Layout density optimization with wire pushing and rerouting for CMP planarization / 陳冠中撰 .- 彰化縣大村鄉

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ABSTRACT

The Chemical-Mechanical Polishing (CMP) technology is an important procedure in the fabrication of chip to increase the overall smoothness. Insertion of dummy fill is an important issue for CMP planarization in the layout synthesis flow of IC design. Layout density analysis is the basics to calculate the amount of dummy fill for CMP planarization before insertion dummy fill to chip. In this thesis, we proposed a wire pushing and rerouting approach to optimize layout density. The aim of proposed wire pushing and rerouting method is reducing the amount of dummy fill. Experimental results with the ISCAS89 benchmark show that the proposed wire pushing and rerouting method can decrease the amount of dummy fill by 12%-22%.

Keywords : Planarization、Chemical-Mechanical Polishing、Dummy fill

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