

## **ABSTRACT**

WMAN in BAPUSIPDA network design originated from the problem to make efficient use of the Internet and the amount spent on Internet subscription. While the use of funds to use the internet access provided by the Office of the center is limited and the separation between the two buildings with BAPUSIPDA BAPUSIPDA Jabar Bandung, it is planned to build a network WMAN to replace the network path that has been installed by the provider. WMAN networks selected as the access by reason of the costs incurred will not continue only during the design and implementation of the course.

The methods used are designing WMAN networks point to point between BAPUSIPDA building with BAPUSIPDA Bandung West Java. The device used in the design and implementation of WMAN is using the grid as a transmitter antenna and sectoral antenna at the receiver. Point to point communications between the two antennas is done in line of sight without any obstacle.

In designing and implementing this WMAN obtain measurement results Quality of Service was good. It is seen from the results of testing several parameters: the average delay amounted 15,67ms, packet-loss by an average of 0.67%, and the throughput of 0,110MBit / sec which is done by accessing multiple servers to the locations internationally. Therefore, when compared with the standard quality Quality of Service ITU-T G.114 gain value in accordance with these standards, so it can be concluded the design and implementation of the WMAN is pretty good.

Keywords: Network, WMAN, Antenna, Wireless