ABSTRACT

LMDS System (Local Multipoint Distribution Service) is representing one of technological approach of wireless to provide service broadband base on technology of point to point with frequency operate in range of 27 GHZ to 31 GHZ. With small coverage cell, because of rain influence in high frequency, so it is needed existence planning to locate BTS in order to the get an optimal coverage area..

Constructively using mapinfo software, the amount of cell which is got from calculation using method of traffic estimation unable to cover all area of Kotamadya Bandung. It is caused by the calculation which is not ideal. The shape of area district assumed in simple model, on the other hand in real condition cannot. Other cause is cell model of hexagonal, though in real condition, the coverage of antenna is not uniform in each side.

From results of analyses got coverage area from the cell represent the function of cell density. This mean that if subscriber density progressively increase, so coverage of cell must be minimized according to system capacities which is used. The improvement of System capacities in serving subscriber can be arranged using antenna which is made with guidance pattern (sectorize).

To optimize of cell position, it is done a cell displacement so that is formed a cell which is side each other and there is no blank spot area between cells.. Using this method, to cover Kotamadya Bandung, required 5 cell for urban area and 3 cell for suburban area.