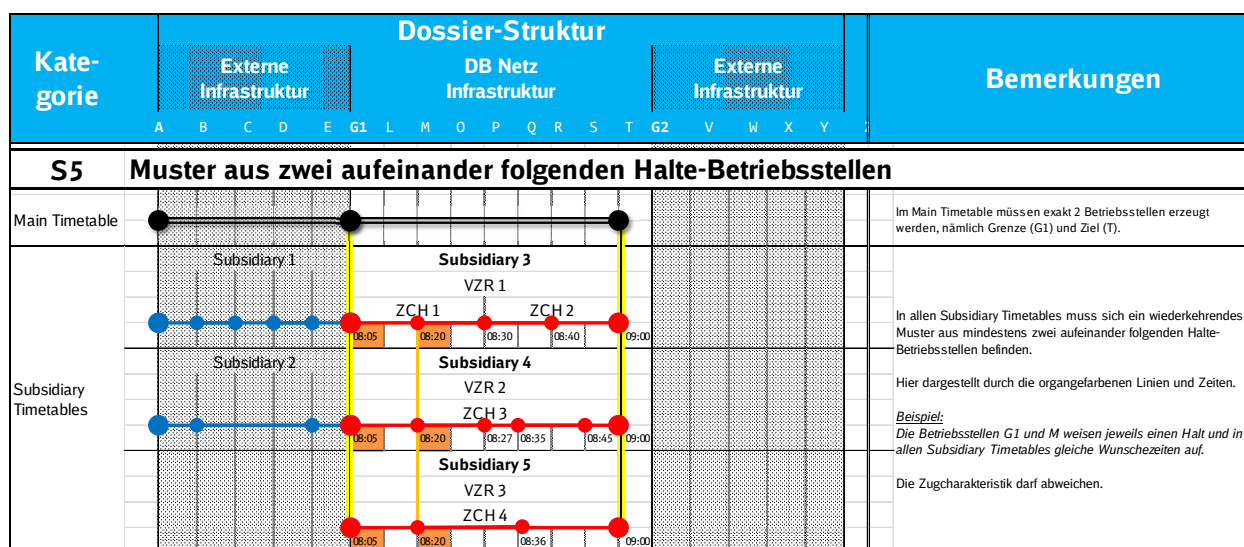


Figure 10

⁸ The national parameter 23 – (see 5.4.2.17) must be set at these two operation points either to "C – Request stop" or to "+ – Operational stop".

The common operation point sequence is permitted to be longer than 2 operation points.

If there is a longer sequence it is permissible to also have run-through operation points (e.g. to restrict the routing) between two operational or circulation stops as long as the same run-through operation points with the same run-through time are used in all Subsidiary Timetables.

Example:

An Empty Master dossier is to be set up from Maschen Rbf via Basel Bad Bf to Domodossola. The dossier contains in the requested timetable 3 Subsidiary Timetables for DB Netz AG that in each case run from Maschen Rbf to Basel Bad Bf and make a commercial stop in Hanover Hbf to change the loco driver.

In order to restrict the routing, in all Subsidiary Timetables Celle Gbf has been inserted with activity type "run through" (in each case with the same transit times).

If no suitable common section can be found in the desired routes of the individual Subsidiary Timetables, we would ask you to request in the case of cross-border traffic an operational stop (Halteart "+- Betriebshalt") at the DB Netz station after the handover point or at the last DB Netz station before the handover point (see dossier structure in section 0).

4.2.1.2 Border areas

The procedure described in section 3.3 for border crossings also applies to Empty Master dossiers. The operation points (e.g. border point at the state border, first station before / after the handover point) that are in the vicinity of the border in accordance with the rules stated there or to be input in addition must appear here in all Subsidiary Timetables. On the other hand, the Main Timetable may only include the handover point of the border section for border crossings.

4.2.1.3 Calendar

The following basic rules apply when setting up the calendars:

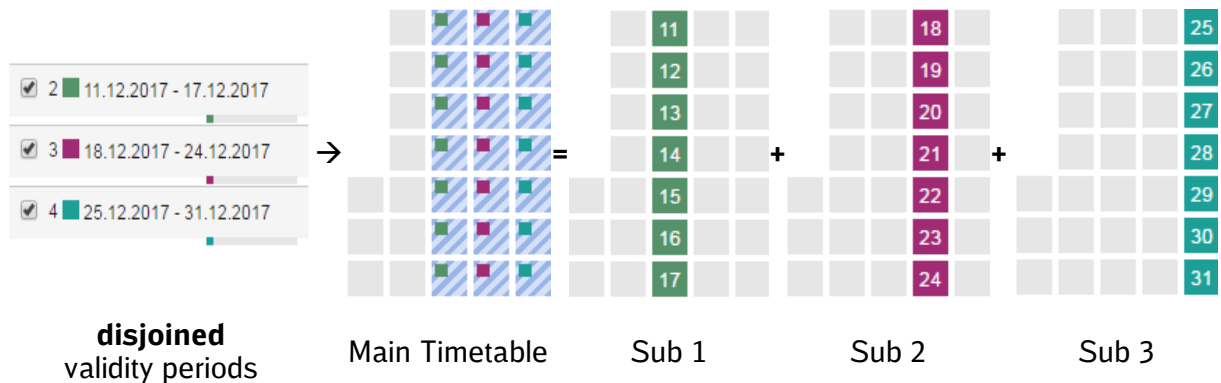
- K1 - The calendar of each Subsidiary Timetable must be a subset of the calendar of the associated Main Timetable
- K2 - The total of the calendars of all Subsidiary Timetables must exactly cover the calendar of the associated Main Timetable, meaning that all the circulation days of the Main Timetable must be covered by Subsidiary Timetables!
- K3 - The individual Subsidiary Timetables must be disjunct to one another.

The following restrictions are the result:

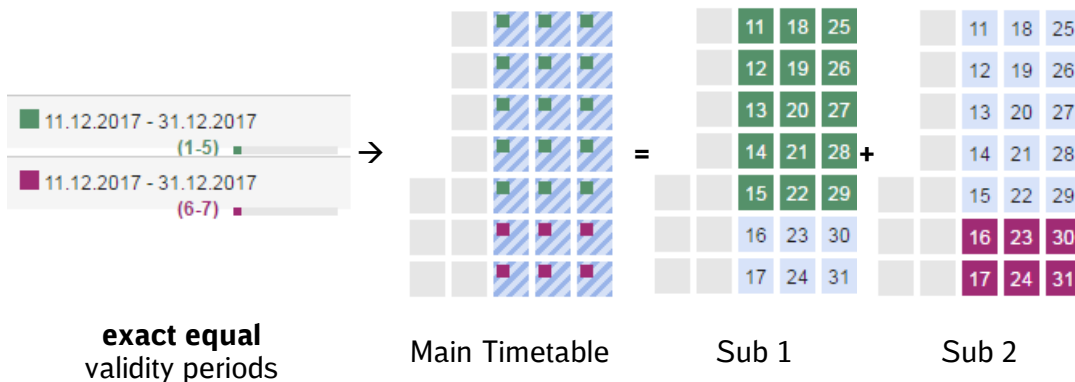
- There may not be any circulation days in the Main Timetable that are not covered by precisely one Subsidiary Timetable.
- Subsidiary Timetables may not include any circulation days outside the calendar of the Main Timetable

In order to have your path request automatically processed by the PCS-TPN interface, the calendar disjunction between all Subsidiary Timetables has to be fulfilled only by using one of the following methods:

- either through **disjoined consecutive validity periods** (“Zeitscheiben”, time frames)

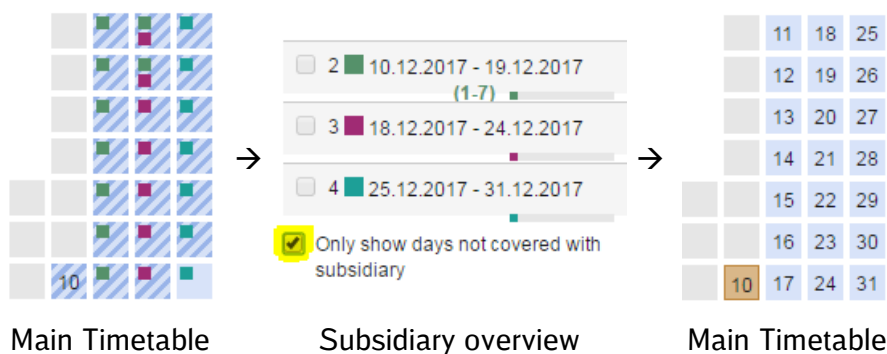


- or by grouping 2 or more Subsidiary Timetables with **exact equal validity periods** and **disjoined alignment of running days**.



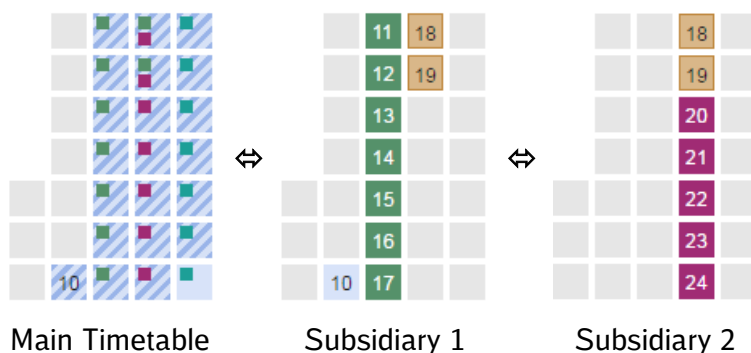
The consistency of Main and Subsidiary Timetable calendars is monitored by PCS. Any inconsistencies will be highlighted optically on the graphical user interface:

- Running days of Main Timetable, that are not covered by one Subsidiary Timetable

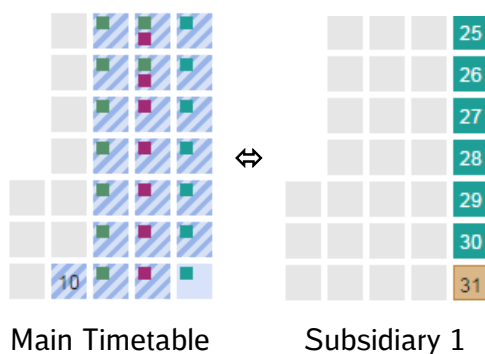


Use the checkbox „Only show days not covered with subsidiary“ to highlight the days.

- The Subsidiary Timetable calendars are not disjoint (same running days were requested in different Subsidiary Timetables)



- A Subsidiary Timetable has got running days, which are not covered by the Main Timetable.



However, a consistency warning does not prevent a path from being requested via PCS. We therefore ask you to check your RU timetable for any corresponding errors and to make corrections on the basis of the Empty Master rules.

Please note here the difference between "Detailed Master" and "Empty Master":

In Detailed Master mode there can also be warning messages from PCS in certain application cases even if the dossier has been set up correctly. This does not then prevent automatic processing by DB Netz.

On the other hand, in Empty Master mode there is no correct form of setting up the dossier that would trigger a warning message. Thus a PCS warning message here means that the dossier has not been set up in strict accordance with the rules and as a result the processing at DB Netz can no longer be done automatically.

4.2.1.4 Train characteristic(s)

The individual Subsidiary Timetables are permitted to differ from one another regarding the train characteristics and also from the train characteristics of the Main Timetable. The train characteristics of the Main Timetable are not evaluated for the path request.

The train characteristics may be changed as often as desired within a Subsidiary Timetable.

If there are one or more changes in the train characteristics within a Subsidiary Timetable we would nonetheless request you to input after each change of train characteristics at last one additional DB Netz operation point along your requested route with the same train characteristics, and if necessary, also with a "run-through"

4.2.2 Use Cases that cannot be set up in the "Empty Master"

4.2.2.1 "Y-paths"

The start and destination of all Subsidiary Timetables must match exactly the first and second operation points respectively in the Main Timetable.

Circulation relations that are

- on different circulation days
- and / or in various validity periods

and have differing start or destination locations (so-called "Y-paths" or "wing trains"), cannot be illustrated within a dossier when using the Empty Master method (as this would infringe rules S3 and K2).

If you wish to request circulation relations of this type, you must

- either create multiple Empty Master dossiers with different train numbers (in doing so you must pay attention yourself to the calendar disjunction between the individual dossiers, since PCS cannot check these across dossiers)⁹
- or set up a dossier using the Detailed Master method.

4.2.2.2 Differing Handover Points

The Handover Point between two IMs is an integral part of the Main Timetable. Hence must all Subsidiary Timetables use the same Handover Point. This applies also for both Handover Points in multilateral dossiers.

Example:

In an international traffic relation from the Netherlands to Germany, the Handover Point in the Main Timetable of a dossier was set to Emmerich. All Subsidiary Timetables for DB Netz have to start at Emmerich. It is not permissible to create a Subsidiary Timetable that starts at Venlo in order to request a deviation in that way.

If you wish to use different Handover Point in a traffic relation, you must create a separate PCS dossier with another train number for those circulation days on which another border crossing is to be used.

⁹ The dossiers can be linked with one another in PCS by means of hyperlinks so that it is possible to easily switch back and forth between the dossiers in the browser. However, this does not represent any sort of technical dependency, the dossiers are processed fully independently of one another.

4.2.2.3 International Subsidiaries

It is not permissible to request in an Empty Master dossier the Subsidiary Timetables across the handover point of two IMs. The start and/or end of the Subsidiary Timetables must always be an IM handover point.

4.2.2.4 Parent operation points (“Mutterbetriebsstellen”)

It is not permissible to select a parent operation point in the Main Timetable (e.g. Mainz-Bischofsheim) and to have the Subsidiary Timetables start or end in various station parts (e.g. Mainz-Bischofsheim Westseite and Mainz-Bischofsheim Ostseite).

4.2.2.5 Multiple transiting of an operation point

If the RU requested timetable is structured such that one or more operation points need to be run through multiple times or if an operation point has already been input multiple times in the RU desired timetable, this can lead to problems in the automated processing (see also section 4.1.3.1).

We therefore ask you to contact us beforehand if at all possible if you intend to make a path request of this kind.

4.2.2.6 Desired times at both operation points in the Main Timetable

Input in the Main Timetable of a dossier in Empty Master logic a requested time for the selected reference operation point only and always leave the other operation point blank.

If both operation points of the Main Timetable are filled with times, the interface algorithms cannot detect with certainty whether you have created a Detailed Master dossier or any Empty Master dossier. The result is that the automatic processing of your path request could fail.

4.3 Dossiers with Pre-Arranged Paths

Pre-designed international catalogue paths -so-called "pre-arranged paths (PaPs)" are operated exclusively through the so-called Corridor One Stop Shop (C-OSS) and allocated on the basis of corridor-specific rules on European rail freight traffic corridors in accordance with EU-VO 913/2010, and revised by EU VO 1316/2013.

Path requests on PaPs are to be sent directly to the responsible C-OSS of the relevant corridor. These path requests can only be made in PCS.

Special guidelines regarding the handling of PaP path requests are available from RailNetEurope and C-OSS

4.3.1 Doubling of operation points in Feeder and Outflow and PaP section

If you request "Pre-arranged Paths" (PaPs) via PCS and wish to request in addition to the PaPs a Feeder or an Outflow for the PaPs, then please note that no operation point doubling is permitted at the links between the Feeder and the PaP or between the PaP and the Outflow.

Example:

You have requested a PaP section from Antwerp to Gremberg Personalwechselstation Sued from the PaP catalogue and now wish to request an Outflow from Gremberg to Wetzlar Gbf. In this case simply add another operation point after Gremberg; do not insert Gremberg a second time in the dossier!

Otherwise your path request cannot be processed automatically.

This applies in the same way to Feeder timetables. This means that in the case of Feeder timetables the fields for request time arrival of the first operation point of the first PaP section become operable. Input here the desired arrival time of the feeder at the start operation point of the first PaP section. Do not create the starting operation point in the Feeder a second time!

4.4 Miscellaneous Use Cases

4.4.1 Backward elaboration

If there is no other indication in a dossier, your path will be elaborated in a forward direction by DB Netz, hence the elaboration starts at the first DB Netz operation point.

In case that you would like to request a backward elaboration, follow these steps:

- Leave or set the reference point of the respective Main or Subsidiary Timetable to the first operation point
- Open the section “Train information” from the left side menu and under the topic “Direction of alignment” please switch the parameters for “RU” and “IM” to the value “backwards”.
- Place a comment in German language in the dossier’s comment section.

4.4.2 Usage of comment fields

You may add further information to your path request, such as

- request of a backward elaboration
- circulation plans of wagons and locomotives, that have got a relation to other path requests
- usage of private sidings or leased tracks (“APS”-tracks) in train stations
- cooperation with other RUs
- anything which you deem necessary for your path request

Please note that

- all comments have to be written in German language
- they have to be entered in the dossier’s comments section; the comment box available in the “train parameters” section on operation point level will not be read by the PCS interface
- they should be introduced with the words “Hinweise für DB Netz”
- all information should be gathered into one comment if feasible and the comments itself should be brief and condensed
- all comments that contradict to PCS workflows, technical or procedural rules, the Network Statements of DB Netz or anything such will be disregarded

4.4.3 Alternative train characteristic sets

It is impossible to request alternative train characteristic sets in PCS, neither can DB Netz place them in their offers. For each operation point there has to be exact one set of train characteristics.

If you need to request alternative train characteristic sets, PCS is not a suitable medium; in this case please request the paths directly via “Trassenportal Netz” (TPN).

Any comments regarding alternative train characteristics will be disregarded for the elaboration.

5 Parameters

5.1 General

In PCS a distinction is made between

- dossier level parameters
- path section level parameters, which are split once again into
 - common parameters
 - IM-parameters of the relevant IM

5.1.1 Parameters at the dossier level

The **parameters at dossier level** apply to all elements of the PCS dossier, i.e. both the RU part of the dossier as well as to the IM part. They apply to the Main Timetable and for all the Subsidiary Timetables. Each IM can define his own parameters according to his wishes; as a result there is also a set of dossier level parameters of their own for each EVU-IB pair.

passenger traffic:

D01 - Vertriebskanal	PCS
D02 - Kundennummer	Z0001
D03 - Besteller-OE	Abt. Wasserkopf
D04 - Name Besteller	Nikolaus Piepmatsen
D05 - Telefon Besteller	+496926531450
D06 - E-Mail Besteller	no_one@no_where.nope
D07 - Fax Besteller	+49123456789
D08 - Art des Zuges	R - Regelzug
D09 - Betreuender RB	Mitte
D10 - RV-Kap.-Nr. Bez.	123456789012
D11 - OeDLA	ja
D14 - Verkehrsart Kunde Zusatz	Charterverkehr
D15 - Betroffenheit Bau	
D98 - Kunden-Bestellnummer	08-15
D99 - Liniennummer	23

freight traffic:

D01 - Vertriebskanal	PCS
D02 - Kundennummer	Z0001
D03 - Besteller-OE	Abt. Wasserkopf
D04 - Name Besteller	Nikolaus Piepmatsen
D05 - Telefon Besteller	+496926531450
D06 - E-Mail Besteller	no_one@no_where.nope
D07 - Fax Besteller	+49165416580
D08 - Art des Zuges	R - Regelzug
D09 - Betreuender RB	Mitte
D10 - RV-Kap.-Nr. Bez.	123456789012
D11 - OeDLA	nein
D12 - Flexibilitaet	RF 120
D13 - Gefahrgut-Ganzzug	ja
D15 - Betroffenheit Bau	
D98 - Kunden-Bestellnummer	08-15

5.1.2 Parameters at the operation point level

The **common parameters** are queried as a whole at each operation point, regardless of the responsible IM.

The **IM-parameters**¹⁰ can be defined by each IM for its operation points and then queried at its operation points, in addition to the common parameters.

Each operation point in each Main and Subsidiary Timetable includes respectively a complete set of general and IM-parameters. They describe the train characteristics at the respective operation point for the departure of the train and are valid until the arrival of the next requested operation point.

If the train characteristics change in the course of a path to an operation point, the new set of parameters must also be changed at all the other operation points of the PCS timetable and up until the next change of train characteristics

The table on the next page shows an overview of all common and IM parameters of DB Netz.

¹⁰ sometimes wrongly described as „national parameters“

	Schienenpersonenverkehr:	Schienengüterverkehr
Common parameters	<div>Common Train Parameters</div> <div>Activity type Commercial stop ✓</div> <div>Traffic type ICE-T</div> <div>Type of service</div> <div>Train weight 217 ✓ Weight carriages set 0 ✓</div> <div>Train length 107 ✓ Length carriages set 0 ✓</div> <div>Train max speed 200 ✓ Planned speed 200</div> <div>TRACTION DETAILS</div> <div>Loco type number 605-1 ✓ Traction mode Train tract ✓ 1st traction ✓</div> <div>Train cc system</div> <div>Traction weight 217 Traction length 107</div> <div>Route class A Max axle weight</div> <div>Tilting function Active tilting</div> <div>Brake type R+MG Emergency brake override ✓</div> <div>Minimum broken weight percentage claimed by IM 213 Breaking Ratio / Weight 213</div> <div>Exception gauging ident</div>	<div>Common Train Parameters</div> <div>Activity type Commercial stop ✓</div> <div>Traffic type DGX</div> <div>Type of service</div> <div>Train weight 1687 ✓ Weight carriages set 1600 ✓</div> <div>Train length 620 ✓ Length carriages set 600 ✓</div> <div>Train max speed 120 ✓ Planned speed</div> <div>TRACTION DETAILS</div> <div>Loco type number 80 618 ✓ Traction mode Train tract ✓ 1st traction ✓</div> <div>Train cc system LZB</div> <div>Traction weight 87 Traction length 20</div> <div>Route class D4 Max axle weight</div> <div>Container profile P 70 400 C 70 400</div> <div>— DANGEROUS GOODS INDICATION</div> <div>Hazard Number 33 UN Material Number 1203</div> <div>RID Classification 3 Weight of dangerous good</div> <div>PACKAGE GROUP</div> <div>Brake type P</div> <div>Minimum broken weight percentage claimed by IM Breaking Ratio / Weight 75</div>
	<div>IM Parameters</div> <div>D01 - Vertriebskanal PCS</div> <div>D02 - Kundennummer Z0001</div> <div>D03 - Besteller-OE Abt. Wasserkopf</div> <div>D04 - Name Besteller Nikolaus Piepmatsen</div> <div>D05 - Telefon Besteller +496926531450</div> <div>D06 - E-Mail Besteller no_one@no_where.nope</div> <div>D07 - Fax Besteller +49123456789</div> <div>D08 - Art des Zuges R - Regelzug</div> <div>D09 - Betreuender RB Mitte</div> <div>P20 - Halteart C - Kundenhalt</div> <div>P21 - Zuggat.-Produkt 14.3 - ICE-T</div> <div>P22.11 - 1. Tzf - Baureihe 605-1 (ICT-VT, 4tfg, 4x560kW)</div> <div>P22.13 - 1. Tzf - Stellung Z - Zuglok (Regelbespannung)</div> <div>P23 - LZB ja</div> <div>P24 - CIR 1+2</div> <div>P26.1 - Bremsstellung R+MG</div> <div>P26.2 - vorhandene BrH 213</div> <div>P27 - EBUa ja</div> <div>P28 - Grenzlant nein</div> <div>P29 - Richtungswechsel zulässig</div> <div>D10 - RV-Kap.-Nr. Bez. 123456789012</div> <div>D11 - OeDLA ja</div> <div>D14 - Verkehrsart Kunde Zusatz Charterverkehr</div> <div>D98 - Kunden-Bestellnummer 08-15</div> <div>D99 - Liniennummer 23</div> <div>P25 - ETC S ETC S SRS 3</div>	<div>IM Parameters</div> <div>D01 - Vertriebskanal PCS</div> <div>D02 - Kundennummer Z0001</div> <div>D03 - Besteller-OE Abt. Wasserkopf</div> <div>D04 - Name Besteller Nikolaus Piepmatsen</div> <div>D05 - Telefon Besteller +496926531450</div> <div>D06 - E-Mail Besteller no_one@no_where.nope</div> <div>D07 - Fax Besteller +49165416580</div> <div>D08 - Art des Zuges R - Regelzug</div> <div>D09 - Betreuender RB Mitte</div> <div>P20 - Halteart C - Kundenhalt</div> <div>P21 - Zuggat.-Produkt 70.6 - DGX</div> <div>P22.11 - 1. Tzf - Baureihe 80 6189-1 (Pu=6,4MW)</div> <div>P22.13 - 1. Tzf - Stellung Z - Zuglok (Regelbespannung)</div> <div>P23 - LZB ja</div> <div>P24 - CIR 1+2</div> <div>P26.1 - Bremsstellung P</div> <div>P26.2 - vorhandene BrH 75</div> <div>P27 - EBUa ja</div> <div>P28 - Grenzlant nein</div> <div>P29 - Richtungswechsel zulässig</div> <div>D10 - RV-Kap.-Nr. Bez. 123456789012</div> <div>D11 - OeDLA nein</div> <div>D12 - Flexibilitat RF 120</div> <div>D13 - Gefahrgut-Ganzzug ja</div> <div>D98 - Kunden-Bestellnummer 08-15</div> <div>P25 - ETC S ETC S SRS 2</div> <div>P75 - Ladegut Container</div> <div>P76 - Bef. Besonderh. AK - Automatische Kupplung</div>

5.2 Usage of parameter templates

In case of ordering a greater amount of dossiers with the same or similar train characteristics, parameter templates can be established and managed in PCS.

Please recognise that these templates always consist of a complete set of dossier level-, common and IM-parameters. If you import a template into a dossier, all train characteristics data on all operation points will be overwritten by the data in the template. If you have placed changes of train characteristics within the path, they will be overwritten as well. Also, the activity types are replaced by the template. This means that also operation points that are desired to be run-through might be marked as stop after the import.

It is vital to individually verify every operation point for validity of the parameters themselves and for the validity between common and IM-parameters, such as between the common parameter “Activity Type” and the IM-parameter “P20 - Halteart”.

We urge you to act responsibly and carefully when using the template function.

5.3 Parameters at the dossier level

These parameters are defined in advance by each IM. Details that apply to the entire dossier in each case are queried in them.

There is an own set of dossier level parameters for each RU/IM pair within each dossier that are independent of the relevant IM.

DB Netz has defined the following parameters to ensure a complete transfer of data in the national request tool TPN.

5.3.1 Parameter D01 - Vertriebskanal

Select this parameter to indicate in which form you wish to use PCS.

- **PCS**

Switch the parameter to the value PCS if you wish to exclusively use PCS for the binding path request, for the binding transfer of the path offer and to conclude the contract between you and DB Netz AG. Then you are not permitted to make any parallel path requests in the national ordering tool TPN for the same path.

The parameter "01 - Sales channel" serves in addition as a switch element for additional IM-parameters. If the value of the parameter had been set to "PCS", additional parameters become visible at the dossier and operation point level.

- **TPN**

Set the parameter to the value TPN if you wish to use PCS exclusively for the international harmonization of your path request. The functional scope of PCS is not restricted, but you cannot send a valid path request in this way to DB Netz AG and you also do not get a valid path offer via DB Netz AG.

Only set the parameter to the value TPN if you make the corresponding requests via the national ordering tool TPN in parallel to your PCS dossier. The contract between you and DB Netz AG comes about via TPN.

DB Netz AG makes efforts to show the contractual contents of your TPN path request in PCS as well. However, it is only legally binding through the path offer communicated via TPN.

Note the following distinction:

In the TPN sales channel you **must always** initiate a parallel TPN request, while in the PCS sales channel **you are not permitted** to initiate a parallel TPN request.

5.3.2 Parameter D02 – Kundennummer

Input here the five-digit customer number that was assigned to you by DB Netz in the basic usage contract.

The customer number is always made up of an alphabetic letter and four digits and has no blank spaces (hence, for example Q1234).

In this field you may only input exactly five characters, otherwise there is a technical rejection from PCS.

5.3.3 Parameter D03 – Besteller-OE

Input here the company or, optionally, the responsible department / organization unit of the customer / authorized representative (IUC).

In this field you may input a maximum of 50 characters and the field may not be left blank, otherwise there is a technical rejection by PCS.

5.3.4 Parameter D04 – Name Besteller

Input here the name of the juridical person who is handling the path request for the customer / authorized party in accordance with the basic infrastructure usage contract (IUC).

In this field you may input a maximum of 50 characters and the field may not be left blank, otherwise there is a technical rejection by PCS.

5.3.5 Parameter D05 – Telefon Besteller

Input here a telephone number at which the juridical person who is handling the path request in accordance with the basic infrastructure usage contract can be reached by telephone if DB Netz AG has any queries.

In this field you may input a maximum of 20 characters and the field may not be left blank, otherwise there is a technical rejection by PCS.

We would request you to input the telephone number in accordance with the format stipulations of directive DIN-ISO 5008, hence, for example, +49 130 12345-678.

5.3.6 Parameter D06 – E-Mail Besteller

Input here an e-mail address at which the juridical person who is handling the path request in accordance with the basic infrastructure usage contract can be reached if DB Netz AG has any queries.

In this field you may input a maximum of 60 characters and the field may not be left blank, otherwise there is a technical rejection by PCS.

5.3.7 Parameter D07 – Fax Besteller

Input here a fax number at which the juridical person who is handling the path request in accordance with the basic infrastructure usage contract can be reached by DB Netz AG.

In this field you may input a maximum of 20 characters and the field may not be left blank, otherwise there is a technical rejection by PCS.

We would request you to input the fax number in accordance with the format stipulations of directive DIN-ISO 5008, hence, for example, +49 130 12345-679.

5.3.8 Parameter D08 – Art des Zuges

Select here whether your order involves a “Regelzug” (path request of the New Path Process) or a “Sonderzug” (path request of Late Path and Ad-Hoc Path Process).

The field may not be left blank.

5.3.9 Parameter D09 – Betreuender RB

Select here which regional branch of DB Netz AG is to have the responsibility for your order. Normally this is the regional branch in which the customer management that is responsible for you is located.

The field may not be left blank.

5.3.10 Parameter D10 – RV-Kap.-Nr. Bez.

In the case of path requests to the New Path Process a reference can be made to an accepted framework agreement capacity offer.

Input in this case the 12-digit framework agreement capacity number on the basis of which you wish to reference your path request.

Longer or shorter input leads to a technical rejection by PCS.

You can also leave this field blank if you do not have any outline agreement capacity or if you do not wish to reference one.

You may not fill in this field if you are requesting a path for non-scheduled traffic.

Please note that an incorrectly input framework contract capacity number leads to you not having valid referencing of your New Path Process path request for your framework agreement capacity and the outline agreement does not develop its effect in the creation of the New Path Process.

5.3.11 Parameter D11 – OeDLA

If your path request is part of a public service assignment (ÖDLA, “öffentlicher Dienstleistungsauftrag”), you may switch the Parameter to “ja”, otherwise put it to “nein”.

A blank field is interpreted as “nein”.

5.3.12 Parameter D12 – Flexibilität

This parameter is shown only for freight traffic requests.

You may here indicate whether you grant DB Netz during the path elaboration a flexibility beyond the usual boundaries of the Network Statements regarding times and route.

Valid values are

- ZF 30 = temporal flexibility +/- 30 minutes
- ZF 120 = temporal flexibility +/- 120 minutes
- RF 120 = temporal flexibility +/- 120 minutes and special flexibility regarding the route

If you leave the field blank, the general rules of the Network Statements will apply.

5.3.13 Parameter D13 – Gefahrgut-Ganzzug

This parameter is shown only for freight traffic requests.

You must switch this parameter to “ja” in case that you are requesting a path for a whole train carrying dangerous goods. In this case, you must also fill out the field “RID class” in the section “Dangerous goods indication” of the common parameters of all operation points in the dossier.

A blank value is interpreted as “nein” = no.

5.3.14 Parameter D14 – Verkehrsart Kunde Zusatz

This parameter is shown only for passenger traffic requests.

For accounting purposes, you may here enter additional information on the kind of traffic (i.e. charter traffic). The valid values can be chosen from the dropdown list and are based on the current DB Netz master data tables.

5.3.15 Parameter D15 – Betroffenheit Bau

This parameter is eventually filled out by DB Netz.

5.3.16 Parameter D98 – Kunden-Bestellnummer

You may enter here a alphanumeric string with up to 40 characters. By this you can enter an ID from your domestic planning system and thus create a reference between PCS and your system.

5.3.17 Parameter D99 – Liniennummer

This parameter is shown only for passenger traffic requests.

In this field you can input as required the line number of the transport service billing. This characteristic that is specific to passenger traffic is not interpreted or changed by DB Netz in its internal processes but is simply passed on in the offers.

5.4 Parameters at the operation point level

In PCS each operation point has a full set each of general and IM-parameters.

Please note the differing ways that the PCS and TPN systems work.

In TPN it is only necessary to save at the starting operation point a set of parameters (train characteristics). This set is valid until the next change of train characteristics (or, if applicable, up to the destination if no changes are made).

On the other hand, in PCS it is necessary to not only make a change in the train characteristics not only for the operation point at which the change of train characteristics applies but also for all the following operation points for which the train characteristics apply.

5.4.1 Common parameters

These parameters are collected and managed by PCS at each operation point, regardless of whether they belong to a particular IM.

5.4.1.1 Activity type

Input here one or (if required) more activity types.

PCS supports a total of 38 different activity types. not all of which are supported by TPN. Any activity types that are not supported are ignored by the PCS-TPN interface. You can find from Annex 1 (see 7.1) which types of activity are supported.

Please note that PCS does not carry out any plausibility checks. It is technically possible to select "Run-Through" as a type of activity, although the arrival and departure times and a minimum stopping time have been entered at the selected operation point.

Furthermore, PCS also does not check for consistency between the common parameter "Type of activity" and the IM-parameter "P20 - Halteart". Thus PCS allows you to select "Operational stop" as a type of activity, while the IM-parameter "P20 - Halteart" is switched to "D - Durchfahrt". Here as well, take the permissible combinations from Annex 1.

In order to determine the Halteart in your path request the PCS-TPN interface uses the IM-parameter "P20 - Halteart".

5.4.1.2 Location type

Input here which type is involved at the selected operation point.

The parameter "Operation point type" does not need to be filled in for a request via DB Netz, but possibly in future PCS service programs such as COBRA will need this function.

PCS does not make a plausibility check, each value characteristic can be clicked on at each operation point.

5.4.1.3 Comment

PCS provides the option to enter in this free text field a comment that relates to the selected operation point. However, the PCS interface does not evaluate these details.

5.4.1.4 Train type

You can enter in this field the Traffic type (maximum 5 characters).

Please note that for the determination of the Traffic type it is not this field that is used but instead the IM-parameter "P21 - Zuggat.-Produkt".

PCS does not carry out any consistency checking between the two parameters, the PCS-TPN interface solely evaluates the IM-parameter.

It is not necessary to fill in this parameter for a request to DB Netz. If you do decide to fill it in, we recommend that to avoid any misunderstandings that you always use the same Traffic type as in the IM-parameter "P21 - Zuggat.-Produkt".

5.4.1.5 Type of Service

This free text text has no function for requests in DB Netz.

5.4.1.6 Train weight

In this field you must input the total weight of the train with tons as the unit of measure. The value that is input must be an integer with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round up to the nearest whole number if necessary.

PCS carries out a consistency check with the parameter "Weight of set of carriages" on the basis that the Train weight must always be greater than the Weight of set of carriages. PCS does not carry out a plausibility check regarding the difference between the Train weight and the Weight of set of carriages and a comparison with the weight of the tractive unit (s).

This field is not read by DB Netz for your request. The Train weight is made up of the common parameter "Weight of set of carriages" and the IM-parameter "P22.x1 - x. Tractive unit type series" (with x = position of the tractive unit).

5.4.1.7 Train length

In this field you must input the total length of the train with metres as the unit of measure. The value that is input must be an integer with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round up to the nearest whole number if necessary.

PCS carries out a consistency check with the parameter "Length of set of carriages" on the basis that the Train length must always be greater than the Length of set of carriages. PCS does not carry out a plausibility check regarding the difference between the Train length and the Length of set of carriages and a comparison with the length of the tractive unit(s).

This field is not read by DB Netz for your request. The Train length is made up of the common parameter "Length of set of carriages" and the IM-parameter "P22.x1 - x. Tractive unit type series" (with x = position of the tractive unit).

5.4.1.8 Weight of set of carriages

In this field you must input the weight of all carriages of the train with tons as the unit of measure. The value that is input must be an integer with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round up to the nearest whole number if necessary.

If the train is only made up of working tractive units (e.g. traction with railcars, locomotives running empty) the Weight of set of carriages must be input as 0.

PCS carries out a consistency check with the parameter "Train weight" on the basis that the train weight must always be greater than the weight of set of carriages. PCS does not carry out a plausibility check regarding the difference between the train weight and the weight of set of carriages and a comparison with the weight of the tractive unit (s).

This field is read for your request at DB Netz by the PCS-TPN interface.

5.4.1.9 Length of set of carriages

In this field you must input the length of all carriages of the train and non-working tractive units with metres as the unit of measure. The value that is input must be an integer with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round up to the nearest whole number if necessary.

If the train is only made up of working tractive units (e.g. traction with railcars, locomotives running empty) the Weight of set of carriages must be input as 0.

PCS carries out a consistency check with the parameter "Train length" on the basis that the train length must always be greater than the length of set of carriages. PCS does not carry out a plausibility check regarding the difference between the train length and the length of set of carriages and a comparison with the length of the tractive unit(s).

This field is read for your request at DB Netz by the PCS-TPN interface.

5.4.1.10 Traction details

In this field you must give details of the requested tractive units.

You can extend the table as desired in the case of multiple traction. We recommend that you enter here the actual number of tractive units used, even when if in the IM-parameter "08.x1 - x. Tractive unit type series" (with x = 1, 2, 3 or 4) double or multiple traction can be selected directly in the form of other tractive unit sub-numbers.

5.4.1.10.1. Loco type number

Here you must input the type series designation of the tractive unit that is used. The value that is input must be at least one character and can be a maximum of 12 characters and can include alphabetic letters and special characters.

We recommend that you input only the tractive unit main number here and create an additional line in the case of multiple traction.

This field is not read for your request at DB Netz by the PCS-TPN interface. No consistency and plausibility checking is done of the IM-parameter „P22.x1 - x. Tfiz - Baureihe“. The PCS-TPN interface evaluates solely the IM-parameter.

5.4.1.10.2. Traction mode

Select here what type of train traction is involved and in what position the tractive unit that was entered in this line has in the case of multiple traction with regard to the other tractive units.

This field is not read for your request at DB Netz by the PCS-TPN interface. No consistency and plausibility checking is done of the IM-parameter „P22.x3 - x. Tfizf - Stellung“ (in each case with x = 1, 2, 3 or 4 respectively). The PCS-TPN interface evaluates solely the IM-parameter.

5.4.1.10.3. Train cc system

In the dropdown list you can choose between various European train safety systems if your tractive unit is equipped and suitable for them. If there are multiple choices available then select the highest level cab resp. train control system.

This field is not mandatory.

This field is not processed for your request at DB Netz by the PCS-TPN interface. Details on equipment with train control systems such as LZB, LZB-CIR and ETCS must be input via the IM-parameters P23, P24 and P25.

5.4.1.10.4. Traction weight and Traction length

You can input details on the weight and length of the tractive unit(s) used in these free text fields.

These fields are not mandatory fields and also no consistency or plausibility checking is done on the other parameters. The PCS-TPN interface does not read these fields because the associated values are kept in the tractive unit master data table.

The values that are input must be integers with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round up to the nearest whole number if necessary.

5.4.1.11 Train max speed

Input in this field the maximum speed of the train that is technically possible from this operation point onward with the unit km/h.

Consistency checking is done for the parameter "Planned speed". The value that is input must equal to or greater than the value in the parameter "Planned speed".

The value that is input must be an integer with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round up to the nearest whole number if necessary.

5.4.1.12 Planned speed

Input in this field with what speed the IM should reckon with from this operation point onward to calculate the timetable times (unit: km/h).

The value that is input must equal to or less than the value in the parameter "Train max speed". You can input an integer with a minimum of one digit and a maximum of five digits. Decimals are not allowed, round down to the nearest whole number if necessary. Input is not mandatory.

5.4.1.13 Route class

Select from this field in which route class in accordance with EN 15528 your path request is to be rated.

5.4.1.14 Max axle weight

Here you have the option to input the relevant maximum wheelset load in the unit tons of the vehicles making up your train.

That value that is input must be without a dimension and be in a range between 0 and 99.9. Integers and decimals are permitted. Use a period (full stop) as the decimal separator. You can input a value with up to three places of decimals but PCS will round it off by itself to just one decimal place.

5.4.1.15 Tilting function

Select from this dropdown field whether your train has tilting technology from the selected operation point onward.

The default value is "No tilting".

If your train has a vehicle facility for tilting technology, but it has been switched off for the journey and will not be used in the travelling time calculation, then select the value "Switched off".

5.4.1.16 Brake type

Select from this dropdown field what brake type your train has from the selected operation point onward.

PCS does not carry out any consistency checking of the IM-parameter 12.01 - (see 5.4.2.6.1). For that reason please ensure that the two values match.

DB Netz AG evaluates for the path request solely the details in the IM-parameter.

5.4.1.17 Emergency brake override

Activate the checkbox if your train (locomotive and all carriages) is equipped with emergency brake override from the selected operation point onward.

The locomotive and carriages must be equipped with emergency brake override for paths on high-speed sections with a high proportion of tunnels and on sections with newly built tunnels. Further information on sections on which there is this emergency brake bridging requirement can be found in the infrastructure register in the SNB of DB Netz AG.

5.4.1.18 Minimum brake weight percentage

This parameter is provided by DB Netz AG on the basis of the requested train characteristics and the resulting timetable in path offers. The field contents then specify the braking capacity in the unit brake weight per 100 t train weight that is required as a minimum for this train journey from the selected operation point onward.

Please do not fill in this field when making a path request! Any values that are input are ignored in the processing and will be overwritten when the path request is handed in.

5.4.1.19 Braking ratio

Input here the braking capacity in the unit brake weight per 100 t train weight which forms the basis for the designing of the timetable from the selected operation point onward.

PCS does not carry out any consistency checking of the IM-parameter

12.02 – (see 0). For that reason please ensure that the two values match.

The value that is input must be an integer without dimensions and with a maximum of 3 places in the value range between 1 and 400. PCS itself allows up to five-figure integers in this field, but all values above 400 are implausible for requests to DB Netz AG.

DB Netz AG evaluates for the path request solely the details in the IM-parameter.

5.4.1.20 Brake weight

This field is not evaluated by the interface of DB Netz AG.

5.4.1.21 Exceptional gauging ident

This field is not evaluated by the interface of DB Netz AG.

5.4.1.22 Container profile

In these fields you must input the profile numbers of the container profile when you make a path request in freight traffic for combined traffic.

Input in the fields provided exactly the corresponding profile numbers without any additions, spaces or other characters. If the train does not have any containers, swap bodies or the like, input "N" or "n" here (without the quotation marks).

5.4.1.23 Dangerous goods indication

In these fields you must input details of the dangerous goods being conveyed when you make a path request in freight traffic for a train to convey dangerous goods.

You may input a maximum of 4 characters in the sub-field "Hazard number". The value that is input must be made up of at least 2 and a maximum of 3 digits, if applicable, an "X" can be put before a two- or three-digit value.

You must input exactly 4 digits in the sub-field "UN Material number" when filling it. If applicable, use padding zeroes (e.g. 0077 in the case of Dinitroresorcinol).

You may input a maximum of 3 characters in the sub-field "RID Classification". The following combinations are permissible: a digit by itself (e.g. 2) or two digits that are separated by a period (e.g. 4.1).

You can input the corresponding information in the "Package group" sub-field.

The sub-field "Weight of dangerous goods" is not important for the path request at DB Netz and is therefore not evaluated by the interface.

If you wish to convey one item of dangerous goods, then create a new line for an additional set of the previously stated dangerous goods characteristics. Never input several dangerous goods numbers one after another.

The following applies to each dangerous goods characteristics line: always input at least one RID class. If the RID class field is empty the other fields do not need to be filled in either. Otherwise there will be a technical rejection.

5.4.2 IM-parameters of DB Netz AG

DB Netz requires this parameter to be input so as to ensure complete and smooth transfer of the PCS path request to the national ordering tool TPN.

5.4.2.1 P20 – Halteart

Select here the "Halteart" (= stop type) for the selected operation point.

The following forms can be selected:

- C - Verkehrshalt → commercial stop
- B - Bedarfshalt → stop on request
- D - Durchfahrt → run-through
- + - Betriebshalt → operational stop

In the case of a request stop and a mandatory stop it involves stops that are a constituent part of the path request. Operational stops arise from the design or the infrastructure and do not count as stops requested by the RU. If no stop has been requested, then flag it with D - Durchfahrt.

The regulations can involve restrictions concerning request stops. Stops on request ("B - Bedarfshalt") may not be requested for stops at operation points

- on sections with operation as per Ril 408 that do not have an exit signal
- on sections with operation as per Ril 436 if train movement authorities ("Zuglaufmeldungen") need to be given there.

Important note:

The common parameters Activity type (see 5.4.1.1) and the IM-parameters 23 - must be consistent with one another and technically plausible. You can find the permitted combinations in the Annex.

Currently there is no automatic consistency checking via PCS. Please therefore take special care here.

Take special care when copying train characteristics in PCS for subsequent operation points. In this case the Halteart of the following operation points is replaced by those of the template and any values that may have been set correctly are overwritten again by incorrect values. We

therefore recommend most strongly that each DB Netz operation point should be checked separately and with great care for plausibility and consistency, especially after using the PCS-based copy or update actions.

Impermissible combinations of Halteart and activity types can lead to a rejection by the PCS-TPN interface.

You can find a table of permitted combinations in Annex 1.

5.4.2.2 P21 – Zuggat.-Produkt

Select the traffic type that is to be used from the selected operation point onward for your path.

The dropdown menu is sorted by traffic type main and sub-number, then the traffic type short text is displayed. You must input a correct traffic type to be able to hand in a valid request.

If anything is unclear, please use the DB Netz master data list or contact the customer management that is responsible for you.

We recommend that you fill in the common parameter field "traffic type" with the train short text to avoid any lack of clarity.

5.4.2.3 P22.xy – Traction details (tractive unit data)

Input is this parameter group the data of the tractive unit(s) that you are using.

The parameter designation P22.xy is made up as follows:

- x (with value range 1 to 4): ordinal number of the tractive unit
- y (with value range 1 to 3): Details
 - 1 – Baureihe
 - 3 – Stellung

I.e. with parameter P22.23 the “Stellung” of the 2nd tractive unit is queried.

By default, only the input mask for the first tractive unit is visible in the user interface. You can request paths with up to four working tractive units via PCS. If you have available more than one working tractive unit, set the parameter "P22.19 – weitere Tfz?" from blank to „ja“. As a result the input masks for tractive units 2, 3 and 4 become visible.

Important:

Please be aware of the fact that in case that you want to change from multiple traction to single traction, it will not be enough to just switch the parameter “P22.19 – weitere Tfz?” from “ja” to blank. In the background the fields for 2nd, 3rd or 4th tractive unit remain filled, they would be just invisible for you. To really delete the 2nd, 3rd or 4th tractive unit, you will need to set all the respective traction unit parameters to blank. Only after this has been done, switch the parameter “P22.19 – weitere Tfz?” back to blank.

The detail input fields "Baureihe", "Art d. Bsp." and "Stellung" are all structured identically and hence will only be presented once:

5.4.2.3.1. P22.x1 – Baureihe

Select from the dropdown list the type series of the tractive unit in accordance with the DB Netz master data list.

Note that a type series can have several variants. In the case of railcars multiple traction units are controlled to some extent via the variant number (e.g. for the type series 612, where the variant number defines from single to quadruple traction).

You primarily input a multiple traction unit via the variant number. In the case of quadruple traction for the 612 type series you should select in the parameter of the 1st tractive unit the tractive unit variant with quadruple traction and leave blank the parameters for the 2nd, 3rd and 4th tractive unit. Only if there is no variant in the list that can be chosen for multiple traction should you use the input fields of the 2nd, 3rd and 4th. tractive unit.

Background:

Multiple traction through railcars is subject to peculiarities of driving dynamics that are controlled via the individual variants in the master data. Incorrect input can therefore lead to an incorrect travelling time calculation.

5.4.2.3.2. P22.x3 – Stellung

Select from the dropdown list in which position the previously selected tractive unit is located within the train set.

The German terms for the different values mean:

Z - Zuglok (Regelbespannung)	locomotive on the forefront of the train, to be used if only one regular locomotive or railcar is in place
D - Doppeltraktion (Regelbespannung)	= “double traction” To be used if two locomotives or railcars are used next to each other at the forefront of the train and the second one is remotely controlled from the first one, both have to be switched to “D - Doppeltraktion”
M - Mittellok (Regelbespannung)	= “intermediate locomotive” To be used if the locomotive is located in the middle of the train set and is remotely controlled by the leading locomotive.
M - Mittellok (Zusatzbespannung)	= “intermediate locomotive” To be used if the locomotive is located in the middle of the train set and is operated by a separate loco driver.
V - Vorspannlok (Zusatzbespannung)	To be used if two locomotives are used next to each other at the forefront of the train and each locomotive is operated by one loco driver.
S - Schiebelok gekuppelt (Zusatzbespannung)	Banking locomotive, coupled Maximum speed is 80 km/h in that composition
U - Schiebelok ungekuppelt (Zusatzbespannung)	Banking locomotive, uncoupled Maximum speed is 60 km/h in that composition

5.4.2.4 P23 – LZB

Select „ja“ from the dropdown list if the tractive units that have been specified from this operation point onward are equipped with vehicle facilities for the continuous automatic train control system LZB (= “Linienzugbeeinflussung”).

Otherwise select „nein“.

5.4.2.5 P24 – CIR

CIR stands for "Computer Integrated Railroading" and is used on sections that are equipped with a continuous automatic train control system. There are service levels 1 and 2 for CIR.

If the specified tractive units are not equipped with LZB (see 5.4.2.4) from this operation point onward then you must set parameter P23 to "nein".

If the tractive units are equipped with LZB but not with CIR vehicle facilities then likewise switch parameter P23 to „nein“.

If the specified tractive units are equipped with vehicle facilities for LZB and CIR from this operation point onward then select in parameter 10 the service level that is supported by the vehicles. The selection is 1, 2 and 1+2 (if both service levels are supported)

Note:

Currently it is not possible to make a consistency check in PCS between the switched values in parameters P23 – LZB and P24 – CIR. Thus it is technically possible to switch in technically impermissible combinations from both parameters and thus to initiate a path request.

However, the PCS-TPN interface will detect a technically incorrect combination, although only at the incoming check, and hence it will technically reject the path request.

Please therefore ensure during data entry that you input consistent values!

5.4.2.6 12.P26.x – Brake-related details

In these two parameters you must input details from the brake equipment of your train from the relevant selected operation point onward.

5.4.2.6.1. P26.1 – Bremsstellung

Select from the dropdown list the brake application position that applies from the relevant selected operation point onward.

5.4.2.6.2. P26.2 – Vorhandene BrH

Input in the field the percentage of brake power applied that is to apply from the relevant selected operation point onward.

The value that is input must be an integer with a minimum of one digit and a maximum of three digits. Decimal places are not allowed. The permissible range of values for input is between 1 and 400. Higher values are initially accepted by PCS but are then rejected by the PCS-TPN interface.

5.4.2.7 P27 – EBUla

Select from the dropdown list the EBUla equipment of the train.

Select „ja“ if the tractive units that apply from this operation point onward have EBUla vehicle equipment and if you do not want any printed timetables from this operation point onward.

Select „nein“ if the tractive units that apply from this operation point onward do not have EBUla vehicle equipment and so you want a printed timetable from this operation point onward.

5.4.2.8 P28 – Grenzlast

Input in this parameter whether the specified weight of set of carriages is the maximum load.

The value „nein“ means that the specified load may be exceeded after having obtained special instructions and approval from the local responsible operating centre (“Betriebszentrale”) of DB Netz AG.

The value „ja“ means that the specified load is the maximum load and therefore it should in general not be exceeded.

5.4.2.9 P29 – Richtungswechsel

The change of direction flag specifies whether it is necessary to consider in the timetable planning further changes in the direction of travel need to be made apart from the changes in the direction of travel requested by the RU.

Select „ja“ if you wish to permit DB Netz to construct additional, unrequested changes in the direction of travel when elaborating the path.

Select „nein“ if you wish to prohibit DB Netz to construct additional, unrequested changes in the direction of travel when elaborating the path.

5.4.2.10 P71 – LUE-Leitziffer

This parameter is only visible on paths for rail freight traffic.

It is filled in as required by DB Netz AG and output in your answers / data deliveries.

5.4.2.11 P72 – ROLA-Profil

This parameter is only visible on paths for rail freight traffic.

The German acronym ROLA means "Piggyback transport".

You must fill in the field of this parameter if the requested path runs in internal piggyback transport traffic on the section Haltingen – Basel Bad Bf and across the border onto the network of the SBB infrastructure.

5.4.2.12 P73 – Bef. Anordnung

Here you can input details of the “Beförderungsanordnung” (movement order).

The input value may not contain more than 35 alphanumeric characters, otherwise there is a technical rejection by PCS.

5.4.2.13 P74 – BZA

This parameter is only visible on paths for rail freight traffic.

Input here as required the number of the “Beförderungszusage für außergewöhnliche Transporte” (special conveyance permit, abbr. “BZA”).

The input value may not contain more than 140 alphanumeric characters, otherwise there is a technical rejection by PCS.

5.4.2.14 P75 – Ladegut

This parameter is only visible on paths for rail freight traffic.

In this free text field you can input details of the freight being conveyed (e.g. coal, heating oil, chlorine, etc.).

The input value may not contain more than 30 alphanumeric characters, otherwise there is a technical rejection by PCS.

5.4.2.15 P76 – Bef. Besonderh.

This parameter is only visible on paths for rail freight traffic.

Here you can select the train ID / special conveying points for freight traffic that take effect from this operation point onward. Multiple designations are possible.

5.4.2.16 P81 – Anzahl Rz-Wagen

This parameter is only visible on paths for rail passenger traffic.

Input here the number of passenger carriages.

The value that is input must be an integer with a maximum of two digits.

5.4.2.17 P82 – Wendezug

This parameter is only visible on paths for rail passenger traffic.

Select „ja“ if the applicable train characteristics from this operation point onward make it possible not to require a tractive unit to round the train in case of a reversing stop (e.g. control cab, "sandwich" traction, railcars and the like).

Select „nein“ if the applicable train characteristics from this operation point onward also require the tractive unit to round the train when making a change in the direction of travel.

5.4.2.18 P83 – HG Ausf NeiTech

This parameter is only visible on paths for rail passenger traffic.

Input in this field the maximum speed in km/h that is permitted for the train from this operation point onward if the tilting technology fails. An input is only required if there is a tilting technology function from this operation point onward (see 5.4.1.15 Tilting function).

The value that is input must be an integer with a minimum of one digit and a maximum of three digits. Decimal places are not allowed. The number must be input without a dimension.

5.4.2.19 P84 – NBUE erford. bis

This parameter is only visible on paths for rail passenger traffic.

The field is filled out by DB Netz AG in answers and specifies as the field contents that operation point up to which the train must effective (switched on) emergency brake override. This operation point is shown abbreviated in accordance with DB-Ril 100 coding.

5.4.2.20 P9x – Ergänzungsfahrplanangaben

Parameters P91 to P94 specify in Detailed Master mode in the answers of DB Netz AG, among other things, whether a Subsidiary Timetable is being used in the function as Startflügel, Zielflügel or Doppelfahrplan.

You do not need to make inputs in these fields; the fields are only filled in through the answers of DB Netz in Detailed Master mode.

6 Special rules for specific PCS process phases

6.1 Open and Harmonization

6.1.1 Forwarding dossier from previous timetable

PCS allows to copy a dossier from one timetable period into the next one and also to transfer parameters and calendar into the next timetable year ("dossier forwarding").

We do not recommend to use that function as it currently does not work reliably well. However, if you choose to use that function, please ensure

- to always use the previous year's IM timetable as source for the copy
- to check the newly created dossier for any operation points which validity periods ran out at the end of the previous timetable period and hence become invalid in the new timetable period
- to check the calendars of main and subsidiary timetables very thoroughly for any inconsistencies. Especially check the calendar for day shifts as the forwarding function tends to shift the days regardless of their position in the new timetable's calendar

6.2 Path request

6.2.1 Withdrawal of a path request

You may withdraw a previously submitted path request, i. e. for correction purposes. Please note that the train number has been reserved for the initial path request in the follow-up IT systems of DB Netz. Thus, the withdrawal has to be processed at first in all DB Netz IT before re-requesting.

If you re-request the path immediately, this will probably result in a rejection of your request.

We kindly ask you to contact us immediately after withdrawing a path request. Please use the following e-mail-adress:

pcs@deutschebahn.com

The deadlines for path request in the new path process remain unaffected.

6.3 Path elaboration

-

6.4 Draft offer

-

6.5 Observations

6.5.1 Indication as “berechtigte Beanstandung”

In order to submit a “berechtigte Beanstandung” (= “justified objections”) (see paragraph 4.2.1.12.3 of the Network Statements (SNB) of DB Netz AG), you need to click the button “make observation”, which is only available in the Observations phase. You must fill out the form that appears on your screen afterwards, put in a reasonable and meaningful comment into the free text field and mark this comment as “justified objection” by activating the adjacent clickbox.

Any entries in the common comment field of the PCS dossier or entries in the observations form that have not been marked as “justified objection” will not be processed by DB Netz.

6.5.2 More than one observation per IM

Due to technical limitations you may not submit more than one “justified objection” to DB Netz. Hence we advise:

- not to create observations for sections where more than one IM is involved (i. e. at the border areas). Instead we recommend to create separate observations for each affected IM.
- to summarise all “justified objections” for DB Netz in a dossier into one observation. Use the observations text field to indicate separate text strings for different operation points after one another.

6.6 Post-Processing

-

6.7 Final Offer

6.7.1 Acceptance deadline

Please note that for acceptance or refusal of the Final offer the rules of the Network Statements (SNB) of DB Netz AG apply in every case. You can find these rules in chapter 4.2.1.14. of the SNB. Thus, a Final offer has to be accepted or refused by the RU within 5 workdays. This regulation is independent from any PCS process related regulations.

6.7.2 Accepting the Final Offer

Basically the acceptance of the Final Offer is done by switching the RU acceptance indicator to “green”. The dossier is switched into the next process phase “Active Timetable” when the following conditions are fulfilled:

- all RU-IM-pairs must have reached the the phase “Final Offer”
- all RUs must have switched their respective acceptance indicators to “green”
- the leading RU accepts the Final Offer

In case that not all conditions are fulfilled, the phase “Active Timetable” cannot be reached. Nevertheless may you indicate the acceptance of the part of the offer which DB Netz is responsible for. To do so, switch your acceptance indicator to “green”.

At the end of the acceptance deadline, DB Netz is checking all dossiers which are still in “Final Offer” phase for the status of the acceptance indicator of the respective RU. A green acceptance indicator is interpreted as acceptance of the Final Offer.

6.7.3 Declining the Final Offer

You may decline the Final Offer by switching your acceptance indicator to “red”. In this case, this dossier cannot be promoted to “Active Timetable” phase any more since not all conditions are fulfilled.

Hence you do affect your contracting partners with that action, we recommend to get in touch with them before.

6.8 Active Timetable

6.8.1 Systemwechsel PCS→TPN

DB Netz supports the PCS process until the phase “Active Timetable”. All subsequent processes (such as Path Modification, Path Alteration) are no longer supported by DB Netz.

Hence DB Netz performs a system switch after the dossiers have reached “Active Timetable”. The paths are re-established in the TPN system which becomes the leading system afterwards. All modifications and alterations of the paths are subsequently done in the TPN system only. You may use the TPN customer interface or the TPN internet client to work on your requests and use the full functionality of TPN without PCS limitations.

Please note that there will be no data communication any more between PCS and TPN,

- changes that you place in PCS only will not be transferred to TPN
- any elaborated TPN requests will not be transferred to PCS.

DB Netz will inform you about the details of that procedure in sufficient time.

7 Annexes

7.1 Annex 1 – Permittable combinations of Activity Type and Haltegrund

Please refer to the downloads section.

7.2 Annex 2 – Overview of border-crossing railway lines and handover points

Please refer to the downloads section.

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