

## ABSTRACT

Mobile WiMAX or IEEE 802.16e is a wireless telecommunications technology microwaves that can provide services of high-speed data connectivity, mobility and wide coverage to the user. In the implementation of this technology-based communications network needed dimensioning and network planning. Dimensioning network includes business plan and technical aspects (coverage and predictive capacity of the network) in the next few years, while network planning involves placement of base stations and the use of frequencyspectrum.

In this final project, there are two methods of design that is planning to use the network dimensioning and network implementation in the planning tool (Planet Mentum 5.0). After doing both of these methods then compare the most optimum conditions in the case study in Bandung.

The identification results of the dimensioning values on the analysis of the number of Base Station capacity to produce as many as 67 units and use the coverage approaches 128 units while the number of Base Station on the planning tools totaling 21 units. This result is obtained by considering the parameters that influence it. Furthermore, from the results identified, the accuracy of the planning tools more complex than this dimensioning due to review the results of the design is still theoretically.

***Keywords : Mobile WiMAX, network planning, network dimensioning dan Planet Mentum 5.0***