A Case Study of Multi-Slot Assignment in High Speed Chip Shooter for Printed Circuit Board Assembly

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ABSTRACT

Nowadays, the demand for computer, communication and consumer electronics products is huge and growing up speedily. Printed circuit board has become the critical part. The bottleneck of PCB assembly process primarily lies in the high speed chip shooter. How to reduce the assembly time and increase the yielding rate has consequently become the challenge that the enterprises must face. The layout of all components in the PCB would determine if that board is suitable for multi-slot. Thus, this paper studies assembling one single PCB on one machine, and how to reduce the assembly time using vacant slot, and apply multi-slot assignment heuristic to reduce assembly time and thereby increase yielding rate.

Keywords : PCB Assembling ; high speed chip shooter ; multi-slot assignment ; heuristic

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