

## ABSTRACT

Technology telecommunications system grow fast in this time. Change type of service media at telecommunications system claim conditions of higher level system performance. Coding technique be able to create an original information format so at time of process transmission earn detect even correct mistake. Coding technique which have a lot of recognized is convolutional code using viterbi Algorithm. Viterbi Algorithm divided to become two that is soft decision decoding and hard decision decoding.

The objective of this Final Assignment is to evaluate the performance of convolutional code by using technique of Soft Output Viterbi Algorithm (SOVA) to be applied for application of Digital Video Broadcast (DVB). To test this algorithm, hence be seeking optimum system of convolutional code; channel influence weared that is AWGN channel, influence of used *constraint length* and influence of used decision decoding.

From simulation result got data that use SOVA as FEC for application DVB at SNR 6 dB with amount of constraint length 3, 5, and 7 obtained BER equal to  $3 \times 10^{-4}$ ,  $2 \times 10^{-4}$  dan  $2 \times 10^{-5}$ . While simulation result by using method of hard decision decoding at SNR 8 dB obtained BER equal to  $7 \times 10^{-5}$ .