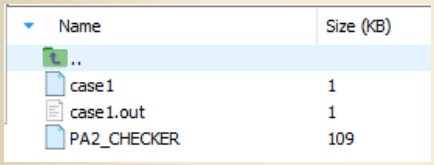
EE6094
CAD for VLSI Design

PA2 Checker

Andy, Yu-Guang Chen
Assistant Professor, Department of EE
National Central University
andyygchen@ee.ncu.edu.tw
Slides Credit: TA黃柏燁/TA施奕瑄

Checker

- How to use the checker?
  - Step1: Make sure you put your checker, case and your output file case.out at the same folder.



Checker

- How to use the checker?
  - Step2: Key in the following commands.
    ./PA2_CHECKER case case.out

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
```

  - Step3: If you get the error, key in the following commands.
    chmod 700 PA2_CHECKER

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
./PA2_CHECKER: Permission denied.
[ta112521031@cad ~/CAD]$ chmod 700 PA2_CHECKER
```

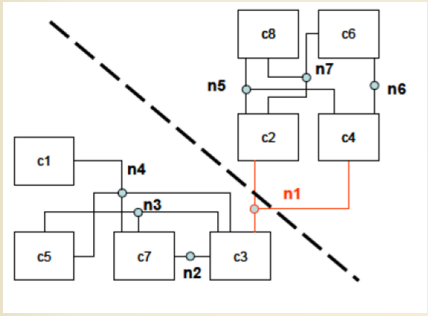

Checker

- How to use the checker?
  - Step4: Retry the step2.
    ./PA2_CHECKER case case.out

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
```

Checker

- Partition result example.



Checker

- Example
  - If your partition result is legal. Your error count is 0 and you will get the “Well Done !!!” message.

```
cut_size 1
A
c1
c3
c7
c5
B
c2
c4
c8
c6
```

case.out

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
error count: 0
Well Done !!!
```

result

Checker

- However, there are some errors which will cause your result illegal.
- We will give you some examples in following slides.

Checker

- Example 1
  - If your result's cut size does not match your partition result, your error count is 1 and you will get the "**cut size mismatch**" message.

```
cut_size 2
A
c1
c3
c7
c5
B
c2
c4
c8
c6
```

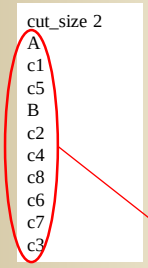
case.out

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
error count: 1
1. cut size mismatch
```

result

Checker

- Example 2
  - If your partition result does not meet the constraint of *|size(A) – size(B)| <= total_module_size/5*, which means your result is unbalance. Your error count is 1 and you will get the "**unbalance partition**" message.



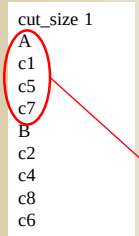

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
error count: 1
1. unbalance partition
```

size(A): 2
size(B): 6
total_module_size: 8
|2-6| > 8/5 = 1.6

case.out result

Checker

- Example 3
  - If there are some modules disappeared in your partition result, you will get "**module disappear in partition result**" messages.




```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
error count: 1
1. module disappear in partition result
```

c3 is disappear

case.out result

Checker

- Example 4
  - If there are some redundant modules existed in your partition result, your error count is 1 and you will get "**redundant module in partition result**" messages.

```
cut_size 1
A
c1
c3
c5
c7
B
c2
c4
c8
c6
c9
```

c9 is a redundant module

case.out

```
[ta112521031@cad ~/CAD]$ ./PA2_CHECKER case1 case1.out
error count: 1
1. redundant module in partition result
```

result