

ABSTRACT

Frequency hopping (FH) is one of performance improvement method of GSM network. FH switches the carrier frequency of a call occupying a traffic channel periodically. This method can degrades the effect of fading and interference. As when a communication is maintained, signals can easily be dropped if there are signal interference happen or if the Mobile Station (MS) currently located at fading area of certain frequency. As a result, by means of FH, the next signal received will be much better if it is sent via different frequency.

Baseband hopping technology is one of FH which has it's own benefits and drawbacks compared with other FH methods. With the right implementation method and some adjustment, BBH can give better network performance.

This final project will cover the BBH implementation at Sumatera Barat. Some Key Performance Indicator (KPI) which indicates the network performance before and after the BBH implementation are also evaluated. The KPIs evaluated are SDCCH Success Rate (SDSR), TCH Drop Call Rate (DCR), Handover Success Rate (HOSR), dan Drive Test results.

With some adjustment, BBH is suitable for Sumatera Barat network condition. The result has reach the target of service determined by PT Telkomsel.

Keyword : Frequency Hopping, Baseband Hopping