

## ABSTRACT

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*In Telkom University Applied Sciences Faculty classrooms, there are available Wi-Fi connections. But it is often difficult to connect because of the limited capacity of the network. In this final project we build High Density Wireless LAN (HDWLAN) in Faculty Applied Sciences Telkom University classroom to support learning activities. HDWLAN can handle 50 users connected simultaneously. The device used is Mikrotik Routerboard 433 as an access point and using the IEEE 802.11n standard. To measure the quality of the network, Wireshark application with 30 device client is used. The measurement result excellent performance according by ITU-T G.1010 Standard. All Delay are measured < 150 ms, packet loss are < 1% , average throughput per client 200 744 Kbps and the the overall throughput are 6022,322 Kbps)*

*Keywords: Mikrotik Access Point, High Density WLAN, 802.11n*