ABSTRACT

Video on demand (VoD) services, IPTV is one of the paid service. This service can be enjoyed only by certain users who have access rights. For that, we need a security system that will protect the content from the VoD service users who are not eligible.

In this final project, a security system video on demand (VoD) implements the Video Encryption Algorithm (VEA). This method is reading frames in a video, then each frame is read in the bits, and XOR operations performed by certain key byte. After that, Vea is written on the video files on demand (VoD). To test this system, video on demand accessed by users who have access rights or not, then compared the results of encrypting the video and the video is not encrypted. For video that is not encrypted, the key length Vea be altered to 2, 5, 10, 25, and 50 bytes.

With this system, users who have permissions generated an average delay of 1:14 seconds, while users who do not have permissions, an average delay of video with two-byte key length is 1:49 seconds, five bytes is 1.13 seconds, 10 bytes is 1.19 seconds, 25 bytes is 1.21 seconds, and 50 bytes is 1.33 seconds, so that these test results can be known that the video is encrypted with a key length changes did not influence the delay but the effect on video quality. The key used to encrypt, can not be viewed by unauthorized user. So, the key which can be seen are the key results with MD5 encryption

Keywords: IPTV, VoD, VEA, Video Encryption
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