ABSTRACT

Communication has become a necessity and plays an important role in public life today. This wide variety of market needs in the telecommunications sector are often not matched by an increase in service quality. One way to get the level of service that is felt by a GSM subscriber is carried out analysis of the received signal strength from Base Stations service to GSM Mobile Stations.

The effect of multipath fading in cellular can't be completely removed from the system. Cooperative Signal Detection method can be simulated based on propagation channel, such as Line of Sight, Cost 231-Hatta for small and medium city, Cost 231-Hatta for large city.

From the analysis, user who is on the edge of the cell detects a decrease in transmit power from the BTS service and the increased transmit power from neighboring BTS. Performance of cooperative signal detection between two BTS services by taking the average of RSL from two BTS services. Difference in propagation loss between small and medium-sized city with large city no more than 5 dBm. Handover happens because Received Signal Level which is accepted by Mobile Station is under the threshold -100 dBm that is permitted by GSM 1800.

Key Words: Cooperative Signal Detection, multipath fading, Line of Sight, Received Signal Level.