

ABSTRACT

Problems on the radio communication system are very complex, such as disturbance, noise, and interference. On a radio communication with numbers of operating operator are causing high interference effects. In the operation of the radio frequency system from cellular service providers that involved within becoming one of the main contributors to the decline of QoS in radio communication network.

Those problems are coming from internal and external factors. External interference factors include the use of various devices, such as repeater. Those device is causing disturbance because they emit frequencies that running on the BTS reception or uplink band. For the handling of the disturbance, an observations was made using the RTWP value and causing the Key Performance Indicator (KPI) to decrease. Interference Hunting Techniques with Direction Finder and Handheld Specrum Analyzer device method is used.

Many disturbance that happens often in real life, the purpose of this final task are to analyze, discover, and handle the causes of frequency interference on mobile device by using the parameters of RTWP value (Received Total Wide Band Power) on the uplink band of PT Indosat, Tbk. 890-900 MHz and downlink 935-945 MHz which one of its use is on a UMTS mobile communication technology. In this research, the analysis is to find the cause of high RTWP by checking internal and external.

From the results of the analysis in this study after the known value of RTWP has improved the value of KPI and parameters also improved. The value of KPI Accessibility experienced an improvement that was initially only 87% to 98.77%. The value of Retainibility improvement was initially only 92% to 98.95%, the value of Mobility KPI experienced an improvement that was initially only 89.75% to 97%. So it has reached the target desired PT Indosat, Tbk so that network performance also improved.

Keywords: Inband Interference, RTWP, KPI, Interference Hunting Techniques and NodeB.