Abstract

A variety of texture classification approaches have been reported in the literature but many of them are focused on gray-scale textures. The aim of this work is to develop a novel color texture features by constructing a histogram based on the combined intensity and color channel information to effectively classify color texture images. Five features are computed from the histogram bin values to reduce the computational complexity. Experiments are conducted on a set of 164 color texture images from VisTex database. The K-Nearest Neighbor (K-NN) classification method is used as a classifier. The classification results are encouraging to use the proposed scheme with reduction in features. Further the proposed scheme is used in automatic wood classification to show the usefulness of the proposed scheme in industrial applications.

References


Sons.


Index Terms

Computer Science

Image Processing

Keywords

Intensity and color channel, Histogram bins, Feature computation, Wood classification, Color texture features, K-NN classifier.