DINO – Exchange Format
Version 2.1
DINO Exchange Format Documentation

MENTZ GmbH
Grillparzerstraße 18
81675 München
Tel: +49 89 41868-0
Fax: +49 89 41868-160
info@mentz.net
www.mentz.net

Versionsgeschichte				
Document version	Software version	Date	Name	Reason for change
2.1		29.09.2020	F. Twaroch	Correction to link.din: STOPPING_POINT_NR is also part of the key Clarification of the mandatory fields in stop_attribute.din and stop_point_attribute.din. The stop number or platform number must be provided

Inhaltsverzeichnis

1 Introduction

The DINO exchange format is based on the VDV-DIVA exchange format which, in turn, is based on the German ÖPNV VDV standard, version 5.0 or 5.1.

The DINO data documentation has been revised extensively in response to numerous customer requests. In recent years, some extensions to the interface were also implemented and introduced, some of which deviate from the VDV standard. One main difference from the VDV standard is the way trip times and day types are modelled. A test data set to illustrate the changes in the definitions is provided together with this documentation.

Some inconsistencies in the interface were also cleaned up. The short designation NO which was occasionally used for "number" was therefore consistently replaced with the VDV 452-compliant abbreviation NR. Field lengths were extended so that they apply uniformly to all tables in the specification (e.g. *TIMETABLE_PERIOD*).

Due to the many changes compared to previous versions, a new version number was assigned to the interface. Future DINO exports will be issued with the version number 2.x. DINO 2.x data is not backward compatible with DINO 1.x.

2 Overview of all relations

The following table shows all the tables supported by the DINO format. From version DINO 2.0 onwards, attention was also paid to naming the tables more uniformly. Many tables were therefore renamed compared to the previous version. The new table names are listed here:

	from DINO 2.0	up to DINO 1.7
Allgemeine Daten	character.set.din	-
Kalenderdaten	version.din	set_version.din
	day_type.din	set_day_type.din
	day_attribute.din	set_day_attribute.din
	day_type_2_day_attribute.din	day_type_2_day_attribute.din
	day_type_calendar.din	calendar_of_the_company.din
	service_restriction.din	service_restriction.din
Ortsdaten	stop.din	rec_stop.din
	stop_area.din	rec_stop_area.din
	stop_point.din	rec_stopping_points.din
	stop_footpath_din	rec_footpath.din
	stop_additional_name.din	rec_additional_stopname.din
	stop_alias_placename.din	rec_alias_placename.din
	coordsys.din	-
Tarifdaten	fare_zone.din	-
	neighbour_fare_zone.din	rec_neighbour_fare_zone.din
	fare_zone_transition.din	-
	fare_zone_transition_point.din	-
Verkehrsmittel	means_of_transport_desc.din	means_of_transport_desc.din
Umsteigezeiten	transfer_matrix.din	transfer_matrix.din
Fahrzeugtypen	vehicle_type.din	set_vehicle_type.din
Unternehmer	operator.din	-
	operator_branch_office.din	-
	depot.din	set_depot.din
Betriebszweige	branch.din	branch.din
Linien-, Netz-, Betriebsdaten	timing_pattern.din	lid_travel_time_type.din
	route.din	lid_course.din
	trip_purpose.din	set_trip_purpose.din
	line.din	rec_lin_ber.din
	vehicle_destination_text.din	vehicle_destination_text.din
	trip_vdt.din	trip_vdt.din
	train_category.din	-
	trip.din	rec_trip.din
	trip_stop_time.din	trip_stop_time.din
	vehicle_block.din	rec_round_trip.din
	line_suppression.din (ab 2.1)	-
Hinweise	notice.din	notice.din
	notice_str.din	hinw_str.din
	service_constraint.din	service_interdiction.din
Anschlussdefinitionen	connection.din	rec_connection.din
	interchange_definition.din	-
	interchange_validity.din	-
	link.din	-

	from DINO 2.0	up to DINO 1.7
Teilstrecken und Georeferenzierte Daten	link_geometry.din	-
	link_force_point.din	-
Benutzerdefinierte Attribute	attribute.din	-
	stop_attribute.din	-
	Stop_area_attribute.din	-
	Stop_point_attribute.din	-
	Line_attribute.din	-

3 Compatible products

The list below describes the products (interfaces) that are compatible with the standard DINO interface. In some instances, a compatible version of the interfaces is not yet in use anywhere but is planned (depending on orders). This has been noted accordingly.

The DINO interface can reduce the effort involved in transferring data to and from a DIVA system. At this point we cannot make any statements about the general quality of the software and, in particular, its suitability to meet transport companies' requirements.

To achieve compatibility, the software vendors did the following:

- they handed over version 2.x of the DINO interface service description including the data model, product designation and version assignment and
- provided verification that it functions as described.

To successfully link two products, it is necessary to make sure that the source system can supply all the relations required by the target system in addition to ensuring compatibility with the interface description published in this document.

All the tables in the minimum scope of DINO (see list below) must always be transferred when a data exchange takes place. However, depending on the products involved, some optional tables may be sent empty.

3.1 Minimum scope and project-specific extensions

The following tables show the relations supported by the various products.

Good linking options presuppose as many supported relations as possible **(X)**. For any individual linkage, the exporting system should ideally supply all the relations that can be imported by the receiving system. Manual adjustments can, however, also be made at a later stage. The following tables should by no means be understood to mean that only the products for which the same relations are ticked **(X)** can be linked.

			DIVA MENTZMENTZ			IVU.PLAN IVU			Epon ISIDATA			Publiq GEVAS			MATRIK Telematrik				
	X: Minimum **O: Optional** **Tabelle**	**Minimum**	**Export**	**Import**		**Export**	**Import**		**Export**	**Import**		**Export**	**Import**		**Export**	**Import**		**Import**	**Import**
Kalenderdaten	version.din	**X**	X	X*															
	day_type.din	**X**	X	X															
	day_attribute.din	**X**	X	X															
	day_type_2_day_attribute.din	**X**	X	X															
	day_type_calendar.din	**X**	X	X															
	service_restriction.din	**X**	X	X															
Ortsdaten	stop.din	**X**	X	X															
	stop_area.din	**X**	X	X															
	stop_point.din	**X**	X	X															
	stop_footpath.din	**X**	X	X															
	stop_additional_name.din	**O**	X	X															
	stop_alias_placename.din	**O**	X	X															
	coordsys.din	**O**																	
Tarifdaten	Fare_zone.din	O	**	**															
	Neighbour_fare_zone.din	**O**	X	X															
	Fare_zone_transition.din	**O**	X	X															
	Fare_zone_transition_point.din	**O**	X	X															
Linien- / Netz- / Betriebsdaten	means_of_transport_desc.din	**O**	X	X															
	transfer_matrix.din	**O**	X	X															
	vehicle_type.din	**O**	X	X															
	operator.din	**O**																	
	operator_branch_office.din	**O**																	
	depot.din	**O**	X																
	branch.din	**O**	X	X															
	timing_pattern.din	**X**	X	X															
	trip_purpose.din	**O**	X	X															
	route.din	**X**	X	X															

	line.din	**X**	X	X															
	vehicle_destination_text.din	**O**	X	X															
	trip_vdt.din	**O**	X	X															
Fahrplandaten	trip.din	**X**	X	X															
	trip_stop_time.din	**O**	O	O															
	round_trip.din	**O**																	
	notice.din	**X**	X	X															
	service_constraint.din	**X**	X	X															
	notice_str.din	**X**	X	X															
Anschlussdaten	connection.din	**O**	X	X															
	interchange_definition.din	**O**	**	**															
	interchange_validity.din	O	**	**															
Teilstrecken und georeferenzierte Fahrwege	link.din	**O**	X	X															
	link_geometry.din	**O**	X	X															
	link_force_point.din	**O**	X	X															
Benutzerdefinierte Attribute	attribute.din	**O**	X	X															
	stop_attribute.din	**O**	X	X															
	Stop_area_attribute.din	**O**	X	X															
	Stop_point_attribute.din	**O**	X	X															
	Line_attribute.din	**O**	X	X															

*version.din is not imported but set by the import configuration.

** fare_zone.din, interchange_definition.din and interchange_validity.din will only be supported in a later implementation of the DINO 2.x interface by MENTZ GmbH.

3.2 Incremental data exchange

Some projects proposed an incremental data exchange. If this option is taken, the data elements that are to be exchanged must be agreed in advance. In DIVA 4 Release R15, an incremental DINO data delivery means a part delivery of lines.

Here is an example to explain this. Take a timetable database consisting of a total of 10 lines within the timetable period. Changes are now made to lines 1 and 3. It is possible to transfer just these two lines (1 and 3) in a separate incremental DINO data delivery. The DINO export must contain all the files of the full delivery but they only contain data relating to lines 1 and 3. Special consideration must be given if there are interchange definitions. If, in the same example, other lines (e.g. lines 5 and 7) have an interchange relationship with lines 1 and 3, these lines must also be included in the delivery. The incremental delivery then consists of lines 1,3,5,7 instead of the 10 lines of the total dataset.

The DIVA 4 DINO import can be configured to import DINO lines into an existing dataset in the form of DIVA line versions or to overwrite existing line versions (see also notes on the validity of the DIVA line version in the version.din relation).

A DINO delivery dataset of individual lines must always contain all the relevant data elements that are dependent on these lines (stops, areas, platforms, service restrictions, notes, destination texts, etc.).

For incremental deliveries this means that the exporting system must transfer the minimum scope (see table) or the number of tables agreed for the project. If connection linkages are delivered, an incremental part delivery must include all the lines involved in the connection linkage.

Here, once again, is a list of the minimum DINO relations that are required:

- version.din
- day_type.din
- day_attribute.din
- day_type_2_day_attribute.din
- day_type_calendar.din
- service_restriction.din
- stop.din
- stop_area.din
- stop_point.din
- stop_footpath.din
- timing_pattern.din
- route.din
- line.din
- trip.din
- ~~trip_stop_time.din~~
- notice.din
- service_constraint.din
- notice_str.din

If further optional relations are to be transferred in the incremental data delivery, they must also be exported / imported. This must be decided before the data exchange takes place. If, for example, vehicle destination texts are to be exchanged, the vehicle_destination_text table must be supplied with the lines in the incremental data export. In the example above, only the destination texts of lines 1,3,5,7 need to be supplied, and not all 10 lines.

The line number must be maintained persistently so that it can be allocated again at the time of the next import. The DIVA 4 import uses an allocation table to link the imported DINO lines to the DIVA lines.

4 Notations

The database tables are imported and exported in the ASCII format. Each data table is created with the filename <filetablename>.din. The first line contains the table header in accordance with the VDV standard.

The data fields should be delimited with a semicolon ";", however, other separators are possible. Data fields that are not used can be skipped by the delivery or import system (instead of default values or spaces).

Key: Y = Yes, N = No, Opt = Optional

The selected delimiter must not be used inside the data fields unless it is enclosed by double quotes. The default delimiter of the DINO format is the semicolon.

4.1 Data types

The following data types are used for DIVA and DINO in the documentation:

Data Typ	**Description**
Decimal (x)	Decimal value, where x is the maximum number of digits
Char (x)	String, where x is the maximum number of net characters
Boolean	Logical type: 0 = FALSE / 1 = TRUE
ISO 8859-1	

5 Interface description

The DINO relations are described in the following sections.

5.1 Code Page

5.1.1 Character_set.din

DINO description (overview of all relations)

ORACLE-compliant code page

This table is optional for the DIVA import.

	DINO **Table: character_set.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	mandatory	CHARACTER_SET	char (20)	WE8ISO8859P1, EE8MSWIN1250, UTF8, …	description of character set used	Character set used

A list of character sets that are supported by Oracle can be found at e.g.: http://docs.oracle.com/cd/B28359_01/server.111/b28298/applocaledata.htm#i635016.

5.2 Calendar dates

Trips are mapped to a calendar that indicates for each day whether or not the trip will take place. This section describes the required elements of the DINO data model.

The version.din relation describes timetable periods in the same way as in the DIVA data model. Timetable periods specify the validity range of a timetable. They are named with a freely definable key (e.g. s17 for summer timetable 2017 from 1.6.2017 to 26.9.2017). The key should provide an indication of the meaning. In principle, it is possible to work with any number of timetable periods at the same time. The lines do not have to have the same periodicity. The Oktoberfest timetable applies only to the lines that travel to the location of the event. There may be overlaps between the timetable periods, in which case priority rules are defined. For example, the Christmas timetable overlaps with the winter timetable and yet there is no need to create a gap in the validity period of the winter timetable.

Other relations are used for defining service days. Service days are those days on which a trip takes place. In most timetable books, the timetables are presented separately according to the service days, i.e. "Mondays to Fridays", "Saturdays", Sundays and public holidays". For trains, the service day normally shows as "daily".

The essential elements are the day types and day type groups (in the DIVA world, the term "weekday type" is also used), which, in specific cases, are combined with service restrictions to indicate the service days applicable to the trip.

The DINO relation day_type.din lists all the types of operating days in a data delivery. These are referred to as day types. For example, you could define MonFriS as Monday - Friday, during the school term excluding public holidays and, as a complement to it, MonFriH as Monday - Friday during the school holidays, excluding public holidays. You could also define Monday to Friday including public holidays as MonFri, for example.

The day types are linked to a calendar in the day_type_calendar.din relation. Only one day type is assigned to each applicable day within the timetable period. For example, 26 March 2015 could be defined as ThuS (Thursday school) or MonFriS (Monday - Friday school), while in the following Easter holiday week, Holy Thursday, 3 April 2015, for example, could be defined as day type ThuH (Thursday holiday) or MonFriH (Monday - Friday holiday). These are simply examples which can be modified at any time depending on the requirements of the timetable and its efficient storage.

Day types are therefore defined for individual days. For a more compact representation, the day types relating to the calendar are grouped together. Groups of day types are formed with the day_type_2_day_attribute.din DINO relation. The day types can be summarized here. Here is an example:

day_type defines the following day types:

```
VERSION;DAY_TYPE_NR;DAY_TYPE_TEXT;STR_DAY_TYPE;
1;1;Sonntag und Feiertag;SO;
1;2;Samstag;SA;
1;3;nur freitags Schule;FrS;
1;4;nur donnerstags Schule;DoS;
1;5;nur mittwochs Schule;MiS;
1;6;nur dienstags Schule;DiS;
1;7;nur montags Schule;MoS;
1;8;nur freitags Ferien;FrF;
1;9;nur donnerstags Ferien;DoF;
1;10;nur mittwochs Ferien;MiF;
1;11;nur dienstags Ferien;DiF;
1;12;nur montags Ferien;MoF;
```

Now we can define a composite group Monday to Friday school as day_attribute_no = 1, for example, in the day_type_2_day_attribute.din table

```
VERSION;DAY_TYPE_NR;DAY_ATTRIBUTE_NR;
1;7;1;
1;6;1;
1;5;1;
1;4;1;
1;3;1;
…
```

and another composite day type group Monday to Friday holidays as day_attribute_no =2,

```
...
1;12;2;
1;11;2;
1;10;2;
1;9;2;
1;8;2;
1;3;1;
…
```

and a Saturday day-type attribute as day_attribute_no = 3 as follows:

```
1;2;3;
```

…

The day_attribute.din relation describes the composite day type groups in more detail:

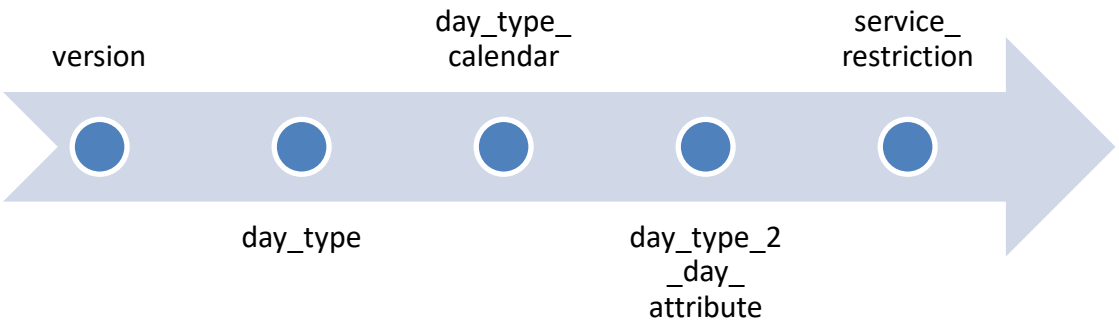
```
VERSION;DAY_ATTRIBUTE_NR;DAY_ATTRIBUTE_TEXT;STR_DAY_ATTRIBUTE;
1;1;MoFrS;Montag – Freitag Schule;
1;2;MoFrF;Montag – Freitag Ferien;
1;3;Sa;Samstag;
…
```

In addition to the day type groups, service restrictions are mapped as bit fields in the service_restriction.din relation.

Within a trip (trip.din), the system then references the day type groups (DAY_ATTRIBUTE_NR) or the service restrictions (RESTRICTION) directly. The validity of connection linkages (connection.din) can be limited to day type groups (DAY_ATTRIBUTE_NR).

In summary, service days are set up in the following steps:

1. version.din: Define the timetable period
2. day_type.din: Define the day types that were assigned to the calendar days.
3. day_type_calendar.din: Define the company calendar in the relation and assign day types with DAY_TYPE_NR. This may occur several times in the calendar.
4. day_type_2_day_attribute.din: Group the day types into composite day types.
5. service_restriction.din: Restrict day types to certain time periods via a bit field, e.g. only in the first week of May, only in the Easter holidays, etc.



5.2.1 version.din (formerly set_version.din)

DINO description (overview of all relations)

Basic versions, valid standard versions for network, structure and timetable data

This table is required for the DIVA import. It describes the timetable period.

	DINO **Table: version.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	N	Optional	VERSION_TEXT	char (70)		description of version	Version description
	N	Optional	TIMETABLE_PERIOD	char (4)		abbreviation of the timetable period	Abbreviation of the timetable version
	N	Optional	TT_PERIOD_NAME	char (40)		name of the timetable period	Depending on the input specification settings: Network: <Network>, project: <project>, plan <map type/coordinates>, date: <export date> <export time>
	N	Optional	PERIOD_ DATE_FROM	date (JJJJMMTT)		date of the beginning of the time table period	Date from which the general timetable version applies: e.g. the number 20021231 refers to 31 December 2002
	N	Optional	PERIOD_DATE_TO	date (JJJJMMTT)		date of the end of the time table period	Date until which the general timetable version applies: e.g. the number 20021231 refers to 31 December 2002
	N	Optional	NET_ID	char (3)		network ID	Provider / network name
	N	Optional	PERIOD_PRIORITY	decimal (1)		period priority	Weighting of the timetable version

The weighting of the timetable period (PERIOD_PRIORITY) must be set if there are several timetables that overlap in time. The weighting then determines which timetable period is to be prioritised on a particular date. The timetable project with the higher weighting is prioritised. This is not currently implemented in the DINO import because it is captured in DIVA. x

The DIVA 4 DINO import uses the date set in version.din(PERIOD_DATE_FROM, PERIOD_DATE_TO) to determine whether an existing line version should be overwritten in DIVA (same date as previous delivery) or whether a new line version is to be created.

The starting date of the validity of a line version created by the DIVA 4 DINO import is identical to the date of the import unless the PERIOD_DATE_FROM field in the version.din table is filled, in which case the validity starting date of the new line version is defined by PERIOD_DATE_FROM.

Example:

```
VERSION;VERSION_TEXT;TIMETABLE_PERIOD;TT_PERIOD_NAME;PERIOD_DATE_FROM;PERIOD_DATE_TO;NET_ID;P
ERIOD_PRIORITY;
1;Fahrplanperiode 2013/2014;FP22;Fahrplanperiode ab 15.12.2013;20131215;20141213;ovb;1;
```

5.2.2 day_type_calendar.din (formerly calendar_of_the_company.din)

DINO description (overview of all relations)

Company or corporate calendar, assigns day types to operating days

This table is required. It maps the day types listed in day_type.din to calendar days.

	DINO **Table: day_type_calendar.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	DAY	Date (JJJJMMTT)		date	Date
	N	Optional	DAY_TEXT	char(40)		description, may be empty	Description
	N	Mandatory	DAY_TYPE_NR	decimal (9)		type of the day for this day	Day type number

Example:

```
VERSION;DAY;DAY_TEXT;DAY_TYPE_NR
1;"20111121";"";1
1;"20111122";"";2
1;"20111123";"";3
1;"20111124";"";4
1;"20111125";"";5
1;"20111126";"";6
1;"20111127";"";7
1;"20111128";"";1
1;"20111129";"";2
1;"20111130";"";3
...
```

5.2.3 day_type.din (formerly set_day_type.din)

DINO description (overview of all relations)

Day types - a list of all types of operating days, Mon, Tue, Wed, Thu, Fri, Sat, Sun

This table is required. It contains text descriptions of the day types that are assigned to calendar days in the day_type_calendar.din relation.

	DINO **Table: day_type.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	DAY_TYPE_NR	decimal (9)		type of the day	Day type number
		Optional	DAY_TYPE_TEXT	char (40)		description	Description of the day type
		Optional	STR_DAY_TYPE	char (2)		abbreviation, may be empty	Short designation of the day type

The service days, i.e. the days on which vehicles actually operate, are determined on the basis of the operating days. These may be, for example, the days of a week:

Example:

```
VERSION;DAY_TYPE_NR;DAY_TYPE_TEXT;STR_DAY_TYPE
1;1;"Montag  21.11.2011";"Mo"
1;2;"Dienstag  22.11.2011";"Di"
1;3;"Mittwoch  23.11.2011";"Mi"
1;4;"Donnerstag  24.11.2011";"Do"
1;5;"Freitag  25.11.2011";"Fr"
1;6;"Samstag  26.11.2011";"Sa"
1;7;"Sonntag  27.11.2011";"So"
1;8;"Montag  28.11.2011";"Mo"
…
```

5.2.4 day_type_2_day_attribute.din

DINO description (overview of all relations)

Assignment of day types to day-type attributes (to form groups)

This table is required. It combines the day types reflected on the calendar into day type groups.

	DINO **Table: day_type_2_day_attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	DAY_TYPE_NR	decimal (9)		type of the day	Day type number
	Y	Mandatory	DAY_ATTRIBUTE_NR	decimal (5)		attribute of the day	Day-type attribute number

Day types are grouped into day-type attributes in the day_type2_day_attribute.din table.
A text description of the groups can be provided in the day_attribute.din table.

Example:

```
VERSION;DAY_TYPE_NR;DAY_ATTRIBUTE_NR
1;1;1
1;2;2
1;3;3
1;4;4
1;5;5
1;6;6
1;7;7
…
```

5.2.5 day_attribute.din (formerly set_day_attribute.din)

DINO description (overview of all relations)

Day-type attributes, a group of day types,

This table is required. It contains text descriptions of the grouped day types. These are called day-type attributes.

	DINO **Table: day_attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	DAY_ATTRIBUTE_NR	decimal (5)		attribute of the day	Day-type attribute number
	N	Mandatory	DAY_ATTRIBUTE_TEXT	char (40)		description	Designation
	N	Optional	STR_DAY_ATTRIBUTE	char (2)		abbreviation, may be empty	Short designation, blank

A combination or group of day types is aggregated in the day_type_2_day_attribute.din table to form a day-type attribute. The day_attribute.din table serves to describe the day-type attribute in greater detail.

Example:

```
VERSION;DAY_TYPE_NR;DAY_TYPE_TEXT;STR_DAY_TYPE
1;1;"Montag  21.11.2011";"Mo"
1;2;"Dienstag  22.11.2011";"Di"
1;3;"Mittwoch  23.11.2011";"Mi"
1;4;"Donnerstag  24.11.2011";"Do"
1;5;"Freitag  25.11.2011";"Fr"
1;6;"Sonnabend  26.11.2011";"Sa"
1;7;"Sonntag  27.11.2011";"So"
1;8;"Montag  28.11.2011";"Mo"
```

Please note, with regard to the DIVA 4 DINO import: DIVA 4 day types can also be specified in the import configuration in which case, the DIVA 4 DINO import does not evaluate *DAY_ATTRIBUTE_TEXT*. If it is not specified in the import configuration, the day type specified in *DAY_ATTRIBUTE_TEXT* is evaluated and used by the DIVA 4 DINO import.

5.2.6 service_restriction.din

DINO description (overview of all relations)

Additional service restriction applicable to a day-type attribute

The day types grouped in the day-type attributes can be restricted by service restrictions defined in the service_restriction.din table (e.g. "from 02.05 to 13.06", "only in the school holidays", etc.). The days set in the bit field are the days on which the service will run.

DINO

Table: service_restriction.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	RESTRICTION	char (5)		restrictions of operation	Service restriction in DIVA, up to 5 digits Export switch V switches between 4 and 5 digits.
	N	Optional	RESTRICT_TEXT1	char (60)		Text row 1	Text row 1
	N	Optional	RESTRICT_TEXT2	char (60)		Text row 2	Text row 2
	N	Optional	RESTRICT_TEXT3	char (60)		Text row 3	Text row 3
	N	Optional	RESTRICT_TEXT4	char (60)		Text row 4	Text row 4
	N	Optional	RESTRICT_TEXT5	char (60)		Text row 5	Text row 5
	N	Mandatory	RESTRICTION_DAYS	char (192)		binary coding of the days of operation	Binary code of the service days
	N	Mandatory	DATE_FROM	Date (JJJJMMTT)		Start of the coding	Start date
	N	Mandatory	DATE_UNTIL	Date (JJJJMMTT)		End of the coding	End date
	Y	Optional	LINE_NR	decimal (8)		internal line number, if empty, the service_restriction is valid with all lines	Internal line number

The Restriction_Text, if delivered, is only evaluated if the service restriction is applied.

Generation or interpretation of the binary code:

The service restrictions (SR) are coded for the period of the exported timetable period, i.e. monthly, in a

DWORD = long integer = 4 bytes = 32 bits.

The LSB (least significant bit, bit 0) corresponds to the first of the month.
The MSB (most significant bit, bit 31) remains free.

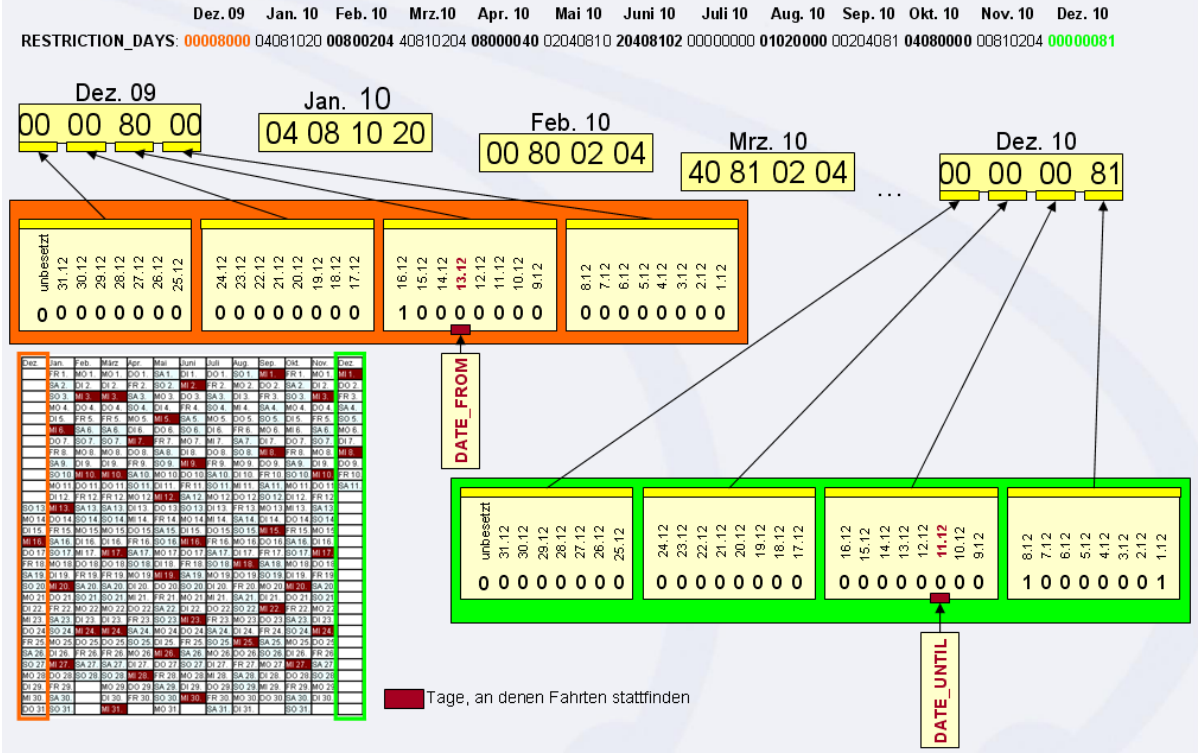
A 12-month period therefore results in 12 DWORDs. If they are output in hexadecimal notation, this results in eight characters per DWORD.

A SR that is valid for 12 months can then be represented as a 12*8 = 96 character string.
DIVA can have a maximum duration of two years but it is rarely used for more than one year.

The theoretical maximum length of the string is therefore 24 * 8 = 192 characters.

The period for which the validity of the SR is defined is limited by the DATE_FROM and DATE_UNTIL fields.

Graphical view of the binary code:



Example:

```
VERSION;RESTRICTION;RESTRICT_TEXT1;RESTRICT_TEXT2;RESTRICT_TEXT3;RESTRICT_TEXT4;RESTRICT_TEXT
5;RESTRICTION_DAYS;DATE_FROM;DATE_UNTIL;
1;8;;;;;;7FC000000000003F003F000000000000003FF8001000000100040 3C07FFFFFF07FFFFFFF0000003F0200
0000000000100000080;20131215;20141213;
1;31;;;;;;7FC000000000002700000000000000000003FE0001000000100040 3807FFFFFC07FFFFFFF0000001F020
0000000000100000080;20131215;20141213;
1;34;;;;;;7FC000000000002F000000000000007C03FFE0001000000100 1FFF80600000007FFFFFFF00007FFF7E0
0000400000000100000080;20131215;20141213;
```

5.3 Location data

Location data includes all stop data. The modelling of stops in the DINO format is heavily based on the DIVA data model. The model is hierarchical. Stops can have 1..n areas, each area can have 0..n platforms. Stops with no areas can have 0..n platforms. The platforms are modelled in a virtual area with the number "0".

5.3.1 stop.din (formerly rec_stop.din)

DINO description (overview of all relations)

Stops

DINO

Table: stop.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	STOP_NR	decimal (5)	1..99998	Number of the stop	For stops: stop number
	N	Optional	STOP_TYPE	decimal (2)	0-99	DIVA 4 stop type: 0 = Standard stop, 1 = Stop on request within net area, 2 = Alighting only, 3 = Hail and ride, 4 = Stop on request outside net area, 7 = Transition tarif, 8 = Ein- und Ausbringer Fahrten, 9 = Not in net area, 10 = Time position, 12 = for school	DIVA 4 stop type 0 = Normal stop, 1 = Demand stop in the network area, 2 = For disembarking only, 3 = Request stop, 4 = Demand stop not in network area, 7 = Transition fare 8 = Inbound and outbound trips, 9 = Not in network area, 10 = Time position, 12 = School stop
	N	Mandatory	STOP_NAME	char (50)		Name of the stop including the name of the place (city) or Name of stop area	Stop name (with locality)
	N	Optional	STOP_NAME_WITHOUT_LOCALITY	char (50)		Name of the stop without the name of the place (city) or Name of stop area	Stop name without locality
	N	Optional	STOP_SHORTNAME	char (8)		Short name of the stop if existing	Abbreviation
	N	Optional	STOP_POS_X	decimal (12)		WGS84 Andere Formate sind mit der MENTZ GmbH zu klären	X coordinate (e.g. WGS 84) If WGS84, then a value with up to 7 decimal places 16.1234567 -1 or blank entry means no coordinate

	N	Optional	STOP_POS_Y	decimal (12)		WGS84 Andere Formate sind mit der MENTZ GmbH zu klären	Y- coordinate If WGS84, then a value with up to 7 decimal places 48.1234567 -1 or blank entry means: no coordinate
	N	Optional	PLACE (deprecated)	char (20)		name of community or location (deprecated)	Name of the locality or district in which the stop is located (max. 20 characters) (obsolete, to be replaced by PLACE_ID in future)
	N	Optional	OCC	decimal (8)		Offical Community Code	Official municipal code of the locality
	N	Optional	FARE_ZONE1_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE2_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE3_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE4_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE5_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE6_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
IF	N	Optional	GLOBAL_ID	Char (50)	ISO 8859-1	Identification of fixed objects in public transport code (IFOPT is a prCEN/ Technical Standard in development – www.ifopt.org.uk	Global stop ID as per IFOPT standard
	N	Optional	VALID_FROM	Decimal(8)	YYYYMMDD	Validity of stop	Validity of the stop, to be used as a keyless attribute
	N	Optional	VALID_TO	Decimal(8)	YYYYMMDD	Validity of stop	Validity of the stop

	N	Optional	PLACE_ID	Char (50)		unique place ID	Will be filled with a global location ID in the future, making the PLACE field obsolete. For now, the district number can be entered here
	N	Optional	GIS_MOT_FLAG	Decimal(10)	0 .. 4294967295	GIS Means of transport flags. Defines the GIS edges that can be used for automatic routing in DIVA. BIT1 = 1 = Pedestrians BIT2 = 2 = Cyclists BIT3 = 4 = Motorized Transport BIT4 = 8 = Privileged Individual Traffic, Busses BIT5 = 16 = Railway BIT6 = 32 = Tramway BIT7 = 64 = Subway BIT8 = 128 = Ferry (everything on waterways),	GIS means of transport flags. This attribute defines the GIS edges that are used for automatic routing. BIT1 = 1 = Pedestrians BIT2 = 2 = Cyclists BIT3 = 4 = Normal private transport BIT4 = 8 = Priority private transport, busses BIT5 = 16 = Rail, standard gauge BIT6 = 32 = Tramway, rail narrow gauge BIT7 = 64 = Subway BIT8 = 128 = Ships, ferries, all water transport
	N	Optional	IS_CENTRAL_STOP	Boolean	(0 | 1)		Central stop flag
	N	Optional	IS_RESPONSIBLE_STOP	Boolean	(0 | 1)	In a multi subnet data context, the same stop can occur in multiple subnets. This flag indicates, if the exporting system uses this stop instance for the trip planning system	
	N	Optional	INTERCHANGE_TYPE	Decimal(1)	0..2	0 = N = Never (fixed), 1 = Y = Always (fixed), 2 = Derive automatically	0 = N = never 1 = Y = always 2 = determine automatically
	N	Optional	INTERCHANGE_QUALITY	Decimal(2)	0..99	Interchange quality (higher = better)	Transfer quality

STOP_NAME and STOP_NAME_WITHOUT_LOCALITY

For compatibility reasons with older DINO versions, the DINO *STOP_NAME* field is imported to DIVA into the "Stop name without locality" field. The locality suffix in the *PLACE* field is not evaluated.

If the *STOP_NAME_WITHOUT_LOCALITY* field includes a stop name, this name is imported into the DIVA "Stop name without locality" field. The locality suffix from the DINO *PLACE* field is evaluated and imported into the DIVA "Stop name with locality" field together with the name provided.

GLOBAL_ID

The GLOBAL_ID is a unique ID for identifying stop objects. If this optional field is filled, the provider must ensure that it is unique.

VALID_FROM - VALID_TO

The validity of the stop can optionally be specified here. Caution is advised when using it in the DINO data model because there may be only one instance of each locality. The name at the time of the export applies. Stops are identified by means of the global ID and assigned by the importing systems to their own stop inventories. The importing systems can then use their own stop names or adapt their own if necessary.

If the importing system does not perform any assignments and therefore adopts the exported DINO data on a 1:1 basis, the importing system receives the exporting system's stop names that apply at the time of the export.

5.3.2 stop_area.din (formerly rec_stop_area.din)

DINO description (overview of all relations)

Transfer areas at stops

This table is only required if area not equal 0.

DINO

Table: stop_area.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	STOP_NR	decimal (5)	1..99998	Number of the stop	Internal stop number
	Y	Mandatory	STOP_AREA_NR	decimal (5)	0..99998	Number of the stop area	Number of a stop area within a stop
	N	Optional	STOP_AREA_POS_X	decimal (12)	XXX.XXXXXXX	WGS84 Andere Formate sind mit der MENTZ GmbH zu klären	X coordinate (e.g. WGS 84) If WGS84, then a value with up to 7 decimal places 16.1234567 -1 or blank entry means no coordinate
	N	Optional	STOP_AREA_POS_Y	decimal (12)	XXX.XXXXXXX	WGS84 Andere Formate sind mit der MENTZ GmbH zu klären	X coordinate (e.g. WGS 84) If WGS84, then a value with up to 7 decimal places 48.1234567 -1 or blank entry means no coordinate
	N	Optional	STOP_AREA_SHORT_NAME	char (5)		short name of stop area	Short designation of a stop area within a stop

Continued on the next page ...

	N	Optional	STOP_AREA_LONG_NAME	char (20)		Name of the stop area	Designation of a stop area within a stop
	N	Optional	STOP_AREA_LEVEL	decimal (3)		Level information	Level
	N	Optional	STOP_AREA_TYPE	decimal (2)		Type of stop area 0 .. entrance and PT 1 .. PT only 2 .. P&R 3 .. B&R 4 .. taxi 5 .. entrance 6 .. airport terminal 7 .. entrance B&R 8 .. entrance, PT and B&R 9 .. entrance, taxi 10 .. entrance, PT and taxi 11. mezzanine 12, hail and ride	Area type 0 .. Access and public transport 1 .. Public transport only 2 .. P&R 3 .. B&R 4 .. Taxi 5 .. Access 6 .. Airport terminal 7 .. Access and B&R 8 .. Access, public transport and B&R 9 .. Access and taxi 10 .. Access, public transport and taxi 11 .. Mezzanine level 12 .. Request stop
IF	N	Optional	GLOBAL_ID	char (50)	ISO 8859-1	Identification of fixed objects in public transport code (IFOPT is a prCEN/ Technical Standard in development – www.ifopt.org.uk	Global stop ID as per IFOPT standard

Continued on the next page ...

	N	Optional	GIS_MOT_FLAG	Decimal(10) x	0 .. 4294967295	GIS Means of transport flags. Defines the GIS edges that can be used for automatic routing in DIVA. BIT1 = 1 = Pedestrians BIT2 = 2 = Cyclists BIT3 = 4 = Motorized Transport BIT4 = 8 = Privileged Individual Traffic, Busses BIT5 = 16 = Railway BIT6 = 32 = Tramway BIT7 = 64 = Subway BIT8 = 128 = Ferry (everything on waterways),	GIS means of transport flags. This attribute defines the GIS edges that are used for automatic routing. BIT1 = 1 = Pedestrians BIT2 = 2 = Cyclists BIT3 = 4 = Normal private transport BIT4 = 8 = Priority private transport, busses BIT5 = 16 = Rail, standard gauge BIT6 = 32 = Tramway, rail narrow gauge BIT7 = 64 = Subway BIT8 = 128 = Ships, ferries, all water transport
	N	Optional	VALID_FROM	Decimal(8)	YYYYMMDD	Validity of stop area	Validity of the transfer area
	N	Optional	VALID_TO	Decimal(8)	YYYYMMDD	Validity of stop area	Validity of the transfer area

5.3.3 stop_point.din (formerly rec_stopping_points.din)

DINO description (overview of all relations)

Stopping points

This table is required

DINO

Table: stop_point.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	STOP_NR	decimal (5)	1..99998	Number of the stop or Number of stop area	Internal stop number
	N	Mandatory	STOP_AREA_NR	decimal (5)	0..99998	Number of the stop area	Number of a stop within a locality
	Y	Mandatory	STOPPING_POINT_NR	decimal (2)	0..99	Number of the stopping point within a stop	Stopping point number
	N	Optional	STOPPING_POINT _POS_X	decimal (12)	XXX.XXXX XXX	WGS84 Andere Formate sind mit der MENTZ GmbH zu klären	Stopping point coordinate X If WGS84, then a value with up to 7 decimal places 16.1234567 -1 or blank entry means no coordinate
	N	Optional	STOPPING_POINT _POS_Y	decimal (12)	XXX.XXXX XXX	WGS84 Andere Formate sind mit der MENTZ GmbH zu klären	Stopping point coordinate Y If WGS84, then a value with up to 7 decimal places 48.1234567 -1 or blank entry means no coordinate
	N	Optional	SEGMENT_ID	decimal (10)		ID of GIS-Segment	GIS segment ID
	N	Optional	SEGMENT_DIST	decimal (8)		Distance from first node (meters)	Distance from the first node
	N	Optional	STOP_RBL_NR	decimal (7)		RBL-Number of the stopping point	RBL stopping point number (according to VDV-454)
	N	Optional	STOPPING_POINT_SHOR TNAME	char (255)		Public stopping point name	DIVA public platform number
	N	Optional	PURPOSE_TTB	BOOL	0, 1	Purpose Timetable Book	Used for typesetting
	N	Optional	PURPOSE_STT	BOOL	0, 1	Purpose Stop Time Table	Used for AHF,
	N	Optional	PURPOSE_JP	BOOL	0, 1	Purpose Journey Planer	Used for EFA,
	N	Optional	PURPOSE_CBS	BOOL	0, 1	Purpose Central Station	Used for ZOB,

IF	N	Optional	GLOBAL_ID	Char (50)	ISO 8859-1	Identification of fixed objects in public transport code (IFOPT is a prCEN/ Technical Standard in development – www.ifopt.org.uk	Global stop ID as per IFOPT standard
	N	Optional	GIS_MOT_FLAG	Decimal(10)x	0 .. 4294967295	GIS Means of transport flags. Defines the GIS edges that can be used for automatic routing in DIVA. BIT1 = 1 = Pedestrians BIT2 = 2 = Cyclists BIT3 = 4 = Motorized Transport BIT4 = 8 = Privileged Individual Traffic, Busses BIT5 = 16 = Railway BIT6 = 32 = Tramway BIT7 = 64 = Subway BIT8 = 128 = Ferry (everything on waterways),	GIS means of transport flags. This attribute defines the GIS edges that are used for automatic routing. BIT1 = 1 = Pedestrians BIT2 = 2 = Cyclists BIT3 = 4 = Normal private transport BIT4 = 8 = Priority private transport, busses BIT5 = 16 = Rail, standard gauge BIT6 = 32 = Tramway, rail narrow gauge BIT7 = 64 = Subway BIT8 = 128 = Ships, ferries, all water transport
	N	Optional	VALID_FROM	Decimal(8)	YYYYMMDD	Validity of stop point	Validity of the stopping point
	N	Optional	VALID_TO	Decimal(8)	YYYYMMDD	Validity of stop point	Validity of the stopping point
	N	Optional	PLATFORM_HEIGHT	Decimal(4)		Height of platform in mm above top of rail or street surface	
	N	Optional	DISTANCE_TO_RAIL_CENTRE	Decimal(4)		Horizontal distance of platform edge to centre of rail. Used for calculating gap between vehicle and rail edge	
	N	Optional	HAS_MOBILE_RAMP	Boolean	(0 | 1)	Platform has a mobile ramp: 0 = No, 1 = Yes	
	N	Optional	BOARDING_SPACE	Decimal(4)		Space (mm) provided on pavement for operating the equipment	

	N	Optional	STREET_ACCESS	Decimal(1)		Accessibility of platform from street: 0 = Unknown, 1 = Level (no steps), 2 = Small step, 3 = Large step,	

The DIVA 4 DINO import does not currently evaluate PURPOSE_CBS.

5.3.4 stop_footpath (formerly rec_footpath.din)

DINO description (overview of all relations)

Footpaths

This is an optional table.

	DINO **Table: stop_footpath.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	ORIG_STOP_NR	decimal (5)	1..99998	Number of the origin stop	Origin internal stop number
	Y	Mandatory	ORIG_STOP_AREA_NR	decimal (5)	1..99998	Number of the origin stop area	Number of the origin stop area
	Y	Mandatory	DEST_STOP_NR	decimal (5)	1...99998	Number of the destination stop	Arrival stop number
	Y	Mandatory	DEST_STOP_AREA_NR	decimal (5)	1...99998	Number of the destination stop area	Arrival stop area number
	N	Mandatory	TRANSFER_TIME	decimal (5)	0..99999	In seconds	Transfer time in seconds
	N	Optional	TRANSFER_DISTANCE	decimal (5)	0..99999	In meters -1 when blocked, -2 automatically blocked (from DIVA3)	Transfer path in metres, < -1 = footpath closed, -2 = footpath closed automatically
	N	Optional	PROPERTY	decimal (2)	0..99	property of this footwalk 1: SameLevel, 2: Stair, 3: Escalator, 4: Elevator, 5: Ramp, 6: UnlitFootwalk, 7: BlockedFootwalk 8: without Attributes	Footpath properties 1 .. Level (default) 2 .. Stairs 3 .. Escalator 4 .. Elevator, lift 5 .. Ramp 6 .. Unlit footpath 7 .. Footpath blocked 8 .. Not attributed
	N	Optional	FIXED_TIME	decimal (5)	0..99999	in seconds	Time stipulated by the data provider (may differ from the calculated time for composite footpaths).

The DIVA data model defines footpaths between stop areas.

A footpath (walk) from one area to the same area can also be shown. In the DIVA model, the EFA router then interprets the transfer time (TRANSFER_TIME) as the time it takes to transfer between vehicles. In this case, the length of the walk (TRANSFER_DISTANCE) must be specified as 0.

5.3.5 stop_additional_name.din (formerly rec_additional_stopname.din)

DINO description (overview of all relations)

Additional stop names

This table is optional

	DINO **Table: stop_additional_name.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	STOP_NR	decimal (5)	1..99998	Number of the origin stop	Original internal stop number
	Y	Mandatory	ADD_STOP_NAME_WITH_LOCALITY	char (255)			
	Y	Mandatory	ADD_STOP_NAME_WITHOUT_LOCALITY	char (255)			

Example:

```
VERSION;STOP_NR;ADD_STOP_NAME_WITH_LOCALITY;ADD_STOP_NAME_WITHOUT_LOCALITY;
 1; 1800; Altbach Bf;Bahnhof;
 1; 1801; Mettingen Bf;Bahnhof;
 1; 1802; Oberesslingen;Oberessl.;
```

5.3.6 stop_alias_placename.din (formerly rec_alias_placename.din)

DINO description (overview of all relations)

Alias locality names

This table is optional

	DINO **Table: stop_alias_placename.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	STOP_NR	decimal (5)	1..99998	Number of the origin stop	Original internal stop number
	Y	Mandatory	ALIAS_PLACE	char (20)		name of community or location	Name of the locality or district where the stop is located (max. 20 characters)
	Y	Mandatory	ALIAS_OCC	decimal (8)		Offical Community Code	Official municipal code of the locality

Example:

```
VERSION;STOP_NR;ALIAS_PLACE;ALIAS_OCC;
 1; 3212; Sindelfingen        ;08115045;
 1; 6001; Vaihingen (Stgt.)   ;08111000;
 1; 6002; Vaihingen (Stgt.)   ;08111000;
```

5.3.7 coordsys.din

DINO description (overview of all relations)

Coordinate system

This table is optional

	DINO **Table: coordsys.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Optional	SHORT_NAME	char (15)	z.B. MRCV, WGS84, WG10	short name	Short designation of the DIVA plan format
	N	Optional	LONG_NAME	char (255)		Long name of coordinate system	Long name of the coordinate system
	N	Optional	EPSG_CODE	decimal (10)		EPSG Code	EPSG code
	N	Optional	TRANS_X	decimal (10)		Translation x	X translation
	N	Optional	TRANS_Y	decimal (10)		Translation y	Y translation
	N	Optional	SCALE_X	decimal (10,5)		Scale x	Scale X
	N	Optional	SCALE_Y	decimal (10,5)		Scale y	Scale Y

The coordsys.din table is used to describe the coordinate systems in which the stopping points are stored. This involves, as is usual in geoinformatics, specifying the EPSG code as well as the translation and scale parameters of the coordinate system used.

Before exchanging coordinates, always check with MENTZ GmbH if the format used is supported.

If the plan format is filled, the DIVA import does not evaluate the EPSG code. If the EPSG code is filled and the SHORT_NAME is not, coordination with MENTZ GmbH Support is always required before importing.

5.4 Fare data

5.4.1 fare_zone.din

DINO description (overview of all relations)

Fare zones

This table is optional

	DINO **Table: fare_zone.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	FARE_ZONE_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone,
	N	Optional	FARE_ZONE_LONG_NAME	char (50)		Fare zone long name	Fare zone, long name
	N	Optional	FARE_ZONE_TYPE	decimal(1)		Fare zone type, 0 = normal fare zone, 1 = neutral zone	Fare zone type, 0 = normal fare zone, 1 = neutral zone
	N	Optional	FARE_ZONE_COLOR	decimal(18)		color for visualization in DIVA, RGB, 3x8 Bit	Colour for visualization in DIVA, RGB, 3x8-bit

5.4.2 neighbour_fare_zone.din

DINO description (overview of all relations)

Neighbouring fare zones

This table is optional

	DINO **Table: neighbour_fare_zone.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	FARE_ZONE	decimal (5)		if exists, user dependent	Fare zone, tariff zone,
	Y x	Mandatory	NEIGHBOUR_FARE_ZONE	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set

The NEIGHBOUR_FARE_ZONE is part of the key because there is usually more than one neighbouring fare zone.

5.4.3 fare_zone_transition.din

This table is optional

DINO

Table: fare_zone_transition.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	FARE_ZONE_TRANSITION_NR	decimal(18)		Unique, internal, non persistent ID. Only serves to reference to fare_zone_transistion_point.din	Unique internal non-persistent ID. Serves only to form a reference to fare_zone_transition_point.din
	N	Mandatory	START_STOP_NR	decimal (5)	1..99998	Number of start stop	First stop number
	N	Mandatory	END_STOP_NR	decimal (5)	1..99998	Number of end stop	Last stop number
	N	Mandatory	USE_ALWAYS	Boolean	0 .. 1	1 = True = Use this enty even if the sequence of fare zones can be determined the normal way (by comparing the zones associated to start/end stop), 0 = False = Use only if the sequence cannot be determined the normal way	
	N	Mandatory	FARE_POINT	boolean	0 ..1	Transition is a fare point 0 = no, 1 = yes	Transition is a fare point, 0 = no, 1 = yes
	N	Optional	BRANCH_NR	decimal (2)	0..99	Foreign Key to operating branch, if not empty, the setting applies to all lines of this operating branch	Foreign key of the operating branch. If set, then valid for all lines of the operating branch.
	N	Optional	LINE_NR	decimal (8)		Foreign Key to Line, if not empty, the setting applies to this line only.	Foreign key of the line. If set, then valid only for this line
	N	Optional	LINE_DIR_NR	decimal (3)		Foreign key to direction, if LINE_NR_KEY iss et and LINE_DIR_NR_KEY iss et, the transition applies to this direction of the line only. (max 2) (1, 2)	Foreign key of the direction, must be set together with LINE_NR. If set, it is valid only for line in specified direction

Fare zone transitions are defined in order to define a sequence of fare zones even if there are zones in the service journey pattern that are not linked to a stopping point.

The fare_zone_transition.din relation refers to transition points defined along the most direct connection between two stopping points through a fixed sequence and the distance to the previous transition point.

Example:

```
VERSION;FARE_ZONE_TRANSITION_NR;START_STOP_NR;END_STOP_NR;USE_ALWAYS;FARE_
POINT;BRANCH_NR;LINE_NR;LINE_DIR_NR;
 1;     0001;    22;   313;0;0;   ;          ;    ;
 1;     0002;    70;   855;0;0;   ;          ;    ;
 1;     0003;    71;   378;0;0;   ;          ;    ;
```

```
 1;     0004;    71;   856;0;0;   ;          ;    ;
 1;     0005;    76;   265;0;0;   ;          ;    ;
```
…

5.4.4 fare_zone_transition_point.din

This table is optional

	DINO **Table: fare_zone_transition_point.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	FARE_ZONE_TRANSITION_NR	Decimal (18)		Key to fare zone transition ID	External key for fare zone transition ID
	Y	Mandatory	CONSEC_NR	decimal (3)	1..999	Order sequence number (1..n) of transition point	Sequence of fare points along the route segment
	N	Optional	DISTANCE	decimal (6)	[m], in Metern	Distance (m) from previous point	Distance to previous fare point in the sequence
	N	Mandatory	FARE_ZONE1_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE2_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE3_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE4_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE5_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set
	N	Optional	FARE_ZONE6_NR	decimal (5)		if exists, user dependent	Fare zone, tariff zone, -1 or blank means not set

Example:

```
VERSION;FARE_ZONE_TRANSITION_NR;CONSEC_NR;DISTANCE;FARE_ZONE1_NR;FARE_ZONE
2_NR;FARE_ZONE3_NR;FARE_ZONE4_NR;FARE_ZONE5_NR;FARE_ZONE6_NR;
 1;     0001;001;      0;7050;7051;  -1;   -1;   -1;   -1;
 1;     0001;002;      0;5040;7051;  -1;   -1;   -1;   -1;
 1;     0002;001;      0;6074;6309;  -1;   -1;   -1;   -1;
```

```
 1;     0002;002;      0;6076;6309;  -1;  -1;  -1;  -1;
 1;     0003;001;      0;6074;6309;  -1;  -1;  -1;  -1;
 1;     0003;002;      0;6076;6309;  -1;  -1;  -1;  -1;
```
…

5.5 Line / network / operating data

5.5.1 means_of_transport_desc.din

DINO description (overview of all relations)

Means of transport and connecting means of transport

Corresponds to the DIVA means of transport texts. They are used to label means of transport in the EFA. Means of transport texts are also linked to the connecting means of transport / GIS means of transport that are predefined in DIVA and thus have an effect on the georeferencing of the timetable data in DIVA.

DINO

Table: means_of_transport_desc.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	-
	Y	Mandatory	MOT_NR	decimal (2)		means_of_transport number	Number of the means of transport
	N	Mandatory	MOT_NAME	char (20)		means_of_transport name	Name of the means of transport
	N	Mandatory	TMOT_NR	decimal (2)		transfer_means_of_transport number 0 .. train 1 .. Commuter Railway 2 .. underground 3 .. suburban railway 4 .. Tramway 5 .. city bus 6 .. regional bus 7 .. express bus 8 .. cable way, cog wheel railway 9 .. ship 10 .. join taxi on demand 11 .. other 12 .. aircraft 13 .. train (local) 14 .. train (intercity) 15 .. train (intercity with supplementary fee) 16 .. train (intercity with special fare) 17 .. Rail (replacement services) 18 .. Rail shuttle 19 .. Citizen bus	Number of the connecting means of transport 0 .. Train 1 .. Rapid transit railway 2 .. Underground railway 3 .. City railway 4 .. Tram 5 .. City bus 6 Regional bus 7 .. Express bus 8 . Cableway, rack railway 9 . Ship 10 .. AST on-demand bus 11 .. Other 12 .. Aircraft 13 .. Train (local traffic) 14 .. Train (long distance) 15 .. Train (long distance with surcharge) 16 .. Train (long distance with special fare) 17 .. Rail replacement service () 18 .. Train shuttle 19 .. Citizens' bus
	N	Optional	TMOT_NAME	Char(xx)		Name of Type of transport (fixed list in DIVA) See list above (TMOT_NR)	Name of the connecting means of transport (hard-wired in DIVA) See list above (TMOT_NR),

5.5.2 transfer_matrix.din

DINO description (overview of all relations)

Transfer matrix

The transfer matrix in DIVA defines transfer times between means of transport unless they have been defined in DIVA footpath matrices (see stop_footpath.din table).

DINO

Table: transfer_matrix.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	-
	Y	Mandatory	ORIGIN_TMOT_NR	decimal (2)		transfer_means_of_transport origin 0 .. train 1 .. Commuter Railway 2 .. underground 3 .. suburban railway 4 .. Tramway 5 .. city bus 6 .. regional bus 7 .. express bus 8 .. cable way, cog wheel railway 9 .. ship 10 .. join taxi on demand 11 .. other 12 .. aircraft	Number of the means of transport of origin 0 .. Train 1 .. Rapid transit railway 2 .. Underground railway 3 .. City railway 4 .. Tram 5 .. City bus 6 Regional bus 7 .. Express bus 8 . Cableway, rack railway 9 . Ship 10 .. AST on-demand bus 11 .. Other 12 .. Aircraft
	Y	Mandatory	DEST_TMOT_NR	decimal (2)		transfer_means_of_transport destination	Number of the connecting means of transport See also ORIGIN_TMOT_NR
	N	Mandatory	TIME	decimal (3)		Interchange time (min) between TMOT can be empty,i.e NULL	Time (in minutes) May be empty, which means zero

5.5.3 vehicle_type.din

This table is optional.

DINO description (overview of all relations)

Vehicle types

	DINO **Table: vehicle_type.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	VEH_TYPE_NR	decimal (8)		vehicle type number	Vehicle type number
	N	Optional	VEH_TYPE_SEATS	decimal (3)		number of seats	Number of seats
	N	Optional	VEH_TYPE_STRAPS	decimal (3)		number of straphanger places	Standing spaces
	N	Optional	PLACES_FOR_DISABLED_PERSONS	decimal (3)		number of places for disabled persons	Disability-friendly spaces
	N	Optional	VEH_TYPE_TEXT	char (40)		Description	Type description
	N	Optional	STR_VEH_TYPE	char (4)		abbreviation	Vehicle type abbreviation
	N	Optional	VEH_TYPE_DOOR_WIDTH	decimal(4)		Width of vehicle door(s) (mm): 0 means "not specified"	Vehicle door width in mm
	N	Optional	VEH_TYPE_WIDTH	decimal(4)		Width of vehicle in mm (used for calculating the gap between vehicle and platform)	Vehicle width in mm
	N	Optional	VEH_TYPE_HEIGHT	decimal(4)		Height (mm) of floor above rail or street surface	Vehicle height in mm
	N	Optional	VEH_TYPE_ACCESS_EQUIP	decimal(1)		0 = No lift equipped vehicle, 1 = Lift equipped vehicle, 2 = Lift or ramp	Boarding aids included

Example:

```
VERSION;VEH_TYPE_NR;VEH_TYPE_SEATS;VEH_TYPE_STRAPS;HANDICAP_PLACES;VEH_TYPE_TEXT;STR_VEH_TYPE
1;2;85;143;0;"Cityflex";"CF8"
1;5;101;151;0;"Combino";"NF8"
1;9;60;96;0;"GT6";"GT6"
```

5.5.4 operator.din

This table is optional.

DINO description (overview of all relations)

Operator

	DINO **Table: operator.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version VDV 452::Basic version
	Y	Mandatory	OP_CODE	char(10)	>0	operater number	Operator N VDV 452::UNTERNEHMEN r
	N	Optional	OP_BRANCH_NR	decimal (6)		default operating branch	Default operating branch
	N	Optional	OP_SHORT_NAME	char(7)		short descriptor	Short designation, VDV 452::ABK_UNTERNEHMEN
	N	Mandatory	OP_LONG_NAME	char(255)		long descriptor	Long designation
	N	Optional	OP_PUBLIC_SHORT_NAME	char (7)		Operator Abbreviation used for publishing	Representation in passenger information
	N	Optional	OP_LICENCE_NAME	char (255)		Full name of operator (i.e. as appears on licence)	Licence name
	N	Optional	OP_TRADING_NAME	char (255)		Name under which operator trades	Trading name, used e.g. in marketing
	N	Optional	OP_VAT_REGISTERED_FLAG	decimal (1)	0,1	VAT registered	VAT / turnover tax Registration

An operator must have at least one branch office. The operator.din table must therefore always be delivered together with operator_branch_office.din.

DIVA data providers are defined via the DIVA import configuration and are therefore not included in the operator.din table.

Example:

```
VERSION;OP_CODE;OP_BRANCH_NR;OP_SHORT_NAME;OP_LONG_NAME;OP_PUBLIC_SHORT_NAME;OP_LICENCE_NAME;OP_TRADING_NAME;OP_VAT_REGISTERED_FLAG;
 1;01;;PT;ÖBB Postbus GmbH;Pt;;;0;
 1;25;;LIEm;LIECHTENSTEINmobil;;;;0;
 1;27;;BUS OAG;BUS Ostschweiz AG;;;;0;
...
```

5.5.5 operator_branch_office.din

This table is optional.

DINO description (overview of all relations)

Operator branches

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
DINO **Table: operator_branch_office.din**							
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	OP_CODE	char(10)		Foreign key to operator.din::OP_NR	Foreign key for operator.din::OP_Code
	Y	Mandatory	OBO_SHORT_NAME	char (10)		Short name of branch office must be unique within operator	Short name of the branch, unique within one operator
	N	Optional	OBO_INTERNAL_PHONE	char (50)		Internal phone number	Internal telephone number
	N	Optional	OBO_PUBLIC_PHONE	char (50)		Phone number for general public	Public phone number
	N	Optional	OBO_FAX_NR	char (50)		Fax number	Fax number
	N	Optional	OBO_ADDRESS	char (500)		Address (street location) of branch office	Address (street address of the operator)
	N	Optional	OBO_CONTAC_ADDRESS	char (500)		Public contact address (e.g. customer service desk)	Public address (e.g. helpdesk)
	N	Optional	OBO_URL	char (255)		web site	Website

Depending on the data situation in DIVA, the OBO_SHORT_NAME can also be filled by OBO_EXT_Code for the export.

Example:

```
VERSION;OP_CODE;OBO_SHORT_NAME;OBO_INTERNAL_PHONE;OBO_PUBLIC_PHONE;OBO_FAX_NR;OBO_ADDRESS;OBO_CONTAC_ADDRESS;OBO_URL;
 1;01;Al;01/71101;01/71101;;Servicetelefon Wien;;;
 1;01;BZ;05552/62746;05552/62746;;ÖBB Postbus GmbH, Äuleweg 126700 Bludenz;;;
 1;01;LA;05442/64422;T 05442/64422;;ÖBB Postbus GmbH, Buntweg 46511 Zams;;;
 1;25;VA;+423 237 94 94;T +423 237 94 94;;LIECHTENSTEINmobil, Städtle 17FL-9490 Vaduz;;;
```

5.5.6 depot.din

DINO description (overview of all relations)

Depots

The table is optional, and is not currently evaluated by the import.

	DINO **Table: depot.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	-
	Y	Mandatory	DEPOT_NR	decimal (5)		number of the depot	-
	N	Optional	DEPOT_TEXT	char (40)		name of the depot	-
	N	Optional	DEPOT_ABBREV	char (5)		abbreviation	-

Example:

```
VERSION;DEPOT_NR;DEPOT_TEXT;DEPOT_ABBREV
1;1001;"Hofwiesengasse";"H1"
1;1002;"Wolfganggasse";"W1"
```

5.5.7 branch.din

DINO description (overview of all relations)

Operating branch information

	DINO **Table: branch.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	BRANCH_NR	decimal (2)	0..99	Number of the branch	Operating branch number
		Optional	STR_BRANCH_NAME	char (6)		Short name of the branch	Short designation of the operating branch
		Mandatory	BRANCH_NAME	Char (40)		Name of the branch	Name of the operating branch

Example:

```
VERSION;BRANCH_NR;STR_BRANCH_NAME;BRANCH_NAME;
1;10;Linz;Stadt Linz;
1;16;RV_PB;RV Postbus;
1;13;RV_Pri;RV Private;
```

5.5.8 timing_pattern.din (formerly lid_travel_time_type.din)

DINO description (overview of all relations)

Service journey pattern-specific travel and stopping times

	DINO **Table: timing_pattern.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Internal line number
	Y	Mandatory	STR_LINE_VAR	char (4)		route number	Route number
	Y	Mandatory	LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Direction of travel
	Y	Mandatory	LINE_CONSEC_NR	decimal (3)		Consecutive Number of Stop	Consecutive stopping point number in the service journey pattern
	Y	Mandatory	TIMING_GROUP_NR	decimal (3)	1 .. 999	Timing Group Number	Travel time group number
	N	Mandatory	TT_REL	decimal (6)		Travel time relative to the preceding stop in seconds	Travel time in seconds from the previous stop, -1 if passing through i.e. 1st entry on the route is 0 because there is no preceding stop.
	N	Mandatory	STOPPING_TIME	decimal (6)		Stopping Time at the stop in seconds	Stopping time in seconds

5.5.9 route.din (formerly lid_course.din)

DINO description (overview of all relations)

Points in sequence

DINO

Table: route.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	Internal line number
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Route number
	Y	Mandatory	STR_LINE_VAR	char (4)		route number	Direction of travel
	Y	Mandatory	LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Consecutive stopping point number in service journey pattern
	Y	Mandatory	LINE_CONSEC_NR	decimal (3)		Consecutive Number of Stop	Stop number
	N	Mandatory	STOP_NR	decimal (5)	1..99998	number of stop	Stopping point number
	N	Mandatory	STOPPING_POINT_NR	decimal (2)		stopping point number	Stop type: -1 = No stop (pass-through) 0 = Normal stop 1 = Stop on request 2 = Boarding denied 3 = Disembarkation denied 4 = No stopping in intra-urban areas 5 = No passenger transport Types 2 to 4 are not filled if the service_interdiction.din (22) table is filled The attribute value "5 = No passenger transport" can be used to filter for unproductive trip segments.
	N	Mandatory	STOPPING_POINT_TYPE	decimal (2)		stopping point typ	Distance to previous stop in metres, -1 = not filled. i.e. the first entry in LID_COURSE for each route is 0.
	N	Optional	LENGTH	decimal (7)		distance to the preceding stop in meter	Internal line number

The following applies for the DIVA import: if the *STOPPING_POINT_NR* is 0, and if there is no entry in rec_stopping_point, then the stop is mapped to itself.

The specification of a "**zero route"** was defined for various third-party applications, e.g. for counting passengers. Here is how the zero route is defined and used:

The DIVA margin column can be output as a service journey pattern with the number 0. This service journey pattern is not actually travelled and all the trips can be mapped onto it in chronologically ascending order.

When exchanging DINO timetable data, care must be taken to ensure that the trip reference always refers to the actual routes. This also applies in particular to route-specific elements such as destination texts, announcement texts, etc. Also, LINE_CONSEC_NR always refers to the actual service journey pattern and NOT to the zero route.

5.5.10 trip_purpose.din (formerly set_trip_purpose.din)

DINO description (overview of all relations)

Trip purposes, trip types

Not evaluated by the import

	DINO **Table: trip_purpose.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	-
	Y	Mandatory	PURPOSE_NR	decimal (20)		purpose number	-
	N	Mandatory	PURPOSE_TEXT	char (40)		Description	-
	N	Optional	STR_PURPOSE	char (5)		Abbreviation	-

Example:

```
VERSION;PURPOSE_NR; PURPOSE_TEXT; STR_PURPOSE
1;1;"IntermodalJourneyPlanner";"BIT1"
1;2;"PersonalTimetable";"BIT2"
1;3;"StopTimetable";"BIT3"
```

The bits must be set as follows for the trips in trip.din:

```
trip.din:

Fahrt 1.PURPOSE_NR = 3
Fahrt 2.PURPOSE_NR = 6
Fahrt 3.PURPOSE_NR = 4
```

A bit-by-bit evaluation then results in the following bits being set: Bin: 110 = decimal: 6 = BIT2|BIT3

5.5.11 line.din (formerly rec_lin_ber.din)

DINO description (overview of all relations)

Line directory

	DINO **Table: line.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	N	Mandatory	BRANCH_NR	decimal (2)	0..99	Number of the branch of operation or authority	Designation of the operating branch or authority
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Internal line number
	Y	Optional	STR_LINE_VAR	char (4)		route number or empty	Route number
	N	Optional	LINE_NAME	char (40)		published line number	Published line number
	Y	Optional	LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Direction of travel
	N	Optional	LAST_MODIFIED	char (20)		Last modified <dd.mm.jjjj><SPACE><SPACE> <hh:mm:ss>	Last modification date of the line including time stamp
	N	Optional	MOT_NR	decimal (2)		transfer_means_of_transport	Number of the means of transport
	N	Optional	VALID_FROM	decimal(8)	YYYYMMDD		Validity of the line Currently supported only by DINO Export
	N	Optional	VALID_TO	decimal(8)	YYYYMMDD		Validity of the line Currently supported only by DINO Export

Continued on the next page ...

	N	Optional	OP_Code	Char(10)		Foreign key to operator.din::OP_NR	Foreign key for operator.din::OP_Code
	N	Optional	OBO_SHORT_NAME	char(10)		Foreign key to operator_branch_office.din::OBO_SHORT_NAME	Foreign key for operator_branch_offic.din::OBO_SHORT_NAME
	N	Optional	ROUTE_TYPE	decimal (2)		number (only used with export of round trips, e.g 0=scheduled trips, 1=pullin-trips, 2=connecting trips)	Trip purpose type, trip type
	N	Optional	GLOBAL_ID	Char (50)	ISO 8859-1	Unique Identifier of the line (in DELFIplus context the DLID)	
	N	Optional	BIKE_RULE	decimal(2)		Bicycle transport rules: -1 = NoBicycle, 0 = VVS_Rail, 1 = VVS_CityRail, 2 = MVV, 3 = DB, 4 = GVH, 5 = IVB, 6 = TFL, 7 = VVS_END, 8 = AlwaysAllowed, 9 = RegulatedPerJourney	Contains the bike-loading rule.

The *LINE_NR* defined in DINO must be unique across all operating branches.

The means of transport are supported only by the DINO export. All routes of a line must have the same means of transport and the same *LINE_NAME*.

The attributes VALID_FROM and VALID_TO refer to the validity of the DIVA 4 line version. The DINO data can also be exported on the DIVA side in such a way that the validities are converted into service restrictions on the individual trips. If you have any questions, please contact the MENTZ GmbH Support unit.

Example:

```
VERSION;BRANCH_NR;BRANCH_NAME;LINE_NR;STR_LINE_VAR;LINE_NAME;LINE_DIR_NR;LAST_MODIFIED;
1;16;RV Postbus;1120016;101;112;1;;
1;16;RV Postbus;1120016;102;112;1;;
1;16;RV Postbus;1120016;201;112;2;;
1;16;RV Postbus;1120016;202;112;2;;
```

GLOBAL_ID

The GLOBAL_ID is a unique ID for identifying line objects. If this optional field is filled, the provider must ensure that it is unique.

5.5.12 vehicle_destination_text.din

This table is optional.

DINO description (overview of all relations)

List of destinations displayed on/in the vehicle

	DINO **Table: vehicle_destination_text.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Optional	BRANCH_NR	decimal (2)	0..99	Number of the branch of operation or authority	Designation of the operating branch or authority
	Y	Mandatory	VDT_NR	decimal (8)	0..99999999	vehicle display text number	Vehicle destination text number Attention: The VDT_NR can hold numeric values with up to eight digits. However, the length of the values to be transferred must be adapted to suit the value ranges of the respective target system. VDT_NR = 0 clears the display
	N	Optional	VDT_TEXT_DRIVER1	char (160)	ISO 8859-1	Driver display text line 1	Driver destination text display line1
	N	Optional	VDT_TEXT_DRIVER2	char (160)	ISO 8859-1	Driver display text line 2	Driver destination text display line2
	N	Optional	VDT_TEXT_FRONT1	char (160)	ISO 8859-1	Vehicle front text line 1	Front display text line 1
	N	Optional	VDT_TEXT_FRONT2	char (160)	ISO 8859-1	Vehicle front text line 2	Front display text line 2
	N	Optional	VDT_TEXT_FRONT3	char (160)	ISO 8859-1	Vehicle front text line 3	Front display text line 3
	N	Optional	VDT_TEXT_FRONT4	char (160)	ISO 8859-1	Vehicle front text line 4	Front display text line 4
	N	Optional	VDT_TEXT_SIDE1	char (160)	ISO 8859-1	Vehicle side text line 1	Lateral destination display text line 1
	N	Optional	VDT_TEXT_SIDE2	char (160)	ISO 8859-1	Vehicle side text line 2	Lateral destination display text line 2
	N	Optional	VDT_TEXT_SIDE3	char (160)	ISO 8859-1	Vehicle side text line 3	Lateral destination display text line 3
	N	Optional	VDT_TEXT_SIDE4	char (160)	ISO 8859-1	Vehicle side text line 4	Lateral destination display text line 4
	N	Optional	VDT_LONG_NAME	char (160)	ISO 8859-1	Name of the vehicle destination text	Name of the vehicle destination text
	N	Optional	VDT_SHORT_NAME	char (68)	ISO 8859-1	Shortname of the vehicle destination text	Short name of the vehicle destination text

5.5.13 trip_vdt.din

DINO description (overview of all relations)

Stop or route-segment-related vehicle destination texts

	DINO **Table: trip_vdt.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Optional	TIMETABLE_PERIOD	char (4)		Timetable period	Timetable project
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Internal line number
	Y	Optional	STR_LINE_VAR	char (4)		route number	Route number
	Y	Optional	LINE_DIR_NR	decimal (3)		direction (max. 2) (1,2)	Direction of travel
	N	Mandatory	TRIP_ID	decimal (8)		internal trip number	Internal trip number - only if trip-specific destination text
	Y	Mandatory	LINE_CONSEC_NR	decimal (3)		Consecutive Number of stop	Consecutive stopping point number in the service journey pattern
	N	Mandatory	VDT_NR	decimal (8)	0..99999999	vehicle display text number	Vehicle destination text number Attention: The VDT_NR can hold numeric values with up to eight digits. However, the length of the values to be transferred must be adapted to suit the value ranges of the respective target system. VDT_NR = 0 clears the display

For stop-related notices, only those stopping points must be specified (LINE_CONSEC_NR) at which the destination text changes.

5.5.14 train_category.din

DINO description (overview of all relations)

Train categories

	DINO **Table: train_category.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	BASIS_VERSION	decimal (2)		Version	Basic version
	Y	Optional	TRAIN_CATEGORY_SHORT_NAME	char (255)		train category abbreviation	Train category - short designation
	N	Mandatory	TRAIN_CATEGORY_LONG_NAME	char (255)		train category description	Train category - long designation / description

5.5.15 line_suppression.din

DINO description (overview of all relations)

Line suppressions

Integration systems import line data from several sources. These sources may include multiple instances of the same lines. Integration systems can recognise these duplicates by examining the global line ID. The line suppression table is used to provide the integration system with conflict resolution rules that are captured in the exporting system.

	DINO **Table: line_suppression.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	SOURCE_POOL	Char(30)		Identifier of the source data pool	
	Y	Mandatory	SOURCE_LINE_GLOBAL_ID	Char (50)	ISO 8859-1	Unique Identifier of the source line	
	Y	Mandatory	TARGET_POOL	Char(30)		Identifier of the target data pool	
	Y	Optional	TARGET_LINE_GLOBAL_ID	Char (50)	ISO 8859-1	Unique Identifier of the target line	

The columns SOURCE_POOL and TARGET_POOL refer to DINO data deliveries.

An exporting DIVA system enters the network here and an exporting IVU.pool system can probably specify the provider.

If DINO data is being imported, the importing system must note the corresponding pool. An importing DIVA system imports a provider's data into a network, i.e. the network identifier corresponds to the pool in DIVA. In IVU.pool systems one network is probably assigned to one provider.

During the integration process, the DIVA system checks for each line whether there is a data record that contains this line as a SOURCE line key and whether there is also a line in the TARGET_POOL (network) with the TARGET_LINE_GLOBAL_ID.

By omitting the TARGET_LINE_GLOBAL_ID, you can ensure that the integration process only checks if there is data from the TARGET_POOL. If this is the case, the SOURCE_LINE is suppressed.

5.6 Timetable data

5.6.1 trip.din

VDV452 fordert dass die TRIP_ID alleine eindeutig ist. Der DINO Standard ist hier weicher LINE_NR und TRIP_ID müssen zusammen eindeutig sein. ~~DINO 2.x legt schreibt hier eine Eindeutigkeit je Datenbestand vor.~~

Die angegebene *DAY_ATTRIBUTE_NR* muss auch in der Tabelle day_attribute.din definiert sein.

Beschreibung DINO (zur Übersicht aller Relationen)

Fahrten

DINO

Table: trip.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Internal line number
	N	Mandatory	STR_LINE_VAR	char (4)		route number	Route number
	N	Mandatory	LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Line direction
	N	Mandatory	TIMING_GROUP_NR	decimal (3)		timing group	Timing group number
	Y	Mandatory	TRIP_ID	decimal (8)		internal trip number	Internal trip number
	N	Optional	TRIP_ID_PRINTING	decimal (7)		trip number for presentation	Trip number for printing
	N	Mandatory	DEPARTURE_TIME	decimal (6)		departure time in seconds	Departure time in seconds
	N	Mandatory	DEP_STOP_NR	decimal (5)	1..99998	stop number of departure	Internal departure stop number
	N	Mandatory	DEP_STOPPING_POINT_NR	decimal (2)		stopping point departure	Departure stopping point number
	N	Mandatory	ARR_STOP_NR	decimal (5)	1..99998	stop number of arrival	Internal arrival stop number
	N	Mandatory	ARR_STOPPING_POINT_NR	decimal (2)		stopping point arrival	Arrival stopping point number
	N	Optional	VEH_TYPE_NR	decimal (8)		vehicle type	Vehicle type
	N	Mandatory	DAY_ATTRIBUTE_NR	decimal (5)		DIVA: attribute of day	Day-type attribute number
	N	Optional	RESTRICTION	char (5)		restrictions of operation	Service restriction, also empty
	N	Optional	NOTICE	char (5)		key to table notice.din	Key to the notice table
	N	Optional	NOTICE_2	char (5)		key to table notice.din	Key to the notice table
	N	Optional	NOTICE_3	char (5)		key to table notice.din	Key to the notice table
	N	Optional	NOTICE_4	char (5)		key to table notice.din	Key to the notice table
	N	Optional	NOTICE_5	char (5)		key to table notice.din	Key to the notice table
	Y	Optional	ROUND_TRIP_NR	decimal (8)		round trip number (only used with export of round trips) it is key-value if a trip is served with several moving units	Round trip number Currently not supported
	N	Optional	TRAIN_NR	decimal (8)		train number (only used with export of round trips)	Train or bus number

	N	Optional	TRAIN_CATEGORY_SHORT_NAME	char (10)		train category Selected values: BUS EN IC OEC OIC R REX RJ ZUG EZ See list of train categories in the appendix of the specification	Train category Selected values: BUS EN IC OEC OIC R REX RJ ZUG EZ Please refer to the list of train categories in the appendix of this document
	N	Optional	TRIP_EXT_KEY	char (50)		External trip key (not used in DIVA)	External trip number (not used in DIVA) This parameter was introduced for a third party but is not supported in DIVA through import or export.
	N	Optional	OP_CODE	char(10)		Foreign key to operator.din::OP_NR	Foreign key for operator.din::OP_Code
	N	Optional	OBO_SHORT_NAME	char(10)		Foreign key to operator_branch_office .din:: OBO_SHORT_NAME	Foreign key for operator_branch_offic.din:: OBO_SHORT_NAME
	N	Optional	GLOBAL_ID	Char (100)	ISO 8859-1	Unique Identifier of the trip (in DELFIplus context the DFID)	A combination of two keys. GLOBAL_ID of the line + REAL_TIME_ID of the trip (real time ID)
	N	Optional	BIKE_ALLOWED	Boolean	(0 | 1)	Is it allowed to take a bike on the trip	
	N	Optional	PURPOSE_NR	decimal(20)		Foreign key to trip_purpose.din :: PURPOSE_NR	Foreign key for trip_purpose.din::PURPOSE_NR

GLOBAL_ID

The GLOBAL_ID is a unique ID for identifying trip objects. If this optional field is filled, the provider must ensure that it is unique. It is possibly only unique within the calendar day.

5.6.2 trip_stop_time.din

This table is optional.

DINO description (overview of all relations)

Waiting time of a specific trip:

The time a vehicle has to wait at a specific stopping point on a specific trip. This time overrides the stop_time and the lid_travel_stop_time.

	DINO **Table: trip_stop_time.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	-
	Y	Mandatory	LINE_NR	decimal (8)	1-99999999	internal line number	-
	Y	Mandatory	TRIP_ID	decimal (8)	1-99999999	Number of the trip	-
	Y	Mandatory	LINE_CONSEC_NR	decimal (3)		Consecutive Number of Stop	-
		Mandatory	STOPPING_TIME	decimal (6)		Stopping Time at the stop in seconds	-

5.6.3 vehicle_block.din (formerly rec_round_trip.din)

Currently not supported by DIVA 4 DINO import.

DINO description (overview of all relations)

Vehicle round trips

DINO

Table: vehicle_block.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	-
	Y	Mandatory	DAY_TYPE_NR	decimal (9)		type of the day	-
	Y	Mandatory	DEPOT_NR	decimal (5)		number of the depot	
	Y	Mandatory	BLOCK_NR	decimal (8)		round trip ID	
	N	Mandatory	VEH_TYP_NR	decimal (2)		vehicle type	
	N	Mandatory	DEP_STOP_NR	decimal (6)		departure of the round trip	
	N	Mandatory	DEP_STOPPING_POINT_NR	decimal (2)		stopping point of the departure of the round trip	
	N	Mandatory	BEGIN_OF_BLOCK	decimal (6)		time of the beginning of the round trip in seconds	
	N	Mandatory	ARR_STOP_NR	decimal (6)		arrival stop of the round trip	
	N	Mandatory	ARR_STOPPING_POINT_NR	decimal (2)		arrival stopping point of the round trip	
	N	Mandatory	END_OF_BLOCK	decimal (6)		time of the end of the round trip in seconds	

5.6.4 notice.din

DINO description (overview of all relations)

Service information texts without reference to service days

	DINO **Table: notice.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Optional	LINE_NR	decimal (8)		internal line number, if empty, the notice is valid with all lines	Internal line number
	Y	Mandatory	NOTICE	char(5)		operational notice	Notice abbreviation
	N	Mandatory	NOTICE_TEXT	char (1000)		Text	Notice text, \n is interpreted as a new line
	N	Optional	CONTENT_TYPE	decimal (3)		0 .. general (default) 1 .. train name 2 .. telephone number for demand responsive vehicle 3 .. bicycle regulation 4 = track usage 5 .. R-Bahn 6 .. driver message 7 .. facillity 8 .. fare code	0 .. Other notice (default) 1.. Train name notice 2 .. On-demand bus notice 3 .. Bicycle loading notice 4 .. Track notice 5 .. Regional train 6 .. Driver text 7 .. Special offer 8 .. Fare code
	N	Optional	DISPLAY_TYPE	decimal (3)		0 = Display always (DisplayAlways), 1 = Display only when boarding (DisplayOnlyWhenBoarding), 2 = Display only when alighting (DisplayOnlyWhenAlighting), 4 = Display only when on-board (DisplayOnlyWhenOnBoard), 8 = Display only when on-board or alighting (DisplayOnlyWhenOnBoardOrAlighting)	0 .. Show always 1 .. Show only when boarding 2 .. Show only when disembarking 4 .. Show only while moving 5 .. Show only when boarding or disembarking

If LINE_NR is filled, the notice is only valid for this line.

In order for spaces and special characters to be represented correctly, export programs should store the notice texts in NOTICE_TEXT within apostrophes. "\n" results in a new line.

5.6.5 notice_str.din (formerly hinw_str.din)

DINO description (overview of all relations)

Stop-related (or route-segment-related) information

	DINO **Table: notice_str.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Optional	TIMETABLE_PERIOD	char (4)		Timetable period	Timetable project
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Internal line number
	Y	Optional	STR_LINE_VAR	char (4)		route number	Route number
	Y	Optional	LINE_DIR_NR	decimal (3)		direction (max. 2) (1,2)	Direction of travel
	Y	Optional	TRIP_ID	decimal (8)		internal trip number	Internal trip number
	Y	Optional	LINE_CONSEC_NR	decimal (3)		Consecutive Number of stop	Consecutive stopping point number in the service journey pattern
	Y	Optional	STOP_NR	decimal (5)	1..99998	number of stop	Stop number
	Y	Optional	STOPPING_POINT_NR	decimal (2)		stopping point number	Stopping point number
	Y	Mandatory	HINW_STR_CODE	char (5)		key to table notice.din	Key to the notice table

A range of tables are used to reflect the notices. The DINO format specifies the following notices

- Line-related notices
- Trip-related (timetable-related) notices
- Route-segment-related notices
- Stop-related notices

Notices are interpreted and imported into DIVA with the following logic:

Global line notice

Only the LINE_NR field needs to be filled for this. The notice is set for all trips when imported from DINO to DIVA.

Trip-related notice

If the TRIP_ID is empty, the notice for a specific route of a line applies to all trips (on this route).

If the TRIP_ID, LINE_CONSEC_NR and STOP_NR fields are filled, the notice applies per trip and stop.

Route-segment-related notice

A route-segment-related notice applies to each route and stop. STR_LINE_VAR must be filled with LINE_CONSEC_NR.

Stop-related notice

A stop-related notice can be implemented by entering a value in the STOP_NR field.

5.6.6 service_constraint.din (formerly service_interdiction.din)

DINO description (overview of all relations)

List of trip and route-segment-related service constraints

	DINO **Table: service_constraint.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	LINE_NR	decimal (8)		internal line number	Internal line number
	N	Optional	STR_LINE_VAR	char (4)		route number	Route number
	N	Optional	LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Direction of travel
	Y	Mandatory	TRIP_ID	decimal (8)		internal trip number	Internal trip number
	Y	Mandatory	LINE_CONSEC_NR	decimal (3)		Consecutive Number of Stop	Consecutive stopping point number in the service journey pattern
	N	Optional	STOP_NR	decimal (5)	1..99998	number of stop	Stop number
	N	Optional	STOPPING_POINT_NR	decimal (2)		stopping point number	Stopping point number
	Y	Mandatory	SERVICE_INTERDICTION_CODE	char (1)	A, E,I 0 .. 9		Type of service constraint: A = Stops only for disembarking E = Stops only for boarding I = No service possible in intra-urban areas 0,1,2 ... depending on how many intra-urban area service constraints apply to the service journey pattern

Intra-urban service constraints - SERVICE_INTERDICTION_CODE

In addition to A, E and I, the SERVICE_INTERDICTION_CODE column can also contain the values 0, 1, 2, ..., depending on how many intra-urban service constraints apply to a service journey pattern.

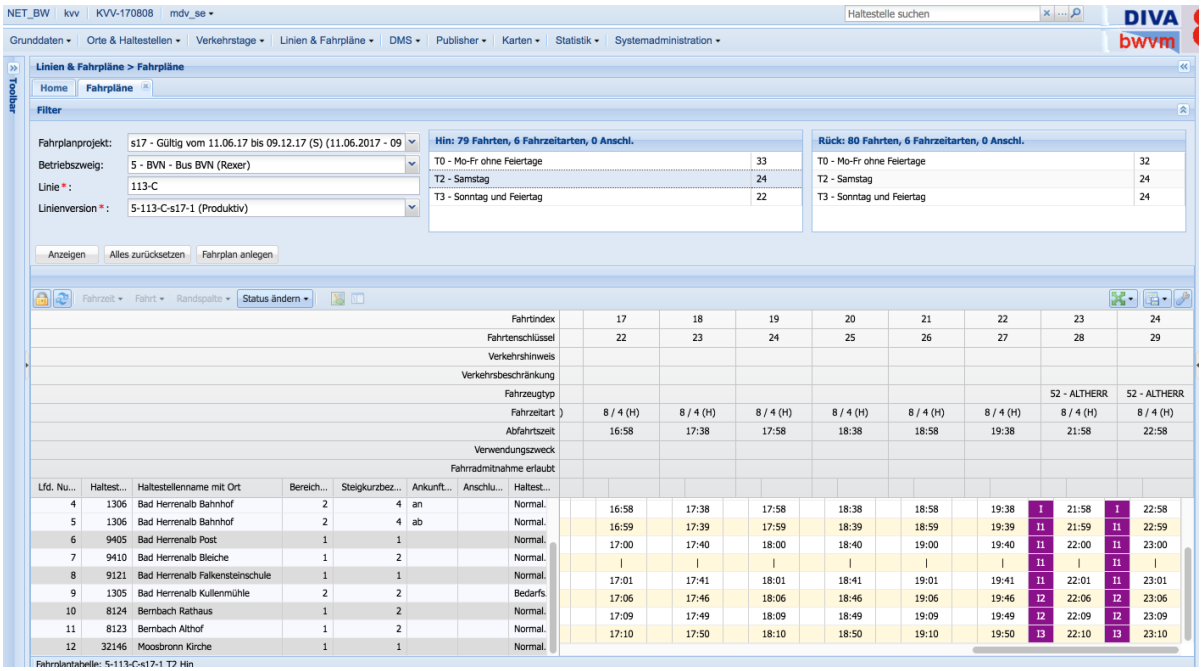
You can see this in the following example:

```
VERSION;LINE_NR;STR_LINE_VAR;LINE_DIR_NR;TRIP_ID;LINE_CONSEC_NR;STOP_NR;ST
OPPING_POINT_NR;SERVICE_INTERDICTION_CODE;
 1;       27;    4;   1;   200028;   1; 1306; 6;I ;
 1;       27;    4;   1;   200028;   2; 9405; 1;0 ;
 1;       27;    4;   1;   200028;   3; 9410; 2;0 ;
 1;       27;    4;   1;   200028;   4; 9121; 1;0 ;
 1;       27;    4;   1;   200028;   5; 1305; 3;0 ;
 1;       27;    4;   1;   200028;   6; 8124; 2;1 ;
 1;       27;    4;   1;   200028;   7; 8123; 2;1 ;
 1;       27;    4;   1;   200028;   8;32146; 1;2 ;

 1;       27;    4;   1;   200029;   1; 1306; 6;I ;
 1;       27;    4;   1;   200029;   2; 9405; 1;0 ;
 1;       27;    4;   1;   200029;   3; 9410; 2;0 ;
 1;       27;    4;   1;   200029;   4; 9121; 1;0 ;
 1;       27;    4;   1;   200029;   5; 1305; 3;0 ;
 1;       27;    4;   1;   200029;   6; 8124; 2;1 ;
 1;       27;    4;   1;   200029;   7; 8123; 2;1 ;
 1;       27;    4;   1;   200029;   8;32146; 1;2 ;
```

Intra-urban service constraints are used to suppress the output of connections in the EFA router, e.g. where a faster regional bus serves an intra-urban route although there is a slower city bus. They can be defined by marking a continuous part of a service journey pattern. The system does not check whether the stops on this route segment are located in the same municipality, for example.

The relevant DIVA data looks like this.



The two magenta-coloured areas indicate the service constraints. In DIVA, they are numbered consecutively starting with I1, then I2 and I3, etc. DINO counts the intra-urban service constraints starting with 0, i.e. in this case 0,1, and 2.

In this instance, the aim was to prevent the EFA from issuing connections within Bad Herrenalb and within Bernbach. While it is possible to define I3 as a service constraint with one stop, it only serves as an example and makes no sense in this form.

Converted to DINO, the data looks like this:

```
DIVA-I1
 1;       27;    4;   1;   200028;   1; 1306; 6;I ;
 1;       27;    4;   1;   200028;   2; 9405; 1;0 ;
 1;       27;    4;   1;   200028;   3; 9410; 2;0 ;
 1;       27;    4;   1;   200028;   4; 9121; 1;0 ;
 1;       27;    4;   1;   200028;   5; 1305; 3;0 ;

DIVA-I2
 1;       27;    4;   1;   200028;   6; 8124; 2;1 ;
 1;       27;    4;   1;   200028;   7; 8123; 2;1 ;

DIVA-I3
 1;       27;    4;   1;   200028;   8;32146; 1;2 ;
```

It is not mandatory to specify the stop number since LINE_CONSEC_NR is sufficient to identify the nth stopping point on the route. The DINO service_constraint.din relation refers directly to the routing of the trip.

To ensure backward compatibility with DIVA 3, the intra-urban constraint is limited to values between 0 ... 9.

5.7 Connection data

5.7.1 connection.din (formerly rec_connection.din)

This table is optional.

DINO description (overview of all relations)

Through-service connections

The connections described in this relation are often referred to as through services. The important feature is that there is no change of vehicle for this kind of connection. In the case of railways, they can also be referred to as through trains. An example of a through service is a .

DINO

Table: connection.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	ORIG_DAY_ATTRIBUTE_NR	decimal (5)		DIVA: attribute of day	Day-type attribute number
	Y	Mandatory	ORIG_LINE_NR	decimal (8)		internal line number	Departure line number
	Y	Mandatory	ORIG_LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Direction of travel
	Y	Mandatory	ORIG_STOP_NR	decimal (5)	1..99998	Number of the origin stop	Original internal stop number
	Y	Mandatory	ORIG_STOP_AREA_NR	decimal (5)	1..99998	Number of the origin stop area	Number of the original stop area
	Y	Mandatory	ORIG_TIME_INTERVAL_BEGIN	decimal (5)	0..99999	In seconds from 00:00	Start of transfer in seconds
	Y	Mandatory	ORIG_TIME_INTERVAL_END	decimal (5)	0..99999	In seconds from 00:00	End of transfer in seconds
	Y	Mandatory	DEST_DAY_ATTRIBUTE_NR	decimal (5)		DIVA: attribute of day	Day-type attribute number
	Y	Mandatory	DEST_LINE_NR	decimal (8)		internal line number	Internal line number
	Y	Mandatory	DEST_LINE_DIR_NR	decimal (3)		direction (max 2) (1, 2)	Direction of travel
	Y	Mandatory	DEST_STOP_NR	decimal (5)	1...99998	Number of the destination stop	Destination stop number
	Y	Mandatory	DEST_STOP_AREA_NR	decimal(5)	1..99998	Number of the destination stop area	Arrival stop area number
	Y	Mandatory	DEST_TIME_INTERVAL_BEGIN	decimal (5)	0..99999	In seconds from 00:00	Start of transfer in seconds
	Y	Mandatory	DEST_TIME_INTERVAL_END	decimal (5)	0..99999	In seconds from 00:00	End of transfer in seconds
	N	Mandatory	TRANSFER_TIME	decimal (5)	0..99999	In seconds	Transfer in seconds Not applicable
	N	Optional	TRANSFER_DISTANCE	decimal (5)	0..99999	In meters	Transfer in meters Not applicable

	Y	Mandatory	CONNECTION_TYPE	decimal (1)	1..9	Type of journey association 1 = Passenger can remain in vehicle 2 = Passenger can remain in vehicle with intermediate destination 3 = Passenger can remain in vehicle with final destination 4 = Through coach destination rail car 5 = Category change	Type of through-service connection 1 = Passenger can remain seated in the vehicle, 2 = Passenger can remain seated in the vehicle (intermediate destination is displayed), 3 = Passenger can remain seated in the vehicle (final destination is displayed), 4 = Through coach, 5 = Change of category

5.7.2 interchange_definition.din

This table is optional.

DINO description (overview of all relations)

Interchange definitions

Interchange definitions are managed in a separate DINO relation. While connection.din contains through-service connection instructions without a change of vehicle, interchange definitions are defined in interchange_definition.din. This involves a change of vehicles and waiting for vehicles within specific time windows.

DINO

Table: interchange_definition.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)			Basic version
	Y	Mandatory	CONNECTION_NR	decimal (10)			Unique number for an interchange definition, persistent
	N	Mandatory	CONNECTION_NAME	Char (100)	ISO-8859-1		Freely definable text for identifying the interchange by name
	N	Optional	CONTROL_CENTRE_CODE	Decimal (3)	1..255(0)		Number of the control centre with which the interchange information is exchanged as per VDV 453. If the feeder service is within the area of the external control centre's responsibility, this attribute is assigned the value > 0. The value of this attribute controls the combination of attributes that is read in: If control centre identifier = 0, the following attributes are sent • ZUB_LI_NR • ZUB_LI_RI_NR • ZUB_ORT_REF_ORT If control centre identifier > 0 • LinienID, • RichtungsID • ASBID . Attributes that are not supplied are filled with 0 or "".
	Y	Mandatory	FEEDER_LINE_NR	decimal (8)			Line number of the feeder service
	Y	Mandatory	FEEDER_DIR_NR	decimal (3)	1..2(0)		Direction of the feeder line
	N	Mandatory	FEEDER_STOP_NR	decimal (5)	1..99998		Stop at which passengers disembark from the feeder vehicle for the interchange.
	N	Optional	FEEDER_STOP_AREA_NR	decimal (5)	1..99998		Optional additional area information for FEEDER_STOP_NR
	N	Optional	LINE_NR	Char(20)	ISO 8859-1	-	Identifier of the feeder line; must be filled instead of ZUB_LI_NR if the feeder is within the external control centre's area of responsibility.
	N	Optional	DIRECTION_NR	Char(20)	ISO 8859-1	-	Identifier of the feeder line; must be filled instead of ZUB_LI_RI_NR if the feeder is within the external control centre's area of responsibility.
	N	Optional	CONNECTIONLINKREF	Char (20)	ISO 8859-1	-	Interchange area ID. Must be reconciled with the interface partner and is only filled if it is an interchange to a third-party control centre. Number of a systematic interchange

	Y	Mandatory	FETCHER_LINE_NR	decimal (8)			Line number of the fetcher service
	Y	Mandatory	FETCHER_DIR_NR	decimal (2)	1..2(0)		Direction of the fetcher line
	N	Mandatory	FETCHER_STOP_NR	decimal (5)	1..99998		Stop at which passengers board the vehicle of the fetcher service
	N	Optional	FETCHER_STOP_AREA_NR	decimal (5)	1..99998		Optional additional area information for FETCHER_STOP_NR
	N	Optional	SECURED_INTERCHANGE	decimal (1)	1..99998		Interchange synchronization 0 .. not synchronized 1 .. synchronized
	N	Optional	PROTECTION_TYPE	decimal (5)	<empty> 1..99998		Type of interchange blank ... if SECURED_INTERCHANGE=0 otherwise 0 .. static 1 .. dynamic

Example:

```
VERSION;CONNECTION_NR;CONNECTION_NAME;CONTROL_CENTRE_CODE;FEEDER_LINE_NR;FEEDER_DIR_NR;FEEDER
_STOP_NR;FEEDER_STOP_AREA_NR;LINE_NR;DIRECTION_NR;CONNECTIONLINKREF;FETCHER_LINE_NR;FETCHER_D
IR_NR;FETCHER_STOP_NR;FETCHER_STOP_AREA_NR;SECURED_INTERCHANGE;PROTECTION_TYPE;
21; 200;459-Altach Kirche 41-2b-s16-H -> 41-2b-s16-H 459-Altach Kirche ; 0; 345; 1; 459; ; ;
; ; 344; 1; 459; ;0; ;
21; 200;459-Altach Kirche 41-2b-s16-H -> 41-2b-s16-H 459-Altach Kirche ; 0; 345; 1; 459; ; ;
; ; 345; 1; 459; ;0; ;
21; 213;1574-Rankweil Mühlbach 15-61-s16-H -> 15-56-s16-H 1574-Rankweil Mühlbach ; 0; 193; 1;
1574; ; ; ; ; 182; 1; 1574; ;0; ;
21; 213;1574-Rankweil Mühlbach 15-61-s16-H -> 15-56-s16-H 1574-Rankweil Mühlbach ; 0; 193; 1;
1574; ; ; ; ; 183; 1; 1574; ;0; ;
21; 213;1574-Rankweil Mühlbach 15-61-s16-H -> 15-56-s16-H 1574-Rankweil Mühlbach ; 0; 193; 1;
1574; ; ; ; ; 184; 1; 1574; ;0; ;
```

5.7.1 Interchange_validity.din (formerly Rec_ums.din, as per VDV452 V1.4 REC_UMS))

This table is optional.

Interchange monitoring can be restricted to a day type and to certain times of day. It is therefore possible to assign different validities to an interchange definition. Interchange monitoring may have different transfer and delay times depending on the time of day (description of transfer options or systematic interchanges).

DINO

Table: interchange_validity.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)			Basic version
	Y	Mandatory	CONNECTION_NR	decimal (10)	1..		Unique number of the interchange definition, persistent
	N	Optional	PRIORITY	Char (6)	ISO-8859-1	-	Free grouping of interchanges in terms of priority
	Y	Mandatory	DAY_ATTRIBUTE_NR	decimal (3)			Day type designation DAY_ATTRIBUTE_NR
	Y	Mandatory	VALIDITY_START_TIME	decimal (6)	1..		Time in seconds from midnight, from which the interchange definition is valid within the day type.
	N	Optional	VALIDITY_END_TIME	decimal (6)	1..		Time in seconds from midnight, until which the interchange definition is valid within the day type.
	N	Optional	INTERCHANGE_STANDARD_DURATION	decimal (6)	1..		Minimum transfer time for a transfer connection. Time in seconds available to a passenger to get from the stopping point of the feeder service to the stopping point of the fetcher service.
	N	Optional	INTERCHANGE_MAXIMUM_DURATION	decimal (6)	1..		Maximum interchange time for a transfer connection. Maximum time in seconds that the passenger can be expected to spend transferring between trains (including waiting time) that could still be referred to as an interchange. This attribute is used to form the interchange pairs.
	N	Optional	MAXIMUM_WAIT_TIME	decimal (6)	1..		Maximum timetable deviation in seconds which may be incurred by the fetcher if interchange synchronization is in effect
	N	Optional	MAXIMUM_WAIT_TIME_AUTO	decimal (6)	1..	-	The system's margin of flexibility in seconds in the event of a deviation from the fetcher's service timetable. If this value is exceeded, a confirmation must be requested from the dispatcher for continued monitoring of this interchange.

5.8 Route segments and georeferenced service journey patterns

5.8.1 link.din

This table is optional.

DINO description (overview of all relations)

Route segments

	DINO **Table: link.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	LINK_ID	decimal (10)	0..9999999999	Unique, internal non persistent link identifier, only used to reference to link_geometry.din	Unique internal link ID, not persistent, used only for reference by child records
	Y	Mandatory	BRANCH_NR	decimal (2)	0..99	Number of the branch of operation or authority	Designation of the operating branch or authority
	Y	Mandatory	ORIG_STOP_NR	decimal (5)	1..99998	Number of the origin stop	Original internal stop number
	Y	Optional	ORIG_STOP_AREA_NR	decimal (5)	0..99998	Number of the origin stop area	Number of the original stop area
	Y	Optional	STOPPING_POINT_NR	decimal (2)		Number of the stopping point within a stop	Stopping point number
	Y	Mandatory	DEST_STOP_NR	decimal (5)	1...99998	Number of the destination stop	Destination stop number
	Y	Optional	DEST_STOP_AREA_NR	decimal (5)	0..99998	Number of the origin stop area	Number of the destination stop area
	Y	Optional	DEST_STOPPING_POINT_NR	decimal (2)		Number of the stopping point within a stop	Stopping point number
	N	Optional	LENGTH	decimal (8)		length [m]	Length in [m]
	N	Optional	GIS_LENGTH	decimal (8)		GIS length [m]	GIS length in [m]

Route segments can be defined between platforms, areas and stops. The stopping point elements of the start and end points of the route segment may be of different types. For each operating branch, there may only be one unique route segment between two stop elements, e.g. there may only be one link between platform 1 of stop number 1 and platform 2 of stop number 2.

5.8.2 link_geometry.din

This table is optional.

DINO description (overview of all relations)

Route segment polygons

If route segments that have already been georeferenced are to be transferred, the polygons of the referenced route segments can be transferred with the link_geometry relation. The route segment polygons should be optimized for transmission with a thinning algorithm (e.g. Douglas-Peucker) beforehand.

DINO

Table: link_geometry.din

T	Key	Mandatory Field	Name	Data type	Value facet	Description	Remarks
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	LINK_ID	decimal (10)	0..9999999999	Unique, internal non persistent link identifier, only used to reference to link.din	Unique internal non-persistent ID. Serves only as a reference to link.din
	Y	Mandatory	LINK_CONSEC_PT_NR	decimal (5)	0 .. 99999		Sequential index in the route segment polygon
	N	Mandatory	LINK_PT_X	decimal (11)	XXX.XXXXXXX		WGS84 If WGS84, then a value with up to 7 decimal places 16.1234567 -1 or blank entry means no coordinate Other formats must be checked with MENTZ GmbH
	N	Mandatory	LINK_PT_Y	decimal (11)	XXX.XXXXXXX		WGS84 If WGS84, then a value with up to 7 decimal places 16.1234567 Other formats must be checked with MENTZ GmbH

5.8.3 link_force_point.din

This table is optional.

If, instead of transferring georeferenced route segments in link_geometry.din, they are to be georeferenced in the DIVA system, force points can be defined with the DINO link_force_point.din relation. DIVA can then use these force points for automated georeferencing.

DINO description (overview of all relations)

Force points

	DINO **Table: link_force_point.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	LINK_ID	decimal (10)	0..9999999999	Unique, internal non persistent link identifier, only used to reference to link.din	Unique internal non-persistent ID. Serves only as a reference to link.din
	Y	Mandatory	LINK_CONSEC_PT_NR	decimal (2)	0 .. 99		Continuous index in route segment if there are several force points.
	N	Mandatory	LINK_PT_X	decimal (11)	XXX.XXXXXXX		WGS84 If WGS84, then a value with up to 7 decimal places 16.1234567 -1 or blank entry means no coordinate Other formats must be checked with MENTZ GmbH
	N	Mandatory	LINK_PT_Y	decimal (11)	XXX.XXXXXXX		WGS84 If WGS84, then a value with up to 7 decimal places 16.1234567 Other formats must be checked with MENTZ GmbH

5.9 User-defined attributes

Diva 4 supports the creation of user-defined attributes. As of version 2.0, the DINO interface also supports the definition of free numeric, Boolean, date, list and text attributes, which can be assigned to the stop, stop_area, stop_point and line relations and transferred to DIVA 4 as network-version-specific, user-defined attributes.

5.9.1 Attribute.din

This table is optional.

DINO description (overview of all relations)

Definition of the freely defined attributes

	DINO **Table: attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)		Version	Basic version
	Y	Mandatory	ATT_SHORT_NAME	Char(12)		Unique, persistent short name	Unique, persistent short designation
	N	Mandatory	ATT_LONG_NAME	Char(50)		description	Description
	N	Mandatory	ATT_TYPE	decimal(2)	0 .. char 1 .. decimal 2 .. date 3 .. list 4 .. bool	Attribute type	Attribute type

Please note: in older versions of specification 2.1, the value range of the column ATT_TYPE was erroneously shown as (char | decimal | bool). The correct range of values is (0 | 1 | 2 | 3 | 4)

In the case of list attributes, the ATT_TYPE columns of the stop_attribute.din, stop_area_attribute.din, stop_point_attribute.din and line_attribute.din tables contain the short designation of the value exported from the field value list, i.e. usually the sequential number of the list value.

5.9.2 Stop_attribute.din

This table is optional.

	DINO **Table: stop_attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	ATT_SHORT_NAME	char(12)		Unique, persistent short name	Unique, persistent short designation
	N	Mandatory	ATT_VALUE	Char(1000)		value	Value
	Y	Mandatory	STOP_NR	Decimal(5)	1..99998	Number of the stop	For stops: stop number

5.9.3 Stop_area_attribute.din

This table is optional.

	DINO **Table: stop_area_attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	ATT_SHORT_NAME	char(12)		Unique, persistent short name	Unique, persistent short designation
	N	Mandatory	ATT_VALUE	Char(1000)		value	Value
	Y	Mandatory	STOP_NR	Decimal(5)	1..99998	Number of the stop	For stops: stop number
	Y	Mandatory	STOP_AREA_NR	decimal (5)	1..99998	Number of the stop area	Number of a stop area within a stop

5.9.4 Stop_point_attribute.din

This table is optional.

	DINO **Table: stop_point_attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	ATT_SHORT_NAME	char(12)		Unique, persistent short name	Unique, persistent short designation
	N	Mandatory	ATT_VALUE	Char(1000)		value	Value
	Y	Mandatory	STOP_NR	Decimal(5)	1..99998	Number of the stop	For stops: stop number
	Y	Mandatory	STOP_AREA_NR	decimal (5)	0..99998	Number of the stop area	Number of a stop area within a stop
	Y	Mandatory	STOPPING_POINT_NR	decimal (2)	0..99	Number of the stopping point within a stop	Stopping point number

5.9.5 line_attribute.din

This table is optional.

	DINO **Table: line_attribute.din**						
T	**Key**	**Mandatory Field**	**Name**	**Data type**	**Value facet**	**Description**	**Remarks**
	Y	Mandatory	VERSION	decimal (2)	1..99	Version	Basic version
	Y	Mandatory	ATT_SHORT_NAME	char(12)		Unique, persistent short name	Unique, persistent short designation
	N	Mandatory	ATT_VALUE	Char(1000)		value	Value
	Y	Mandatory	LINE_NR	decimal (8)		Foreign Key to Line, if not empty, the setting applies to this line only.	Foreign key for the line. If set, then valid only for this line

6 ANNEXES

6.1 List of permissible train categories

To ensure a smooth exchange of DINO data that contains train data, a list of train categories to be supported by DINO imports is published here. Further categories can be supported but this would require coordination with MENTZ GmbH.

'A'	'Tren accelerat'
'ABR'	'ABELLIO Rail NRW GmbH'
'ag'	'agilis'
'AG'	'agilis'
'AIR'	'Aircraft'
'AKN'	'AKN Eisenbahn AG'
'ALS'	'Alaris'
'alt'	'Demand-responsive transport'
'ALT'	'Demand-responsive transport''
'ALX'	'Allgäu-Express'
'AM'	'Tren accelerat automotor'
'ARC'	'Arco/Alvia/Avant'
'ARN'	'Artesia Nacht'
'ARR'	'Arriva'
'ARZ'	'Autoreisezug' (motorail train)
'as'	'agilis express train'
'AS'	'AutoShuttle'
'ast'	'Anruf-Sammel-Taxi' (on-demand collective taxi)
'AST'	'Anruf-Sammel-Taxi' (on-demand collective taxi)
'ATB'	'Autoschleuse Tauernbahn'
'ATR'	'Altaria'
'AVE'	'klimat.Hochgeschwindigkeitszug' (airconditioned high-speed train)
'AZ'	'Auto-Zug' (motorail train)
'B'	'Bus'
'BE'	'Bentheimer Eisenbahn'
'BLB'	'Berchtesgadener Land Bahn'
'BN'	'Nachtbus' (night bus)
'BOB'	'Bayerische Oberlandbahn GmbH'
'BP'	'Beschleunigter Personenzug'
'BR'	'Bus replacement' (GB)
'BRB'	'Bayerische Regionalbahn'
'BS'	'Bus service' (GB)
'BSB'	'Breisgau-S-Bahn Gmbh'
'BSV'	'Schienenersatzverkehr'
'BUS'	'Bus'
'BZB'	'Bayerische Zugspitzbahn'
'CAN'	'Cantus Verkehrsgesellschaft'
'CAT'	'City Airport Train'
'CB'	'CityBahn'
'CIS'	'Cisalpino'

'CNL'	'CityNightLine'
'D'	'Schnellzug'
'Dab'	'Daadetalbahn'
'DB'	'DB Regio AG'
'DBG'	'Döllnitzbahn'
'Dir'	'Train direct' (semi-fast train)
'Diu'	'Diurno (fast train)
'DNR'	'Nahverkehrszug von Dritten' (third-party local train)
'DNZ'	'Nacht-Schnellzug'(fast night train)
'DO'	'Schnellzug ohne Zuschlag' (fast train, no supplement)
'DPF'	'Fernreisezug externer EU' (long-distance train of external RU)
'dpn'	'S-Bahn' (rapid transit)
'DPN'	'Nahverkehrszug von Dritten' (third-party local train)
'DWE'	'Dessau-Wörlitzer Eisenbahn'
'DZ'	'Sonderverkehrs- oder Dampfzug' (special or steam train)
'e'	'Eilzug' (semi-fast train)
'E'	'Eilzug' (semi-fast train)
'EB'	'Expresszug' (express train)
'EBx'	'Erfurter Bahn Express'
'EC'	'EuroCity'
'ECB'	'Eurocity'
'ECO'	'EuroCity ohne Zuschlag' (EuroCity, no supplement)
'ECW'	'Berlin-Warszawa-Express'
'EE'	'Schnellzug' (fast train)
'EIC'	'Express InterCity'
'EM'	'Euromed'
'EN'	'EuroNight'
'EP'	'erikoispikajuna' (special fast train)
'ER'	'Eilzug des Reiseverkehrs' (semi-fast train)
'ERB'	'eurobahn'
'erx'	'erixx - Der Heidesprinter'
'ES'	'EuroStar Italia'
'EST'	'EuroStar'
'Et'	'expresstog' (express train)
'ETR'	'Eiltriebwagen' (express multiple-unit)
'EVB'	'ELBE-WESER GmbH'
'Ex'	'Ekspresni voz (express train)
'EX'	'Express-Zug' (express train)
'EXB'	'ExpressBus'
'EZ'	'Erlebniszug' (tourist train)

'fae'	'Fähre' (ferry)
'FAE'	'Fähre' (ferry)
'FB'	'FernBus' (long-distance bus)
'FD'	'Fernschnellzug' (long-distance train)
'FEG'	'Freiberger Eisenbahngesellschaft'
'FYR'	'FYRA'
'GmP'	'Güterzug m. Personenbeförderg.' (mixed freight/passenger train)
'HEX'	'Veolia Verkehr Sachsen-Anhalt'
'HKX'	'Hamburg-Köln-Express'
'HLB'	'Hessische Landesbahn'
'HOT'	'Hotelzug' (hotel train)
'HSB'	'Harzer Schmalspurbahn'
'HTB'	'Hellertalbahn'
'HzL'	'Hohenzollerische Landesbahn AG'
'I'	'Interurbano'
'IC'	'InterCity'
'ICB'	'ÖBB-Intercitybus'
'ICE'	'InterCityExpress'
'ICN'	'InterCityNight'
'ICO'	'InterCity ohne Zuschlag' (InterCity, no supplement)
'ICR'	'Intercity'
'ICT'	'Intercity Neigezug' (InterCity tilting train)
'IEx'	'Internationaler Expresszug' (international express train)
'IN'	'Internordischer Qualitätszug'
'INT'	'Internationaler Zug' (international train)
'INZ'	'Nachtzug' (night train)
'IR'	'InterRegio'
'IRE'	'InterRegioExpress'
'IRN'	'Interregion'
'IRO'	'InterRegio ohne Zuschlag'
'IRX'	'Intercity'
'IXB'	'Intercity-Express'
'IXK'	'Intercity-Express'
'KAT'	'Katamaran'
'KD'	'Koleje Dolnoslaskie'
'KM'	'Osobowy'
'KTB'	'Kandertalbahn'
'L'	'Luxuszug' (luxury train)
'LEO'	'Chiemgauer Lokalbahn'
'lt'	'Linien-Taxi' (scheduled-service taxi)

'Lt'	'lokaltog (local train)
'LYN'	'LYNTOG'
'M'	'Messezug' (trade fair train)
'MB'	'Internationaler Zug' (international train)
'MBB'	'Mecklenburgische Bäderbahn Molli'
'ME'	'metronom'
'MEr'	'metronom regional'
'MET'	'Metroplitan Express Train'
'MR'	'Märkische Regiobahn'
'MRB'	'Mitteldeutsche Regionalbahn'
'MSB'	'Mainschleifenbahn'
'N'	'Nahverkehrszug' (local train)
'NBE'	'Nordbahn Eisenbahngesellschaft'
'NEB'	'Niederbarnimer Eisenbahn'
'neg'	'Norddeutsche Eisenbahn Gesellschaft'
'NEX'	'NachtExpress'
'NOB'	'NordOstseeBahn'
'NWB'	'NordWestBahn'
'NZ'	'Nachtzug' (night train)
'ÖBA'	'Eisenbahn-Betribsgesellschaft Ochsenhausen GmbH'
'OBU'	'Oberleitungs-Bus'
'OE'	'Ostdeutsche Eisenbahn GmbH'
'OEC'	'ÖBB-EuroCity'
'OIC'	'ÖBB-InterCity'
'OL'	'London Underground Ltd. o.pas.'
'OLA'	'Ostseeland Verkehr GmbH'
'OM'	'Post Office controlled’ (o.pas)
'OO'	'Ordinary passenger’ (o.pas.)
'Os'	'Regionalzug' (regional train)
'OS'	'Regionalzug' (regional train)
'OSB'	'Ortenau-S-Bahn Gmbh'
'OU'	'Unadvertised o.pas.'
'OZ'	'Oeresundzug'
'P'	'Zug des Spitzenverkehrs' (peak-hours train)
'PCC'	'PCC Arriva'
'PEG'	'Prignitzer Eisenbahngesellschaft'
'PRE'	'Pressnitztalbahn'
'R'	'Regionalzug'
'R84'	'RegionalExpress'
'RB'	'Regionalbahn'
'RBG'	'Regental Bahnbetriebs GmbH'

'RE'	'Regional-Express'
'RER'	'S-Bahn Paris'
'REX'	'ÖBB-RegionalExpress'
'rfb'	'Rufbus' (on-demand bus)
'RHI'	'Intercity-Express'
'RHT'	'TGV'
'RJ'	'Railjet'
'RR'	'Schnellzug' (fast train)
'RRI'	'Intercity-Express'
'RRT'	'TGV'
'RSB'	'RegionalSchnellBahn'
'Rt'	'Regionzug' (regional train)
'RT'	'RegioTram'
'RTB'	'Rurtalbahn GmbH'
's'	'S-Bahn' (rapid transit train)
'S'	'S-Bahn' (rapid transit train)
'S2'	'Pendolino S220'
'S84'	'Schnellzug' (fast train)
'SB'	'Seilbahn' (cableway)
'SBB'	'SBB'
'SBS'	'Städtebahn Sachsen'
'SC'	'SuperCity'
'SCH'	'Schiff' (boat)
'SDG'	'SDG Sächsische Dampfeisenbahngesellschaft mbh'
'SE'	'StadtExpress'
'SES'	'Städteexpress Sachsen'
'SEV'	'Schienenersatzverkehr'
'SHB'	'Schleswig-Holstein-Bahn'
'SKM'	'Szybka Kolej Miejska'
'SKW'	'Szybka Kolej Miejska'
'SOE'	'Sächsisch-Oberlausitzer Eisenbahngesellschaft'
'Sp'	'Eilzug' (semi-fast train)
'SP'	'Eilzug' (semi-fast train)
'stb'	'Stadbahn'
'STB'	'Stadtbahn'
'stR'	'Straßenbahn' (tram)
'Str'	'Straßenbahn' (tram)
'STR'	'Straßenbahn' (tram)
'SWB'	'Schwebebahn' (suspension railway)
'SWE'	'Südwestdeutsche Verkehrs-AG'
'T84'	'Regionalzug' (regional train)

'TGD'	'TGV Duplex'
'TGV'	'Train a grande Vitesse'
'THA'	'Thalys'
'TLG'	'Talgo'
'TLK'	'Tanie Linie Kolejowe'
'TLX'	'Trilex'
'u'	'U-Bahn' (underground railway)
'U'	'U-Bahn' (underground railway)
'U70'	'Zug' (train)
'UBB'	'Usedomer Bäderbahn'
'UEF'	'Ulmer Eisenbahnfreunde'
'UEx'	'Urlauberexpress'
'UUU'	'Zug' (train)
'VBG'	'Vogtlandbahn'
'VE'	'Vetter'
'VEB'	'Vulkan-Eifel-Bahn'
'VEC'	'Vectus Verkehrsgesellschaft'
'VEN'	'Thenus Veniro'
'VIA'	'Viamont'
'VX'	'Vogtland-Express'
'WB'	'WESTbahn'
'WEG'	'Nebenbahn Amstetten-Gerstetten'
'WFB'	'Westfahlenbahn'
'WKD'	'Warszawska Kolej Dojazdowa'
'WTB'	'Wutachtalbahn'
'X'	'InterConnex'
'X2'	'Hochgeschwindigkeitszug' (high-speed train)
'X70'	'Schnellzug' (fast train)
'XM'	'Post Office controlled ex.pas.'
'XU'	'Unadvertised ex.pas.'
'XX'	'Express passenger (ex.pas.
'XZ'	'Express passenger sleeper'
'Zr'	'Eilzug' (semi-fast train)
'ZRB'	'Zahnradbahn' (rack railway)
'ZUG'	'Zug unbekannter Art' (unknown train type)
'ZZZ'	'wechselnde Zuggattung' (variable train type)