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SURVEY ARTICLE

Iterative Average Estimation Filter using BDND Algorithm for the Removal of High-Density Impulse Noise

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Abstract— The Boundary Discriminative Noise Detection (BDND) is one of the powerful methods for detecting the noise in the image. In this paper we are updating our detection map using the BDND algorithm. The iterative algorithm for filtering searches the noise-free pixels within a small neighbourhood, and then the noisy pixel is replaced with the average estimated value from noise-free pixels. This iterative process continues until all noisy pixels of the corrupted image are filtered. The experimental result shows that proposed scheme removes high density impulse noise and consumes less time compared to other filters.

The proposed algorithm promises less execution time and optimum size, which would be beneficial for smart phone application.

Keywords: Impulse Noise; Noise-free pixel; Noise detection; Average estimation.
