ABSTRACT

Recently, wireless technology expand a technology such as Mobile Wimax which has some excellence compared to the previous technology in the case of speed data transfer and also support LOS and Non LOS in its modulation.

This final project, discuss about technology of Mobile Wimax (802.16e) in the case of MAPL permitted base on wimaxforum, requirement of traffic's estimation, radius cell, and number of cell.

In the network planning of Mobile Wimax take the case study of Kuningan Jakarta Area with broadly equal to 3,94 km2. Planning done using 2 approach that is approach of coverage area and capacities (traffic). Others planning also use omnidireksional's antenna and sectoral of 120^0 as antenna's sectoral.

Network Planning of Mobile Wimax at final project use the frequency operation 2,3 GHZ with bandwidth equal to 5 MHZ where using omnidireksional's antenna obtained 2 cell base on capacities and 3 cell for its coverage area, while by using antenna sectoral of 120^0 obtained 1 cell base on capacities and 3 cell base on coverage area.

The result of this network planning produce the visualisation of coverage cell and capacities by using software Map Info which is base on calculation of link budget in the downlink direction for its coverage area and calculation of traffic's estimation for its capacities.