

Example of an Instance	Explanation of the Instance
<pre> 2 20 27 1 0 11 1 3 6 13 1 1 8 1 2 14 1 4 2 4 1 5 0 20 1 6 9 24 1 8 15 26 1 7 6 3 21 1 9 17 1 10 10 1 11 16 1 12 19 25 1 13 7 18 1 14 1 1 15 5 12 22 0 16 15 0 17 6 23 0 18 18 0 19 8 1 7 1 19 1 4 1 10 1 5 1 20 1 6 1 17 1 1 1 9 1 14 1 0 1 21 1 3 1 2 1 12 1 15 1 13 1 18 1 16 1 8 1 11 0 22 0 23 0 24 0 25 0 26 </pre>	<p>The first line indicates the total number of layers in the graph;</p> <p>The second line contains two numbers n_1 and n_2 representing the number of vertices in each layer, 20 in the first layer and 27 in the second one;</p> <p>The next n_1 lines contains the vertices of the first layer following the structure:</p> <p>First number is a 1 if the vertex is original or a 0 if it is a new one; Second number is the id of the vertex; The remaining numbers are the adjacent vertices in the second layer.</p> <p>The next n_2 lines contains the same information as the previous lines except for the adjacent vertices which are not necessary here.</p>

The file "ids.txt" contains the names of the files corresponding to each of the instances. These files are in the data folder.

Example of the beginning of the ids.txt file:

```
incgraph_2_0.06_5_30_1.20_1  
incgraph_2_0.06_5_30_1.20_2  
incgraph_2_0.06_5_30_1.20_3  
...
```

In total, we have 240 instances with four different numbers of layers (2, 6, 13, and 20). The first number after 'incgraph' refers to the number of layers in the instance, while the second number indicates the density, which can be 0.06, 0.17, or 0.30 (0.065, 0.175, and 0.300). The number of vertices chosen in each layer was randomly selected by the graph generator within the range of 5 to 30 (third and fourth numbers). For some instances, the number of incremental nodes was increased by 20%, and for others, by 60% (for more details, see the "experimental setup" section of Napoletano's paper). This results in the notation 1.20 or 1.60 according to the author. The last number varies from 1 to 10, representing a specific group of instances according to a particular configuration of layers, density, and number/percentage of incremental nodes.

Please note that in the file 'Results and Optimal from Gurobi.txt', the IDs describing each instance have an additional number at the end.

```
incgraph_2_0.06_5_30_1.20_1_1  
incgraph_2_0.06_5_30_1.20_2_1  
incgraph_2_0.06_5_30_1.20_3_1  
...
```

This number refers to the maximum dislocation extent number of positions (d), assuming the values 1, 2, or 3 in this work.