Thesis Title	Nonlinear Adaptive System for Noise Cancelling on Image
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Abstract

Using filter to eliminate noise of images is the preprocessing of an image processing and very necessary for the next process. The mixed noises from Gaussian noise and Impulsive noise can be eliminated by using the Hybrid filter which consist of median and average filter (M&A), however a contrast of images will be destroyed. The purpose of this thesis is the method for eliminate mixed noises by using 2-D Median Filter with Adaptive Window Length (2-D MFAWL) which developed from Robust Median Filter with Aadaptive Window Length (RMFAWL). This method can reduce the affect from adapting window size of impulse signal. It can adapt window size suitatble for image data and niose. The results of this method can eliminate mixed noises and presurve the edge and shape of image better than M&A filter. The experiment used mean square error, mean average error and signal to noise ratio, the efficiencies between two filters were compared.