ABSTRACT

Based on recommendation of ITU-R M.1036-2, the government will clean frequency band 2,1 GHz that is frequency block 1920-1980 with 2110-2170 MHz and 1880-1920 with 2010-2025 MHz which will be allocated for the third generation telecommunication (3G) services. This cause operators which do not have 3G licenses operating in that frequency band have to migrate their frequency. One of them is TELKOM*Flexi*. Frequency migration for TELKOM*Flexi* only affect at services in second and third regional division covering DKI Jakarta, West Java, and Banten. Outside that regions, TELKOM*Flexi* still can be used. This matter because of frequency 1900 MHz only be used in second and third regional division, outside that areas, served with frequency 800 MHz. To do frequency migration, TELKOM*Flexi* will take 5 MHz of Mobile-8's bandwith allocation in 800 MHz B-Band.

This project analyses the impact of frequency migration of TELKOM*Flexi* from 1900 MHz to 800 MHz in Bandung that concentrate in STO Bandung Centrum *site*, Lippo Gatsu *site*, dan Masjid Agung *site*. The researches include analysis of frequency allocation, coverage, capacity, allocation of sufficiency bandwidth 5 MHz for TELKOM*Flexi* Bandung'subscribers, and analysis of peripheral type which need changed.

The results of this project show that frequency allocation which can be used by TELKOM*Flexi* to migrate in B-Band 800 MHz are 840-845 MHz and 885-890 MHz with channel number 548, 589, and 630. After migration, coverage cell is larger than before. Allocation Bandwidth 5 MHz from Mobile-8 will not enough for TELKOM*Flexi* Bandung'subscribers in the year 2007. So, it needs upgrade BTS condition in order to own 3 carrier capacities or add amount BTS are 69 BTS 1 carrier or 35 BTS 2 carrier or 23 BTS 3 carrier to cover TELKOM*Flexi* Bandung'subscribers in the year 2007 . Frequency migration need replacement of peripheral of BTS and terminal access subscriber .