

## RINGKASAN

**JINANTHO PAMUNGKAS HABIBULLAH SHOHIIH**, Jurusan Teknik Elektro, Fakultas Teknik Universitas Brawijaya, Juli 2016, Analisis Jaringan 3G Dengan Implementasi *Keys Performance Indicator* Pada Jaringan Telkomsel Area Malang. Dosen Pembimbing: Ir. Sigit Kusmaryanto, M. Eng dan Dwi Fadilla Kurniawan, S.T., M.T

Skripsi ini ditujukan untuk mengetahui seberapa baik layanan kualitas jaringan yang diberikan provide kepada pengguna. Pada skripsi ini pengukuran kualitas layanan provider dilakukan dengan metode *drivetest* (pengukuran langsung dilapangan) pada area Universitas Brawijaya Malang dengan parameter KPI (*Keys Performance Indikator*). Lokasi *drivetest* dipilih secara subyektif dengan pertimbangan tingkat halangan gedung disekitar lokasi pengukuran. Parameter yang digunakan untuk analisis ini berupa : *RSCP*, *Eb/No*, *Ec/No*, *Call Setup Success Ratio* (CSSR), *Call Dropped Ratio* (CDR), *Successfull Call Ratio* (SCR), *Call to Interference* (C/I) dan *Handover Success Ratio* (HOSR).

Berdasarkan data pengukuran dengan penerapan *keys performace indikator* dengan menggunakan metode *drivetest*, daerah yang mengalami penurunan kualitas yaitu pada area Widyaloka. Area Widyaloka menunjukkan penurunan kualitas dibandingkan dengan 3 area pengujian lainnya, dari 100 kali pengukuran nilai CSSR 94 %, nilai CDR 1.03 %, dan nilai SCR 89.073 % hanya area Widyaloka yang mengalami 6 *blocked call* dan 1 *drop call*.

Kata Kunci – *RSCP*, *Ec/No*, Performansi 3G, *BTS coverage*, *Keys Performance Indicator*

## SUMMARY

**JINANTHO PAMUNGKAS HABIBULLAH SHOHIH**, Department of Electrical Engineering, Faculty of Engineering, University of Brawijaya, in July 2016, 3G Network Analysis With Keys Implementation Performance Indicator On Network Telkomsel Malang Area. Supervisor: Ir. Sigit Kusmaryanto, M. Eng and Fadilla Kurniawan Dwi, S.T., M.T

This thesis is intended to determine how well the network quality of service provided to users provide. In this paper, Measuring the quality of service providers was conducted using drivetest (measurement directly in the field) in an area of Brawijaya University with KPI parameters (Keys Performance Indicators). Location drivetest chosen subjectively by considering the level of obstruction of buildings around the location of measurement. The parameters used for this analysis include: RSCP, Eb / No, Ec / No, Call Setup Success Ratio (CSSR), Call Dropped Ratio (CDR), Successfull Call Ratio (SCR), Call to Interference (C / I) and Handover Success Ratio (HOSR).

Based on the measurement data with the application keys on performance indicators using drivetest, areas experiencing decline in quality that is at Widyaloka area. Widyaloka area showed a loss of quality compared to other 3 testing area, 100 times the measurement value of the CSSR 94%, the value of CDR 1:03%, and the value of SCR 89 073% only area experiencing Widyaloka 6 blocked call and one call drop.

Keywords - RSCP, Ec / No, Performance 3G, BTS coverage, Keys Performance Indicator