

## ABSTRACT

Images data was needed on various aspect of life such as : education, healthy, remote sensing, etc. The images data have bit capacity very large for one it's file. By development of technology today and request images data on several aspect of life, so the images need to compress. Purpose of compression of images is produce images data not too large and not decrease quality of output images. So, the images must reduce bit capacity with compress original image to produce output image that have bit capacity is smaller than original image and have good quality.

On the case of remote sensing, images data have bit capacity too big and the quality of images data not so good. For remote sensing, images data was needed a lot of images that use for conclusion the output of the remote sensing, so the images data is compressed to produce images data that smaller than original images data and the quality is still good.

On this final project was designed a hybrid algorithm based on wavelet transform and fractal coding to compress image of remote sensing. This algorithm was designed to compress RGB image in bitmap (\*.bmp) format.

The hybrid algorithm was implemented using MATLAB software version 6.1 for image of remote sensing that have size 64x64 pixel, 96x96 pixel and 128x128 pixel. From implementation with MATLAB software, output of hybrid algorithm produced compression ratio 6:1 with PSNR is 26 dB with fine quality.

**Keywords :** Wavelet Transform, Fractal Coding, Hybrid, Huffman