PERFORMANCE OF THREE DIFFERENT POWER CONTROL SCHEMES IN LTE-A FEMTOCELL DEPLOYMENT

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ABSTRACT

Femtocell deployment is considered to be the most efficient way to improve the capacity of cell and performance of mobile service especially in high traffic user at urban area. However, the radio signal interferences were occurs in Macrocell that cause the capacity degradation in Long Term Evolution-Advanced (LTE-A) Femtocell. Therefore, minimizing the interference in LTE-A Femtocell using power control technology is necessary. Femto-to-femto interference is the main focus in this paper. The main objective of this paper is to analyze the performance of three different power control scheme which are open loop power scheme, closed loop power scheme and hybrid power scheme. In order to achieve the main objective, this study developed macrocell topology with random femtocells consists of random femto users using simulation software which is MATLAB. Based on the analyses, the proposed hybrid power control scheme is the best technique to mitigate the interference and at the same time will fully optimize the transmitted power.

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