ABSTRACT

Long Term Evolution (LTE) is defined 3GPP (Third Generation Partnership Project) Release 8 standard and also 1xEV-DO technology evolution part of 3GPP-2 roadmap standard. This technology is designed for serviced good spectrum efficient, increased radio capacity, latency and low cost operational for operator and mobile broadband service high quality for user. However, in realisation needed network planning.

Planning Network Long Term Evolution (LTE) using Geographic Information System (GIS) aimed at creating software to help the LTE network planning, showing the coverage area and location of the actual coordinates eNodeB fit and perform analysis using the pathloss propagation model COST 231 Walfish - Ikegami, where the appearance is on the map thematic, which is well known MS received power for each region that will be decided according to the intensity of color on the planning maps.

In this study, obtained by the LTE network planning software using a geographic information system (GIS), a coverage area for each eNodeB in accordance with the actual coordinates. Determination of position location coordinates of an appropriate eNodeB can be analyzed based on the received power at MS by using GIS. By utilizing Rx Power MS maximum obtained at -114.7 dBm, so the location can be realized if eNodeB Rx Power MS (-110 s / d -30 dBm) > maximum Rx Power MS (-114.7 dBm).

Key Word : LTE, Software, GIS