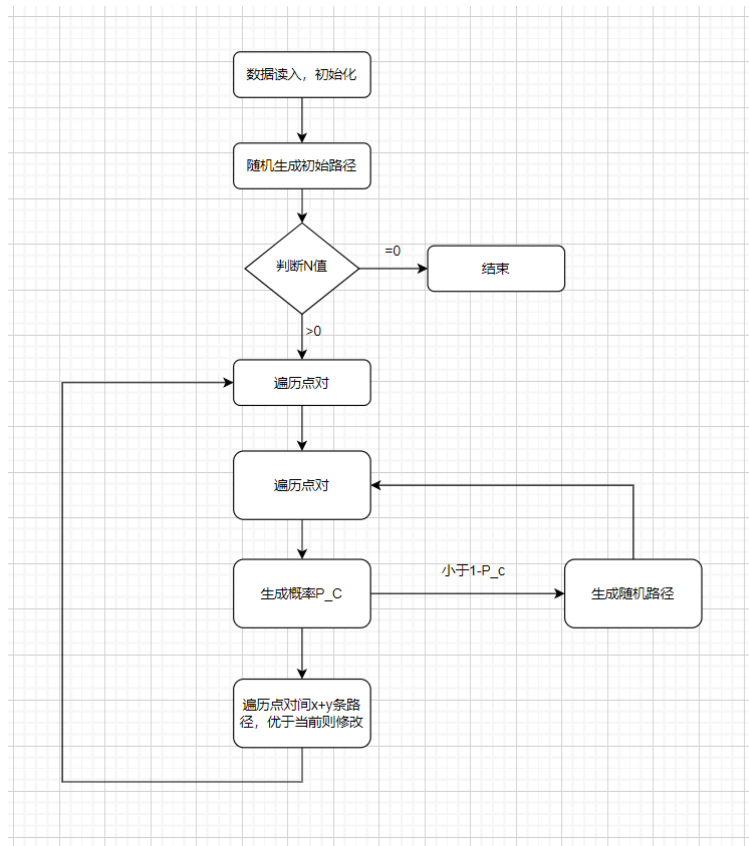


1. 算法流程

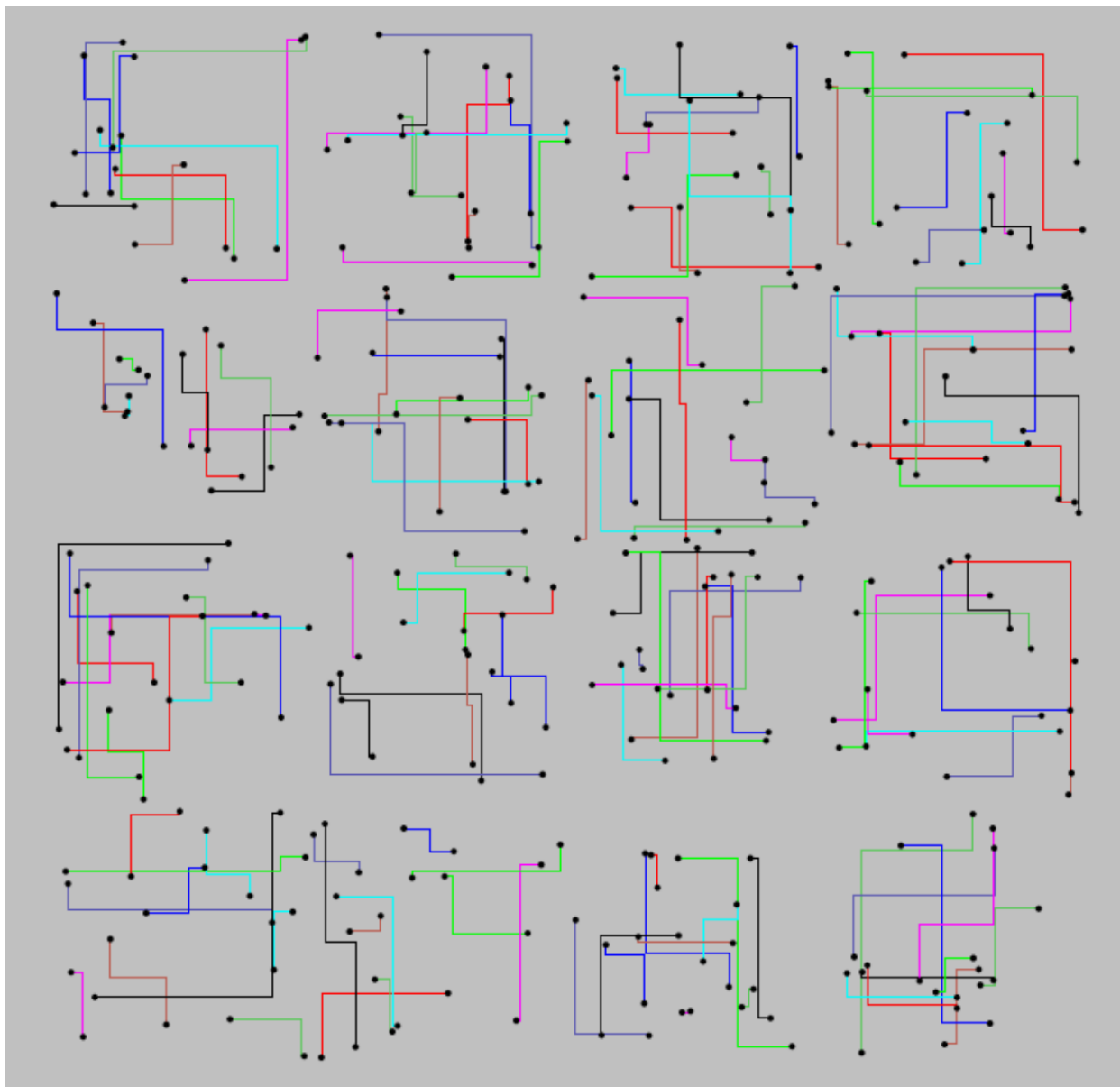


• 结果

```
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ python validate.py -r wire.txt -c cost.txt
4096 4096 1123
2023-03-31 00:06:07,885 - INFO - validate:73 - Cost Array constructed
2023-03-31 00:06:11,284 - INFO - validate:37 - Validate succeeded.
```

• easy_4096.txt

```
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f easy_4096.txt -n 1
Number of threads: 1
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: easy_4096.txt
Initialization Time: 0.026280.
Computation Time: 1.895986.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f easy_4096.txt -n 2
Number of threads: 2
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: easy_4096.txt
Initialization Time: 0.024380.
Computation Time: 1.133148.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f easy_4096.txt -n 4
Number of threads: 4
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: easy_4096.txt
Initialization Time: 0.017490.
Computation Time: 0.543216.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f easy_4096.txt -n 8
Number of threads: 8
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: easy_4096.txt
Initialization Time: 0.023924.
Computation Time: 0.427042.
```

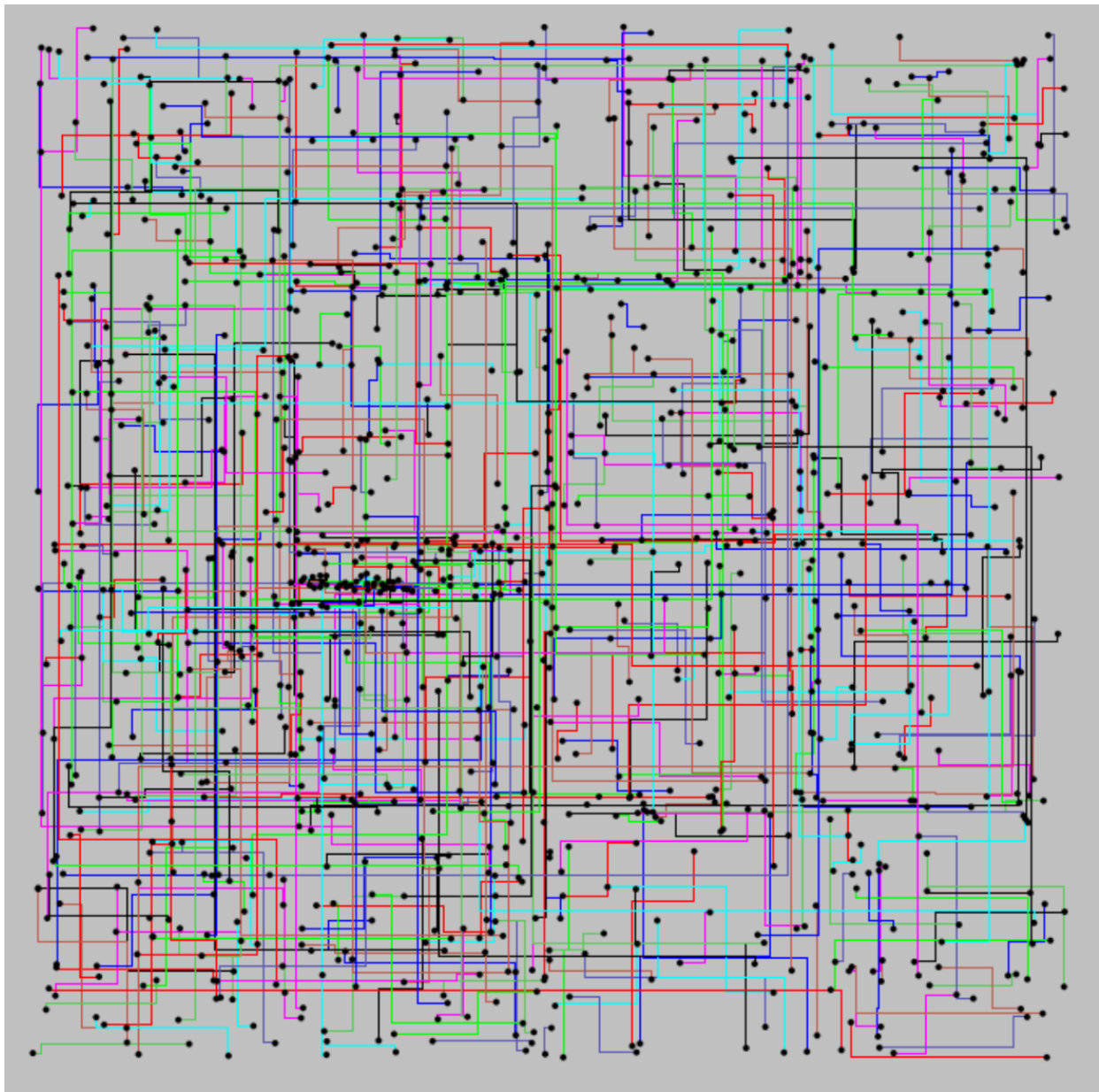


- medium_4096.txt

```

consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f medium_4096.txt -n 1
Number of threads: 1
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: medium_4096.txt
Initialization Time: 0.035030.
Computation Time: 33.029581.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f medium_4096.txt -n 2
Number of threads: 2
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: medium_4096.txt
Initialization Time: 0.033115.
Computation Time: 18.737684.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f medium_4096.txt -n 4
Number of threads: 4
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: medium_4096.txt
Initialization Time: 0.032754.
Computation Time: 10.003318.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f medium_4096.txt -n 8
Number of threads: 8
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: medium_4096.txt
Initialization Time: 0.032341.
Computation Time: 8.146124.

```



- hard_4096.txt

```
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f hard_4096.txt -n 1
Number of threads: 1
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: hard_4096.txt
Initialization Time: 0.033551.
Computation Time: 38.998276.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f hard_4096.txt -n 2
Number of threads: 2
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: hard_4096.txt
Initialization Time: 0.046519.
Computation Time: 21.559250.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f hard_4096.txt -n 4
Number of threads: 4
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: hard_4096.txt
Initialization Time: 0.042232.
Computation Time: 12.365349.
consonnm@Consonnm:/mnt/c/Users/consonnm/Desktop/CMU作业/Assignment-3/code$ ./wireroute -f hard_4096.txt -n 8
Number of threads: 8
Probability parameter for simulated annealing: 0.100000.
Number of simulated annealing iterations: 5
Input file: hard_4096.txt
Initialization Time: 0.038805.
Computation Time: 9.824057.
```

