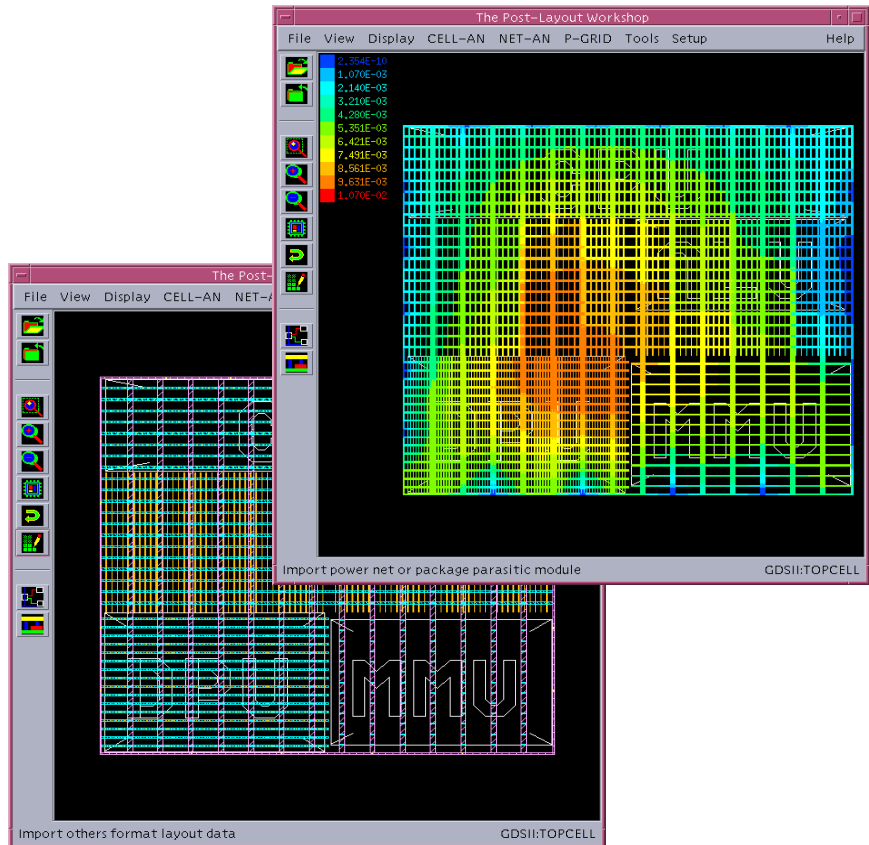


P-PLAN

Power Distribution Network Floorplanning

P-PLAN™ Features:

- ◀ *Optimizes geometric configuration of VDD and VSS rings, internal power rails, and ring voltage source pad locations*
- ◀ *Uses iterations of P-GRID runs, helps quickly optimize the block and top level power rail design before detailed routing, allowing quick location and correction of problem areas*
- ◀ *Allow users fast means to redefine and analyze planned power rail configuration in floorplanning stage*
- ◀ *Automatically ties data together with program generated vias*
- ◀ *Accepts floorplan locations of blocks along with any planned block power rails and average or peak current source information for the block*
- ◀ *Runs on all popular workstation platforms*



P-PLAN is a VLSI power distribution network hierarchical floorplanning tool used with P-GRID for optimizing the geometric configuration of VDD and VSS rings, internal power rails, and ring voltage source pad locations using estimated block current sources. By allowing a fast means to iterate by redefining and reanalyzing the planned power rail configuration in the floorplanning stage of the design, major electromigration and IR drop failures can be avoided.

In the program flow, a simple control file supplies initial rings, top level power rails, voltage input pads, and via parameters. Also supplied are the floorplan locations of the blocks along with any planned block power rails and average or peak current source information for the block. The data is tied together automatically with program generated vias. Combined with process technology data, a 3D model is generated and then analyzed by P-GRID for IR drop and electromigration violations.

By allowing the user to run through the entire cycle of analyzing results, changing input parameters, and re-simulating in less than one hour, the power rail design can be quickly optimized before detailed routing prevents quick solutions to problem areas.