

Improved Pattern Matching Applied to Surface Mounting Devices Components Localization on Automated Optical Inspection

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Abstract : Automated Optical Inspection (AOI) Systems are commonly used on Printed Circuit Boards (PCB) manufacturing. The use of this technology has been proven as highly efficient for process improvements and quality achievements. The correct extraction of the component for posterior analysis is a critical step of the AOI process. Nowadays, the Pattern Matching Algorithm is commonly used, although this algorithm requires extensive calculations and is time consuming. This paper will present an improved algorithm for the component localization process, with the capability of implementation in a parallel execution system.

Keywords : AOI, automated optical inspection, SMD, surface mounting devices, pattern matching, parallel execution

Conference Title : ICCEECE 2017 : International Conference on Computer, Electronics, Electrical and Communication Engineering

Conference Location : Lisbon, Portugal

Conference Dates : April 16-17, 2017