

ABSTRACT

Nowadays, many applications use multimedia feature. One of them is video conferencing application, which enable a group of people to make a communication by viewing each other only using a webcam.

On video communication, it need a large bandwidth to transmit the video data. To prevent it, the video data is compressed before transmitted. By using compression, video data which will be transmitted have a smaller size of bitstream which give a small cost of network bandwidth while communication session.

In this final project, was designed a codec which adopts H.264 compression standard, then designed a video conference application which integrated the designed codec. Further analysis includes the compressed video quality: compression ratio, Peak Signal-to-Noise Ratio (PSNR), and Mean Opinion Score (MOS). In addition, it also analyzed the effect of video compression to the application performance.

From the result of the research showed that use of H.264 compression can produce lower video bitrate with the reduction reached 98.7% (1:77) up to 99.52% (1:208) and a slight distortion in quality which can still be tolerated.

Keywords : video conference, compression, H.264