**AMES-CLOUD: A FRAMEWORK OF ADAPTIVE MOBILE VIDEO STREAMING AND EFFICIENT SOCIAL VIDEO SHARING IN THE CLOUDS**

**ABSTRACT:**

While demands on video traffic over mobile networks have been souring, the wireless link capacity cannot keep up with the traffic demand. The gap between the traffic demand and the link capacity, along with time-varying link conditions, results in poor service quality of video streaming over mobile networks such as long buffering time and intermittent disruptions. Leveraging the cloud computing technology, we propose a new mobile video streaming framework, dubbed AMES-Cloud, which has two main parts: adaptive mobile video streaming (AMoV) and efficient social video sharing (ESoV). AMoV and ESoV construct a private agent to provide video streaming services efficiently for each mobile user. For a given user, AMoV lets her private agent adaptively adjust her streaming flow with a scalable video coding technique based on the feedback of link quality. Likewise, ESoVmonitors the social network interactions among mobile users, and their private agents try to prefetch video content in advance. We implement a prototype of the AMES-Cloud framework to demonstrate its performance. It is shown that the private agents in the clouds can effectively provide the adaptive streaming, and perform video sharing (i.e., prefetching) based on the social network analysis.

**EXISTING SYSTEM**:

Over the past decade, increasingly more traffic is accounted by video streaming and downloading. In particular, video streaming services over mobile networks have become prevalent over the past few years. While the video streaming is not so challenging in wired networks, mobile networks have been suffering from video traffic transmissions over scarce bandwidth of wireless links. Despite network operators’ desperate efforts to enhance the wireless link bandwidth, oaring video traffic demands from mobile users are rapidly overwhelming the wireless link capacity.

**DISADVANTAGE OF DISADVANTAGE:**

* Receiving video streaming traffic via 3G/4G mobile networks, mobile users often suffer from long buffering time and intermittent disruptions due to the limited bandwidth and link condition fluctuation caused by multi-path fading and user mobility.
* Thus, it is crucial to improve the service quality of mobile video streaming while using the networking and computing resources efficiently

**PROPOSED SYSTEM:**

A adaptive video streaming and prefetching framework for mobile users with the above objectives in mind, dubbed AMES-Cloud. AMES-Cloud constructs a private agent for each mobile user in cloud computing environments, which is used by its two main parts: (1) **AMoV** (adaptive mobile video streaming), and **ESoV** (efficient social video sharing).

AMoV offers the best possible streaming experiences by adaptively controlling the streaming bit rate depending on the fluctuation of the link quality. AMoV adjusts the bit rate for each user leveraging the scalable video coding. The private agent of a user keeps track of the feedback information on the link status. Private agents of users are dynamically initiated and optimized in the cloud computing platform. Also the real-time SVC coding is done on the cloud computing Side efficiently.

AMES-Cloud supports distributing video streams efficiently by facilitating a 2-tier structure: the first tier is a content delivery network, and the second tier is a data center. With this structure, video sharing can be optimized within the cloud. Unnecessary redundant downloads of popular videos can be prevented.

Based on the analysis of the SNS activities of mobile users, ESoV seeks to provide a user with instant playing of video clips by prefetching the video clips in advance from her private agent to the local storage of her device. The strength of the social links between users and the history of various social activities can probabilistically determine how much and which video will be perfected.

**ADVANTAGES OF PROPOSED SYSTEM:**

1. Scalability: mobile video streaming services should support a wide spectrum of mobile devices; they have different video resolutions, different computing powers,etc.. To address this issue, the Scalable Video Coding (SVC) technique used to improve the scalability.
2. Adaptability: Traditional video streaming techniques designed by considering relatively stable traffic links between servers and users perform poorly in mobile environments.

**SYSTEM SPECIFICATION**

**HARDWARE REQUIREMENTS:**

* Processor : Intel Core i3 Processor
* Speed : 2.5 GHz
* RAM : 2GB(min)
* Hard Disk : 500MB
* Key Board : Standard Windows Keyboard
* Mouse : Two or Three Button Mouse
* Monitor : LCD

**SOFTWARE REQUIREMENTS:**

* Operating System : Windows7/10.
* Application Server : Tomcat6.0/7/8.X.
* Front End : Java , HTML,CSS
* Scripts : JavaScript.
* Server side Script : Java Server Pages.
* IDE : Net beans
* Back End : MYSQL 5.0/ Heidi SQL 8.1
* Database Connectivity : JDBC

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