

## ABSTRACT

Mobile telecommunication system is one of the usage of telecommunication system with the fastest growth and demands. It shows a big percentage and it keeps increasing. Between 890-960 Mhz, there are 124 channel and space between channel is 200 Khz, it is very vulnerable against interference from nearby channels and ever from the same channel because of frequency reuse. If it is not anticipated, it will reduce the system reliability.

One of the solution reduce interference frequency effect is by using hopping frequency. This system is a mechanism that hops transmitted information. Hopping method this final project is random frequency hopping. In this final project will be analysed comparison performance between hopping system and non hopping system.

SFH system simulation gives a present in increasing system performance. Call Blocked Rate value decreasing each around 0.45 % for 60 seconds, 0.27 % for 120 seconds and 0.4 % for 180 seconds. An increase Call Success Rate value each around 2.19 % for Arrival Rate 1 call/s, 1.83 % for Arrival Rate 2 call/s, and 1.1 % for Arrival Rate 3 call/s. A decrease Drop Call Rate value because of interference each around 0.53 % for 60 second, 1.64 % for 120 second, dan 2.18 % for 180 second.