

## INTISARI

Teknologi generasi ketiga sudah berkembang di hampir seluruh belahan dunia, tidak terkecuali Indonesia. *Wideband Code-Division Multiple Access* (WCDMA) teknologi dapat memberikan berbagai pelayanan tambahan kepada para pengguna. Fenomena ini yang menuntut operator agar berusaha meningkatkan layanan pengguna telekomunikasi dengan sistem optimasi jaringan berdasarkan *drive test* dan data statistik. Hasil parameter *drive test* berupa *Receive Signal Code Power* (RSCP) dan  $E_c/N_0$  sedangkan hasil parameter data statistik berupa *Drop Call Rate* dan *SHO Success Rate*.

Tugas Akhir ini membahas mengenai analisis penyebab terjadinya *drop call* yang menjadi salah satu parameter dalam penilaian kualitas jaringan. Analisis yang akan dilakukan melalui studi kasus di BTS 3G Hermina. Berdasarkan hasil analisa dari software TEMS Investigation dapat diketahui bahwa penyebab *drop call* dikarenakan belum terdaftarnya *site* tetangga atau yang lebih dikenal dengan *missing neighbor*. Sehingga MS tidak dapat berpindah ke sel tetangga dan menyebabkan pemutusan panggilan (*drop call*).

Berdasarkan hasil *drive test* setelah optimasi dengan menambah *neighbor list*, nilai RSCP pada BTS Hermina sudah mengalami perbaikan, yaitu sebesar -74 dBm dan untuk nilai  $E_c/N_0$  meskipun termasuk dalam kategori yang *bad spot*, yaitu -13 dBm namun proses optimasi berjalan dengan baik dikarenakan sudah tidak terjadi *drop call* pada BTS 3G Hermina.

Kata kunci : WCDMA (*Wideband Code-Division Multiple Access*), *Drive test*, *missing neighbor*, *drop call*, *rscp*,  $E_c/N_0$ .

## ABSTRACT

*The third generation technology has developed in almost all parts of the world , including Indonesia . Wideband Code - Division Multiple Access ( WCDMA ) technology can provide a variety of additional services to users . This phenomenon which requires the operator to try to increase the users of telecommunications services with network optimization system based on drive test and statistical data . Results of the drive test parameters such as the Receive Signal Code Power ( RSCP ) and  $E_c / N_0$  parameters , while the results of statistical data in the form of Drop Call Rate and SHO Success Rate .*

*This final project is to discuss the causes of the drop call analysis that became one of the parameters in the assessment of network quality . The analysis will be carried out through case studies in 3G base stations Hermina . Based on the analysis of software TEMS Investigation showed that the cause of drop call because the site has not been registered or better known neighbors to the missing neighbor . So that MS cannot move to neighboring cells and cause the termination of the call ( drop call ) .*

*Based on the results of the drive test after optimization by adding a neighbor list, the value of RSCP at BTS Hermina has been improved , amounting to -74 dBm , and for the value of  $E_c / N_0$  although included in the category that bad spot , which is -13 dBm but the optimization process goes well because has no drop call in 3G base stations Hermina .*

*Keywords : WCDMA ( Wideband Code - Division Multiple Access ) , Drive test , missing neighbor , drop call , RSCP ,  $E_c / N_0$  .*