Cloud based Video Storage System with Privacy Protection

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Abstract— In this paper, we present a novel method to protect privacy information for the Cloud based Video Storage System (CVSS). We present how this system stores the video stream data transferred from the network connected camera such as IP CCTV. As the system receives the video stream, it masks the privacy related part, such as facial information or car plate number and so on, of the video stream data with a scrambling key and it also encrypts the scrambled video stream data with an encryption key. In this paper, we also present how the system retrieves the privacy information protected video image requested by either the network control centre or end users. When the network control centre or end user requests the networked video, it retrieves the corresponding video image from the video storage first. Then, it decrypts the image with the decryption key and unscrambles the decrypted image with the unscrambling key. Then it transfers the network video back to the network control center or to the end-user.

Keywords— Cloud Video Storage System, Privacy Protection

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