

## **ABSTRACT**

Growing number of service providers on the GSM (Global System for Mobile Communications), forcing service providers to strengthen the network and optimize the service and quality that will be given. Quality of service will be provided in accordance with quality standards set by the government and the operator. To meet the standard set required optimization of the network will calculate the performance parameters of a radio that does not decrease the value of the quality of voice signal, connection reliability, and speed of the drop call hand over to a particular cell.

This Final research will discuss the optimization and analysis of network performance on the GSM network for cluster 21 Garut area as one of the coverage area of the service provider network. Akan network optimization based on the measurement results of cluster analysis of test drive of the BTS from some of the cells, and results measurement drivetest data while the data to be analyzed include, call attempt, call drop, failed access, call success, handoff, and blocking.

Results of this optimization is a comparison of the value matches the value of planning with the results and provides recommendations for optimized to produce better results. Rated akan optimization refers to the quality standards of the feasibility of a service after the meet based on certain parameters of the Test Drive and standard Key Performance Indicator (KPI).