

Abstract

Jitter is one of problem occurred on *video* streaming through internet network. In consequence, because of the jitter, there is blank picture on *video* while they are played. It is because frames are played too fast or too slow, so that causing packet loss. To handle the jitter, applications need to buffer arriving packets.

In this last project, implementing new adaptive playout algorithms, that are Exponential Average Extension (Exp-Avg-Ext), Fast Exponential Average Extension (Fast-Avg-Ext), Spike Detection Extension (Spike-Det-Ext), and Previous Optimal (Prev-Opt). These algorithms are used to determine size of buffer delay and playout delay, by using network delay of each packet as input value and considering FEC (Forward Error Correction) used, that is Reed Solomon, by counting packet loss probability from the determined playout delay.

Based on test results, the conclusion can be obtained is based on parameters buffer delay, playout delay, and loss probability, Exp-Avg-Ext algorithm delivers best performance. So is each MPEG codec that is used. However, by considering MPEG codec used, Exp-Avg-Ext is better than another if it is used with MPEG 2. Although Fast-Avg-Ext delivers worst performance, however Fast-Avg-Ext that is used with MPEG 1 delivers better quality than with MPEG 2 or 4. With the same way, Spike-Det-Ext or Prev-Opt is good if it is used with MPEG 2. Also can be obtained that mean value of jitter from network, does not influence the comparison of the algorithms.

Keywords: New Adaptive Playout Algorithms, FEC (Forward Error Correction), jitter, packet loss probability.