ABSTRACT

As one of the Global System for Mobile communication (GSM) cellular operator, PT.TELKOMSEL, it is expected to provide maximum service to its customers. One of the most important is how its performance maintains an uninterrupted communication process even though the customer is so dynamic in performing its activities. In other words, PT. TELKOMSEL must be able to minimize the failure rate of customers in communicating when the customer is moving to another place. To be able to meet these objectives, it is necessary to do an analysis of those failures known as handover failure. Therefore, data is needed to be used in the implementation of the analysis. The data that can be observed is data from the last two months. One example of data obtained and observed directly is data on Monday, April 18, 2014. From the data obtained the average value of handover failure that is equal to 6.91%. The BTS-BTS that exceeds that value means having a high handover failure. This is caused by several things, database parameter setting error, communication line connection error (Relation Connection Fault), high traffic density, area overlap area, low transmit power and lack of adjacent cell. The efforts to overcome them include the implementation of settings and configuration of database parameters, improvement of communication lines, the addition of traffic channels, changing direction (downtilt) and the addition of adjacent cell.