

ABSTRACT

H.264/AVC coding standard is the result of the formulation of the Joint Video Team (JVT) which is a collaboration between the ITU-T Video coding Experts Group (VCEG) and ISO / IEC Moving Picture Experts Group (MPEG). H.264/AVC is designed to answer the need for high compression rate and to be implemented in various applications.

Final task performed on the simulation and analysis of the performance of video decoder encoder H.264/AVC entropy coding Context Adaptive Variable Length Coding (CAVLC) on LAN. Simulations are conducted using the reference software H.264 coding JM1.7 and Network Simulator 2 (NS2). While the analysis done by looking at the coding quality objectively by calculation of Peak-to-peak Signal to Noise Ratio (PSNR), and the coding quality subjectively based on Mean Opinion Score (MOS).

From the test results, the resulting bit rate for each sequence at each Quantization Parameter (QP) is influenced by the characteristics of the sequence. For **iklan.yuv** resulting bit rate is 1532.86 Kbps and **akiyo.yuv** is 220.99 Kbps. This is because the characteristics of **iklan.yuv** that there is a change between frames is quite a lot, while the characteristics of **akiyo.yuv** is not much movement then there is not much change between frames. For **carphone.yuv** and **lalulintas.yuv** almost have the same characteristics that there is a movement but static, the value of the resulting bit rate is not much different there are 740.72 Kbps and 771.23 Kbps.

The number of packets lost in the channel affect changes PSNR in the QP values are low. Maximum performance of H.264 coding via LAN model obtained on the QP 10 to 14 with a PSNR value between 42 to 38 dB. Objective parameters above are also in accordance with the subjective parameters. Where the characteristics of many moving images have MOS values the lowest, while for the images tend not much movement has a high MOS value.

Key words: H.264/AVC, CAVLC, LAN