

Documentation

Strodio import

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1 Introduction

This document is intended to be for software developers, who want to connect to Strodio, to frequently generate flow diagrams based on own data. Strodio can open/import files with the following file extensions:

- .STR: default Strodio file
- .STRIMP (OD of DIR): StrodioImport
- .IN
- .CSV

The various files can be accessed via 'File' > 'Open' and then the file format (extension) can be selected. Strodio can also open these files by double clicking on the file in Windows Explorer, if the file extension is associated with Strodio.

A special version of Strodio is available that works as a batch-server. For example, this version can continuously be carried out on a (web)server to generate flow diagrams based on actual traffic volumes that are available in a database. Strodio can export these diagrams to the (online) user. Please contact us for more information about this batch-server version.

Further in this document the different file types are explained. The files are all built in a simple ASCII format that you can view in a text-editing program such as Windows Notepad. Examples of the files are installed in the folder '%INSTALLDIR%\AddOn'.

2 Str-file

This file with the extension '.str' is the default format in which Strodio saves data. The file consists of several sections, including a script. It is not recommended to use this format to make a connection to Strodio because the script is quite complicated. However, with the script it is possible to create any flow diagram you want. If you cannot get a satisfying result by using one of the following file types, please contact us. We can probably help you further by using the str-file.

3 Strimp-file

This file with the extension '.strimp' (StrodioImport) is the preferred format to create a connection to Strodio. Of this format there are two volume-types available: OD (origin-destination) and DIR (direction).

Example strimp-OD (origin-destination):

```
[Strodio importfile]

[**Import variables**]
FileVersion=310
ImportType=STRIMP
VolumesType=OD
BaseDiagramFromLibrary=011303
ExportType=JPG
ExportSizeWidth=1200

[**General variables**]
NorthNorth=95
FontName=Arial
FontSize=10
Title01=Traffic volumes Demostreet / Testlane
Title02=Morning peak June 4th: 07:30-08:30 hrs (veh)

[**Arms**]
"ARMNO";"ANGLE";"NAME"
"1";"0";"East street"
"2";"270";"South street"
"3";"180";"West street"
"4";"90";"North street"

[**OD**]
"ARMFROM";"ARMTO";"VOLUME";"TEXT1"
"1";"2";"420";"d03_1"
"1";"3";"600";"d02_1"
"1";"4";"100";"d01_1"
"2";"1";"90";"d04_1"
"2";"3";"190";"d06_1"
"2";"4";"120";"d05_1"
"3";"1";"810";"d08_1"
"3";"2";"40";"d07_1"
"3";"4";"80";"d09_1"
"4";"1";"70";"d12_1"
"4";"2";"140";"d11_1"
"4";"3";"250";"d10_1"
```

Example Strimp-DIR (direction):

```
[Strodio importfile]

[**Import variables**]
FileVersion=310
ImportType=STRIMP
VolumesType=DIR
BaseDiagramFromLibrary=020400
ExportType=JPG
ExportSizeWidth=900

[**General variables**]
NorthNorth=90
Title01=Traffic volumes roudabout Testlane / Demostreet
Title02=Morning peak June 6th: 08:30-09:30 hrs (veh)

[**Arms**]
"ARMNO";"ANGLE";"NAME"
"1";"0";"East street"
"2";"260";"South street"
"3";"180";"West street"
"4";"90";"North street"

[**DIR**]
"DIRECTION";"VOLUME";"TEXT1"
"0001";"120";"d01_1"
"0002";"500";"d02_1"
"0003";"400";"d03_1"
"0004";"50";"d04_1"
"0005";"200";"d05_1"
"0006";"80";"d06_1"
"0007";"600";"d07_1"
"0008";"450";"d08_1"
```

```
"0009";"30";"d09_1"  
"0010";"40";"d10_1"  
"0011";"180";"d11_1"  
"0012";"70";"d12_1"
```

Section **[**Import variables**]**

- FileVersion: Always '310' until the format is changed (indicated by Trenso).
- ImportType: Always 'STRIMP' for this moment.
- VolumesType: 'OD' (origin-destination) or 'DIR' (direction); this determines which section, see below, is used: **[**OD**]** or **[**DIR**]**.
- BaseDiagramFromLibrary: Must match a diagram number of the Strodio library (in Strodio choose 'File' > 'New' to consult the library).
- ExportType: Always 'JPG' for this moment.
- ExportSizeWidth: Width of the export-file (JPG) in pixels; height is determined automatically.

Section **[**General variables**]**

These settings/variables are consistent with the **[**General variables**]** in a standard Strodio file (extension '.str'). These settings are first retrieved from the library, and then overwritten by the settings in this section. Some useful settings:

- NorthNorth: Direction of the north indicator.
- Title01: Title 1 of the diagram.
- Etc.

Section **[**Arms**]**

This section consists of a CSV table containing per arm the arm number, angle and name. The number of arms and the arm order must match to the selected diagram in the first section at BaseDiagramFromLibrary.

Section **[**OD**]**

See example strimp-OD. This section is only required if 'VolumesType=OD'. This section consists of a CSV table with a record for each relation (from arm to arm) containing the traffic volume (intensity) and a free text. This free text is not (yet) used in Strodio.

Section **[**DIR**]**

See example strimp-DIR. This section is only required if 'VolumesType=DIR'. This section consists of a CSV table with a record for each direction containing the traffic volume (intensity) and a free text. This free text is not (yet) used in Strodio. The directions must match to the selected diagram in the first section at BaseDiagramFromLibrary.

4 IN-file

This file with the extension '.in' includes an origin-destination matrix in a fixed column width format. The matrix can consist of a maximum of 8 origins and destinations (arms). The demo version of Strodio can handle a maximum of 5 arms.

Example IN:

```
Traffic volumes (vph)
001 4Junction streetname1/streetname2
104 10East-arm          0    100    70    30    0    0    0    0
409 70North-arm         400   0    200   500   0    0    0    0
883 180West-arm         220  280   0    300   0    0    0    0
603 270South-arm        150  300   50    0    0    0    0    0
```

The first two lines of the file contain general information. Then the file consists of one line per arm. The arm with the smallest angle (0 degrees) tops the list. The following arm is the arm with the second smallest angle (0 degrees is east, 90 degrees is north, 180 degrees is west and 270 degrees is south).

Line 1: Subtitle of the diagram.

Line 2: column 1..5: Intersection number.
column 6: Number of arms (maximum 8, minimum 2).
column 7..x: Name of intersection (=title of the diagram).
If no name is specified, the intersection number is shown.

Line 3: column 1..5: Intersection number at the end of arm 1 (optional).
column 6..8: Angle of arm 1 in degrees.
column 9..28: Street name of arm 1.
If no name is specified, the intersection number at the end of the arm is shown.
column 29..35: Traffic volume from arm 1 to arm 1.
column 36..42: Traffic volume from arm 1 to arm 2.
column 43..49: Traffic volume from arm 1 to arm 3.
column 50..56: Traffic volume from arm 1 to arm 4.
column 57..63: Traffic volume from arm 1 to arm 5.
column 64..70: Traffic volume from arm 1 to arm 6.
column 71..77: Traffic volume from arm 1 to arm 7.
column 78..84: Traffic volume from arm 1 to arm 8.

Line 4: Same as line 3 but for arm 2.

Line 5: Same as line 3 but for arm 3.

Line 6: Same as line 3 but for arm 4.

Line 7: Same as line 3 but for arm 5.

Line 8: Same as line 3 but for arm 6.

Line 9: Same as line 3 but for arm 7.

Line 10: Same as line 3 but for arm 8.

5 CSV-file

This file with the extension '.csv' includes an origin-destination matrix without a fixed column width format. The structure is the same as for the IN-file. In the AddOn-folder there is also a spreadsheet called 'StrodioExcel2CSV.xls' as an example for using a spreadsheet to create a CSV file.

Example CSV:

```
Traffic volumes (vph)
999;5;Junction streetname1/streetname2
1;0;Streetname arm 1;0;123;70;30;45;0;0;0
2;45;Streetname arm 2;590;0;200;622;64;0;0;0
3;120;Streetname arm 3;219;280;0;328;345;0;0;0
4;200;Streetname arm 4;150;314;50;0;45;0;0;0
5;270;Streetname arm 5;78;8;789;67;0;0;0;0
6;0;-;0;0;0;0;0;0;0;0
7;0;-;0;0;0;0;0;0;0;0
8;0;-;0;0;0;0;0;0;0;0
```