Abstract

Shape decomposition and reconstruction are vital factors in image processing and analysis applications. A generalized skeleton transform allows a shape to be represented as a collection of modestly overlapped octagonal shape parts. One of the main problems with the existing algorithms is that they generate noise after decomposition. For ordinary images the rate of
noise may not be effective but it will be more when applied on printed or handwritten characters. In this paper we have introduced a novel algorithm to tackle this issue by applying a soft morphological filter (SMF) after morphological decomposition. The algorithm was applied on various types of decomposition images. The experimental results indicated that the present decomposition algorithm produces images with more clarity when compared with other algorithms.

Reference

A Novel Approach to Shape Decomposition and Representation using Soft Morphological Filters

Index Terms

Computer Science

Image Processing

Key words

Mathematical Morphology

Structuring elements

Shape decomposition

Structural feature

Soft Morphological filters (SMF)