Interface Format Vehicle Schedules

Version 1 – release 7.1

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1 General Information

1.1 Files

The interface is composed of eight ASCII Data Files (described in some more detail below):

- Validity period file (File name .VAL): This file contains the date interval that defines the validity period of the imported schedule.
- Calendar file (File name .OPR): This file contains operation calendars for the validity period. An operation calendar identifies operation dates.
- Schedule file (File name .HRA): This file contains the trips that are planned to be in operation during the validity period. Each trip is related to an operation calendar.
- Trip characteristics file (File name .CAR): This file contains additional information about each trip (e.g. Route Information).
- Note file (File name .NTE): This optional file contains the text about each note specified in the schedule.
- Block file (File name .BLK): This optional file contains the blocks specified in the schedule.
- Stop file (File name .STP): This file contains information about the stops.
- Portal file (File name .PORTAL): This optional file contains the information about the portals.
- Stop Portal Relation File (File name .STPPORT): This optional file contains information about the portal – stop relations (e.g. which portal belongs to which stop, what the distance is between the portal and it's related stop)
- Version file (File name .VER): This file contains the version number of the Interfacing standard described in this document. This allows an easier migration in case of changes to this standard.

1.2 Naming

These ten Data Files must have the same file name, with the appropriate file extension (for example .VAL, .OPR, .CAR, .HRA, .NTE, .BLK, STP, .PORTAL, .STPPORT or VER). They will be differentiated based on their extension.
All Data Files must be combined into one zip archive and comply to the following naming convention:

<company>YYYYMMDDHHMM.zip

e.g.: delijn200805260816.zip, nmbssncb200805260816.zip, stib200805260816.zip, tec200805260816.zip, ...

the accepted names of the companies: delijn, tec, mivb (Dutch version), stib (French version), nmbssncb

De Lijn will deliver only one file for the whole company (so all the entities together and integrated). The TEC will deliver one zip archive whose name will comply with the above format. This unique file will contain 6 zip archives, each one containing the set of files making up the present format specification. These 6 files will be named: tecbw.zip, tecch.zip, techt.zip, teclu.zip, teclv.zip, et tecna.zip.

All parties agree to use the latest version of Winzip (current, the latest version = winzip11.2)

FTP-server: access passive
FTP-access: address IP needed
The file has to be on the server before 22 hours

All parties agree that the detailed information has to be included in the access-documentation attachment.

1.3 Location

Data Files should be made available on an FTP Server, accessible to the other parties. Two folders should be created on the ftp server :

- Current: contains the most recent data delivery
- Archive: contains previous deliveries. Provides other parties with a failover in case of problems with the most recent files. Each time a new data delivery is created, the old file in the Current directory should be moved to the Archive directory before copying the new file to the Current directory.

1.4 Quality

Each Party is responsible for the quality of the Data Files he delivers.
Special care should be taken to ensure referential integrity is respected within a set of Data Files.
This means that:

- All Stops mentioned in the Schedule file should exist in the Stop File
- All Calendar identifiers mentioned in the Schedule File should exist in the Calendar File
- All Trip identifiers mentioned in the Schedule File should exist in the Trip characteristics File.
- All Note identifiers mentioned in the Schedule File should exist in the Note File
- All Route identifiers mentioned in the top part of the Trip characteristics File (Trip Information) should have a record in the bottom part (Route Information).
- The dataset on the FTP-server is considered as correct. The number of stops and routes should be compared with the previous dataset. A difference of more than 10% might be a sign of a corrupted dataset. If this validation is violated, the deliverer of the data will send an e-mail to the other parties to confirm the validity.
- The calendar of the notes should correspond to the general calendar
- The number of days is the Calendar Information File must be equal to the number of days in the Validity Period File
- All calendar/block-combinations mentioned in the Schedule File should exist in the block-file
- All Stops mentioned in the Stop Portal Relation file should exist in the Stop File
- All Portals mentioned in the Stop Portal Relation file should exist in the Portal File

The parties agree that another important point would be the avoidance of file corruption by having delimiters in the Data fields. E.g. when the delimiter of choice for a specific file is '|', then all occurrences of '|' within the data should be replaced with another character. Same observations apply to usage of CRLF's in text fields.

All parties will use the "|" (pipe) as delimiter.

Content

The trains with seat reservation needed will be excluded from the dataset.

1.5 File Description

1.5.1 Validity Period File

- **Line 1:** Start date of the validity period

Field Name	Field Description	Data Type	Length
Day		character	2
Month		character	2
Year		character	4

The day and month will always be 2 characters

- **Line 2:** End date of the validity period

Field Name	Field Description	Data Type	Length
Day		character	2
Month		character	2
Year		character	4

The day and month will always be 2 characters

Example:

24|05|1998
29|05|1999

1.5.2 Calendar Information File

- **Record #:**

Field Name	Field Description	Data Type	Length
#		character	1
Calendar identifier	The calendar id is associated to trips and blocks that are planned for the associated validity period.	integer	5

- **Record -:**

Field Name	Field Description	Data Type	Length
-		character	1
Operation dates	Each digit corresponds to a date. The first one corresponds to the validity period start date, and so on. When the digit value is 1, it means « in operation » and when the digit value is 0, it means « not in operation ».	character	499

Example:

#1
-100000110101.....110
#2
-011100000001.....000

If the start date is 02/06/96 and the end date is 31/05/97, the calendar 1 will be in operation on the 02/06/96 and calendar 2 will not. For the 31/05/97, calendars 1 and 2 will not be in operation.

1.5.3 Schedule File

- **Record %: Time system Record**

Field Name	Field Description	Data Type	Length
%		character	1
Permitted range	Hour range that allows to enter times. Default period ranges from 0 to 30 hours. 0 means from 0 to 30 hours, 1 means from 0 to 24 hours.	integer	1
24-hour cut-off time	Indicates when the 24-hour period begins and ends. By default, the cut-off is 0000, which means 24-hour period corresponds to a regular day. The latest cut-off time is 0600.	integer	4

- **Record #: Trip Record**

Field Name	Field Description	Data Type	Length
#		character	1
Trip identifier		character	8

- **Record -: Calendar Record**

Field Name	Field Description	Data Type	Length
-		character	1
Calendar identifier	Associated calendar identifier (see calendar file information).	integer	5
Block identifier (optional)	Associated block identifier (see block file information).	character	8

- **Record n: Note Record for the Trip (Optional)**

Field Name	Field Description	Data Type	Length
n		character	1
Note identifier	The note applies on the trip for the specified calendar.	character	8

- **Record >: Start Stop record**

Field Name	Field Description	Data Type	Length
>		character	1
Stop identifier		character	8
Start time		integer	4

- **Record .: Short Stop record (Optional)**

Field Name	Field Description	Data Type	Length
.		character	1
Stop identifier		character	8
Passing time		integer	4

- **Record +: Long Stop Record**

Field Name	Field Description	Data Type	Length
+		character	1
Stop identifier		character	8
Arrival time		integer	4
Departure time		integer	4

- **Record <: End Stop Record**

Field Name	Field Description	Data Type	Length
<		character	1
Stop identifier		character	8
End time		integer	4

- **Record s: Note Record for the Stop (Optional)**

Field Name	Field Description	Data Type	Length
s		character	1
Note identifier	The note applies on the trip stop time.	character	8

For one trip identifier, there can only one trip definition.
For each trip definition, there is an optional trip note record, followed by a start stop record, followed by one or more intermediate stop records. Intermediate stop records are optional. They consist of short stop, or long stop, and can also have trip stop time note records. There is always a end stop record at the end of the sequence. This means that no stop can appear after the end stop record.

Example Trip Definition:

```
--------------------
#5188
-33|B300
>455|1635
.335|1639
.682|1643
.518|1646
.136|1649
.8|1652
.797|1656
+215|1700|1709
sNoStud
.127|1700
.931|1705
<210|1710
---------------------
```

Examples Time System:

Example 1:

```
--------------------
%0
--------------------
```

2345	2515	Trip starts on 23 :45 and ends at 1 :15 on the next day.
0145	0315	Trip starts on 1 :45 and ends at 3 :15 on the current day.

Example 2:

```
--------------------
%1
--------------------
```

		Trip starts on 23 :45 and ends at 1 :15 on the current day.
2345	0115	Invalid.
0145	0315	Trip starts on 1 :45 and ends at 3 :15 on the current day.

Example 3:

```
--------------------
%1|0200
--------------------
```

2345	0115	Trip starts on 23 :45 and ends at 1 :15 on the next day.
0145	0315	Trip starts on 1 :45 on the next day and ends at 3 :15 on the current day. Invalid.

1.5.4 Trip Characteristics File

- **Line 1:**

Field Name	Field Description	Data Type	Length
Prefix for route identifiers	Indicates if the company/site prefix is included in the route identifiers of the current file. Use value 1 to indicate that the prefix is included (otherwise, prefixes are assigned during the import). 1 (TRUE) or 0 (FALSE).	integer	1

The prefixes

0	STIB
1	Antwerpen
2	Oost-Vlaanderen
3	Vlaams-Brabant
4	Limburg
5	West-Vlaanderen
7	NMBS
B	Brabant-Wallon
C	Charleroi
H	Hainaut
L	Liège - Verviers
N	Namur
X	Luxembourg

- **Line 2:**

Field Name	Field Description	Data Type	Length
Prefix for stop identifiers	Indicates if the company/site prefix is included in the stop identifiers contained in the associated schedule file. Use value 1 to indicates that the prefix is included (otherwise,prefixes are assigned during the import). 1 (TRUE) or 0 (FALSE).	integer	1

- **Other Lines:**

  - **Trip information Record:**

Field Name	Field Description	Data Type	Length
Trip identifier		character	8
Route identifier		character	5
Trip route direction	Usually, routes have two directions ex. : East/West, North/South, Inbound/Outbound. 0 for north;1 for south;2 for east;3 for west;4 for inbound;5 for outbound;6 for inward;7 for outward;8 for clockwise;9 for counterclockwise;12 for upward;13 for downward	integer	4
Route service mode	0 for bus;1 for tramway;2 for metro;3 for train	integer	1
Route service type	0 for regular;1 for express;2 for school;3 for industrial;4 for back-up	integer	1

  - **Record @: Route Information Record**

Field Name	Field Description	Data Type	Length
@		character	1
Route identifier		character	5
Route name		character	50
Direction name	This is the usual destination of the route direction 1.	character	60
Direction name	This is the usual destination of the route direction 2.	character	60
Public route identifier	Public name provided to the route.	character	5
Route rating (optional)	Indicates how acceptable the route is for public use. 0 for Preferred;1 for Acceptable;2 for When necessary.	integer	1
Route reliability (optional)	Indicates how reliable the route is for public use. The default value is 1 Medium.0 for High;1 for Medium;2 for Low.	integer	1

Example:

0
0
...
5188|3 |2 |3|0
5190|56|1|3|0
@3|North Shore Line|Berowra - Parramatta via Chatswood|Parramatta - Berowra via Chatswood|1
@56|Blue Mountains Line|Lithgow - North Sydney|North Sydney – Lithgow
...

1.5.5 Note File

- **Record #: Note Record**

Field Name	Field Description	Data Type	Length
Note identifier		character	8
Preferred note code (optional)		character	1

- **Record .: Text Record**

Field Name	Field Description	Data Type	Length
Note text		character	1000

Example:

```
-----------------------------------
#FriOnly|f
.Trip runs only on Fridays
#NoStud
.Students are not allowed
-----------------------------------
```

1.5.6 Block File (Optional, depending on usage in Schedule file)

- **Record #:**

Field Name	Field Description	Data Type	Length
#		character	1
Block identifier		character	8
Calendar identifier		integer	5
Accessible	1 (TRUE) or 0 (FALSE)	integer	1

Example:

```
----------
#B300|33|0
#B400|47|1
----------
```

1.5.7 Stop File

Field Name	Field Description	Data Type	Length
Stop identifier		character	7+1 (site)
Description (Dutch)		character	50
Description (French)		character	50
Municipality (Dutch)		character	50
Municipality (French)		character	50
Country Abbreviation		character	2
Streetname (Dutch)		character	50
Streetname (French)		character	50
Aricode		character	4
Accessible	1: accessible; 0: not accessible	integer	1
X coordinate	Lambert 72 X Coordinate (in m)	integer	10
Y coordinate	Lambert 72 Y Coordinate (in m)	integer	10
Public information	1 public, 0 not public	Integer	1
UIC[1]		character	9

All fields are filled in. If a translation is not available, we use the same data.
For Brussels there is a specific situation:

- STIB: street names in Dutch and French
- De Lijn: only street names in Dutch
- TEC: only street names in French
- SNCB: street names in Dutch and French

Example:

1|DEPOT KONINGSLAAN|DEPOT AVENUE DU ROI|BRUSSEL|BRUXELLES|BE|BELGRADOSTR TEGENOVER 124-128/KONINGSLAAN|R DE BELGRADE EN FACE 124-128/AV DU ROI||1|147490|168938|1|

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[1] 1-2: operator
3-4: country code (88: Belgium; 84: Netherlands; 87: France; 82: Luxemburg; 80: Germany; 70: United Kingdom)
5-9: code of the station

1.5.8 Portal File (Optional)

Field Name	Field Description	Data Type	Length
Portal description (optional)		Character	40
Portal unique identifier (required)		Character	8[1]
X coordinate (required)		Integer	10
Y coordinate (required)		Integer	10

Example:

---

desc3|Port03|901275|6268498

1.5.9 Stop Portal Relation File (Optional)

Field Name	Field Description	Data Type	Length
Stop unique identifier (required)		Character	8
Portal unique identifier (required)		Character	8
Distance (optional)	Represents the distance between the stop and the portal. Default value is the crow fly distance between the stop and the portal.	Integer	7

Example:

Sauve,Sauve01,50

1.5.10 Version File

Field Name	Field Description	Data Type	Length
version		integer	10
release		integer	10

Example:

```
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1|2
---------------
```