ABSTRACT

Currently, the development of digital signal processing is very fast. Lots of implementations of digital signal processing in daily life, such as adaptive filters. Implementation of adaptive filters can be found in the system noise canceller which serves to reduce the noise that mixes with the information signal. Research conducted in this final project is to design a noise canceller system that can be used for military radio which use an adaptive algorithm called Stabilized Fast Transversal Recursive Least Square (SFTRLS). This algorithm is one of the algorithms used to solve problems of RLS quickly. SFTRLS algorithm is chosen in this Final Project because SFTRLS has a fast convergence time, making it suitable for used on military radio. Noise canceller system in this Final Project has MSE optimal value on the value of forgetting factor at 0.999, 0.9995, and 0.9999. It also obtained an average improvement of SNR on 29.8957 dB with an average convergence time is 0.254 seconds

Keywords: *Noise canceller, SFTRLS, military radio, forgetting factor*