

ABSTRACT

Communication technology evolution, wireless specific, at this moment have insist system existence that can distribute information either voice, data, or picture with high capacity and receive signal quality and ability to give voice and data service with data rate more high. HAPS system is one of example cellular technology standard that can give voice and data service with high data rate. HAPS system can purpose as repeater or base station at altitude 20 – 50 km in stratosphere platform. HAPS system is complement to terrestrial cellular network or satellite for evolute to next generation with service more variate and credible.

At this final task will be studied about HAPS network planning process for cellular communication service have as a base CDMA2000 1x in Bandung and Bogor. Data that used in this research data user GSM Telkomsel Bandung, data user Telkom Bogor, and data HAPS equipment. The research explorative and verificative that focused at dimensioning elements HAPS network pass through calculation process be base on data that be able, system limitation and equipment specification that used.

Final result in this research is number of fixed allocation channel, density population, cell area, number of cell, and cell radius that needed to achieve system performance until 2007 and link budget design.