HOW TO RUN GUI FOR SYSTEM-LEVEL SIMULATOR

This simulator is based on the IEEE paper "Unlocking the Deployment of Spectrum Sharing With a Policy Enforcement Framework" (link to https://ieeexplore.ieee.org/document/8271989/?part=1).

The GUI is implemented in Matlab and it has two levels.

Firstly, we can choose the figure we want to plot. Figure 6 is for the variation of the misbehavior probabilities over time and Figure 7 is for the variation of the penalty threshold over time. Secondly, we give the values of the parameters.

To run the GUI of this simulator, you have to follow the instructions as cited below:

1. Change the variable SimulatedTime from inside of the code. (As mentioned below)
2. Run the gui.m file.
3. Choose the figure you want to plot (Figure 6 or Figure 7).
4. Give the values of the rest parameters.
5. Press the Run it button.

For example, the following values should be given as input in order to produce the results of the paper.

For Figure 6:

- Number of Simulations = 500,
- Threshold Penalty = 5,
- MNO1 = {0.3 , 0.2 , 0.05 , 0} and
- MNO2 = {0.2 , 0.1 , 0.05 , 0.01}.

!!! *SimulatedTime can change only from inside of the code. More specifically, you have to open the file getInputParametersMisProb.m , go to line 36 and assign at SimulatedTime variable 100*24*50. This value means that there are 100*24*50 slots of 10 minutes. So the Simulated Time is 1200000 minutes.*

Range for parameters:

- SimulatedTime: 100*24 or 100*24*50

For Figure 7:

- Number of Simulations = 100,
- Threshold Penalty = {0 , 50 , 200}, where 0 and 200 are the lower and the upper limits and 50 is the step,
- MNO1 = 0.3 and
- MNO2 = 0.2.

!!! *SimulatedTime can change only from inside of the code. More specifically, you have to open the file getInputParametersPenThresh.m, go to line 36 and assign at SimulatedTime variable 600*24*50. This value means that there are 600*24*50 slots of 10 minutes. So the Simulated Time is 7200000 minutes.*