Simulasi dan analisa kinerja pengadaan QOS untuk menguji keandalan user equipment jaringan LTE berbasis NS3 = Simulation and analysis of QOS provisioning in verifying user equipment reliability on NS3 based LTE network

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Abstrak

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Teknologi informasi menjadi kebutuhan yang tidak dapat dipisahkan dalam kehidupan masyarakat zaman sekarang. Mobilitas pengguna yang tinggi menjadikan teknologi LTEmenjadi salah satu solusi yang sangat digemari karena mengijinkan user untuk berpindah dari satu tempat ke tempat yang lain selama masih dalam coverage area network. Kehandalan dari jaringan LTE ini seharusnya lebih baik dari teknologi wireless telekomunikasi yang kita pakai seperti WCDMA dan GPRS.Pada skripsi kali ini dibuat sebuah rancangan sistem untuk pengadaan QoS pada jaringan LTE untuk User Equipment. Dimana dari pengadaan QoS tersebut akan ada data yang akan memperlihatkan bahwa kinerja User Equipment di jaringan LTE handal. Penelitian akan dilakukan secara simulasi dengan NS 3 dengan pengukuran untuk kehandalan dari User Equipment pada bagian teknik konfigurasi dan juga jarak yang akan dicoba. Kondisi skenario dan topologi dibuat sedemikian rupa dengan kondisi jaringan LTE di dunia nyata. Dari keadaan tersebut akan dilihat kinerja kehandalan jaringan LTE terutama pada User Equipment Measurement terpercaya.Ini dapat dibandingkan dengan tabel CQI dimana QoS untuk delay berada disekitaran 100ms atau 0,1 detik sampai 300ms atau 0,3 detik.;Information technology is becoming a necessity that can not be separated in public life today. Reliability make LTE technology is a solution that is very popular because it allows a user to move from one place to another as long as the coverage area of the network. The reliability of the LTE network is supposed to be better than the wireless telecommunications technology that we use such as WCDMA and GPRS. In this thesis,was made a scenario of provisioning system for QoS on the network for LTE User Equipment. Where as the QoSprovisioning willmake a data that would show that the performance of User Equipment in a reliable LTE network. Research will be carried out in simulations using NS 3 with measurements for the reliability of User Equipment around the configuration techniques and also the distance that are will be tried. Condition scenarios and topologies created in such a way with LTE network conditions in the real world. From these circumstances we can verify LTE network reliability, especially on the User Equipment Measurement reliability. This result can be compared with the CQI table where the result is still in within reach on the table delay where as the delay are 100ms or 0,1s second and 300ms or 0,3 seconds.;Information technology is becoming a necessity that can not be separated in public life today. Reliability make LTE technology is a solution that is very popular because it allows a user to move from one place to another as long as the coverage area of the network. The reliability of the LTE network is supposed to be better than the wireless telecommunications technology that we use such as WCDMA and GPRS. In this thesis,was made a scenario of provisioning system for QoS on the network for LTE User Equipment. Where as the QoSprovisioning willmake a data that would show that the performance of User Equipment in a reliable LTE network. Research will be carried out in simulations using NS 3 with measurements for the reliability of User Equipment around the configuration techniques and also the distance that are will be tried.

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