

ABSTRACT

The final project will be designed Long Term Evolution network by using the data existing in the city of Banda Aceh . Designing through beberapa stages namely, data analysis network planning based on area coverage (planning by coverage), network planning based on capacity (planning by capacity) , and finally simulate planning results using software Atoll .

The value In calculating of Link Budget and the radius of cell to get the configuration planning based coverage, required capital propagation channel . Okumura - Hata propagation model will be used in the planning of this network because it congruent with the frequency used is 700 MHz .

The results of the planning Of design that has been done, obtained the analysis throughput needed for the Banda Aceh city is 304.39 Mbps, the number of LTE subscribers as many as 8803 users. Cell number needs to provide optimal service throughout the city of Banda Aceh are as many as 17 cells by using a sector antenna 120°. with each cell radius for Dense Urban areas (1.37 Km), Urban area (1.39 Km), and Sub Urban area of (1.6 Km).

Keywords : LTE , Planning by capacity , coverage by the Planning , software Atoll