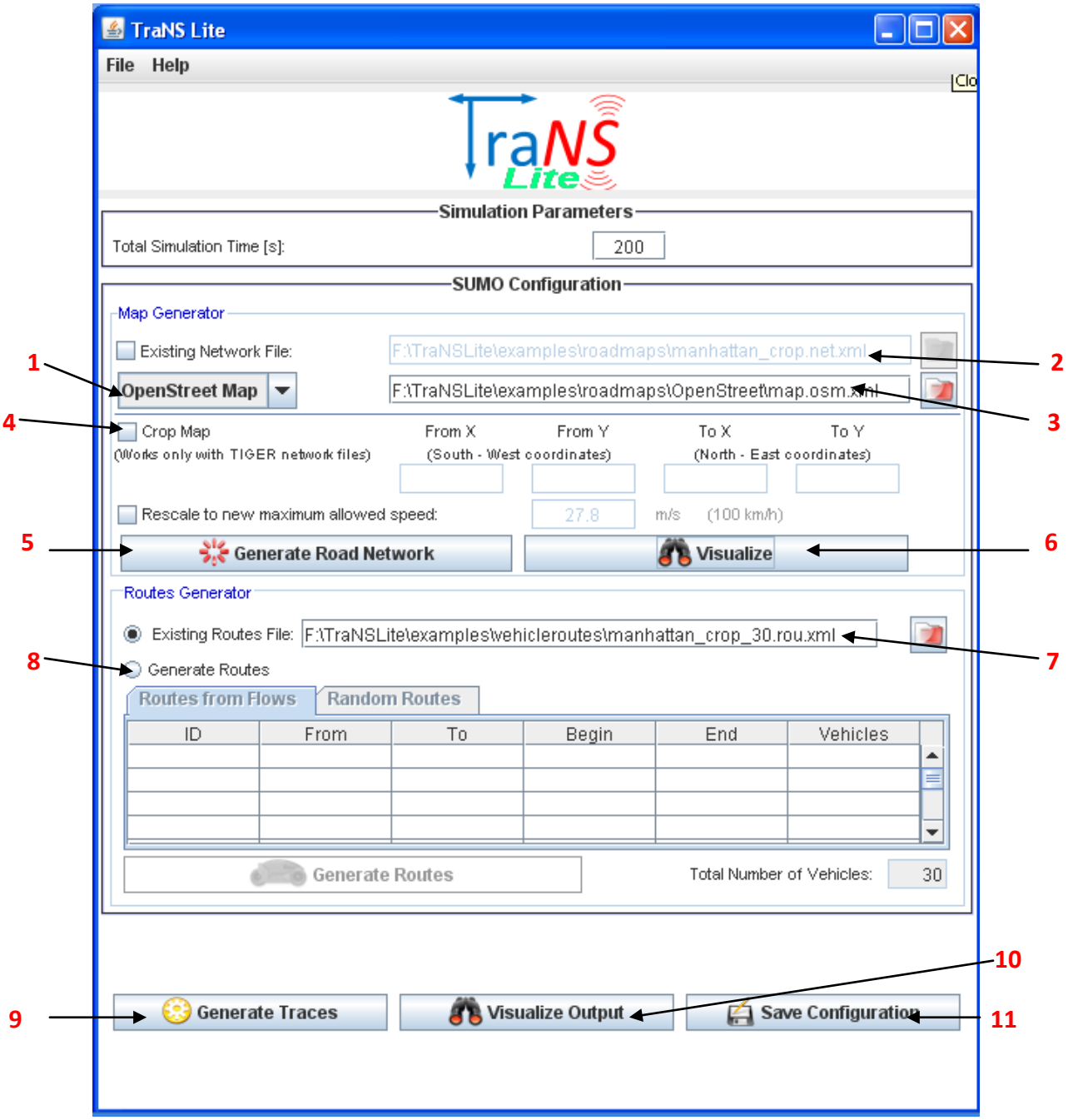
TraNSLite Quick Start Guide

TraNSLite is a GUI tool for generating realistic mobility traces for simulating vehicular networks in NS2.



Legend:

1. Path to sumo executable

1. Choose the map format

2. Path to the .net.xml file

3. Path to the Map in the chosen format

4. Switch to enable the crop panel

5. Button to generate the .net.xml file

6. Button to visualize the network in the SUMO GUI

7. Path to the .rou.xml file

8. Route Generation panel

9. Button to generate the .tcl file

10. Button to view the simulation in Google Earth

11. Button to save all parameters in the GUI

Usage scenarios

1. Visualizing a simulation by cropping an existing network *map.net.xml* and using existing routes file *map.rou.xml.* Steps to follow:

Network file generation
- Set the path of sumo binaries in File->Trans Preferences (in Windows it is {SUMO Folder}\bin and in Linux it is {SUMO Folder}/src)
- Select **1.**
- Set the path of *map.net.xml* in **2.**

Cropping an existing network
- Select the check box **4.** (”Crop Map”) and insert the coordinates of the new boundaries (You can visually find your coordinates in the SUMO GUI by pressing button **6.**)
- Press Button **5.** to create the copped map (after this point Trans will consider the cropped map to be the current network map)

Mobility File Generation
- Set path of the route file *map.rou.xml* in **7.**
- Press button **9.** To generate the .tcl file

Visualization
- Press button **10.** To generate the Google Earth files and visualize the simulation
- You can press button **11.** so that you don’t need to insert the same paths and select the same options every time you use TraNSLite

2. Generating a mobility file by using a network file created from an Open Street Map *map.osm.xml* and generating routes from flows. Steps to follow:

Network file generation
- Set the path of sumo binaries in File->Trans Preferences (in Windows it is {SUMO Folder}\bin and in Linux it is {SUMO Folder}/src).
- Unselect **1.**
- Select “OpenStreet Map” from the drop-down list
- Set the path of *map.osm.xml* in **3.**
- Press Button **5.** to create the *map.net.xml* file from the *map.osm.xml* file (after this point TraNS will consider the generated *map.net.xml* map to be the current network map)

Route generation
- Press **8.** to enable the Route Generation menu
- Select the “Routes from Flows” tab and insert the desired flows in the table. You can verify that your flows are valid by pressing **6.** and check that your edge ids (“from” and “to” values) are correct
- Press the “Generate Routes” button

Mobility File Generation
- Press button **9.** To generate the .tcl file

Notes:
- Cropping is possible only if the network file was generated from a TIGER Map.
- You should not crop a cropped map. Instead you should use the original map.
- If you want to use a large map (# of edges > 500) you have to run TraNSLite from the command line to increase the heap size. Command example: `java –jar -Xms1024m -Xmx1024m TraNSLite.jar`
- You can test your .tcl mobility file by modifying/appending the *TraNSLite\examples\mobility traces\test.tcl* file.
- Google Earth visualization works only for TIGER Maps. For OpenStreet maps you have to manually set the correct value for the node <*orig-boundary*> in the .net.xml file in order to display the simulation at the proper location.

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