

Topic: Advanced Routing Technology for Custom Digital Designs

Abstract:

Routing in custom digital designs faces different challenges and requirements from traditional standard-cell-based digital designs. Custom digital designs usually have multiple hierarchies, and there are many prewires and user constraints making routing problem more complicated. In addition to wire length, routing pattern also needs to be taken into consideration. This presentation will show the challenges of custom design routing, some user constraints, and possible solutions.

Presenter: Owen Chi 紀俊呈

- R&D Manager at Synopsys Design Group
- Experience
 - Ph.D., EE of National Chung Yung Christian University
 - Joined SpringSoft in 2006, and then joined Synopsys through SpringSoft acquisition in 2012
 - Architect of Laker Custom Digital Router
 - Expert of freeze-silicon ECO routing, grid-based routing, and shape-based routing
- Publications
 - 2 journal papers (1 in IEEE Trans. on VLSI, the top journal in EDA), 9 conference papers, 1 US patent, 1 pending US patent
 - Papers and patents are in physical design area including floorplan, placement, and voltage assignment.