Abstract

Images are very powerful tools to provide information to the viewers in every field i.e. medical images for doctors, forensic images for police investigation, text images for readers etc. In the process of image acquisition, image clarity is affected by lighting, weather, distance, or equipment used for image capture. Sometimes quality of the image may be corrupted differently in various regions of an image. As contrast is one of the assessment factors for determining an image quality, it is necessary to develop a better and faster algorithm for contrast improvement in regions of interest. This paper proposes a method for image enhancement through contrast improvement in regions of interest using a Local Parameterized Gradient Intercept (LPGI) Model in spatial domain. The proposed method provides good results subjectively as well as objectively for both gray scale and true color images. The proposed method is useful for interactive image processing applications as it has a family of possible transformations for various enhancement levels in different regions of interest.

References

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- Color image processing: pseudo color processing Spring 2008 ELEN 4304/5365 DIP 1by Gleb V. Tcheslavski
Index Terms

Computer Science

Image Processing

Keywords

Global Histogram Equalization (GHE)  Local Histogram Equalization (LHE)  Global Adaptive Equalization (GAE)

Local Adaptive Equalization (LAE)

and Global Parameterized Gradient Intercept (GPGI)

Local Parameterized Gradient Intercept (LPGI)

Region Of Interest (ROI)