

ABSTRACT

An image is something that is realized in a visual way in two-dimensional form as information. An image can be used as part of digital communication. Digital communication is the process of sending and receiving data or information in digital format. To facilitate transmission, software technology called Software Defined Radio (SDR) is used. SDR is able to process signals so that they can be transmitted and received with high quality even though the transmission media conditions are not ideal. In this research, a digital communication system for image transmission based on software defined radio using Gaussian Minimum Shift Keying (GMSK) modulation will be implemented. The applied design is to send and receive images using USRP and GNU Radio software. Tests of sending and receiving images were carried out outdoors, namely in the VSAT Lab. Testing is done using 2 scenarios, the first scenario is used to take the SNR value and its constellation diagram. While the second scenario is to take the BER value obtained. The first scenario test results for the SNR value are getting bigger and the constellation diagram is getting tighter. The second scenario test results get a BER value that is unstable or up and down.

Keywords: Digital Communication, Gaussian Minimum Shift Keying (GMSK), Image, Software Defined Radio (SDR)