

ABSTRACT

ADSL broadband network created to optimize the wired telephone network that has been held. One way is to use it as a backhaul of femtocell technology. As a wired telephone service provider, PT Telkom thus has a greater chance than other operators to implement technologies such as femtocells do not have to build new infrastructure to access backhaulnya again. On the other hand PT Telkom also has a network of existing CDMA 1xEvDO that can be integrated with femtocell technology.

In this study we analyzed the feasibility of PT Telkom ADSL broadband network if it meets the standards [1] and [2] to be used as backhaul of femtocell technology. Measurements were made on 3 products PT Telkom 1Mbps package, 2Mbps and 3Mbps better transmission quality and QoS on VoIP service, Download, Streaming Video, as well as all three combined.

From the results of the transmission quality measurements obtained average value of 24,68 dB attenuation network for all three packages, as well as the average value of SNR is 26,02 dB. Both parameters have met the performance standards of PT Telkom. QoS Measurement results show that the highest throughput value obtained on the video streaming service at 3 Mbps and lowest packet at 1Mbps packet traffic mix. Obtained the highest value of packet loss on VoIP service pack 1 Mbps and lowest at 3 Mbps video streaming service but the value of packet loss still meet the standards [1] and [2] for all services. Highest delay values obtained on a mix traffic service pack 1 Mbps and lowest at pack 3 Mbps video streaming service yet still meets the standards [1] and [2] for all services. Highest jitter values obtained on amix trafik service pack 1 Mbps and lowest on video streaming service pack 3 Mbps but still meet the standards [1] and [2] for all services. Analysis of ADSL bandwidth to synchronize bitrate CDMA 1x EVDO air interface rev.0, A and B based on the line rate and the rate attainable concluded that PT Telkom's ADSL network can only be used for CDMA femtocell backhaul 1xEvDO Rev.0

Key words : Femtocell, CDMA 1xEVDO, broadband ADSL, backhaul, QoS