

## **ABSTRACT**

Broadband networks are becoming increasingly important to support various types of traffic, such as voice, video, and data. Increased broadband usage can lead to degraded quality of service, such as latency and jitter.

Wi-Fi is a type of broadband that uses radio waves to transmit data. OpenWiFi is an innovative solution to increase the capacity of Wi-Fi networks. OpenWiFi offers advanced features, such as Controller, Passpoint, and OpenRoaming, as well as QoS management to ensure good service quality.

Based on the results of testing and analysis, the OpenWiFi WiFi network in the Telecom Infra Project Lab has good performance. The average bitrate in all rooms is above 4 Mbps, which is the specified bandwidth limit. Jitter is also within acceptable limits, with 95% of jitter values being below 50 milliseconds.

Before QoS implementation, the average bitrate per device could reach 13-15 Mbps, but with QoS implementation, the average bitrate per device dropped to 4-5 Mbps. However, this decrease in bitrate is also followed by an increase in network performance stability and consistency. With QoS, the OpenWiFi Wi-Fi network can provide better services for all users, including users who require high bandwidth for certain applications.

Keywords: Wi-Fi, OpenWiFi, Quality of Service