

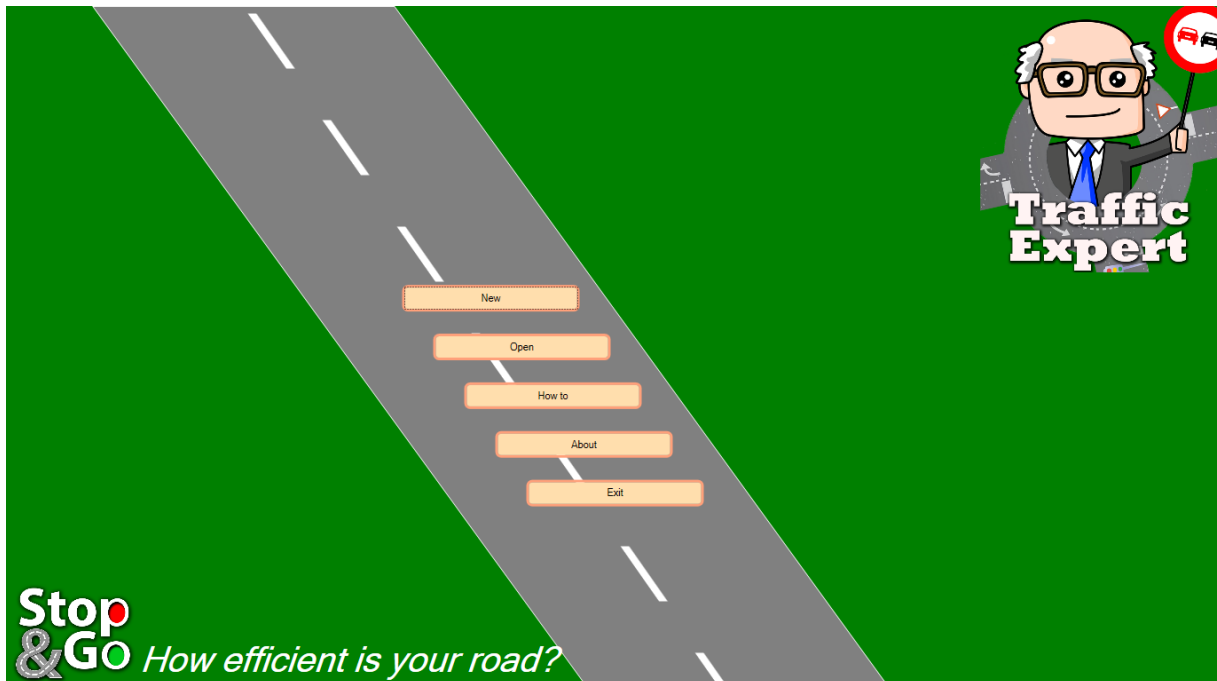
## Inhoudsopgave

|  |                                     |
|--|-------------------------------------|
| 1. Screens.....                                | 3                                   |
| 1.1 Home screen.....                           | 3                                   |
| 1.2 Basic screen .....                         | 4                                   |
| 1.3 Information window .....                   | 5                                   |
| 2. Basic functions .....                       | 6                                   |
| 2.1 From basic screen to home screen .....     | 6                                   |
| 2.2 Opening information window.....            | 6                                   |
| 2.3 Create new file .....                      | 6                                   |
| 2.4 Open a file.....                           | 6                                   |
| 2.5 Options.....                               | <b>Error! Bookmark not defined.</b> |
| 2.6 Exit program.....                          | 6                                   |
| 3. Build a road network.....                   | 7                                   |
| 3.1 Program in building mode .....             | 7                                   |
| 3.2 Place tiles.....                           | 7                                   |
| 3.3 Remove tiles .....                         | 7                                   |
| 3.4 Information about a tile .....             | 7                                   |
| 3.5 Adjust amount of in/ out coming lanes..... | 8                                   |
| 3.6 Rotate built tiles .....                   | 8                                   |
| 3.7 Choose speed limit .....                   | 8                                   |
| 3.8 Adjust traffic flow from spawner .....     | 8                                   |
| 3.9 Adjust traffic strategies.....             | 9                                   |
| 3.9.1 Basic.....                               | 9                                   |
| 3.9.2 Waiting time.....                        | 9                                   |
| 3.9.3 Green wave .....                         | <b>Error! Bookmark not defined.</b> |
| 4. Simulation .....                            | 10                                  |
| 4.1 Program in simulation mode .....           | 10                                  |
| 4.2 Play simulation.....                       | 10                                  |
| 4.3 Pause simulation.....                      | 10                                  |
| 4.4 Stop simulation .....                      | 10                                  |
| 4.5 Accelerate simulation.....                 | 10                                  |

|                                |    |
|--------------------------------|----|
| 4.6 Slow down simulation ..... | 10 |
| 5. Shortcuts.....              | 11 |

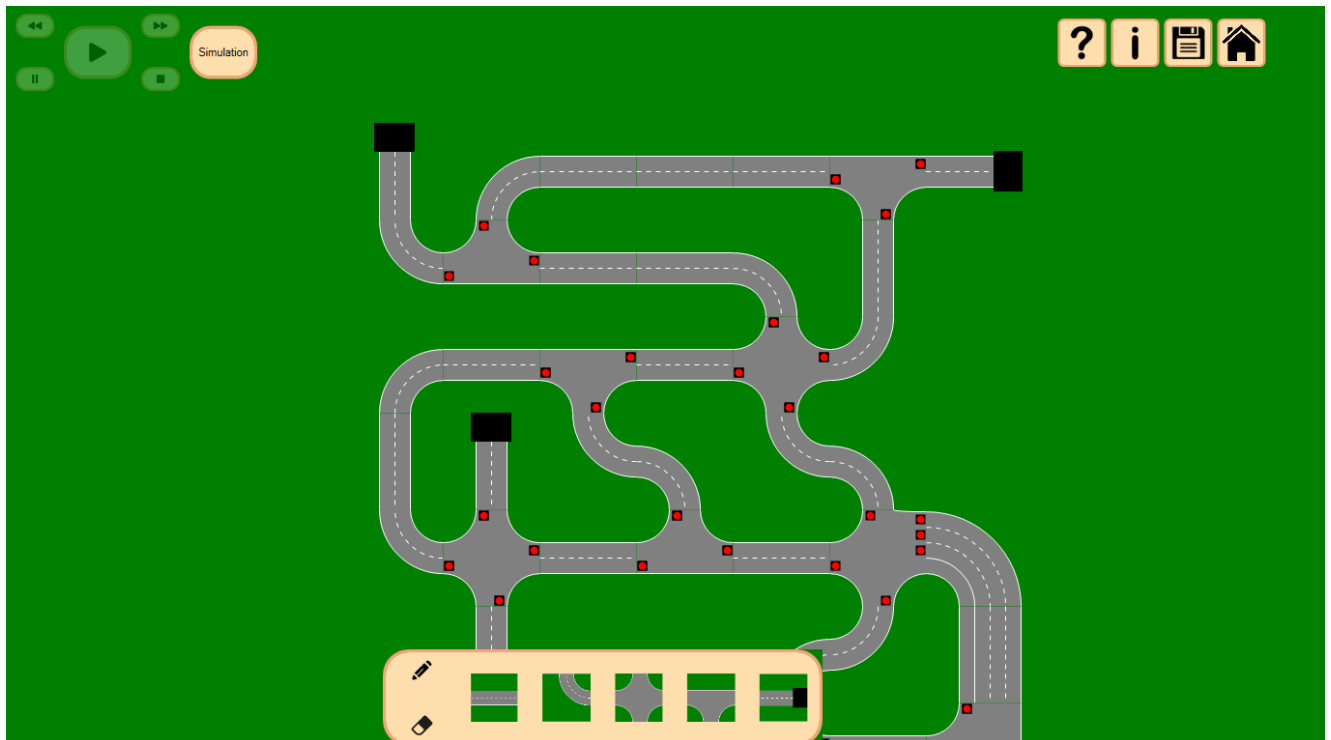
# 1. Screens

## 1.1 Home screen







|        |                               |
|--------|-------------------------------|
| New    | Create a file                 |
| Open   | Open a file                   |
| How to | Open user manual              |
| About  | Information about the program |
| Exit   | Exit program                  |




## 1.2 Basic screen









### General buttons

-  Open user manual
-  Open information window
-  Save
-  Go to home screen

### Building buttons

-  Select tool
-  Erase tool
-  Building tool

### Simulation buttons

-  Slowdown button
-  Accelerate button
-  Pause button
-  Stop button
-  Play button
-  Switch button building/ simulation mode

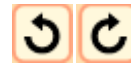
### 1.3 Information window



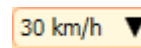
#### General buttons



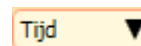
Buttons for adjusting amount of lanes



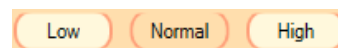
Rotate buttons



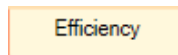
Choose speed limit



Choose traffic strategy




Traffic flow from  
spawnner



Determine efficiency


## 2. Basic functions

### 2.1 From basic screen to home screen

1. Click on . Now you are in the home screen.

### 2.2 Opening information window

1. Go to the home screen.

2. Click on .

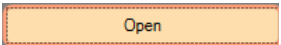
### 2.3 Create new file

1. Go to the home screen.

2. Click on .

### 2.4 Open a file

1. Go to the home screen.

2. Click on .

3. Select the file you want to open in the new window. Click on 'Open'.

### 2.5 Exit program

1. Go to the home screen.

2. Click on .

### 3. Build a road network

There are four sorts of tiles with which you can build a road network:

- roads: these are straight and curved roads
- cross roads: these are crossroads with roads to all four sides
- forks: these are crossroads with roads to only three sides
- spawners: these spawn cars into the network


When you design a road network all the tiles must be connected to other tiles so that all the roads lead to another road or a spawner.

If you build a road or a spawner the building tile will automatically copy the amount of in and out coming lanes from the tiles next to it. This does not count for cross roads or forks.

Make sure the program is in building mode before you start building or adjusting tiles.

#### 3.1 Program in building mode




1. Click on . The text on the button changes into 'Simulation'.


#### 3.2 Place tiles

1. Make sure your program is in building mode.
2. Hover over the building tool. Alternative building tools will appear.
3. Click on the tile you want to build.
4. Click on the place in the green building field where you want your tile. The tile is now built.

#### 3.3 Remove tiles



1. Make sure your program is in building mode.
2. Click on .
3. Click on the tile you want to remove.

#### 3.4 Information about a tile

1. Make sure your program is in building mode.
2. Click on .
3. Click on the tile you want information about. A blue line shows which tile is selected.




4. If the information window is not visible click on. In the information window you can find information about a tile.
5. You can now click on different tiles to show information about these tiles.

### 3.5 Adjust amount of in/ out coming lanes


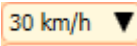
1. Make sure your program is in building mode.
2. Open the information window.
3. Click on .
4. Click on the tile in which you want to make adjustments.
5. In the information window, click on  next to the picture of the selected tile to adjust the amount of lanes.

Warning: you can only adjust de lanes in roads.

### 3.6 Rotate built tiles

1. Make sure your program is in building mode.
2. Open the information window.
3. Click on .
4. Click on the tile in which you want to make adjustments.
5. In the information window, click on  to rotate the tile 90 degrees to the left. Click on  to rotate the tile 90 degrees to the right.


### 3.7 Choose speed limit

1. Make sure your program is in building mode.
2. Open the information window.
3. Click on .
4. Click on the tile in which you want to make adjustments.
5. In the information window, click on . A drop down menu appear in which you can choose the speed limit of the tile.

### 3.8 Adjust traffic flow from spawner

1. Make sure your program is in building mode.
2. Open the information window.





3. Click on .
4. Click on the tile in which you want to make adjustments.
5. In the information window, click on one of these buttons to adjust the traffic flow from the selected spawner.

### 3.9 Adjust traffic strategies



There are two traffic strategies you can choose:

- Basic: with this strategy the traffic lights will switch between red and green after a determined amount of seconds
- Waiting time: with this strategy the switching of the traffic lights depends on the amount of cars that wait for a traffic light. The crossroad or fork calculates how many cars are waiting for each traffic light and gives priority to the traffic light with the most waiting cars.

#### 3.9.1 Basic

1. Make sure your program is in building mode.
2. Open the information window.
3. Click on .
4. Click on the tile in which you want to make adjustments.
5. In the information window, click on  next to 'Choose your traffic strategy'. A drop down menu appears.
6. Select 'Basic'.
7. Under 'seconds' you can fill in how many time you want between the switching of the traffic lights.

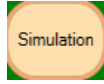
#### 3.9.2 Waiting time

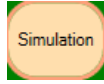
1. Make sure your program is in building mode.
2. Open the information window.
3. Click on .
4. Click on the tile in which you want to make adjustments.
5. In the information window, click on  next to 'Choose your traffic strategy. A drop down menu appears. You can now select 'Wait time'.

## 4. Simulation


Warning: the program must be in simulation mode to show the simulation.

### 4.1 Program in simulation mode




1. Click on . The text of the button changes to 'Design'.


### 4.2 Play simulation

1. Make sure your program is in simulation mode.
2. Click on  to start the simulation.


### 4.3 Pause simulation

1. Make sure your program is in simulation mode.
2. Click on  to pause the simulation.


### 4.4 Stop simulation

1. Make sure your program is in simulation mode.
2. Click on  to stop the simulation.

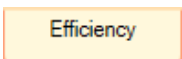
### 4.5 Accelerate simulation

1. Make sure your program is in simulation mode.
2. Click on  to accelerate the simulation.

### 4.6 Slow down simulation

1. Make sure your program is in simulation mode.
2. Click on  to slow down the simulation.

### 4.7 Determine efficiency

1. Make sure the simulation is running.
2. Click on . A new window will appear in which you can find the results of the efficiency test. Hint: For a more realistic result it is wise to let the efficiency meter run for some time.

## 5. Shortcuts

|          |                         |
|----------|-------------------------|
| Crtl + h | Go to homescreen        |
| Crtl + s | Save file               |
| Crtl + i | Show information window |