

ABSTRACT

Femtocell is a technology that uses micro BTS low power levels and using frequencies used officially as cellular networks. Usually femtocell networks connected to the Internet using the link customer data access networks. However the use of femtocells to mass remains a problem. One problem is the radio frequency interference between femtocells to macrocells, due to interference.

In this final project to be examined regarding interference on LTE (Long Term Evolution) femtocell is happening as well as the necessary means to reduce interference on the system using the power control technique. Power control is a technique that can reduce the interference by adjusting the power value sent by the resulting SINR value.

Simulation results show that through the use of power control techniques in the LTE femtocell systems, the performance of the system can be improved to meet the target of 6 dB. The target SINR values can be achieved in all scenarios with the addition of power control technique to the user.

Key words: *Power Control, Femtocell, LTE*