

ABSTRACT

Video as one of multimedia applications have high data rate characteristic. So it need to compress video to decrease data rate of video sequence in order to transport over communication channels. Generally the communication channel has the limited bandwidth. Video compression could be done by several methods. One of the newest video compression methods is H.264/AVC standard.

H.264/AVC video coding standard gives three profile coding (baseline, main and extended profiles), each of them has the different specialty, so it could be used to appropriate with the applications. On this final task conducted H.264/AVC video transmission simulation on CDMA2000 1xEV-DO network which could be provided data rate up to 2,4 Mbps. This simulation aim to determine the best coding profile performance when the video passed over 1xEV-DO network.

This final task used JM12.4 as CODEC H.264/AVC and 1xEV-DO network with AWGN and Rayleigh channel modeled used MATLAB 7.4 (R2007a). Performance perception conducted by BER parameter to determine 1xEV-DO modeling system performance, as well as PSNR and MOS used to determine the video performances.

Simulation result shows that main profile H.264/AVC is resulting a video with the highest value of average PSNR Y than two other coding profiles. Main profile of Akiyo video has decoded video with average PSNR Y = 38,17 dB, despite as subjective obtained MOS value = 3,83 (good). And, for main profile of foreman video has decoded video with average PSNR Y = 28,52 dB, as subjective obtained MOS value = 3,07 (fair).

Keywords : *CDMA2000 1xEV-DO, H.264/AVC, video coding, video transporting*