

ABSTRACT

The satisfaction of information needs of data that can be accessed anywhere becomes very important for all users, especially for users who are on the edge of the area of the base station, often getting very weak signals. The signal attenuation can occur because the signals at the cell edge is interfering with other signals weaken each other and the effect of the attenuation of the objects that exist between the base station by the user itself. Therefore in this final project will be carried out LTE network planning to regulate the allocation of frequencies to minimize the possible use of the same frequency so that the user will be able to maximize the coverage area in the city as well as to increase the capacity of each cell.

Planning is based on two things, namely based on the capacity and the second based on the coverage. The capacity can be obtained from the number of cells that will be used and the coverage can be obtained allocation of transmit power required by a base station. To reduce interference frequencies should be used techniques that frequency reuse schemes which apply the method Optimal Fractional Frequency Reuse.

From planning through the calculation, estimated throughput requirements planning until 2021 for the area of Bandung at 23.189,681Mbps with the number of users that can be served as many as 632.388 users. Radius cells in each classification region for 0.4km (Dense urban), 0.58km (Urban) and 0.95km (Sub urban). The number of sites required to cover areas of the city of Bandung to the next 5 years there were 245 sites. The smallest CINR value on OFFR only in 0.03 % of the total area of Bandung

Keywords: LTE, capacity planning, coverage planning, interference, OFFR