

## Abstract

The current wireless network technology is rapidly growing and needed. With this technology we do not need to connect an Ethernet cable to our device to connect to a network or the internet. The needs of wireless networks can be influenced by the rapid growth of devices that are practical to carry by an individual. Human needs who always want to update the development of the social world or technology requires an individual to always connect to an Internet network. Along with the growing growth and needs of wireless networks (wireless) to cause expansion of wireless network area (wireless) for a service so as not to falter when we have to move the area or place.

Therefore, one solution to expand wireless network is to use wireless distribution system method. Wireless distribution system is a system that allows for interconnection between Access Point (AP) so that wireless network formed has wide area. In this final project, the author will install wireless distribution system in a dynamic state which will facilitate in making a wide network. An Access Point device (AP) may not necessarily have a wireless distribution system method. In this final project will be implemented and analyzed dynamic wireless distribution system in video conference service. The design is to model 2 clients that will conduct video conference using 1 server. Then divide the traffic into the access point station then sent to another access point by using wireless distribution system method.

The result of the implementation generates a value on the root AP with a delay of 6.085 ms at the nearest point and 6.945 ms at the farthest point, jitter 1.008 ms at the nearest point and 1,381 ms farthest point, 1.412 Mbps throughput at the nearest point and 0.775 Mbps at the farthest point, and retransmission of 1.3 package at the nearest point and 1.4 packets at the farthest point. At 1 hop AP produces a delay of 7,835 ms at the nearest point and 8,537 ms farthest point, jitter 0.698 ms at the nearest point and 0.823 ms farthest point, 0.941 Mbps throughput at the nearest point and 0.869 Mbps at the farthest point, and retransmission of 2.1 packets at the nearest point and 2.6 packets at the farthest point . At 2 hops AP produces a delay of 9,837 ms at the nearest point and 10,367 ms at the farthest point, 1,223 ms jitter at the nearest point and 1,304 ms at the farthest point, throughput of 0.919 Mbps at the nearest point and 0.896 Mbps at the farthest point, and retransmission of 1.2 packages at the nearest point and 4.5 packets at the farthest point

**Key Word :** *Wireless Distribution System, Access Point, Video Conference, Quality of Service*