

ABSTRACT

The consumer's necessity for communication services keep on increasing, indeed voice as well as data, especially in wireless communication. It encourages wireless communication industries changes view to technology that be able to increase quality and high data rate. For example is multiple transmit antenna technology that combines Orthogonal Space Time Block Code (OSTBC) coding technique. Mostly, OSTBC research with multiple transmit antenna assumes that channel doesn't change along OSTBC symbol period (quasi static).

In this final task, OSTBC multiple transmit antenna's performance is researched over time-selective frequency flat fading channel, that channel changes from symbol to symbol (non quasi static). This change is caused by Doppler effect (receiver motion). The sum of transmitter antenna used is two and three with single receiver.

The simulation result shows that three transmitter antennas performance consideration to two transmitter antennas is better about 4 dB to low speed (3 kmph). But, if the receiver speed increases (120 kmph to 250 kmph), the performance of three transmitter antennas is worse about 3 dB.