

ABSTRACT

Network planning is very important for optimal result in network telecommunication. BTS planning is one of important part in Telkom Flexi network planning, planning for BTS will make good service quality for system. Many factor influence in BTS planning, for example act of determining count of BTS and BTS location, catch customer. In spite of that, BTS planning is also can guard quality of signal, solve the blank spot, and to make easy for operator in act of determining location, so BTS Flexi planning very necessary in Bandung.

Geographic Information System (GIS) is one of tools that can be used to mapping BTS location with consideration of demand prediction, count of user that can be handled BTS, loss propagation, radius, and computation with Integer Linier Programming. GIS is tools that able to collect, save, integrate, process, and analyze objects and phenomenon. Geographic location is an important or crisis characteristic to be analyzed (Aronof, 1989).

The result of demand prediction in Bandung for 5 years later is 653.041. In this system, demand is divided in every grids. The result of count of user that can be handled BTS is 3166. From the result of loss propagation, be found the result of radius, for urban area is 1.54807 km and for sub urban area is 3.72042 km. The result of Integer Linier Programming for cluster 1 is 10 BTS which spreaded in each of grids. That results are input for GIS.

This system can be used to decide BTS location in grids. And to show information of the result demand prediction for 5 years later, and count of user that can be handled every BTS. In spite of that, to get more accurate result, needed consider other factors which more detail factors and need routine update data.

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