

# Route optimization

**Dimaps multipurpose tool for route planning is developed to be used in Newspaper distribution.**

**Selected functions:**

- Multiple networks depending on weekdays, periods or distribution setups.
- Dynamic and integrated route optimization build into the distribution workflow.
- Calculation of CO2 footprint
- Nested routing making it easy to consolidate transport
- Automatic truck load check
- Printout of driving lists
- Printout of packing lists etc.

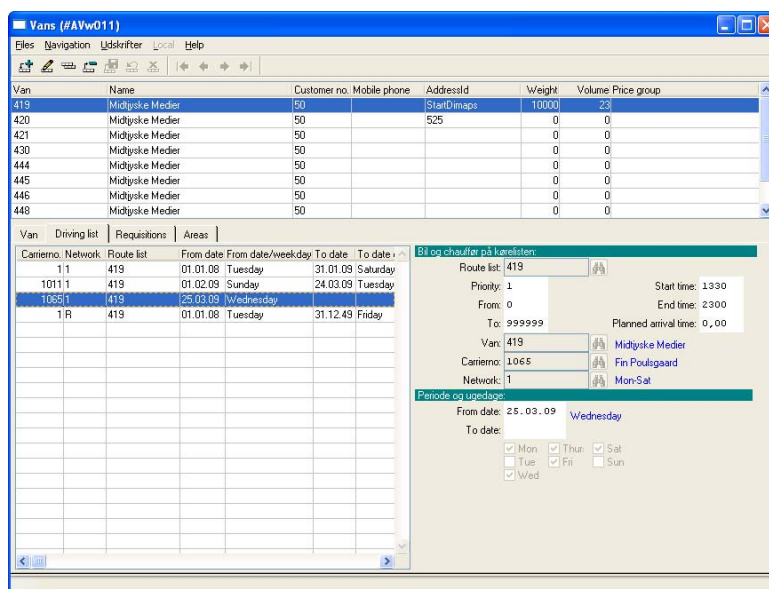
## Basic data

A truck is assigned a given geographic coverage, such as zip codes. Or it can be defined by an geographic area. Several trucks can be assigned the same area, also spare trucks or partners trucks can be defined. Definition of driving lists can vary on a daily basis and a truck can handle several driving lists during the day.

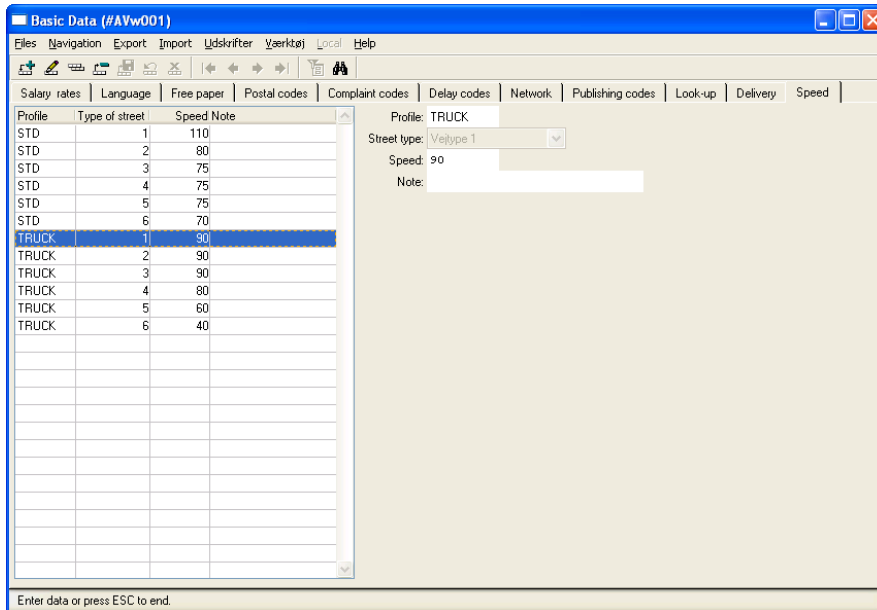
Drivers can, but is not mandatory, be assigned on trucks and/or driving lists in the same manner as paperboys are assign districts.

Each vehicle can be defined with start/end time, maximum payload and a defined start and end location for purposes of route optimization.

*This is an example of truck assign to a driving list with priority, maximum payload, volume, start and end location and start/end time*



This is an example of two speed profile. Each truck will be assigned a speed profile.



## Daily routines

As a part of DimapsPro route optimization is integrated in the normal workflow. As soon as a production is set to run, this means collecting and calculating all details of a production, route optimization is done two – no extra functions to run.

Routing can be combined in different ways:

- A district (the tour or route a paperboy handles) is assigned a delivery address or a driving list or depot
- A subscriber is assigned a truck (which eliminates the use of districts in rural areas)
- Several subscribers are assigned a district with truck delivery status, this means all subscribers will be converted into single deliveries by truck. This makes it possible to have other deliveries in between.
- A driving list is assigned another (limitless). This means trucks can have deliveries to other trucks.

For correct calculations, drop times can be defined for various delivery types. From a practical view routing can be fixed to a specific order to calculate distance and delivery times.

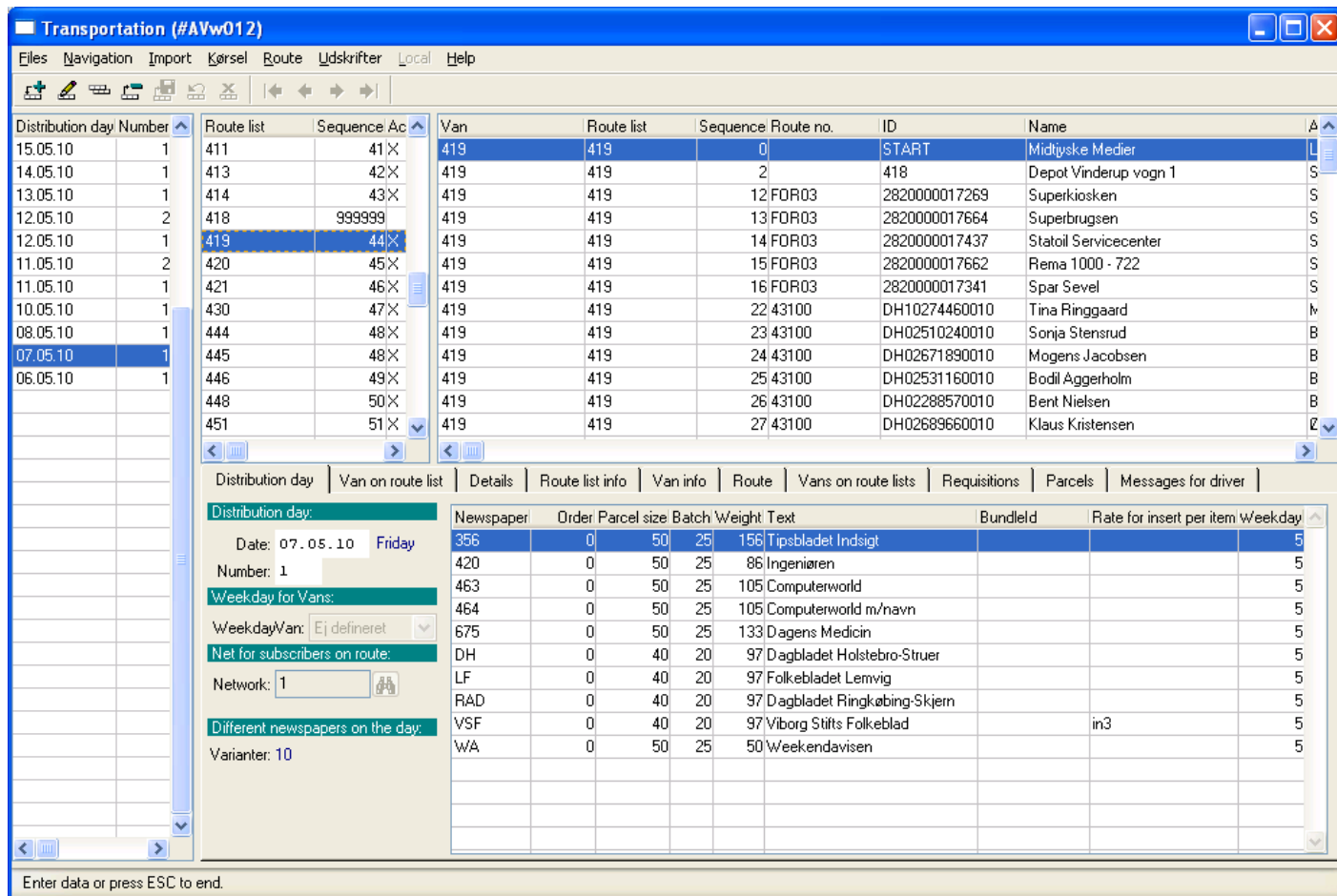
- The following will be calculated:
  - a. Summary of deliveries (per actual drop address)
  - b. Total driving time
  - c. Total km/miles
  - d. Total drop-off times
  - e. Start/end time
  - f. Total load
  - g. Total CO2 footprint

A sample of a driving list in **Figure 1**

A sample map is shown in **Figure 2**

It is possible to print out parcel list to each delivery (bar code can be used here)

*This is an example on a distribution day.*



## Other functionality:

- Bar codes
- Registering of pick-up and drop-off times
- Receipts for deliveries
- Submission of SMS/WAP or e-mail with expected delivery-time etc.

**Figure. 1** This is an example of a delivery list to the van/truck driver.

<u>RouteSequence</u>	<u>Type</u>	<u>Name</u>	<u>Address</u>	<u>Postal code</u>
29-06-2010		<b>Deliverylist 678</b>	<b>Vogn 78</b>	

**Summary of deliveries:**

Distance:	164,99	Delivery start time:	Start kl. 0
Number of stops:	231	Delivery end time:	Slut kl. 235

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1	Rute 36701	JES PER PEDER KNUDSEN	<b>VARDEVEJ 115, LYNE</b>	6880
2	Kiosk	DK Benzin	<b>Vardevej 117</b>	6880
3	Abonnet	Annelise Nielsen	<b>Glibstrupvej 6</b>	6880
4	Abonnet	Knud og Asta Pedersen	<b>Glibstrupvej 16</b>	6880
5	Abonnet	Hans Raunkjær	<b>Hustedvej 8</b>	6880
6	Abonnet	Benny Sunesen	<b>Glibstrupvej 29</b>	6880

Figure. 2 This is an example of a delivery map to the van/truck driver.

