

ABSTRACT

A higher traffic load could be causes overload problem at cellular telecommunication network, so the subscriber can not made a call or call drop because the traffic channel were fulfilled. To contend that problem all the telecommunication operator have to know how to use the frequency efficiently. One of the solution is by using *concentric cell method*.

The concentric cell method is a technical about how to use the frequency very efficient which was devide the cell area become inner zone and outer zone by using separated band frequency at inner zone and outer zone with controlled the interference level.

To avoid the higher blocking probability caused subscriber always handover, so the concentric cell method much better applicated to area with high traffic distribution and concentrated but low mobility subscriber.

By using concentric cell method at PT Indosat Bandung GSM network have been increase allocated channel frequency up to 50 % that causes the increase traffic capacity up to 44,81% and efficiency frequency channel up to 50%. In addition it could made increase at total calling that can be served by network up to 23,27%, decrease dropped TCH up to 8,68 %, and call dropped up to 22,328 %.

Keyword : Concentric Cell, Inner Zone, Outer Zone, Handover, Drop Call, TCH Drop