

ENHANCEMENT OF X-RAY IMAGE: A REVIEW

T P MITHUN¹, SUDARSHAN B G² & ABHILASHAGOUDA KARIGOUDAR³

¹Assistant Professor, Department of Telecommunication, R V College of Engineering, Bangalore, Karnataka, India

²R V College of Engineering, Health Center, Bangalore, Karnataka, India

³Student, Department of Telecommunication, R V College of Engineering, Bangalore, Karnataka, India

ABSTRACT

X-ray image is the noninvasive medical test used for the verification of bone anatomy and bone structure. X-ray image sometime lack bone details and sharpness. This paper uses the layer difference representation (LDR) contrast enhancement (CE) and contrast limited adaptive histogram equalization (CLAHE) methods as a pre-processing CE technique and uses Gaussian filtering operation for increasing the sharpness and structural view of radiographic images of bones. The total process helps to improve the image quality highlighting fine structures of digital bone X-ray images. MATLAB2012b image processing toolbox was used for simulation and verification.

KEYWORDS: Contrast Enhancement, Layer Difference Representation, Contrast Limited Adaptive Histogram Equalization, Gaussian Filtering