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MINIMIZE THE INTER-CELL INTERFERENCE IN CLOSE PROXIMITY CELL USING DYNAMIC FRACTIONAL FREQUENCY REUSE METHOD

RATNA ANDARIENA BT HASSAN

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ABSTRACT

Close Proximity is emerging as a cost effective solution for satisfying the huge demands of mobile data. It can be deployed at any place where mobile traffic is required without the need for cell planning. However, coexistence of many uncontrolled small-cells using the same licensed frequency band can result in serious interference problems. In order to utilize small-cell efficiently, it is highly desirable that the small-cell can self- organize the network and mitigate interference automatically. This paper is proposing a dynamic fractional frequency reuse (DFFR) method for reducing the inter-cell interference (ICI) automatically. With reference to dynamic fractional frequency reuse (DFFR), each cell is separated into two regions identified as super region and regular region. For regular region, it is separated into three parts equivalent to the three sectors. The proposed method has evidently provided a comparable performance with Fractional Frequency Reuse (FFR) through simulation. Simulation results have verified the effectiveness of the proposed method.

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