ABSTRACT

The availability of quality services in every place is important for the customer. To provide access to the best service either by using the picocell. Picocell is a cellular system with a coverage area of small-scale, used to expand the coverage area of service, as well as increase the capacity of the service[13]. On airplanes, picocell coverage area and are used to provide access services to customers in the aircraft cabin.

The design is based on capacity and coverage area picocell in the aircraft cabin A330-200. However, it should be noted that aircraft have a communication system that is used to coordinate the situation and the position of each aircraft[8]. Therefore, the picocell as cellular systems with low power nodes[7] expected to be used for coverage area and increase the capacity of the access service in the cabin of an airplane with a small level of interference so as not to interfere with aircraft communication system[9].

This thesis explores the design picocell coverage area in the cabin Airbus A330-200 aircraft to make the provision of quality services in the cabin Airbus A330-200 aircraft. In planning the coverage area produces a single antenna to be used in order to reach all areas of the aircraft cabin. While in the planning of the generating capacity of three antennas should be used in order to serve all passengers in the cabin of an airplane. By placing the antenna in the position of front, rear, and center will produce an average of -67.14 dBm signal strength, -65.16 dBm and -56.21 dBm. As for the three antennas spread across airplane cabin will get an average signal strength of -51 dBm.

Keywords: Picocell, Coverage Area, Capacity, Airplanes