

ABSTRACT

Motorized vehicles user, especially those who use the four wheels, who often pass the Jakarta-Cikampek toll road, may often have difficulty connecting to their cellular operator network services, which may be due to the density of users and the influence of the condition of the area which is classified as open space. Along with the increase of users passing through the Cikampek Toll Road, the construction of the overpass on the Jakarta-Cikampek route was held as a form of anticipation of traffic congestion. With this condition, the number of devices requiring network services in the area will also increase. Therefore, in this final assignment will carry out network planning for the Cikampek elevated toll area.

Network planning in this final assignment will carry out by conducting capacity planning and coverage planning. The data that will be used for the planning will be base on Cikampek toll users, also the population of the cities around Cikampek elevated toll route. Then, from the data obtained will be use for calculations in coverage and capacity planning for the elevated toll that is being built.

With this planning, it is known the minimum site of 8 to fulfilled the service to fulfilled the need of the users. By doing the simulation using Atoll software, was measure the quality of the network from the planning. With the SINR average of 8.23 dB, throughput average of 31.99 Mbps, and BLER average of 0,01%.

Key Words : *Capacity Planning, Coverage Planning, Cikampek Elevated*