

Weekly Report for YiYu Shi's work in week3

February 6, 2006

1 Work1: Finish the experiments for thermal via optimization

Hao and I have finished most of the experiments on thermal via optimization. There is still minor convergency problem exists, and we are fixing it now.

2 Work2: Prepare final submission of ISPD

I have read Sachin's paper on thermal-aware routing and have discussed with Hao. I am trying to figure out if the circuit simulation method can be applied to this kind of problem.

3 Work3: Apply RCSteiner to the congestion estimation

Discussed with Paul and settled the framework for applying RCSteiner to the congestion estimation problem. Basically, it would involve the iterative calling of rcsteiner function, but with the slight difference that the resistor of the edge that has been occupied by other nets should be updated (decrease exponentially with the net number occupying that node). When constructing the Steiner tree from the spanning tree, we select the edges the has the minimum sum of current.

4 Work4: Start to think about non-linear MOR

I am starting to look at papers in the internal website on non-linear MOR and think about some new approach to deal with it as this problem is still very difficult and far from being solved.