

OSM Web Wizard Tokyo Project

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In this manual, I will show you, how to generate a real city map with **OSM (Open Street Map)** Web Wizard program. First of all, I have used Eclipse **SUMO (Simulation of Urban MObility)** open source program in Windows operation system.

SUMO link: <https://www.eclipse.org/sumo/>
SUMO download link: <https://sumo.dlr.de/docs/Downloads.php>
SUMO OSM Web Wizard tutorial: <https://sumo.dlr.de/docs/Tutorials/OSMWebWizard.html>
Python page: <https://www.python.org/downloads/release/python-397/>
Useful video from YouTube: <https://youtu.be/aiOQbaB-pWo?t=0>
Firefox download link: <https://www.mozilla.org/hu/firefox/new/>

In the SUMO Download page, you can see these files. You only need:
Download 64 bit installer.

Downloads

SUMO - Latest Release (Version 1.10.0)

Release date: 17.08.2021

MS Windows binaries

Contains the binaries (32 or 64 bit), all dlls needed, the examples, tools, and documentation in HTML format.

- Download 64 bit installer: [sumo-win64-1.10.0.msi](#) 125.1 MB
- Download 64 bit zip: [sumo-win64-1.10.0.zip](#) 111 MB
- Download 64 bit zip with all extras: [sumo-win64extra-1.10.0.zip](#) 144.8 MB

Figure 1 SUMO Downloads page

This program is very easy to use. After we download and install the SUMO program, we use these icons.
If we don't find these icons, but we can find with Windows search.

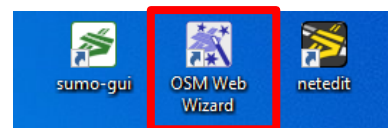


Figure 2 SUMO program icons

After we installed the SUMO program, we have to download python program too. From here:

<https://www.python.org/>

Click the latest version and download and install:

Windows installer (64-bit)

Files					
Version	Operating System	Description	MD5 Sum	File Size	GPG
GoPipped source tarball	Source release		5f463f30b1f9cb545f156583630318b3	25755357	SIG
XZ compressed source tarball	Source release		1dd060b8483bc03850a3f412eead1954	19123232	SIG
macOS 64-bit Intel installer	macOS	for macOS 10.9 and later	ce8c2f885f28b09536857610644280d4	30038206	SIG
macOS 64-bit universal2 installer	macOS	for macOS 10.9 and later, including macOS 11 Big Sur on Apple Silicon (experimental)	8250676310b16b03ec814630d7b65193	38144099	SIG
Windows embeddable package (32-bit)	Windows		6d12e3e0f942830de466a3d30a45fb	7652688	SIG
Windows embeddable package (64-bit)	Windows		67e19f32b3ef62a4b0cc550e33b0f53	8473919	SIG
Windows help file	Windows		b92a78596ccf258d5ad0b9c341f541	9263789	SIG
Windows installer (32-bit)	Windows		0d849b0f9db0c3c66107a980a5ef085	27811736	SIG
Windows installer (64-bit)	Windows	Recommended	cc3eabc1f9d9c703d1d2a4e70d1bc1d	28895456	SIG

Figure 4 Python Download file

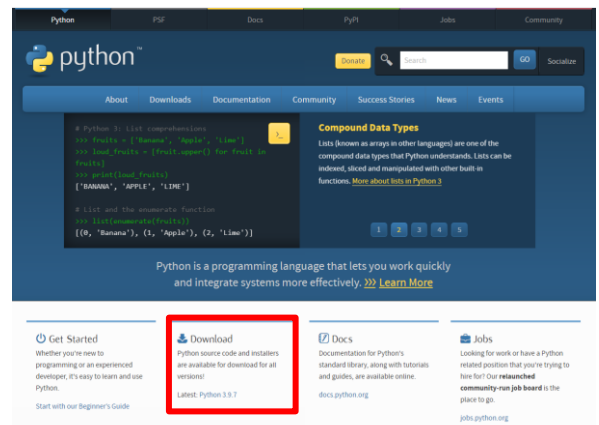


Figure 3 Python homepage

Now we use the **OSM Web Wizard** program.

Open this program and see two windows in our screen. Like Figure 6.

We can see a **map** which is opened by browser, and a **python command line box**.

I consider, the program will work more successful when we **open the map with Firefox** browser.

In the **command line box**, we can **watch the log info** about the generation.

If the OSM Web Wizard icon **doesn't** start to **work** after you clicked on the icon, then **you** have to use **Command Prompt**. **Type these keywords** to the Command Prompt:

C:\> cd Program Files (x86)\Eclipse\Sumo\tools

C:\Program Files (x86)\Eclipse\Sumo\tools>osmWebWizard.py

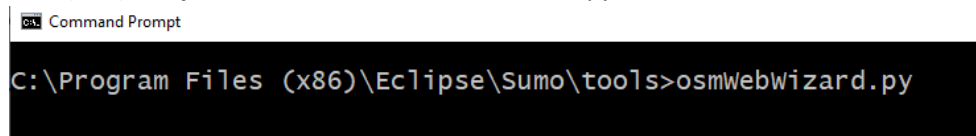


Figure 5 OSM Web Wizard open form Command Prompt

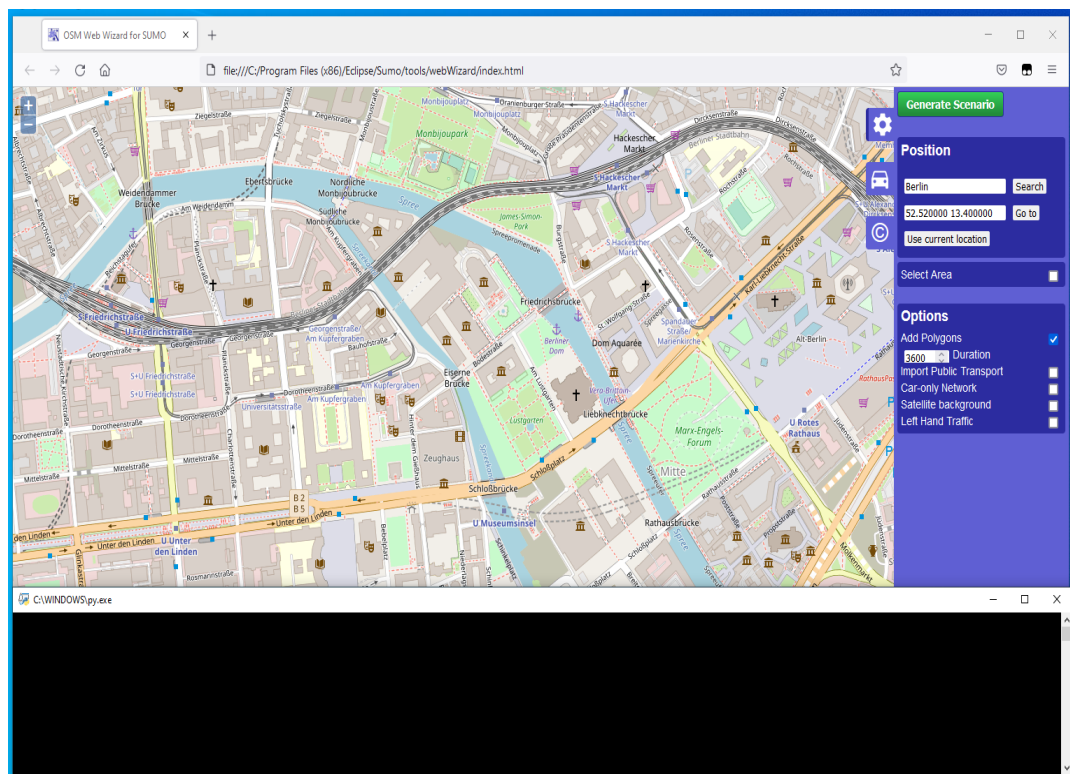


Figure 6 On the top OSM Web Wizard Map and down at the bottom python command line box

I consider, the program will work more successful when we **open the map with Firefox** browser.

In the **command line box**, we can **follow the generation process logs**.

The OSM web wizard starts your default browser with a [index.html](#) like this:

[C:/Program%20Files%20\(x86\)/Eclipse/Sumo/tools/webWizard/index.html](C:/Program%20Files%20(x86)/Eclipse/Sumo/tools/webWizard/index.html)

So copy that line: from your default browser and **put** that **line** into your **Firefox** browser.

Now, we can generate what we want. In this project **we want to generate a SUMO map about Tokyo city centre**.

In this program we could use the **'Select Area'** function, but I think, it is **useless** since it often **destroyed the generation process**. Unfortunately, **we cannot rotate this map** like the Google Maps and only **select area with a rectangle**. That's why I selected area with a browser.

After that, we can choose **'Options'**. **We should never change the 'Add Polygons 3600 Duration'** because our generation will be failed.

I haven't tried the **'Import Public Transport'** option, but it is **not important at this time**.

'Car-only Network' option is very useful skill. If we don't want to generate any pedestrian, bike, tram, metro, or train system, we will **select this**.

We have an opportunity to use the **'Satellite background'** option but it **doesn't work**. I tried in Windows and Linux system It **always failed**.

We don't have to select 'Left Hand Traffic' option, because the program recognizes which country use Left-Hand or Right-Hand Traffic system.

We can **select** what kind of **vehicle** move in this generated map. We could use all options without any problem. After we **chose 'Car-only Network'** option we **don't select railway vehicles** and **pedestrian** because they can't move in the generated map.

Ok, we selected all options what we wanted. Now **push the 'Generate Scenario'** button.

If everything goes well, you see printout in your log info box. Usually, the **generation is created in your Desktop directory**.

```
Building scenario in 'C:\Users\csura_ql\23me\Desktop\2021-09-13-14-23-28'
downloading map data
200 OK
Converting map data
written configuration to 'osm.netcfg'
Loading configuration ... done.
Parsing types from 'C:\Program Files (x86)\Eclipse\Sumo\data\typemap\osmNetconvert.typ.xml' ... done.
Parsing nodes from osm-file 'osm.bbox.osm.xml' ...
Found and substituted 15 osm nodes.
done.
Parsing edges from osm-file 'osm.bbox.osm.xml'
Warning: Ignoring track count 2 for edge '846387643'.
Warning: Ignoring track count 2 for edge '846387644'.
Warning: Ignoring track count 2 for edge '894833089'.
done.
removing duplicate edges ... done.
```

Figure 9 Generation to the Desktop directory

But sometimes it puts files in different places. Please **check** where you can find **your SUMO map location**:

```
C:\Windows\System32\cmd.exe - python osmWebWizard.py
Microsoft Windows [Version 10.0.19042.1165]
(c) Microsoft Corporation. Minden jog fenntartva.

C:\Program Files (x86)\Eclipse\Sumo\tools>python osmWebWizard.py
Cannot create directory 'C:\Program Files (x86)\Eclipse\Sumo\tools\2021-09-17-14-09-28'
Building scenario in 'C:\Users\admin\Sumo\2021-09-17-14-09-28'
downloading map data
200 OK
```

Figure 10 Generate to the SUMO directory

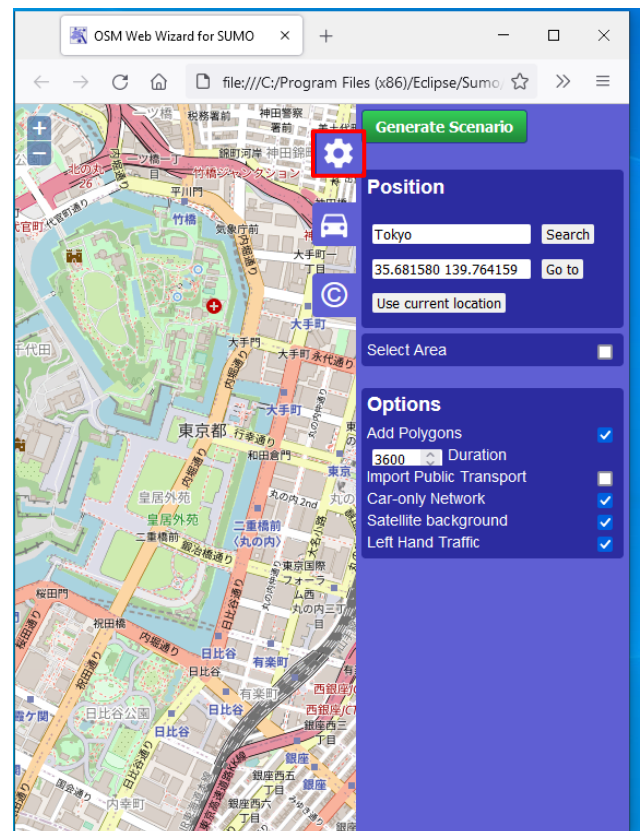


Figure 7 OSM Web Wizard for SUMO opened by Firefox browser

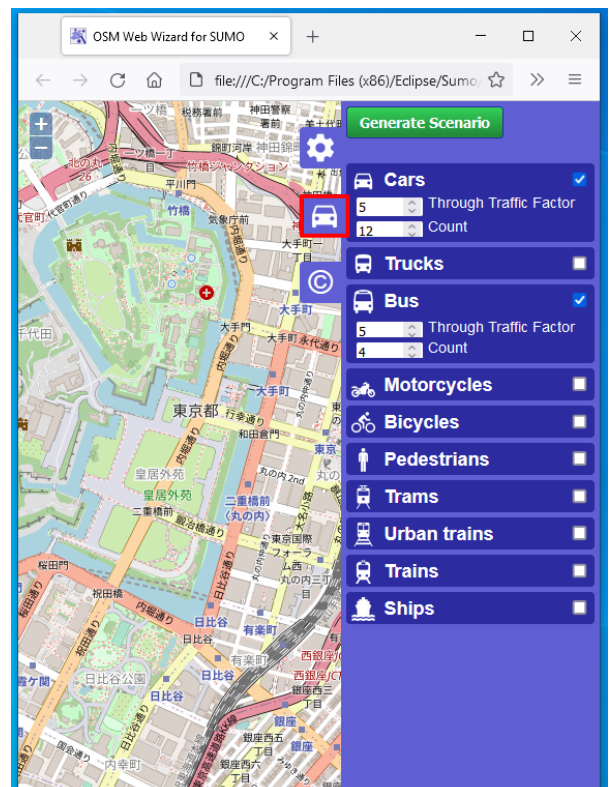


Figure 8 Traffic generates to this map section

After the generation, the **Sumo-gui** automatically **opens the generated map** and we can play the simulation. We can change a lot of things in generated map (I mean the xml files), foreexample the traffic or the road system parameters.

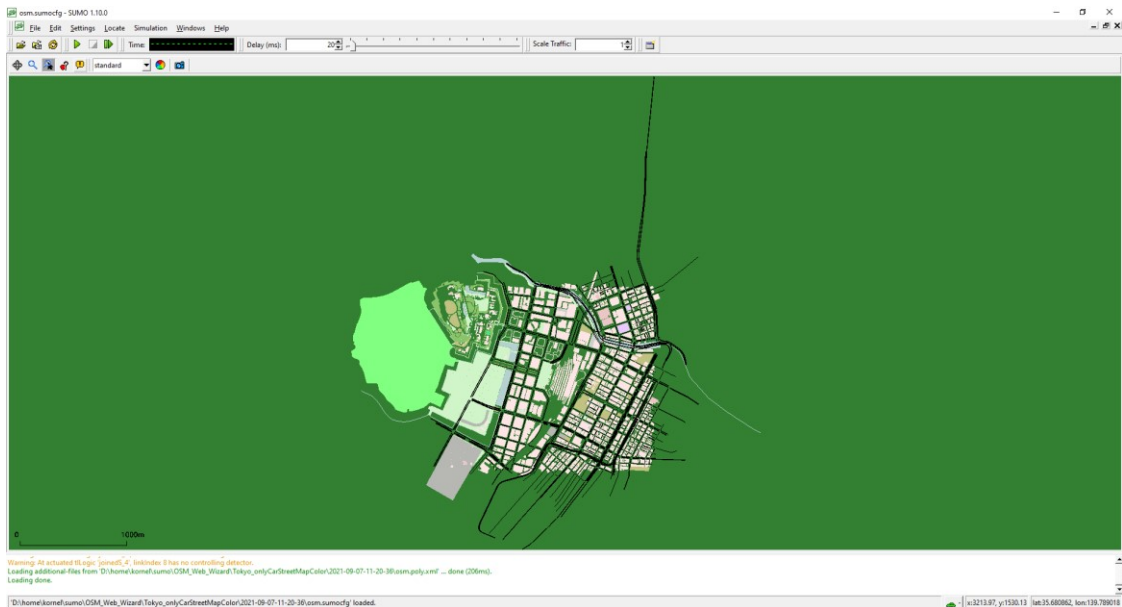


Figure 11 Generated Tokyo city centre

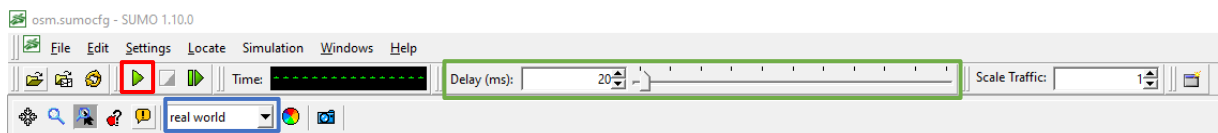
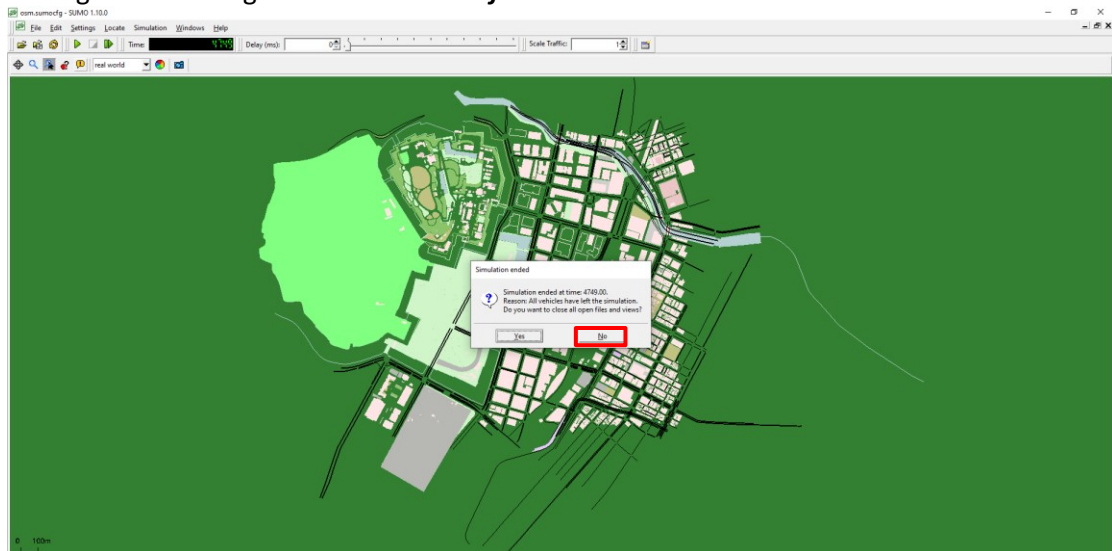


Figure 12 SUMO-Gui useful buttons

After the generation **click the 'Play button'** (green triangle with red frame). We can change the '**Delay**' (with green frame) next to the time display. This allows you to slow down the simulation by waiting for the given number of milliseconds between simulation steps.

I prefer **50 ms** delay, because we can see vehicles moving in this city.

We can change the SUMO-gui view in the '**blue frame**'. The best is to **select: 'real world'**.



I consider, **after the simulation** better to **choose the No** answer in the '**Simulation ended**' window.

Because we can't repeat the simulation without reopend this file from its folder. We can **use the refresh button** (with red frame).

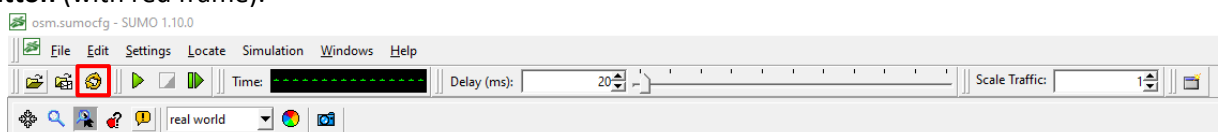


Figure 13 SUMO refresh button location

Result of the successful generation when you see these icons in your **“Desktop”**.
 When you made a generation first time, the program doesn't put these XML Files: *routes.rou.alt.xml* and *routes.rou.xml*.
 to the folder.

In the folder you have to see these XML and config files.
 With the **‘Notepad++’** you can modify XML file.
 You can use the **‘netedit’** program also.
 (See Figure 2).

Sometimes when the generation fails, in the target folder you will see only these files.
 So then, retry the generation with the same parameters.

If you still have any question about SUMO program, you can reach me by email.
 My email address is: csuraikornel@gmail.com.

Name	Date modified	Type	Size
2021-09-07-11-20-36	9/10/2021 9:51 AM	File folder	
routes.rou.alt.xml	9/7/2021 11:20 AM	XML File	265 KB
routes.rou.xml	9/7/2021 11:20 AM	XML File	209 KB

Figure 14 First successful generation folder and files

Name	Date modified	Type	Size
build.bat	9/7/2021 11:20 AM	Windows Batch File	1 KB
osm.bus.trips.xml	9/10/2021 10:31 AM	XML File	60 KB
osm.net.xml	9/7/2021 11:20 AM	XML File	3,550 KB
osm.netcfg	9/7/2021 11:20 AM	NETCFG File	2 KB
osm.passenger.trips.xml	9/8/2021 1:57 PM	XML File	195 KB
osm.poly.xml	9/7/2021 11:20 AM	XML File	968 KB
osm.polycfg	9/7/2021 11:20 AM	POLYCFG File	1 KB
osm.sumocfg	9/7/2021 11:20 AM	SUMO Configurati...	1 KB
osm.truck.trips.xml	9/7/2021 11:20 AM	XML File	129 KB
osm.view.xml	9/7/2021 11:20 AM	XML File	1 KB
osm_bbox.osm.xml	9/7/2021 11:20 AM	XML File	9,823 KB
run.bat	9/7/2021 11:20 AM	Windows Batch File	1 KB

Figure 15 Files from the folder

Name	Date modified	Type	Size
osm.netcfg	9/13/2021 6:10 PM	NETCFG File	2 KB
osm.polycfg	9/13/2021 6:10 PM	POLYCFG File	1 KB

Figure 16 Unsuccessful generation