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Study of a Framework For Video Streaming In Mobile Devices (AMoV and ESoV)

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***Abstract*—**AMoV (adaptive mobile video streaming) and ESoV(efficient social video sharing) are the terms which are currently gaining the attention of variety of computer users and researchers. While enjoying the multimedia services like videos and images, the basic quandary faced by any individual is the progressive downloading or the buffering of the videos. As the researches are focusing on various technologies in said issue, very least focus is given on to the security issues present in these technologies. The basic idea behind this paper is to study and to survey the literature and to propose the security aspects in related field.

Keywords*—AMoV, ESoV, social video sharing, survey , security.*

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I. INTRODUCTION

Now a day's tremendous requirement of video data by video streaming and downloading increased. Over the last few years, presently available video branch services over mobile networks have produced to be well-known. On the contrarily, wireless system is revolving much more to the researchers. The existing traditional way has been changed in the era of Mobile Cloud Computing (MCC) which is efficiently used by the mobile users.Accessible mobile users left from-predictable applications by supporting hardware,3D virtual surroundings, and huge storage capacity;also users share the cloud communications to theirfriends. MCC put the cloud computing into themobile atmosphere and over comes barriers linkedto performance (e.g. battery living, bandwidth, service delay and storage), surroundings (e.g.scalability, heterogeneity, availability) and security(e.g. reliability and privacy). Thanks to the raise ofgrand video compression method such as H.264and MPEG-4, it is currently achievable to joinaudio, video and data in the same signal andtransmit it over packet based wireless arrangement[2].In this technology can propose these hardware resources reasonably.Many of authors have developed the techniques related to storing the data and also for maintaining the data and for security issues related to the cloud[2].

The quality of service on mobile video is based on two factors:

1. **Scalability:** Mobile video streaming services should support a different variety of mobile devices. The mobile devices have different video resolutions, different computing powers, different wireless links like 2G,3G,4G and so on.The strength of signal of mobile devices may vary over time and space.For different mobile devices facing the problem of traffic in same or different cell and link of difference condition.For storing various versions of similar video having different bit rates may obtain high transparency of storing and communication.Scalability refers to different mobile devices have support different wide range of transforming video.

2. Adaptability: Established video streaming method planed by considering comparatively constant traffic links between client-server model.In client-server model or links between servers and users uses wire connection are good.but Inthe mobile environment carry out irregular. Thus the irregular wireless link condition should be properly contract with available supportable video streaming services. To perform this task, we have to regulate the video bit rate adapting to the currently time-varying available link bandwidth of each mobile user. Such adaptive streaming techniques can effectively reduce packet losses properly adaptive video streaming remove the variation in the video having time-varying link bandwidth for mobile users.

II. EXISTING SYSTEM STUDY

In paper[2,5], the author proposed requirement of traffic demand and provided link capacity is not sufficient for the need of mobile devices. Also the time-varying links like time and space results in reduced service quality of video streaming over mobile devices like as extended buffering time and irregular disturbance.in the cloud compute technology, This paper suggest a new video streaming structure of mobile, AMES-Cloud which consist of two parts: AMoV (adaptive mobile video streaming) and ESoV (efficient social video sharing). ESoV and AMoV create a private agent to give video streaming services capably for every mobile client. For a particular client, AMoV lets her secret agent/mediator adaptively alter her/his streaming pour with a scalable video coding procedure depended on the response of link superiority video of an adaptive mobile pour out and allocation framework [2,5].In this paper Author use framework for identify AMES-Cloud in which the creation of personal agents which take care of streaming video in mobile users.

In paper[6], the author proposed The video traffic delay speed inside the adaptive video streaming is in tune based on the user knowledge the highest possible video excellence and links time and varying bandwidth capacity. The two types of adaptive video streaming depends on adaptiveity and restricted by its client or server. The Microsoft smooth streaming knows how to control between different bit fragments which is programmed with configurable bit rates and video declarations at servers. It works the same as clients with dynamism and require video based on local monitoring. The conventional video streams may carry out weakly in module set of connections with a exacting bit rate and measured in stable internet connection between user and server. The mobile video streams gets repeatedly disrupted. If the wireless relation bandwidth a variety of such due to packet failure and bandwidth a misuse. The changeable association conditions should be properly handled to supply steady mobile video services and for a superior QoS practice. Thus providing video excellence to the surrounding TCP friendly rate control process for streaming services over mobile system devices are projected and concerned with price adaption calculating method. The TCP throughput stream can be calculated as the function of packet less rate round trip time and packet size. The H.264 SVC system has gained momentum currently. The SVC organises the adaptive mobile video streaming which studies the real time SVC decoding and encoding at personal computer servers. The newly deployed classification for the communication for video content to one specific user or many users are digital video screen. IPTV and video on require is given to dissimilar end terminal over various communication channels at same or difference time occurrences. For a service or numerous differently encoded versions of the like content to be produced the communication channels or terminals should be undeviated 3G cartridge streaming is commenced which is a charge revision algorithm for conversation. A small number of cross layer adaptation method is used to attain a more correct information of link excellence. Thus the rate adaptation can be more perfectly finished. The bit rate of frame captured by steady video and mobile video is always varied. We use the above technique in this paper for the removal of buffering and fluctuation in the video for mobile user. The mobile video streaming and the social video streaming sharing is cost effective and gets back video from cloud to create private agent for lively mobile user try to watch “non-terminating” mobile video streaming based on mobile users is our proposal. This computing system brings essential enhancement to mobile adaptability and scalability. Keeping a trade of the potential work we will carry out large scale operation on energy and price cost on the basis of mobile users to make bigger framework with more concerns of safety measures and privacy. Aim is to authentication how cloud computing can improve the transmission adaptability and prefetching mobile users and to improve SNS based prefetching and security issues in the AMES cloud.

In paper[3], the author proposed The streaming quality is a prerequisite for users to watchvideos smoothly without interruptions, and thus directly impactsthe human subjective perception.The access time that a user experiences before the startof an on-demand video playback represents the overall responsivenessof the video proxy. The latencies incurred atboth transcoding and streaming components can contribute tothe access time. In this paper we focus on the deterministicsystem-controllable factor, and specifically minimizing theaverage latency spent over encoding one video clip on thecloud compute node, because a video cannot be accessed untilone or multiple re-encoded video clips have been returnedfrom the cloud and arrived at the user.Video freezes are caused by the unavailability of new videodata at their scheduled playback time due to the combinedcontribution of transcoding and streaming jitters. For the *i*-th video clip, we use *ci* to denote the Reduce time (the actualcompletion time). Each video clip has a encoding time *pi*. Inorder to enable real-time transcoding, the expected encodingcompletion time (Reduce time) of the video clips *di* is defined as $di = pe+(i-1)\times\Delta T$ where *pe*is the expected encodingtime of a video clip (a constant) and ΔT is the duration ofthe video clip in time. The term $(i-1)\times\Delta T$ computes thetemporal shift of the *i*-th video clip from the start of thevideo. The transcoding jitter of each clip $\delta T\,ti$ can therefore formally defined as: $\delta T\,ti = ci - di$. In this paper, we assume the streaming jitter $\delta T\,si$ is equal to the transcoding jitter foreach clip, i.e., $\delta T\,si = \delta T\,ti$. The user-side buffering time shouldbe large enough to accommodate the maximum streaming jitterin order to avoid video freezes. The video decoding time isnegligible at both the transcoding component and the user[7].playing of video in the mobile devices are depend on the video clips which is provided for video if the time of related clip is more the buffering created and the flow of video affected in this paper author remove the delay of video clip.

In paper[1],the author proposed In this world multimedia is becoming the huge technology of computer. The technology is increased day by day in the form of mobile devices or potable devices which can be handled by the users very compactable .The multimedia and social networking has became need of human. such devices used to share video, images and audios .The people not able to get knowledge from classes .They can learn from video lectures .we get very much creative ideas for research papers. we can broadcast the important massage all over the world by the multimedia .we can give or take interview or give presentation through video call. As the user wants any video then user get many option if they request. For any video the link of that video has been updated on that video manual i.e YouTube .Sometimes it get

problematic when user puts many request on that website or video changes so some extended issues occurs and that changed is not capable to provide that video so its disadvantage for user another disadvantage for younger generation as adult videos and then becoming to ruin their future and letting them for bud activities like crime videos . In this technology cloud computer is playing the most important role for storing video in bulk amount of data. we can share a video through social media and it will help to all sharing and storing video in the cloud data from called video cloud. From video cloud user or people get higher better study environment or higher study material which cloud helping to user to learn latest technology and knowing the current affairs.

In paper[10], the author proposed The major VoD provide like AT&T has conducted a research on exploiting virtualisation techniques for delivering cloud-based IPTV services. It has also been recognized that the VoD bandwidth demand projection on capacity planning is important. In AT&T's IPTV network it has been observed that the demand estimates can help with optimal content placement. Advanced video demand forecasting such as Non-stationary time series models and video access pattern extraction via principal component analysis has been proposed. For virtual machines and web applications with respect to CPU utilisation and power consumption predictive and dynamic resource provisioning has been proposed. With dynamic bandwidth demand VM consolidation has also been considered. In three different aspects their work exploits the unique characteristic of VoD bandwidth demands. First one include the bandwidth workload consolidation is easy as convex optimization for load direction matrix. Unlike VM the demand of VoD channel can be fractionally splitted into video requests. Second one include more accurate risk factor control of system forecast not only on expected demand by also on demand volatility. It mostly highlights the previous work on assumption of constand demand variance. Third one include independent workload on previous works to exploit statistical relation between bandwidth demand of different video channels to save resources. The author is using virtualization techniques for cloud-based IPTV services. Whenever the user wants video data this technique can be user as in AT&T's. The above author has more advanced video demand forecasting techniques. This technique will provide the pattern of video access and non-stationary time series.

In paper[3], the author proposed In both wire and wireless services users are demanding for understanding services for working higher quality of videos. The most common internet media providers like YouTube have overcome the problem of video delivery to that of a progressive download by a content distribution network. They overcome this problem using a non-adaptive code but the delivery variability is handled by freezing which degrades the user experience. In this paper they propose and study the development of a H.264/SVC based video proxy situated between the user and media servers that can adapt to changing network condition using scalable layer at different data rates .The two major function of this proxy are 1.video transcoding in this original format trancoded into SVC 2.videostreaming in this video streaming to different users under internet dynamics because of code incompatibility a video proxy will have to decode an original into an intermediate formats and reencode into SVC .The encoding process is highly complex that the transcoding speed is relatively slower even on a modern multicore processor when the video decoding overhead is negligible. Due to a long duration the transcoded video accessed by the user and during its playback the possible video freezes because of unavailability of transcoded video data. The users subjective perceptions of the video are directly and negatively impacted by the long access time and frequent freezes multiple concurrent videos are allowed scalable support by enabling real-time transcoding a cluster of computer or cloud for its operation are employed by our video proxy. In order to achiever encoding parallezation our proxy solution divides video into clips and maps them with different compute nodes and configure with one or multiple CPU's.

In paper[1], the author proposed The figure 1 shows the architecture of the adaptive and efficient way of enhancing the video streaming and sharing of video to the mobile users. The architecture was constructed based on the video service provided in cloud called as AMES‖. The architecture contains

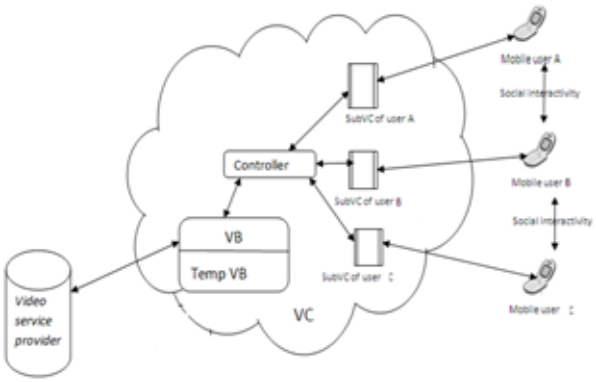

Figure 1. VC architecture

A. Video service provider (VSP) : the originated place of actual video data. It used the traditional video service provider. VSP can handle multiple request at the same time, while coming to the QoS with the mobile users , the VSP does not provide service up to the mark.

B. Video cloud (VC): the cloud step up has been established with many components working together ,virtually to get the original video data from the VSP and provide the reliable service to the mobile user and it also provides availability of video and makes the sharing of those videos among the users much easier.

C. Video base (VB): Video base consists of the video data that are provided as the service to the mobile users in cloud.

D. Temp video base(TVB): it contains the most recently accessed video data and it also contains most frequently accessed video data.

E. Vagent: it is an agent created for every mobile user who requests for the video service to the video cloud.

F. Mobile users: the users who are mobile and providing the availability of the service to their location is difficult.

The video cloud provides services under two main methodologies adaptive mobile video streaming and efficient mobile video sharing. The video streaming and video sharing plays the vital role in providing the reliable service to the customers. The rate in which frames of the videos are streams determines the quality and availability of the video service. Video data are most commonly shared among the users in the network. Mobile users are most commonly found to use social networking sites more offently[1].

III. COMPARATIVE STUDY

Sr. No.	Author	Methodology	Advantages	Disadvantages
1	T. Monika and B. Pallavi	Creation of private agent	Improve streaming rate	Security not consider
2	Mr.PrabhuMr .Gautham , Mrs.Nagajothi	Used buffering removing	Improve streaming rate and removing fluctuation	Not efficient sharing and data security not provided
3	Z. Huang, C. Mei, L. E. Li, and T. Woo,	real-time transcoding for video clips	Fast streaming and reduce time delay for video buffering	Reliable video sharing not measured
4	M. Sona, D.Daniel, S.Vanitha	Adaptive method using cloude	Improve streaming and video sharing	Security and integrity of data not considered
5	As perNiu, H. Xu, B. Li, and S. Zhao	virtualization techniques for deliveringcloud-based IPTV services	Streaming video on demand	Security and integrity of data not considered

IV. CONCLUSION

From the above comparative study of AMES cloud and the methods used to developed it shows that video streaming is consider by most of the authors. But the major factor not consider which is reliable video sharing and integrity of data over cloud computing environment.

It also observe that streaming of video get improved and effective sharing is also consider in last few years.the future work which can be done on AMES cloud which is providing security and integrity to video by using some standard cryptography algorithms like RSA,AES and other.

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