

## ABSTRACT

LMDS represent point to multipoint communications system base on cell which operate on frequency 27 GHZ till 31 GHZ ( Ka-Band) with available bandwidth equal to 1 GHZ till 3 GHZ. LMDS can provide voice service, data, internet, and the video in bidirectional. The purpose of this final task is LMDS network planning and analyze system performance including capacities, quality, availability, early data initiation, equipment election, power link budget and analyse the possibility of exploiting of system LMDS in Bandung city.

Steps used by the process of LMDS system design with case study at of Bandung city covering subscriber estimation, traffic calculation, site planning based on base station ability and also link budget analyse. The result of this planning obtaining reliable LMDS system and able to give voice and data service.

LMDS system main problem is environmental problem that is rain problem which can influence cell radius. Obtainable in order to system LMDS determined availability of by boosting up energy transmit or cut short radius cell. Link performance was influenced by modulation type and BER parameter. In the plan was using different access method between uplink and downlink direction so bandwidth will be more be optimal. Pursuant to result analyse such as the above inferential that LMDS system can be applicable in Bandung city.