

## 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 unable to cover all area of Denpasar. 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.

The analysis resulted that coverage area of cell is a fuction of cell density. Which mean if the number of customer grows, then the cell coverage area had to be made smaller adjust to the used system capacity.

To optimalize cell position, a cell movement is made so a nbeighboring cell is formed, with this method , for Denpasar area 9 cell for urban and 2 cell for suburban is needed and a 26,44 dB of C/I which area still above a minimum of 15 dB LMDS standart.