

# CS6135 VLSI Physical Design Automation

## Homework 5: Global Routing

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2. --How to Compile

In this directory, enter the following command:

```
$ make
```

It will generate the executable file "hw5" in "HW5/bin/".

If you want to remove it and all .o files, please enter the following command:

```
$ make clean
```

--How to Run

In this directory, enter the following command:

```
Usage: ../bin/<exe> <modified.txt file> <result file>
```

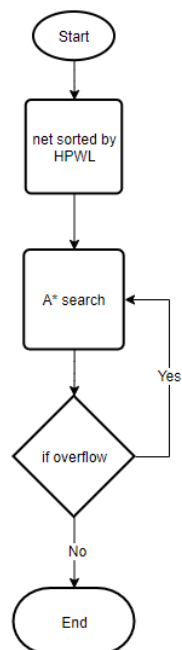
e.g.:

```
$ ../bin/hw5 ../testcase/ibm01.modified.txt ../output/ibm01.result
```

3.

Testcase	Overflow	Wirelength	Runtime(s)
ibm01	0	63589	24.59
ibm04	816	169222	179.49

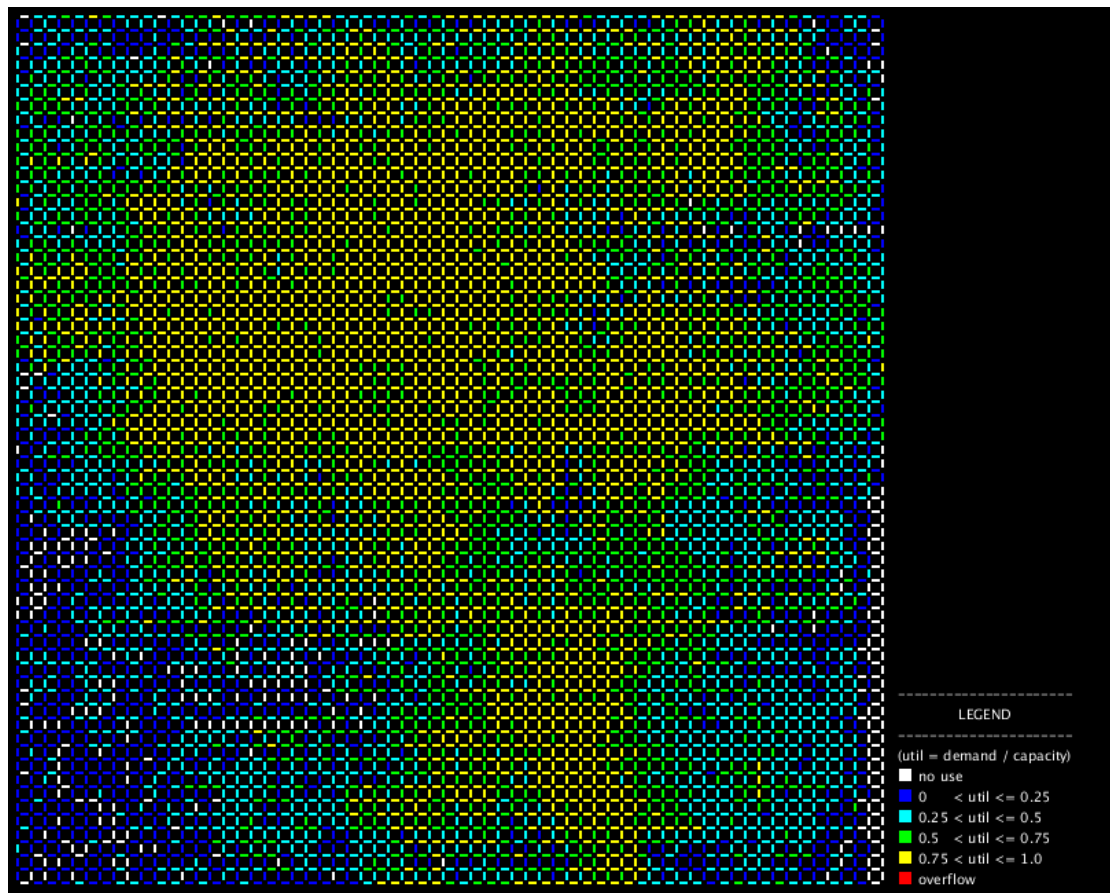
4.



- 5.
- 使用 **openmp** 將雙層 **for** 迴圈平行化(上傳的 code 為 **sequential** 版本)
  - HPWL 較小的 net 優先執行 A\* search
  - Rip-up Reroute，使用 A\* search 重新繞一次
6. A\* search 的 cost F 難以設定，難以找到平衡滿足 overflow constraint 及 wirelength 的參數，其中 cost F 考慮步長(G), Manhattan Distance(H), Demand(C), 離邊界的距離(M)

7.

**ibm01**



ibm04

