ABSTRACT

The development of technology and telecommunications industry has grown. Availability of services sought by a number of operators that offer a variety of systems and services with the cellular radio network infrastructure, including towers for antenna of BTS (Base Transceiver Station). If seen opposing viewpoints, the density of tower location is too dense brings some problems which impact on society. The placement of the tower is too much and without proper planning will lead to adverse effects.

Based on the problems described above, it can be solved by preparing a master plan of arrangement of tower locations in the Sidoarjo Regency for the next 5 years. Structuring the location of the tower is done by using MapInfo and based on traffic needs by mobile subscribers, Spatial Planning of Sidoarjo Regency and the Regulation of joint cellular telecommunications tower arrangement.

In the calculation of the planning requirements for the BTS 2018, Sidoarjo Regency require BTS 757 sustained by 446 joint mobile telecommunication towers. It necessary to increase the number of towers as much as 22 towers to provide traffic in 2018. The number of additional towers will be placed in the new tower zones with a total area is 6,2172 km² zones.

Keywords: BTS, MapInfo, Master plan, telecommunication tower