

ABSTRACT

This comprehensive research delves into the evaluation of the 5GHz Wi-Fi network performance and coverage within the Telkom University Landmark Tower (TULT) building, spanning floors 1 to 3. Through meticulous site surveys, signal strength mapping, and meticulous analysis of network traffic using Wireshark, the research sought to assess Quality of Service (QoS) metrics with PPDIOO method. The research begins with a detailed overview of the network infrastructure, outlining the distribution of access points across the building's floors. This sets the foundation for the subsequent signal strength mapping, providing valuable insights into the network's coverage and performance within TULT. Furthermore, the research evaluates explicitly the QoS metrics, including throughput, average delay, and packet loss during both normal and high activity times. By adhering to the TIPHON standard scale, each parameter is carefully assessed, showcasing the network's strengths and identifying areas for improvement.

Keywords — **5ghz Wi-Fi, Telkom University Landmark Tower (TULT), Network Performance, Quality Of Service (QoS), TIPHON, PPDIOO**