Abstract

Digital halftoning quantizes a grayscale image tone bit per pixel for display and printing on binary devices. It is a crucial technique used in digital printers to convert a continuous tone image into a pattern of black and white dots. Halftoning is used since printers have a limited availability of inks and cannot reproduce all the color intensities in a continuous image. Error Diffusion is an algorithm in halftoning that iteratively quantizes pixels in a neighborhood dependent fashion. Halftones are created through a process called dithering. The standard error diffusion algorithm was introduced by Floyd and Steinberg. Though it has the advantage of producing high visual quality images at low cost, still it suffers from the problem of introducing
worm-like artifacts in smooth regions. To overcome such problem, a chaotic and edge enhanced error diffusion method for image enhancement is proposed.

References

- R. Ulichney, &quot;Dithering with blue noise,&quot; IEEE, vol. 76, pp. 56-79,
Hardware based algorithm for Chaotic and Edge Enhanced Error Diffusion


Index Terms

Computer Science  Network Application

Keywords

Digital Halftoning  Electronic Paper  Field Programmable Gate Array  Edge Enhancement.