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5G technology expected can become possible solution give data rate.Current this is still the RAN (Radio Access Network) development model using traditional models Where developed software and hardware using the same vendor. this _ cause exists attachment to one of the vendors so cause RAN development process is expensive.

Open RAN presents service new with reduce CAPEX (Capital Expenditure) compared to traditional RAN because Open RAN has ability for give service that is not depending on one vendor only. This means that Open RAN can integrate all technology cellular in one Server or can in the form of a Virtual Server.Technology mobile that can developed using Open RAN is one of them 5G network. 5G network produces internet with high data rate low latency system .

On research Currently, Open RAN 5G development is implemented as use cases For compare cost development infrastructure between the NAP Conventional with OpenRan in the Dense Urban area (South Jakarta City). Importance study This done so you can know performance and cost infrastructure Open RAN 5G network with use scenario Centralized RAN.

Measured parameters   For test performance and cost network is with method calculation based on capacity and coverage. Based on results testing analysis capacity and coverage obtained results that Open RAN 5G network requires gNodeB based on Coverage UL 66 gnodeB DL 104 gnodeB Capacity in calculation prediction year 2028 with 400 gnodeB. Open RAN can streamline CAPEX fee of 38.38%. Then based on results analysis technical using wireshark software showing that Open RAN is capable of multivendor integration.

Keywords: 5G, Open RAN, RAN, CAPEX, OPEX, Dense Urban