ABSTRACT

The development of UMTS technologies and services have been a new choice for telecommunication customers. Each UMTS operators do competition to get attention from customers with giving the best services for customers satisfaction.

Network quality benchmark is conducted with measuring, comparing, and analyzing the network quality from one of UMTS operator (Excelcomindo) and two other operators as comparison (Telkomsel and Indosat) in Bandung. The cooperation with Excelcomindo is conducted in UMTS drive test.

Service quality benchmark for voice is obtained from drive test result and refers to KPI (*Key Performance Indicator*), particularly for voice are blocking call attempt (%), SQI, call cut of ratio (%), RSCP (dBm), Ec/No (dB), average BER (%), and Tx power (dBm).

The result below shows service quality from operator I is better than service quality of operator III and operator II. Beside that, we can know network performance problem that felt from customers is long of set up time (6s). That problems are caused by low RSCP or low Ec/No in some of areas.

Based on the result, the areas that have problem are Asia Afrika, Cihampelas, Jalan Ciumbuleuit, Wastu Kencana, martadinata, and Surapati street. The problem is caused by emitting power factor that effect overlap in the sites. So, it will be recommended that there must be change of antenna orientation, and antenna tilting in some of node B.