UCLA EE201A

Project 2018

Group 6

Tiefang **Li** | Zaurbek **Tsorojev**

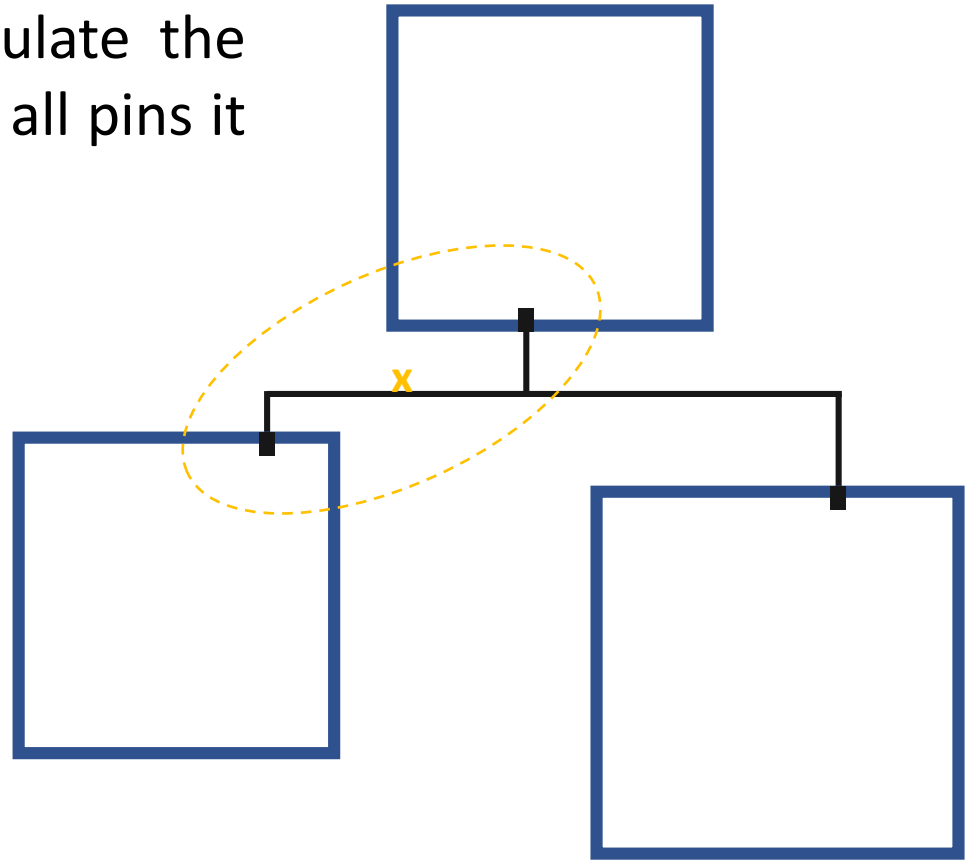
STEP 1: For every macro

ROTATE
to angle with minimum HPWL

PIN ASSIGNMENT

STEP 2: Find moving directions

For every pin, calculate the **average** position of all pins it is connected to.



STEP 3: Pin Moving

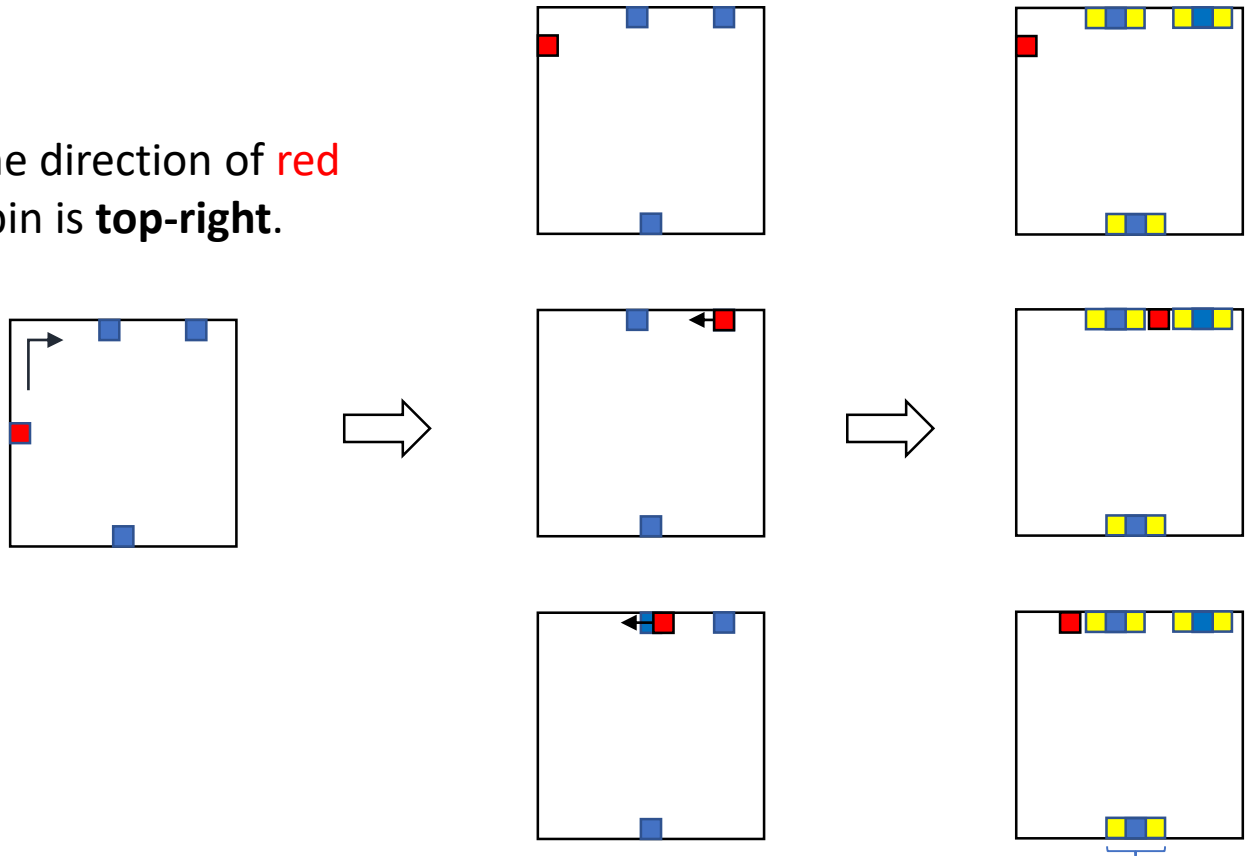
1. For every pin, calculate the **max moving step** according to perturbation and direction.

2. Find the **new pin location** based on max step.

3. Check if the new pin location is **valid**.
   - If not, set new pin location 1 step back.
   - If yes, update the **invalid** area array and move the pin.

STEP 3: Pin Moving (Example)

If the direction of red pin is **top-right**.



Invalid region

STEP 4: Masters Assignment

1. Find all the macros in the design that have the **same master**.

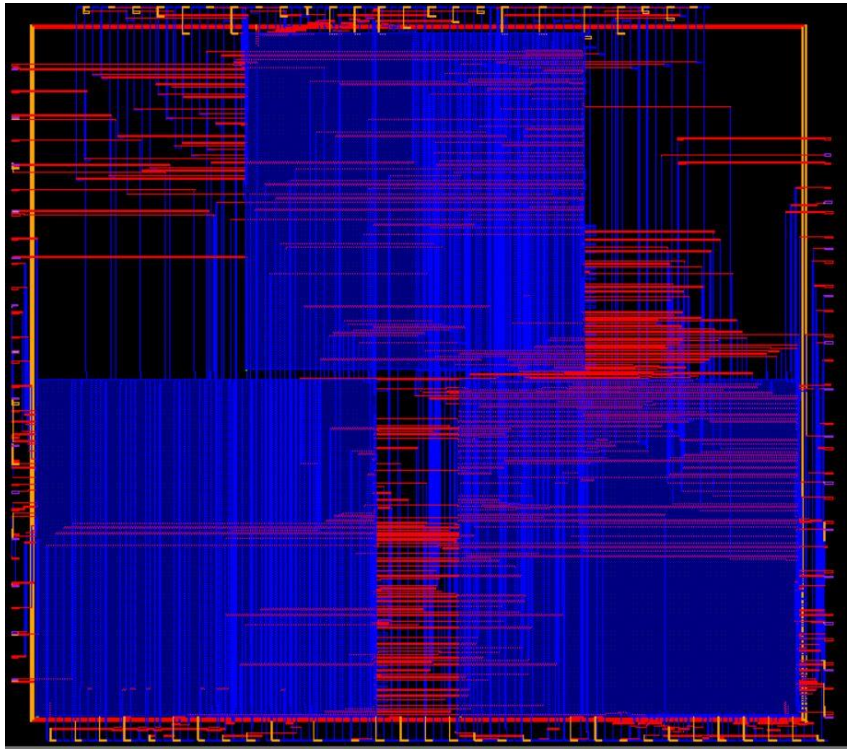
2. Give them the **same pin assignment**.
   - *Beware of the macro **orientations**.*

3. Return to **step 1**.

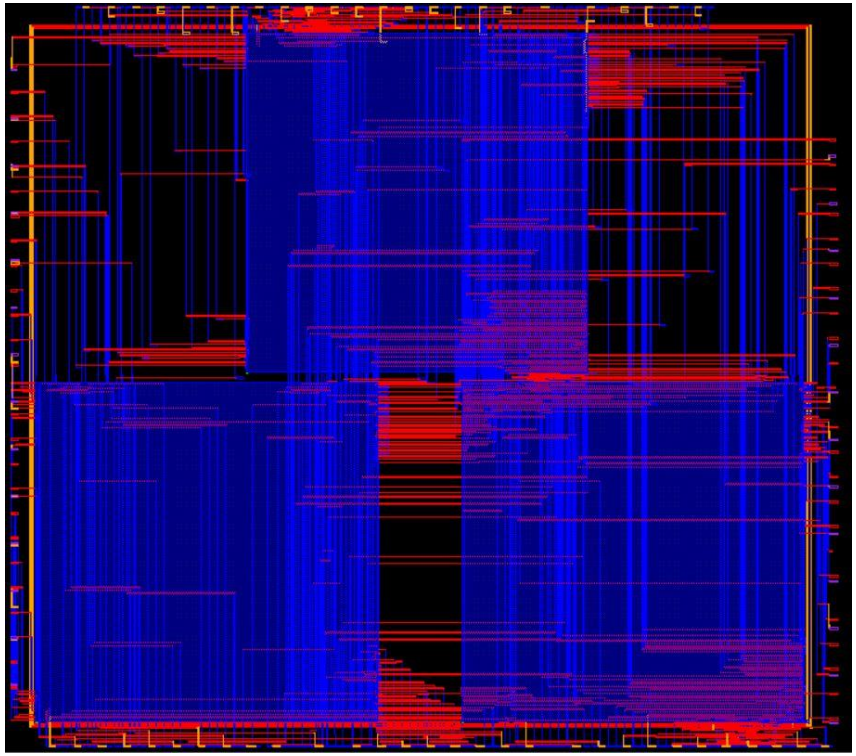
EXAMPLE

Benchmark: **des3_perf_opt**

BEFORE

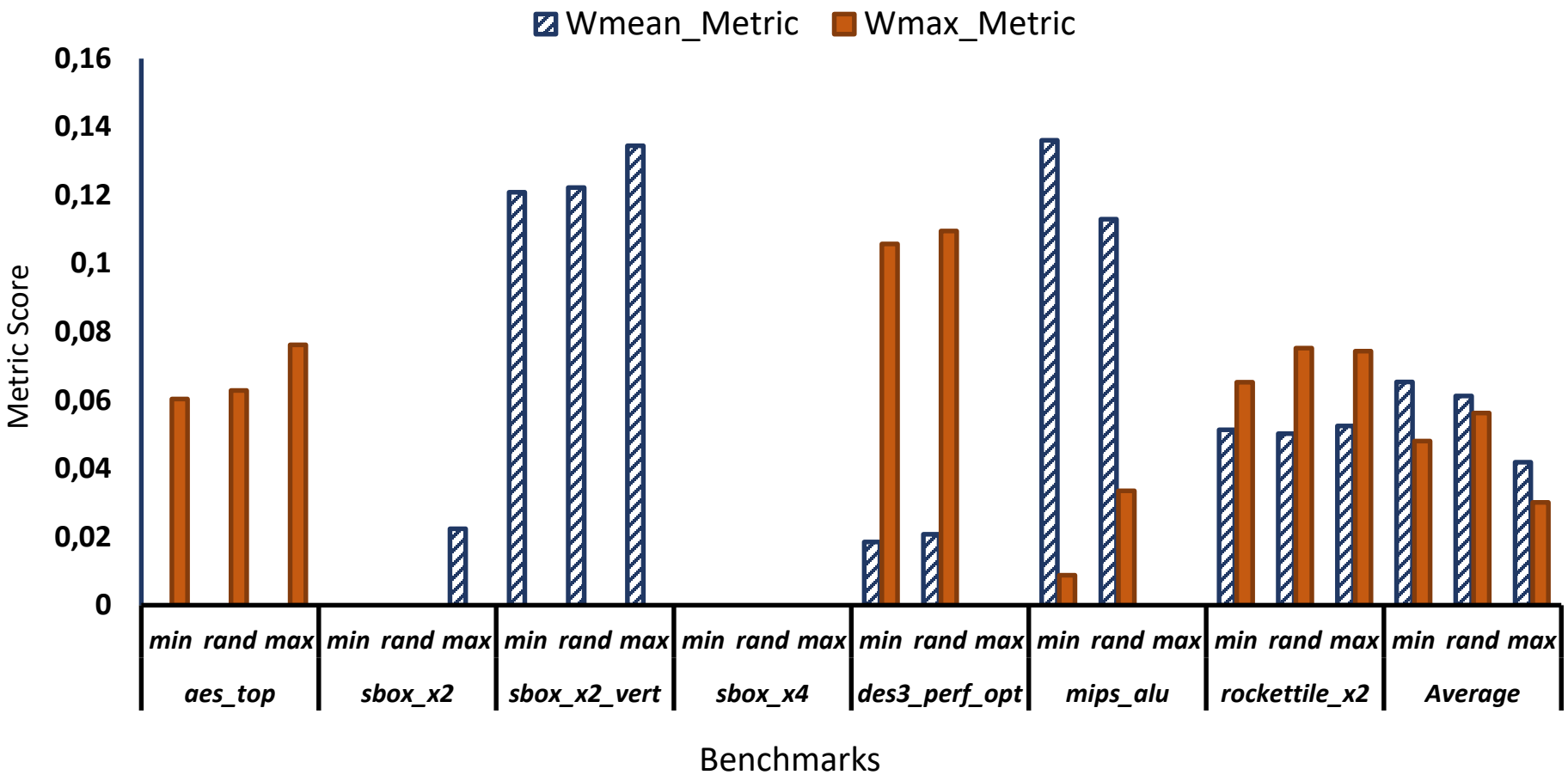


AFTER



RESULTS: RANK N°9

SCORE: 122.38/210



THANK YOU!

Any Questions?

Group 6

Tiefang **Li** | Zaurbek **Tsorojev**