

Nowadays, when the times growth, the needs of digital video data is increasing, whether the company, entertainment industry, telecommunication service, and for personal uses. This makes digital video technology an important necessity. The biggest problem that we have to face is the size of the video is too big. Shannon Nyquist's sampling theorem said if we cut the signal very close (in Nyquist line), so we can reconstruct the data analog perfectly.

In this last project, video is taken from internet and recorded by using camera digital. So I can measure PSNR, MSE and compute time and using *Hadamard Projection Transformation* as projection transformation, where the image/video will have measurement. After that the image/video will be reconstructed using basis pursuit.

From the research results, we know that the projection transformation Hadamard without AWGN channel get PSNR score video *input gray scale* about 7.02 dB – 24.43 dB. While for the PSNR score, the projection transformation Hadamard with AWGN of 10 dB about 7.25 dB – 18.22 dB. And time to compute of compressive sensing about 0.61 seconds – 3.37 seconds.

Key word: *Compressive Sensing*, Hadamard Projection Transformation, *basis pursuit*.