ABSTRACT

Currently, telecommunication technology developed rapidly. To be able to serve the charges so required a new technique is reliable and not prone to interference fading so that it can meet the needs of users. Many techniques can be used to address them, one is to apply the principles of diversity transmits.

Transmission diversity is a transmission technique using the multiple users who work together to give each other information from the source to the destination. Space Time Block Code (STBC) is a simple technique transmits diversity that is capable of improving the quality of the signal using two antennas, or any number of transmitter antennas and can be used for cooperative communication. Quadrature signaling is a transmission method that uses BPSK modulation.

Simulation on this finally project implementing transmits diversity principle. Analysis is conducted to compare the performance of the signaling between the quadrature-quadrature signaling cooperative and non-cooperative. From the results obtained show that the system performance quadrature-cooperative signaling better than the non-quadrature signaling cooperative. Performance communication systems will be increased when used technique for improving the performance of STBC is ± 2 dB.

Keywords: cooperative communication system, transmits Diversity, Quadrature signaling, the Space-Time Block Code (STBC).