

Analisis Pengaruh Down Tilt Antena Untuk Mengurangi Kegagalanhandover Pada Jaringan Seluler GSM PT. Indosat, Tbk. Purwokerto

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Abstract	<p>Handover is a process to guarantee the MS (Mobile Station) communication connection while moving for one cell to another cell. There are 10,89%-12,04% handover failure occurred between BTS Cilongok sector 1 and BTS Karanglewas sector 3 of PT. Indosat, Tbk, Purwokerto, whereas, the standard is 2%-3%. Based on KPI (Key Performance Indicator) data most of handover failure is caused by long overlapping coverage (1,2851 km) as could be seen in BSC Controlled Inc. HO Fail at the amount of 9,69%-10,24%. Long overlapping coverage also reduce Rx Level signal quality to-94 dBm (threshold-90 dBm), and Rx Qual is 2,26 (it is still good enough if comparing to the threshold 5). Down tilt antenna method is used to overcome the overlapping coverage. Calculation result of down tilt antenna points out that the precise down tilt antenna to be applied in BTS Cilongok sector 1 is 3° and BTS Karanglewas sector 3 is 2,5° with number of overlapping coverage 78,2 m (appropriate to reference of PT. Indosat, Tbk Purwokerto ½100 m). After down tilting antenna indicates that there is a reduction of handover failure because of overlapping coverage reduce to 0,01%- 0,02%, and total handover failure reduce to 0,62%-1,39% . Meanwhile there is a raising in signal quality, it is Rx Level become-75 dBm and the better size of Rx Qual is 1.</p>
Publisher Name	Jenderal Soedirman University
Publish Date	2010-08-31
Publish Year	2010
Doi	DOI: 10.20884/1.dr.2010.6.2.36
Citation	
Source	Dinamika Rekayasa
Source Issue	Vol 6, No 2 (2010): Dinamika Rekayasa - Agustus 2010
Source Page	56-61
Url	https://dinarek.unsoed.ac.id/jurnal/index.php/dinarek/article/view/36/34
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