

BOMNET

How to use

02/04/24

This document is a short guide on how to use the BOMNET plug-in once installed. To install the plug-in, refer to the [BOMNET website](#).

To use the plug-in, click on the **B** button (see Figure 1). This will open a dialog to choose an ifc file to extract data from (see Figure 2).

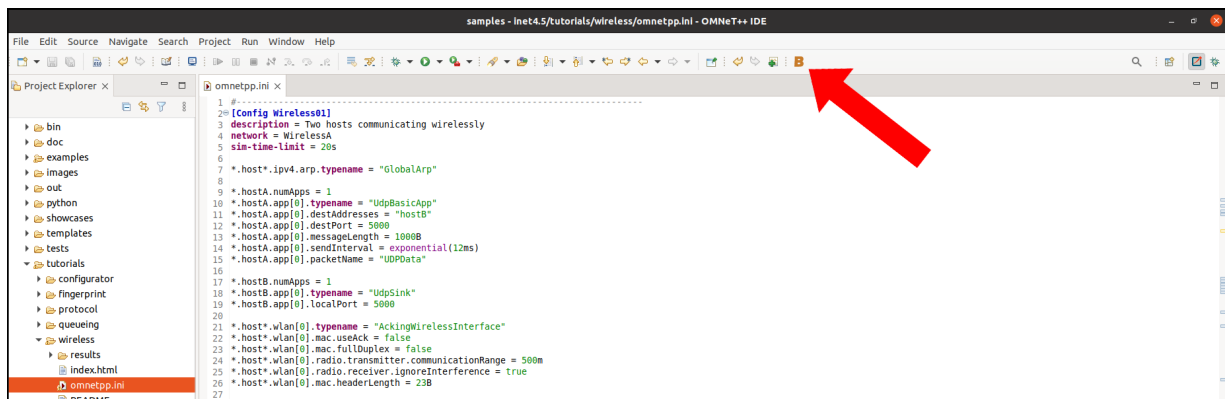


Figure 1

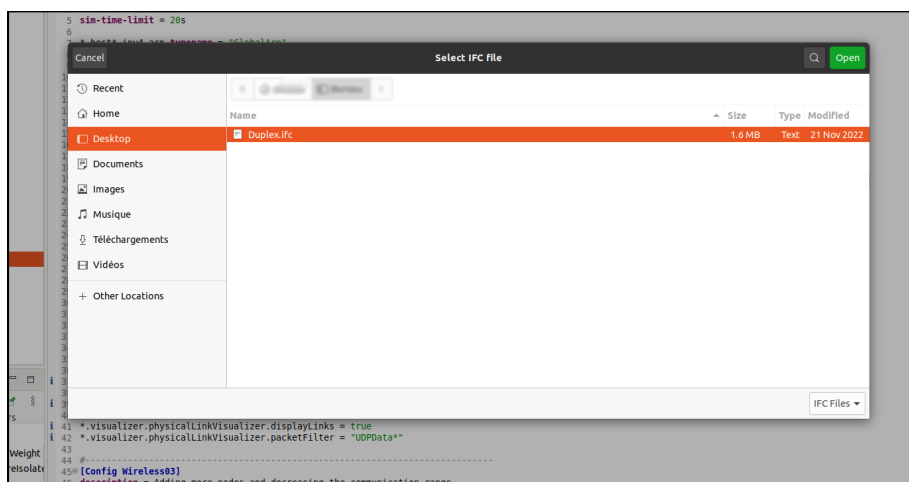


Figure 2

Next, choose the destination folder for the two generated files. The process will generate an **omnet.ini** and an **environment.xml** file, which will be explained later on. If the files already exist in the folder (for instance, if you chose your project root directly), BOMNET will warn you that it will overwrite them. For example, we create a new folder for them as shown in Figure 3.

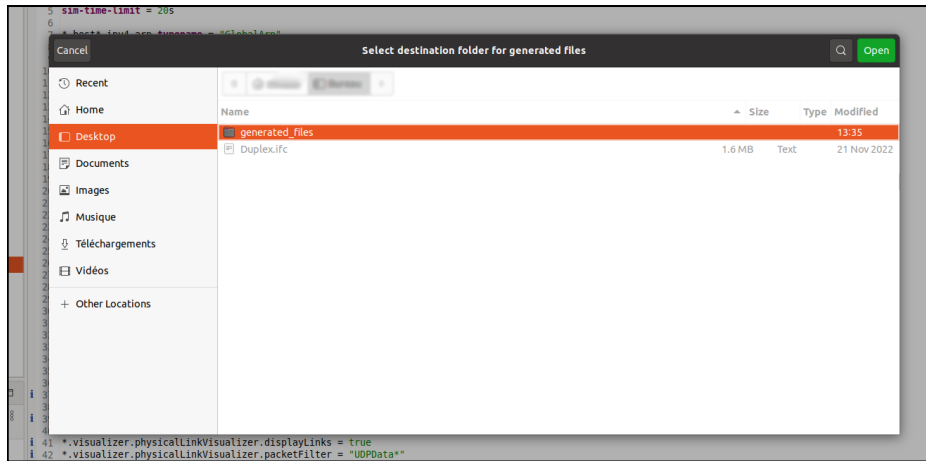


Figure 3

Once the files are generated, a dialog titled 'Simulation Files Produced' should appear. If not, an error message will be printed.

As a quick start example, we will use the tutorial titled 'wireless' from INET 4.5. Thus, as illustrated in Figure 4, the **environment.xml** file containing all the configuration of the physical environment extracted from the IFC file is added to the project. Regarding **omnetpp.ini**, it contains only two important lines that are integrated into the project file.

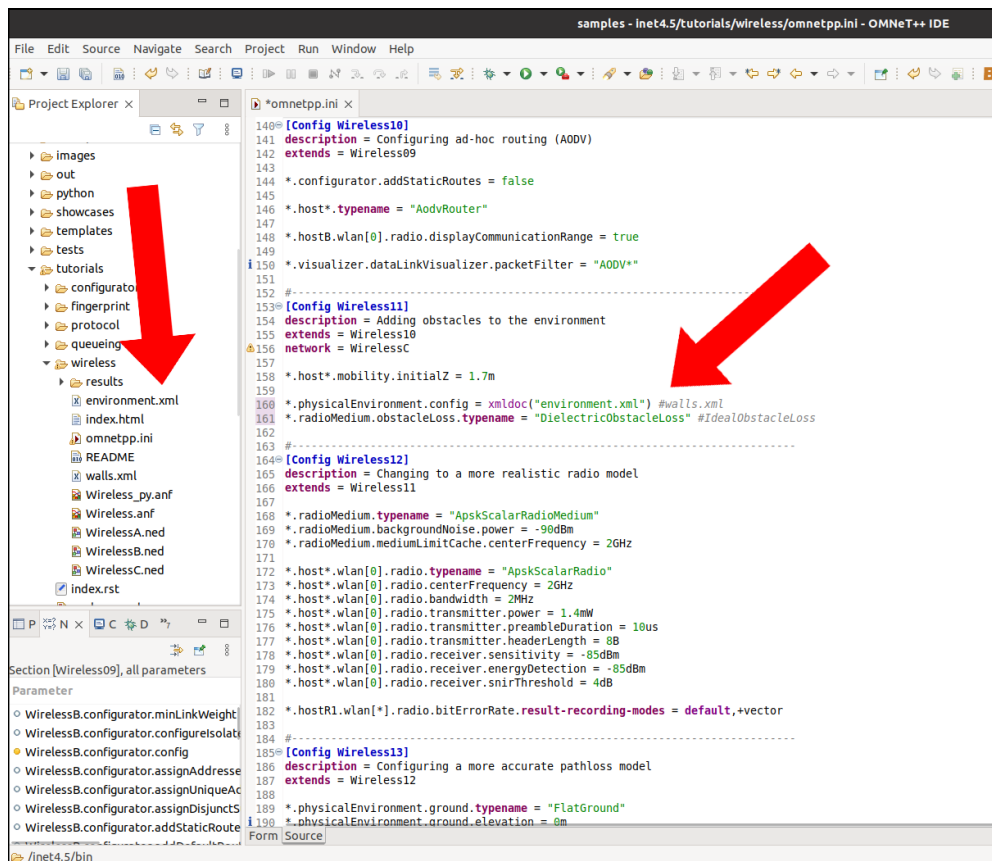


Figure 4

To visualize the environment in 3D within OMNeT++, the properties of INET 4.5 must include 'Visualization OSG (3D)'. Additionally, the visualizer of the project must be changed to **IntegratedVisualizer**, as demonstrated in Figures 5, 6, and 7.

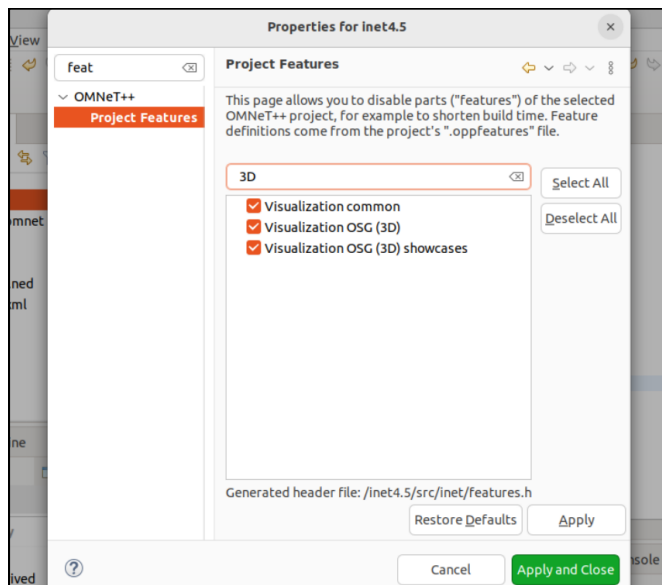


Figure 5

```

1 //
2 // SPDX-License-Identifier: LGPL-3.0-or-later
3 //
4 //
5
6 package inet.tutorials.wireless;
7
8 import inet.networklayer.configurator.ipv4.Ipv4NetworkConfigurator;
9 import inet.node.contract.INetworkNode;
10 import inet.physicallayer.wireless.common.contract.packetlevel.IRadioMedium;
11 import inet.visualizer.common.IntegratedVisualizer; //import inet.visualizer.contract.IIntegratedVisualizer;
12
13 network WirelessA
14 {
15     parameters:
16         @display("bgb=650,500;bgg=100,1,grey95");
17         @figure[title](type=label; pos=0,-1; anchor=sw; color=darkblue);
18
19         @figure[rcvdPkText](type=indicatorText; pos=380,20; anchor=w; font=,18; textFormat="packets received: %g"; initialValue=0);
20         @statistic[packetReceived](source=hostB.app[0].packetReceived; record=figure(count); targetFigure=rcvdPkText);
21
22     submodules:
23         visualizer: IntegratedVisualizer{ //<default(firstAvailableOrEmpty("IntegratedCanvasVisualizer"))> like IIntegratedVisualizer if typename != ""
24             @display("p=580,125");
25         }
26         configurator: Ipv4NetworkConfigurator {
27             @display("p=580,200");
28         }
29         radioMedium: <default("IloftDiskRadioMedium")> like IRadioMedium {

```

Figure 6

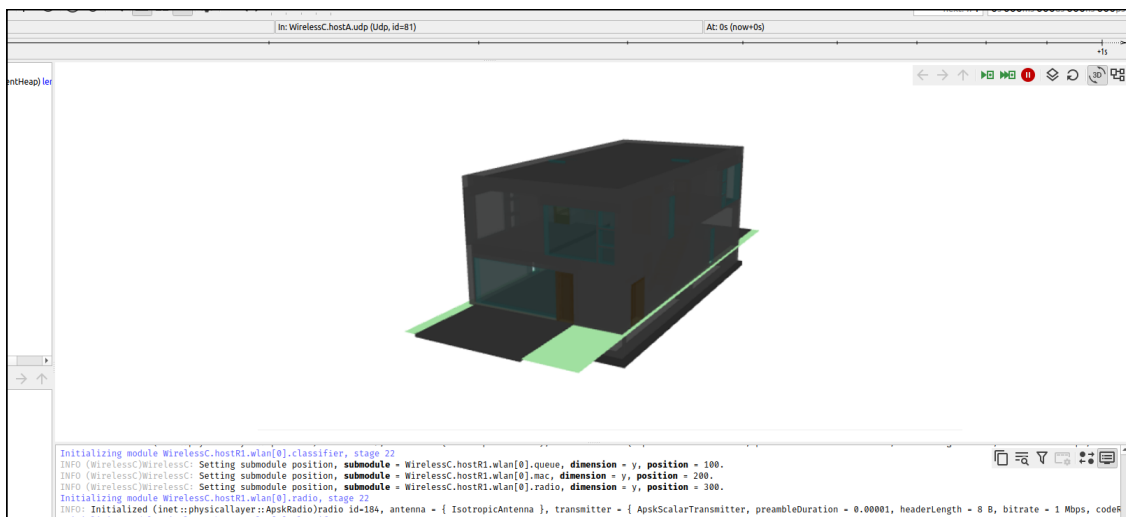


Figure 7