

## INTISARI

### ANALISIS PENGARUH TEKNOLOGI PANGGILAN TELEPON TERHADAP KUALITAS PANGGILAN SUARA DAN KONEKSI INTERNET DENGAN METODE *DRIVE TEST*

**Abstrak** – Teknologi telekomunikasi merupakan salah satu teknologi yang berkembang sangat pesat dan berdampak dalam keberlangsungan hidup manusia dalam hal komunikasi. Pada era modern ini, kebutuhan manusia akan komunikasi dan informasi adalah hal yang sangat penting. Terlebih di masa pandemi ini dimana masyarakat harus mengurangi pertemuan tatap muka secara langsung. Penelitian ini akan memanfaatkan *multitasking* dalam *smartphone* dengan menguji dua teknologi panggilan telepon. Teknologi yang akan diuji adalah VoLTE (*Voice over LTE*) dan VoIP (*Voice over Internet Protocol*). Penelitian ini membandingkan kualitas panggilan antara VoLTE dan VoIP, yang pada penelitian ini menggunakan aplikasi WhatsApp, serta dampaknya terhadap *Quality of Service* (QoS) saat dilakukan panggilan telepon. Hasilnya, persentase perbandingan nilai parameter RSRP VoLTE lebih baik 2.73% daripada VoIP, RSRQ VoLTE lebih baik 2.08% daripada VoIP, CSSR VoIP lebih baik 0.48% daripada VoLTE, dan DCR VoLTE lebih baik 304.25% daripada VoIP. Sedangkan persentase perbandingan nilai parameter QoS adalah nilai *throughput* VoLTE lebih baik 12.18% daripada VoIP, *delay* VoLTE lebih baik 11.32% daripada VoIP, dan *packet loss* sama-sama menunjukkan nilai 0%.

Kata kunci: VoLTE, VoIP, WhatsApp, kualitas panggilan, QoS

## **ABSTRACT**

### ***ANALYSIS OF PHONE CALL TECHNOLOGY EFFECT TO VOICE CALL AND INTERNET CONNECTION QUALITY USING DRIVE TEST METHOD***

***Abstract** – Telecommunication technology is a technology that is developing very rapidly and has many impacts on the human needs of communication. In this modern era, human needs for communication and information are very important. Especially in this pandemic era where people have to reduce face-to-face interaction. This research will utilize the multitasking ability in smartphones by testing two phone call technologies. The technologies to be tested are VoLTE (Voice over LTE) and VoIP (Voice over Internet Protocol). This research compares the call quality between VoLTE and VoIP, which in this research uses the WhatsApp application, as well as its impact on Quality of Service (QoS) when a phone call is ongoing. As a result, the comparison percentage value of the VoLTE RSRP parameter is 2.73% better than VoIP, RSRQ VoLTE is 2.08% better than VoIP, CSSR VoIP is 0.48% better than VoLTE, and DCR VoLTE is 304.25% better than VoIP. Meanwhile, the comparison percentage of QoS parameter values is that throughput VoLTE is 12.18% better than VoIP, delay VoLTE is 11.32% better than VoIP, and both packet loss shows a value of 0%.*

***Keywords:** VoLTE, VoIP, WhatsApp, calls quality, QoS*