

ABSTRACT

The development of mobile technology is growing rapidly based on the needs of the higher data rate. LTE is the fourth generation triggered by 3GPP that can meet those needs. In this system the user transmit power is the one of the factors that can affect the speed of the data rate.

Power emitted from the user affect the speed of data rate to base station which key consideration in uplink direction. The size of the radiated power users will affect the quality of the user data rate for itself and for other users. Though this system promises a high speed of data rate. One of the services offered on LTE is Fractional Power Control.

In this Final Project discusses a technique to overcome these conditions, the Fractional Power Control which serves to control the power emitted by the user to base station by adjust the compensation factor value. The simulation result show that the use of the compensation factor value of 0,6 indicates the the most optimal performance in the system compared to the value of the compensation factor smaller than 0,6 and greater compensation factor of 0,6. With the most optimal value of compensation factor, the user can save the transmit power as much as $\pm 8,42$ dB of the maximum power allowed by the user.

Keyword : LTE, Fractional Power Control, FFR, uplink, and P_{TX}