Abstracts

Indonesian Internet needs are growing rapidly. Internet applications are more varying. The Internet network growth not proportionally than user and traffic growth. Major problem for the internet network is technology to cover all region and all place.

Wireless technology growing rapidly, Wimax (Wireless Technology For Microwave Access) is one of the newest wireless technology. Wimax standardization is IEEE 802.16 that has several innovations than the technology before. Wimax have innovation at adaptive modulation, more speed and longer radius it's also support LOS and NonLOS. There isn't any country used wimax for their wireless data network.

The major problems to planning MAN (Metropolitan Area Network Planning) are bandwidth estimation, bandwidth needs, cell radius, re uses frequency, total cell.

This Final project is research how to planning MAN (Metropolitan Area Network) by seeing user needs and coverage area. By deploying MAN networks all the access of public can be carried out. Internet access become cheaper and bandwidth needs can be carried out.

This research also defined region by urban, sub urban and rural. Each region have own characteristic and have different parameter. By defined the region the bit rate needs for each region can be calculated.

Method that used is cell structuring to coverage all region by assumptions depend on region activity and cell capacity using sectored and cell splitting. The approaching is using coverage area and bit rate needs.

The result is cell model, cell bit rate, cell radius, cell interference, duplexing technique and wide cell. The result can be one of parameter to install Wimax network in Indonesia.