

ABSTRACT

Streaming is a technology that can compress size of audio and video file in order to make it easier to transfer in any transmission media. We know that audio streaming is commonly transmitted using IP network, but now it can be transmitted via wireless Bluetooth, with bluetooth A2DP (Advanced Audio Distribution Protocol) or it is known by bluetooth stereo transmission as media for packet data streaming carrier.

Bluetooth is a radio standard and communication main protocol which is designed with low power consumption and can provide data and voice communication service in real-time. Bluetooth works on 2.45 GHz band unlicensed ISM (Industrial, Scientific, and Medical) and has limited range between 10 to 100 meters. A2DP defines protocol and procedure which distributes high quality audio content in mono or stereo format through bluetooth from equipment to another in one direction.

The observation model is run with server and client. With A2DP profile, bluetooth is properly compatible as streaming media for music or audio with MP3 audio codec format. ACL (Asynchronous Connection-Less) channel link in bluetooth that is commonly used for data packet, with 723 kbps link bandwidth, can be used for transmit audio streaming data packet from server to client. Audio streaming is run by point to point, with a client, and point to multipoint, i.e. from server to three clients.

The system analysis from audio streaming using bluetooth A2DP shows that with clients increasing and background traffic, throughput declines up to 56.65 %, delay is risen up to 7.448 s, jitter is risen up to 2.65 s, and packet loss is risen up to 22.26%.

Keywords: audio streaming, bluetooth, A2DP, MP3