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REMOTE DISPLAY SOLUTION FOR MOBILE COMPUTING

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Abstract

Cloud multimedia provides solutions for high quality multimedia. Now a days mobile phones becomes very popular, network services are no longer limited to home. Multimedia information is obtained easily using mobile devices that allows users to enjoy unlimited network services. Mobile streaming provides low quality and low bandwidth. In this paper, we use a network and device-aware Quality of Service (QoS) that provides the suitable multimedia format for the terminal unit via mobile streaming services and also considering and adjusting the transmission frequency for avoiding the wastage of bandwidth. By using this method, we can improve the quality and bandwidth of multimedia.

Keywords: Sensor networks, Computer network management, Ad hoc networks.

1. Introduction

Mobile devices have become an essential part of our daily life, with smart phone sales now surpassing desktop system sales. As mobile device popularity grows, end-user demands to run heavier applications are also increasing. Although advances in miniaturization continue, the desire to preserve the advantages mobile devices have over desktop systems in weight, size, and device autonomy will always impose intrinsic limits on processing power, storage capacity, battery lifetime, and display size. Researchers must redesign conventional desktop applications to operate on mobile hardware platforms, thereby often reducing functionality, whereas more demanding applications typically require specific hardware resources that are unlikely to be available on mobile devices. Their portability is well appreciated by end-users and smart phones sales will soon surpass desktop sales.

Conventional desktop applications need to be redesigned to operate on mobile hardware platforms, thereby often losing functionality; whereas more demanding applications typically require specific hardware resources that are very unlikely to be available on mobile devices. At the same time, the web hosts increasingly powerful computing resources and has evolved to a ubiquitous computer, offering applications ranging from simple word processors, over all-encompassing enterprise resource planning suites to 3D games .

Both Microsoft and Google, have developed complete online office suites, called Office Live and Google Apps respectively, that may evolve to all round alternatives for the mobile office suites. Beyond the conventional office applications, cloud computing broadens the range of applications offered to mobile end-users with demanding applications in terms of graphical hardware, such as 3D virtual environments, or storage capacity, such as 3D medical imaging applications. As the cloud infrastructure is shared among multiple users, these hardware resources can be provided in a cost-effective way.

All smart phones, as computers, are preferred targets of attacks. These attacks exploit weaknesses related to smart phones that can come from means of communication like SMS, MMS, WiFi networks, and GSM. There are also attacks that exploit software vulnerabilities from both the web browser and operating system. Finally, there are forms of malicious software that rely on the weak knowledge of average users.

Different security counter-measures are being developed and applied to smart phones, from security in different layers of software to the dissemination of information to end users. There are good practices to be observed at all levels, from design to use, through the development of operating systems, software layers, and downloadable apps.

2. System Assumptions

In the previous service, the mobile device exchanges information with the cloud environment, so as to determine an optimum multimedia video. Scholars have done numerous researches toward conventional platform to store different movie formats in a multimedia server, to choose the right video stream according to the current network situation or the hardware calculation capabilities. To solve this problem, many researchers have attempted dynamic encoding to transfer media content, but still cannot offer the best video quality.

2.1 Distributed Scheduling Scheme

Fully distributed scheduling schemes that jointly solve the channel-assignment, rate allocation, routing and fairness problems for video streaming over multi-channel multi-radio networks. Unlike conventional scheduling schemes focus on optimal system throughput or scheduling efficiency, our work aims at achieving minimal video distortion and certain fairness by jointly considering media-aware distribution and network resource allocation. Extensive simulation results are provided which demonstrate the effectiveness of our proposed schemes.

2.2 Stochastic Modelling in Multicore Systems

Stochastic models and optimization formulations based on them can be successfully used for energy management on multicore systems. This paper can be extended in the following directions. First, one can study a more flexible stateful model for applications for which a natural state definition is not immediate. In such a case, hidden Markov models can be used to extract the states in an application. Second, the explicit use of spatial correlations in the two level optimization formulation based on the SAN heuristic can be investigated. Task scheduling, assignment and energy minimization problems should be jointly studied in a more comprehensive framework. As new parallelized applications are created for the emerging many-core systems, the modelling and optimization framework proposed in this paper can be developed further for practical use.

2.3 Cloud Assisted P2p Media Streaming

Cloud-assisted system architecture for media streaming in mobile Internet to minimize power consumption of mobile devices. We show our modelling efforts for cooperative streaming utilizing coalition games and optimal chunk retrieval coordination. Further, we predict collocation durations between peers with the aid of an ARIMA model, which is very important for cooperative streaming formulation. The predicted time series show better accuracy than normally used mean method. System implementation remains for further study.

2.4 Dynamic and Interoperable Adaption of SVC

A dynamic adaption method of SVC using MPEG-21 DIA has been proposed to suit different usage environments of networks, terminals, and user preferences in an interoperable and efficient way. The UED

and Adaption QoS defined in the MPEG-21 D1a are adopted to describe usage environments and relations among feasible adaptation operation, resource constraint, and utility, respectively. Then, the ADTE determines an optimal adaptation operation in the 3-dimension of spatial-temporal-quality scalability along with the information from the UED tool and Adaptation QoS tool. According to the decision by the ADTE, the Dynamic Extractor can drop and/or crop NAL units in a way of examining only NAL unit header.

3. Remote Monitor Solution

The cloud-based real time streaming is used for transcoding adaptive mobile streaming.

3.1 User Profile Module

The profile agent is used to receive the mobile hardware parameters and create user profile related to that parameters. Then the mobile transmits its hardware specifications in XML scheme format to profile agent. The profile agent determines the required parameters for the XML-schema and creates a user profile, and then transmits the profile to the DAMM for identification.

3.2 Network and Device Aware Multi-layer Management (NDAMM)

NDAMM determines the frequency and the coding parameters according to the mobile device. It hands these over for transcoding control, so as to reduce the communication bandwidth requirements and it will provide the user requested multimedia streaming. It consists of a listen module, a parameter profile module. The interactive multimedia streaming service must receive the user profile of the mobile device instantly through the listen module. The parameter profile module records the user profile and determines the parameter.

3.3 Dynamic Network Estimation Module (DNEM)

The DNEM is mainly based on the measurement-based prediction concept then it develops the Exponentially Weighted Moving Average (EWMA). The EWMA uses the current observed value to calculate gentle and flexible network bandwidth

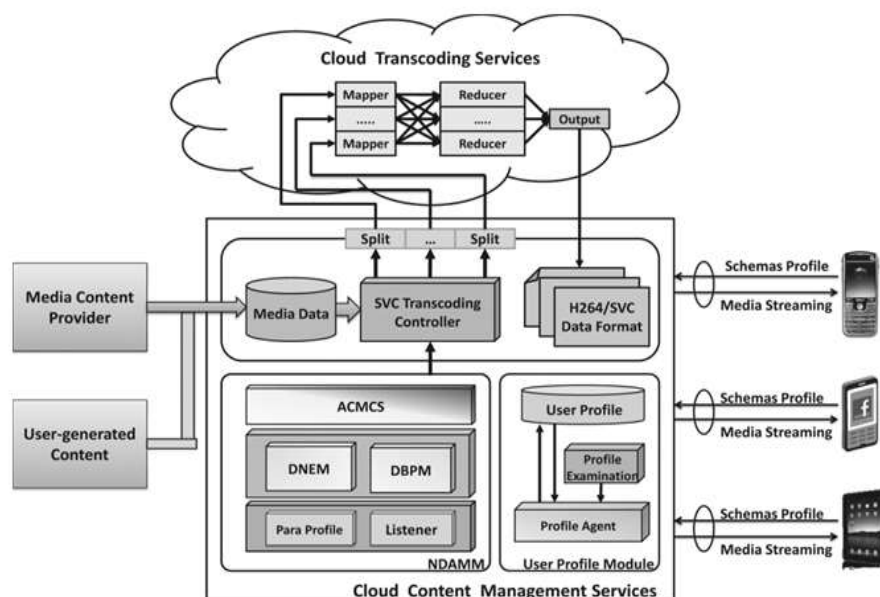


Fig-1: Block diagram of Proposed Technique.

3.4 Network and Device-Aware Bayesian Prediction Module (NDBPM)

If focuses on delivering the right video format to the mobile devices. However, the question remains of how to choose an appropriate video format according to the available resources of various devices. Inference module is used here to confirm the appropriate video based on the following two conditions:

4. Conclusion

Providing appropriate files to the mobile devices is an interesting job. Here, it is achieved by using network and device aware QoS approach. DNEM and DBPM were used effectively to provide this. Thus the overall prototype architecture was realized and an experimental analysis was carried out and ensures smooth and complete multimedia streaming services. Cloud may fasten research on SVC coding in the future.

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A Brief Author Biography

P. Dhivya received the B.E. degree in Computer Science and Engineering from Anna University in 2012 and currently pursuing M.E. degree in Computer Science and Engineering at Anna University. The current research focuses on secure communications in sensor networks.

Dr. S. Uma is Professor and Head of the PG Department of Computer Science and Engineering at Hindusthan Institute of Technology, Coimbatore, Tamil Nadu, India. She received her B.E., degree in Computer Science and Engineering in First Class with Distinction from P.S.G. College of Technology in 1991 and the M.S., degree from Anna University, Chennai, Tamil Nadu, India. She received her Ph.D., in Computer Science and Engineering from Anna University, Chennai, Tamil Nadu, India with High Commendation. She has nearly 23 years of academic experience. She has organized many National Level events like seminars, workshops and conferences. She has published many research papers in National and International Conferences and Journals. She is a potential reviewer of International Journals and life member of the ISTE professional body. Her research interests are pattern recognition and analysis of nonlinear time series data.