ABSTRACT:

The latest cloud computing knowledge with wealthy possessions to recompense for the limitations of mobile devices and connections can potentially provide a perfect proposal to hold up the desired mobile services. We propose the design of a Cloud-based novel Mobile social TV system. The system efficiently uses both Platform-as-a-Service and Infrastructure-as-a-Service cloud services to present the living-room knowledge of video watching to a group of unequal mobile users who can interrelate socially while sharing the video. To agreement good streaming quality as knowledgeable by the mobile users with time unreliable wireless connectivity these different designs for supple transcoding capabilities, battery efficiency of mobile devices and spontaneous social interactivity jointly provide an ideal platform for mobile social TV services. The individual mobile devices are as long as greatly richer contents and social interactions to users on the move. This trend though is throttled by the limited battery lifetime of mobile devices and unbalanced wireless connectivity making the uppermost probable quality of service experienced by mobile users not possible.

1. INTRODUCTION

In CloudMoV mobile users can bring in a live or on-demand video to look at from any video streaming site, request their friends to look at the video concomitantly and chat with their friends while enjoying the video. It consequently merges viewing experience and social consciousness among friends on the go. As different to traditional TV watching, mobile social TV is well suitable to today’s life style where family and friends may be alienated geographically but anticipate sharing a co-viewing experience. We explain the intend of a novel mobile social TV system, CloudMoV which can efficiently make use of the cloud computing example to offer a living-room knowledge of video watching to dissimilar mobile users with impulsive social connections.

Present is one more tendency in which efforts are enthusiastic to expand social elements to television systems. Coppens et al. attempt to add affluent social interactions to TV but their design is incomplete to traditional broadcast program channels. Oehlberg et al. conduct a sequence of experiments on human social behavior while watching different kinds of programs. A number of mobile TV systems have bounced up in recent years ambitious by both hardware and software advances in mobile devices. Some early systems carry the “living room” knowledge to small screens on the move. But they focus more on barrier permission in order to understand the meeting of the television network and the mobile network than search the demand of “social” interactions among mobile users. Although inspirational these designs are not that appropriate for being applied directly in a mobile environment. Schatz et al. have designed a mobile social TV system which is modified for DVBH networks and Symbian devices as opposed to a wider audience. Compared to these previous work and systems we target at a design for a general, moveable mobile social TV framework characteristic co-viewing experiences among friends over geographical separations through mobile devices. The structure is open to all Internet-based video programs also live or on-demand and supports an extensive range of devices with HTML5 compatible browsers set up without any other compulsory constituent on the devices.

2. RELATED WORK:

2.1 LITERATURE REVIEW:

We propose and study the development of a H.264/SVC (Scalable Video Coding) based video proxy situated between the users and media servers that can adapt to changing network conditions using scalable layers at different data rates. The two major functions of this proxy are: (1) video transcoding from original formats to SVC,
and (2) video streaming to different users under Internet dynamics. Because of codec incompatibilities, a video proxy will have to decode an original video into an intermediate format and re-encode it to SVC.

While the video decoding overhead is negligible, the encoding process is highly complex that the transcoding speed is relatively slow even on a modern multicore processor. This results in a long duration before a user can access the transcoded video (called video access time), and possible video freezes during its playback because of the unavailability of transcoded video data. Both long access time and frequent freezes directly and negatively impact the users’ subjective perceptions of the video. To enable real-time transcoding and allow scalable support for multiple concurrent videos, our video proxy employs a cluster of computers or a cloud for its operation. Specifically, our proxy solution partitions a video into clips and maps them to different compute nodes (instances) configured with one or multiple CPUs in order to achieve encoding parallelization.

First, multiple video clips can be mapped to compute nodes at different time (Map time) due to the availability of the cloud computation resources and the heterogeneity in the computation overhead of previous clips. Second, the default first-task first-serve scheme in the cloud can introduce unbalanced computation load on different nodes. This will lead to the deviations from the expected arrival time at the Reduce application (the encoding completion time or the Reduce time) of different video clips. The deviation is called the transcoding jitter. Third, the transcoding component should not speed up video encoding at the expense of degrading the encoded video quality.

With personal content having a broad meaning: your (animated) photos, your movies, but also content you like or recommend, like the broadcast of the football game of your favorite team. Rich communication like people use in daily life be it voice, text, video, gestures or by showing their emotions etc. and even further when it concerns voice masking and visualized metaphors. In a football stadium people yell, use gestures, provoke the other supporters by singing songs and show their emotions in a very expressive way. To provide community support, all enabling features needed for social networking like a buddy list, rich presence, invite a friend function, calendar, etc. are included. These functions are the same you use to make appointments for going to the football game.

3. PROBLEM STATEMENT:

3.1: EXISTING SYSTEM

A number of mobile TV systems have sprung up in recent years, driven by both hardware and software advances in mobile devices. Some early systems bring the living room experience to small screens on the move. But they focus more on barrier clearance in order to realize the convergence of the television network and the mobile network, than exploring the demand of “social” interactions among mobile users.

3.2 DISADVANTAGES:

Although many mobile social or media applications have emerged, truly killer ones gaining mass acceptance are still impeded by the limitations of the current mobile and wireless technologies.

✓ Low Battery life.
✓ Lack of picture quality.
✓ Limited band width.

3.2: PROPOSED SYSTEM

We propose the design of a Cloud-based, novel Mobile social TV system. The system effectively utilizes both PaaS (Platform-as-a-Service) and IaaS (Infrastructure-as-a-Service) cloud services to offer the living-room experience of video watching to a group of disparate mobile users who can interact socially while sharing the video. To guarantee good streaming quality as experienced by the mobile users with time varying wireless connectivity, we employ a surrogate for each user in the IaaS cloud for video downloading and social exchanges on behalf of the user.

3.3 ADVANTAGES

Encoding flexibility: Different mobile devices have differently sized displays and various codec’s.

✓ Traditional solutions would adopt a few encoding formats ahead of the release of a video program.
✓ CloudMoV customizes the streams for different devices at real time, by offloading the transcoding tasks to an IaaS cloud.
4. SYSTEM ARCHITECTURE:

Module Description

1. Transcoder: It resides in each surrogate, and is responsible for dynamically deciding how to encode the video stream from the video source in the appropriate format, dimension, and bit rate. Before delivery to the user, the video stream is further encapsulated into a proper transport stream. Each video is exported as MPEG-2 transport streams which are the de facto standard nowadays to deliver digital video and audio streams over lossy medium.

2. Social Cloud: Social network is a dynamic virtual organization with inherent trust relationships between friends. This dynamic virtual organization can be created since these social networks reflect real world relationships. It allows users to interact, form connections and share information with one another. This trust can be used as a foundation for information, hardware and services sharing in a Social Cloud.

3. Messenger: It is the client side of the social cloud, residing in each surrogate in the IaaS cloud. The Messenger periodically queries the social cloud for the social data on behalf of the mobile user and pre-processes the data into a light-weighted format at a lower frequency. The plain text files are asynchronously delivered from the surrogate to the user in a traffic-friendly manner. In the reverse direction, the messenger disseminates this user’s messages to other users via the data store of the social cloud.

4. Gateway: The gateway provides authentication services for users to log in to the CloudMoV system and stores user’s credentials in a permanent table of a MySQL database it has installed. It also stores information of the pool of currently available VMs in the IaaS cloud in another in-memory table. The in-memory table is used to guarantee small query latencies, since the VM pool is updated frequently as the gateway reserves and destroys VM instances according to the current workload. The gateway also stores each user’s friend list in a plain text file (in XML formats), which is immediately uploaded to the surrogate after it is assigned to the user.

5. Subscribe: In this module user can download the video. Subscribe module download video in high speed and clear video streaming. Authorized user every one download and watch those videos.

6. EXPERIMENTAL RESULTS:
7. FUTURE ENHANCEMENT:

In the current prototype, we do not enable sharing of encoded streams (in the same format/bit rate) among surrogates of different users. In our future work, such sharing can be enabled and carried out in a peer-to-peer fashion, e.g., the surrogate of a newly joined user may fetch the transcoded streams directly from other surrogates, if they are encoded in the format/bit rate that the new user wants.

8. CONCLUSION:

We conclude results prove the superior performance of CloudMoV, in terms of transcoding efficiency, timely social interaction, and scalability. In CloudMoV, mobile users can import a live or on-demand video to watch from any video streaming site, invite their friends to watch the video concurrently, and chat with their friends while enjoying the video.

9. REFERENCES:


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