Robust Contrast Enhancement for Digital Mammography

Abstract

Nowadays, mammography is currently considered as the most efficient way for the detection and diagnosis of breast cancer at early stages. In many cases, due to the subtleness of the difference between normal features and cancerous ones and the bad imaging conditions, cancer is not easily detected with visual interpretation. Thus, image-enhancement technology is often used in screaming mammograms. In this paper, we develop a method based on Shock Filter to enhance the contrast of image and help radiologists. In the proposed method, the Shock Filter is applied for preprocessing, in order to improve the contrast, remove the noisy fluctuations and to enhance the edges containing useful information. Experiments show the efficiency of the proposed method.

References

Transactions on Information Technology in Biomedicine, 2009.

Index Terms

Computer Science
Image Processing
Keywords
Mammogram  Image enhancement  Contrast enhancement  Shock filters