

## ***ABSTRACT***

*ADC and DAC is a communication system course material that is in the department of Telecommunication Engineering D3 Telkom University, particularly in the field of digital signal processing demands of the students who study the field of telecommunications to understand and know about the techniques ADC and DAC at a signal. Then create a simulator for learning systems.*

*At the end of the project this time will be made simulating ADC (Analog to Digital Converter) and DAC (Digital to Analog Converter) to describe the process of conversion from analog signals to digital signals or digital signals into analog signals that are clearer and focused so that students can really clearly understand the working process of the ADC and DAC techniques in a signal. In making this simulation using LabView order to display a graph of the results of the process of converting analog signals into digital signal and to demonstrate the value of the error in kuantisasinya.*

*This study makes the program in each block of the ADC through three stages, namely sampling, quantizing and encoding and DAC are also in three stages, Decoding, Reconstruction, Filtering, which is then designed also to calculate the value of the quantization error and the effect on the value perbandigan  $S / N$ . The results of Simulink is expected to help facilitate teaching in the communication system.*

*Keywords: LabVIEW, ADC, DAC, sampling, quantizing, Encoding, Decoding, Reconstruction, Filtering*