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## WEB-BASED SOLUTION AS A MOBILE GRID ON CLOUD MEDIA SERVICE FOR IMAGE ANALYSIS ON VIDEOS

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**Abstract:** In this paper the social media paradigm has led to a significant rise in the volume of user generated content managed by social networks with millions of users accessing services, each of them often using multiple devices at the same time. The burgeoning capabilities of Web browsers to exploit full-featured devices can turn the huge pool of social connected users into a powerful network of processing assets. Mobile Grid and Mobile Cloud Computing solutions leverage smart devices to relieve the processing tasks to be performed by the service infrastructure. Motivated to gain cost-efficiency, a social network service provider can outsource the video analysis to elements of a mobile grid as an infrastructure to complement an elastic cloud service. As long as users access to videos, batch image analysis tasks are dispatched from the server, executed in the background of the client-side hardware, and finally, results are consolidated by the server.

**Keywords:** Distributed computing, image analysis, multimedia databases, multimedia systems, social media, web-based architecture

### I INTRODUCTION

The web based life worldview has prompted a huge ascent in the volume of client produced content overseen by social systems with a huge number of clients getting to administrations, each of them frequently utilizing various gadgets in the meantime. Administration suppliers intend to connect with gathering of people, anxious for substance, by boosting the media importance. To this end, a more profound programmed labeling empowers better coordinating of client interests with the content database and uncovers hidden associations between things, for example, applying face location components or content based ordering to discover related recordings. Picture investigation calculations enable programmed recovery of striking nature includes yet they likewise include figuring serious capacities. In this manner, the preparing prerequisites develop generously when every one of the media things containing the interpersonal organization database are examined. Here, from one perspective huge information challenges emerge when social administrations have consistently expanding databases, while on the other hand increasingly handling assets are required to break down all the substance. Initially, the present gadget biological system is exceptionally heterogeneous, with various working frameworks and programming dialects, bringing about complex programming cross-stage advancement. In this unique situation, SaW proposes an

unadulterated Web-based methodology since Web innovations beat the interoperability obstructions. HTML5 is consistently enabling the program turning the Web into a genuine application stage middleware ready to get to equipment assets of the apparatuses through JavaScript [7]. Moreover, HTML5 acquainted various highlights with empower disconnected Web applications, such the application reserve also, nearby capacity.

### II LITERATURE REVIEW

In this paper, we investigated performance and energy efficiency of migrating representative video applications to the cloud under dynamic wireless network channels on state-of-the-art mobile platforms. Based on the identified challenges and opportunities for offloading real-time video applications, we formulated a generic energy-efficient offloading scheduling problem and proposed an adaptive scheduling algorithm that makes fine-grained offloading decisions according to the dynamic wireless network conditions. We further evaluated the effectiveness of our solution through trace-driven simulations and extensive experiments. Finally, we presented two case studies on video cloud gaming and MRDA to evaluate the performance of our solution in real-world video applications[1].

Grid Computing is a concept, a network, a work in progress, part hype and part reality, and it is increasingly capturing the attention of the computing community. The idea of sharing the idle resources through the grid leads to

tremendous computing and storage pool, which gives even the resource constrained wireless devices the power of complex task execution. Grid Computing will be the major area of focus in the future days. We may have Gridnet in the future as we have Internet today. Due to mobile nature of wireless devices and limitations of wireless communications a number of unique challenges must be overcome when building a grid application for wireless devices. Many research works have been done in wireless grid computing to address different issues, but still it has to reach its maturity level by implementing various commercial and industrial applications in different fields. Mostly sensor grids are of more interest in most of applications like patient health monitoring system, wild fire monitoring system, tsunami prediction system, supply chain management system, and others. Future researches may consider enhancement of secured communication and economic models in wireless resource sharing so that accessing is facilitated by usage charges[2].

This paper demonstrates the practical potential of network coding for wireless grids using a simple three node example. As can be seen from the test bed results, network coding increases the throughput gained from sending the same information with fewer transmissions with approx. 20% compared to reliable broadcast. A closer look at system behaviour shows that after some time network coding is "speeding up" distributing information in the network, while a traditional approach based on broadcast is slowing down. The measured number of required transmissions is very close to the theoretical one and suggests the feasibility of network coding implementation even on small hand-held devices such as mobile[3].

We propose an incentive model for resource sharing in social clouds. Our model extends work in credit networks, does not require a central reputation management system and supports asynchronous demands. In addition, we utilize trust inherent within social networks to achieve more flexibility by introducing a virtual currency representation motivated by work of Gesell. We study the long term liquidity, that is the capacity to route payments, when nodes repeatedly transact with each other. Using simulations we show how network size, clustering strategy, reputation distributions, density of the social graph and credit limits impact the success of transactions and the overall credit gain. Our future work will focus on studying other realistic scenarios such as network and cluster dynamics and non-cooperative behavior, along with deploying the model using the Comet Cloud framework[4].

In this paper, we have presented an operational semantics to model the concurrency structure of OpenMP and enabling data race detection for structured parallelism. The operational semantics rules are straightforward and can serve as a valuable reference to everyday programmers. Also, the example III-F shows how our approach can identify data races even in corner cases where other techniques (e.g., those purely based on the happens-before tracking) can fail. In summary, our work provides a formalization to help researchers and tool developers to better understand OpenMP concurrency, and help them reliably and systematically build more precise data race checkers that reduce memory

overheads. As already described, we are working on a possible implementation of the operational semantics to support a new data race checker called SWORD. Details of the engineering of SWORD will be presented in future work[5].

Cross-site request forgery is a widely exploited vulnerability in web sites. Many web sites that have repaired their CSRF vulnerabilities contain login CSRF vulnerabilities that let an attacker force a user to authenticate as the attacker. Based on our analysis and experiments, we recommend different CSRF defenses for different use cases. Login CSRF. We recommend strict Referer validation to protect against login CSRF because login forms typically submit over HTTPS, where the Referer header is reliably present for legitimate requests. If a login request lacks a Referer header, the site should reject the request to defend against malicious suppression[6].

The research in wireless sensor networks is very dynamic, and there are high expectations regarding applications and business potential of sensor networks. This paper has presented a state of the art on recent developments in wireless sensor network technology and its applications. We have identified the obstacles in the application of sensor networks that should be addressed in order to push the technology further. Standardization is a key issue for success of WSN markets. We have presented various standards and technologies available for WSNs. For low data rate applications, IEEE 802.15.4 seems to be the most flexible technology currently available, while Bluetooth Low Energy (BLE) can be attractive for applications demanding higher data rates. Moreover, the IEEE 802.15 Task Group 6 (BAN) is developing a new standard specifically oriented to WSNs for Body Area Networks[7].

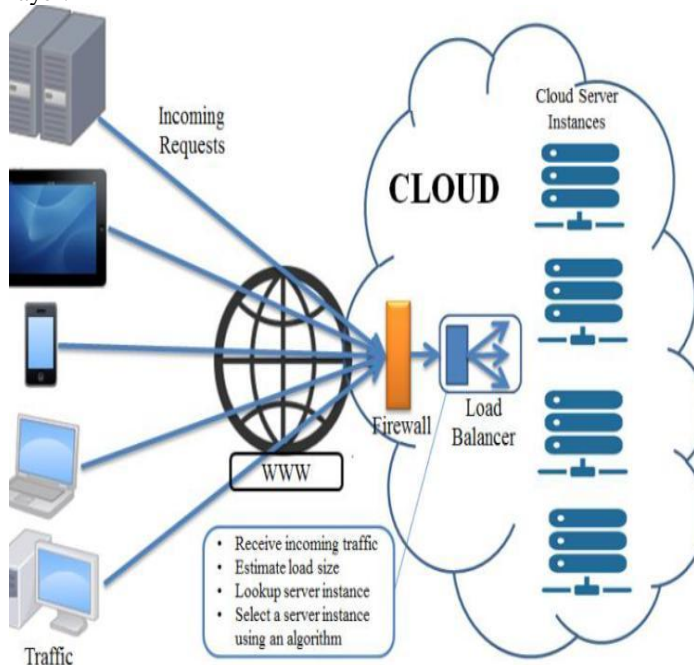
As shown by our experiments, current browser security policies are yet to implement measures to protect against all types of content inclusion cross-origin request attacks. We have investigated a particular scenario that involves FIM (Federated Identity Management) and its susceptibility to cross-origin request attacks. We have built formal models in Alloy of cross-origin request attacks affecting FIM and showed that they can be mitigated using CORP. To validate this hypothesis, we simulated auto-logout attack (CSRF attack) and login detection attack (cross-site timing attack) on popular sites and mitigated them using CORP in a lab environment. The generic model introduced in this paper subsumes many specific cross-origin attacks, such as CSRF, clickjacking, cross-site timing attack, login detection, and validates the soundness of CORP in mitigating these attacks[8].

In this paper developed and demonstrated the effectiveness of a set of online interactive learning modules to accompany physics courses at first- and second-year university levels. Students access the modules prior to attending lectures to familiarize themselves with content which is then discussed and reaffirmed in class. Student surveys and access data show that students were much more likely to use material presented in this form, rather than a textbook, when preparing for lectures given in an active learning format. The students found that interactive simulations, videos of problem-solving approaches prepared

by course staff, and quick-check immediate feedback questions were all useful tools for lecture preparation—none of which are available when using a traditional textbook for lecture preparation[9].

### III SYSTEM ARCHITECTURE

In this system the SaW contemplates the security viewpoints with respect to privacy and trustworthiness. Those are guaranteed by the well known standard systems of confirmation, authorisation, encryption and sound-related. As made reference to above, in SaW a customer needs to submit the procuring of its gadget assets with the end goal to get to the online networking administration. Along these lines, correspondence conditions concerning protection and security ought to be seen by the enlisted customer and the server. It is obligatory to check social character of the calculation hub to check its rights and consents. The utilization of a concentrated instrument facilitates taking care of regular client get to benefit refreshes, (for example, welcome or disavowal of access rights) in substantial powerful frameworks like informal organizations. For this reason, SaW considers three sorts of media scopes with distinctive set up suggestions: open, enlarging the media investigation to any accessible gadget; imparted to companions, restricting the confided in region to the gadgets inside the social associate circle; private sharing, compelled to a particular rundown of processing hubs from the cloud to control information. When the dependable handshake has been done, the information must be scrambled to avert man-in-the-center assaults. SaW sends a transient token based answer for point of confinement get to consents what's more, scrambles the information streams, with TLS conventions, for the Web correspondence layer.



### IV ALGORITHM

Load balancing static algorithm (Min-Min Algorithm)

1. For all tasks  $t_i$  in MT.
2. For all machines  $m_j$
3.  $CT_{ij} = ET_{ij} + r_j$
4. Do until all tasks in MT are mapped
5. For each task  $t_i$  in MT
6. Find minimum  $CT_{ij}$  and resource that obtains it.
7. Find the task  $t_k$  with the minimum  $CT_{ij}$
8. Assign  $t_k$  to resource  $m_l$  that
9. Delete  $t_k$  from MT
10. Update  $r_l$
11. Update  $CT_{ij}$  for all  $i$
12. End do.

### V ADVANTAGES

- Much more efficient use of idle resources.
- Grid environments are much more modular and don't have single points of failure.
- Jobs can be executed in parallel speeding performance.
- Reduce the execution time using load balancing technique.

### VI CONCLUSION AND FUTURE WORK

In this paper introduced the concept of Social at Work, SaW, which aims to process web media service with all the idle devices, that usually have underexploited resources while accessing the service. SaW proposes a Mobile as an Infrastructure Provider (MaaIP) model, using WebCL and WebGL to Mobile Grid Computing concept with the available CPU and GPU resources of the different client devices. And using load balancing technique speed up the execution.

### REFERENCES

1. Lei zhang, "on energy-efficient offloading in mobile cloud for real-time video applications", january 2017
2. Karsten Fyhn Nielsen, Tatiana K. Madsen, "Network Coding Opportunities for Wireless Grids Formed by Mobile Devices"
3. Magdalena Puceva, Ivan Rodero, Manish Parashar, "Incentivising Resource Sharing in Social Clouds" June 2012
4. S. S. Manvi, "A Review on Wireless Grid Computing", June 2010
5. Simone Atzeni, "An Operational Semantic Basis for OpenMP Race Analysis"
6. Adam Barth, "Robust Defenses for Cross-Site Request Forgery"
7. Priyanka Rawat, Kamal Deep Singh, "Wireless sensor networks: a survey on recent developments and potential synergies"
8. Akash Agrawall, Shubh Maheshwari, "Modelling and Mitigation of Cross-Origin Request Attacks on Federated Identity Management Using Cross Origin Request Policy"
9. "Dynamic e-learning modules for student lecture preparation"
10. T. MacWilliam and C. Cecka, "Crowdcl: Web-based volunteer computing with webl," in High Performance

- Extreme Computing Conference (HPEC), 2013 IEEE. IEEE, 2013, pp. 1–6.
11. W. Tan, M. B. Blake, I. Saleh, and S. Dustdar, “Social-network-sourced big data analytics,” IEEE Internet Computing, no. 5, pp. 62–69, 2013.
  12. J. Han, E. Haihong, G. Le, and J. Du, “Survey on nosql database,” in Pervasive computing and applications (ICPCA), 2011 6th international conference on. IEEE, 2011, pp. 363–366.
  13. NAPTE, “New NAPTE and CEA research finds show producers and creators see second screen becoming permanent part of viewing experience,” <https://www.natpe.com/press/release/130>, Q1 2014, [Online; accessed 16-February-2017].