ABSTRACT

An image often experience of the damage which is because of existence of an noise. One of existing noise type that is impulsive noise, usually impulsive noise emerge caused by its environment condition bothering the image intake process like existence of dirt, so that required a screening of noise in process of digital image. The mentioned of vital importance when later a result of filter image will be used to detect the edge, image segmentation, and compression. In the few last year have a lot of developed technique of reduction noise at one particular image specially image having the character of multichannel, where each pixel of at the chromatic image represented with three value which can be considered by the vector of 3D space. In this case, space of colour is Red Green Blue (RGB).

System to be develop is system used to conduct the examination to combination Signal Dependent Rank-Order Mean (SDROM) And Iterative Self-Adaptive Algorithms (ISAA). At this system is used windows matrix 3 x 3 (matrik mask) to conduct all process such as detect and filtering. First, enter the image to be processed and tested. Then system read the image file mentioned as matrix pixel. Hereinafter, enter the noise probability wanted to be tested, then enter the the noise into image hence at the same time that also emerge the value PSNR from noisy image. Later, take the noisy image matrix, so detect the damage pixel effect of impulsive noise by SDROM. Output from SDROM is binary map matirx at each channel R, G and B. Step hereinafter, pursuant to the binary map matrix process the filtering by using ISAA can be done. ISAA conduct the process to damage pixels effect of impulsive noise that is binary map matrix marked with the number 1. Then, emerge result image and assess the PSNR of result image filtering.

Pursuant to analysis to measurement objectively showing performance from combination of SDROM and ISAA where SDROM as impulsive noise detector and ISAA as filtering, hence can be pulled by conclusion that result of combination of SDROM and ISAA able to yield the PSNR which immeasurable enough, because immeasurable detection SDROM result as according to combination threshold which is enetered and combination of SDROM and ISAA, where SDROM as impulsive noise detector and ISAA as filtering can be told to made a success of the combination in increased of digital image quality.

Keyword: *Impulsive Noise, channel Red Green Blue (RGB), Signal Dependent Rank Order Mean, Iterative Self Adaptive Algorithms, Filtering, PSNR.*