Abstract

LTE-A introduced many new features and techniques, one of these techniques is the Coordinated Multi-Point (CoMP) technique. This technology has a significant role in improving the performance of the cell, especially cell-edge throughput of users, by reducing the impact of Inter Cell Interference (ICI) and increasing throughput and spectral efficiency. This paper provided a modeling and simulation of CoMP technology, Where the CoMP Joint Processing (JP) is adopted. System level simulation (V1.9) is licensed by University of Vienna to model and simulate CoMP technique. It is known that the resource block (RB) is directly proportional to the increase in the bandwidth, but the bandwidth is not always available. Therefore, this paper considers the effect of changing the bandwidth on the mean number RB occupancy, average user throughout and spectral efficiency with changing the number of users per cell at different Transmission Time interval (TTI). The simulation results show the relationship between the bandwidth and the RB and other relationships.

Index Terms

Computer Science

Circuits and Systems

Keywords

Modeling, CoMP, LTE-A, Resource Block.