CS6135 VLSI Physical Design Automation

Homework 2: Two-way Min-cut Partitioning

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1.How to compile and execute your program, and give an execution example.

 Type "make" under HW2/src

 Then type "make cellname" (Ex. "make p2-1")

```
[vlsipda12@ic27 src]$ make p2-2
time -p ./partition ../testcases/p2-2.cells ../testcases/p2-2.nets ../output/p2-2.out
real 2.84
user 2.83
sys 0.01
[vlsipda12@ic27 src]$ make p2-1
time -p ./partition ../testcases/p2-1.cells ../testcases/p2-1.nets ../output/p2-1.out
real 0.02
user 0.01
sys 0.01
```

2.The final cut size and the runtime of each testcase

P2-1	Cut : 25	Runtime : 0.01user 0.00system
P2-2	Cut : 570	Runtime : 2.81user 0.01system

3.The details of your implementation containing explanations of the following questions:

a. Where is the difference between your algorithm and FM Algorithm described in class? Are they exactly the same?

 Yes, I followed this algorithm to write my program.

b. Did you implement the bucket list data structure?

 Yes, I use (2*maxpin) of bucket list to record the gain value.

c. How did you find the maximum partial sum and restore the result?

 I declare a integer for maximum partial sum, and if maximum partial sum be renewed I will record cells are at which side.

d.What else did you do to enhance your solution quality or to speed up your program?

 None.

e. What have you learned from this homework? What problem(s) have you encountered in this homework?

 I learned who to build linked list from this homework.