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ROUTING



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TOPICS ARE:-



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ROUTING:-

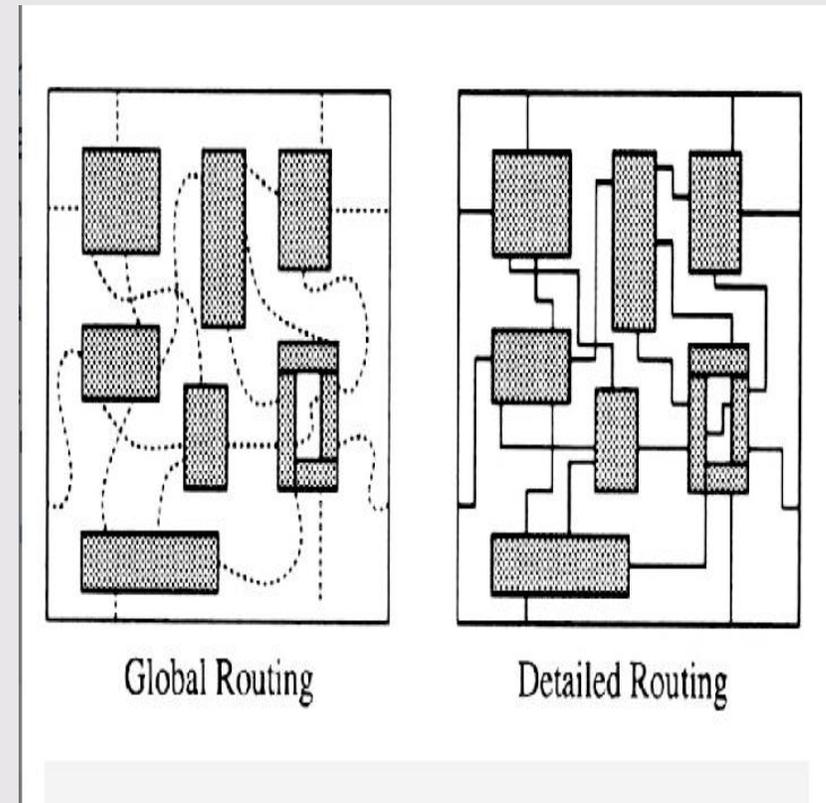
DESCRIPTION:-

Routing is the process of creating physical connections based on logical connectivity. Signal pins are connected by routing metal interconnects.

Routed metal paths must meet timing, clock skew, max trans/cap requirements and also physical DRC requirements.

There are four steps of routing operations:

1. Global routing
2. Track assignment
3. Detail routing
4. Search and repair





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WHY ROUTING IS REQUIRED

It is important for the physically decide the path of actual circuit.

Proper routing stands for minimizing the wire length.

precise path for interconnection.

This includes the standard cell & macro pins,



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ROUTING STEPS:-

In routing stage, metal & vias are used to create the electrical connection in layout so as, to complete all connection defined by netlist.

Most of the routers available are grid base router. There are routing grids defined for the entire layout. Consider it like graph. For grid based routers, there are also preferred routing direction defined for each metal layer.

Consists of following steps

1. Global routing - here, only the routing resources are assigned to the routing end points.
2. Final/ Detailed routing - here, nets are physically routed
3. Search and Repair (remove violations like short, spacing etc)



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THANK YOU