

This thesis describes a new approach to automatic assembly of classical jigsaw puzzles by computer. The process involves processing scanned images of puzzle pieces, computing a solution based on piecewise compatibility and producing an image of the solution. Whereas previous approaches to this problem were mostly concentrated on using only the shape of the pieces, the method we proposed uses both shape and colour information. The method also introduced several improvements in different aspects of solving. The method was able to successfully solve a puzzle of more than 1000 pieces and thus outperformed previous algorithms.