ABSTRACT

The amount of information in the form of data generated more and more every day, accompanied by the increasing need for increased capacity and speed of information delivery. According to IBM, the data generated each day reaches 2.5 quintillion bytes. The amount is so large that 90 percent of the data contained worldwide today is the data generated in this two-year period. Most of the data is in the form of multimedia data, either in the form of audio, digital images, or digital video. Support of the efficiency in the delivery and data storaging can be done in the form of data compression. In digital video, compression needs to be done before the data is transmitted so its not become a burden to the sender and receiver. Compression on video is done with the help of video codec, video codec can be either electronic component or software capable of perform compression and decompression process on digital video. Video codec has various standards, including H.265 / MPEG-H HEVC codec and H.264 / MPEG-4 AVC codec.

The research in this final project will be analyzed the High Efficiency Video Coding codec and Advanced Video Coding by doing calculation toward objective quality parameter with Full Reference method. Parameters analyzed include compression speed, PSNR, MSE, and compression ratio. By performing objective comparative analysis of the compression result using both video codecs, will produce information that is able to show which codecs produce better compression results.

From the calculation and analysis, it was found that the compression result using HEVC / H.265 codec overall gave better result in compression data size parameter, higher PSNR quality, lower MSE error value with higher compression ratio compared with compression using AVC / H.264 codecs that only excel in compression speed.

Keywords: *HEVC, AVC, codec, Full Reference, PSNR, MSE*