Prerequisites for both standalone applications:

1) Installation of MATLAB Runtime R2020a (9.8)

(https://www.mathworks.com/products/compiler/matlab-runtime.html)

eco_indicator Executable

Prerequisites

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1) Sumo output files are the application inputs, namely: all vehicle edge data, routing vehicles edge data, and edge noise data, are the inputs for the standalone application;

Notes:

These files must be named accordingly, as presented below:

a) all vehicle edge data file name needs to respect the following name template: "edges_All_vehicles_PERIOD_Routing_LOCATION_SCENARIO"

In case of optimal solution files:

+ "_solution_Number"

with PERIOD being "hour" + "AM/PM" + "hour" + "AM/PM" (for example PERIOD = 7AM8AM or Period = 7PM8PM) and LOCATION being one of the routing scenarios (Boavista, SaoBento and A3).

examples:

edges_All_vehicles_6AM7AM_Routing_SaoBento_baseline

edges_All_vehicles_6AM7AM_Routing_SaoBento_optimal_solution8

b) routing vehicle edge data file name needs to respect the following name template: "edges_Routing_data_PERIOD_Routing_LOCATION_SCENARIO"

In case of optimal solution files:

+ "_solution_Number"

examples:

edges_Routing_data_6AM7AM_Routing_SaoBento_baseline

edges_Routing_data_6AM7AM_Routing_SaoBento_optimal_solution8

c) edge noise data file name needs to respect the following name template: "edge_noise_data_PERIOD_Routing_LOCATION_SCENARIO"

In case of optimal solution files:

+ "_solution_Number"

examples:

edge_noise_data_6AM7AM_Routing_SaoBento_baseline

edge_noise_data_6AM7AM_Routing_SaoBento_optimal_solution8

2) Set-up folder with all the previously located files and the eco_indicator standalone application;

3) Run the eco_indicator application;

4) The results will appear in the same folder when the process finishes. The files will present a similar name to the ones that follow: "6AM7AM_baseline_Routing_SaoBento_results", and "6AM7AM_optimized_solution8_Routing_SaoBento_results".

heatmaps Executable

1) Trips Files need to be named as the following examples demonstrate:

Trips6AM7AM_baseline.rou

Porto_6AM7AM_SaoBento_solution9.rou

2) Input files:

viewport_heatmaps.xml

Baseline trip file, for example: Trips6AM7AM_baseline.rou.xml (and all the trips files that are associated to scenarios to be analyzed)

Porto.net.xml

Additional_Files_server.add.xml

porto_server.sumocfg

eco_indicator results files

General scheme