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A Survey about the Mobile Computing Infrastructures

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Abstract:
Nowadays Smartphone play a major role in daily part of life. The various algorithms and technology play a major role in making the Smartphone better and efficient in all aspects. The distributed architecture in Smartphone has a wide variety of advantages over other architectures available. The distributed architecture makes the computation easy and along with battery efficiency.

Keywords: CWC, Mobile Computing**,** Micro-Cellstore (MCS).

Introduction:
A distributed infrastructure can make the system more efficient and make the computing infrastructure less. This enables the battery power to be efficient and makes it better 1.6 times better than other approaches. Such an infrastructure has the potential to reduce both the capital expenses and energy costs. In addition to its potential benefits, realizing a smartphone computing infrastructure faces a number of challenges. To express these challenges the authors build a framework to make such a platform feasible. In particular, the biggest obstacles in using smartphones for computing are the battery life and bandwidth. If a smartphone is utilized for heavy computing when in use by its owner, the battery may drain and render the phone unusable.

A case for micro-cellstores: Energy- efficient on recycled Smartphones
Stavros Harizopoulos, Spiros Papadimitriou
In this paper, the concept of a Micro-Cellstore (MCS) unit, consisting of recycled smartphones. The study of detailed power and performance on a current-generation smartphone, assess the potential of modern smartphones as a building unit for database appliances. The idea presented in this paper is to motivate environmentally suitable approaches, based on reusing and repurposing computing equipment.

Droid cluster: Towards a Smartphone clustering – the streets paved with clustering
Felix Büsching, Sebastian Schildt, Lars Wolf
In this paper, the setting up a smartphone cluster is possible. The fact that desktop and server hardware is vastly outnumbered by mobile devices deployed today, leads to the conclusion that we should find ways to fully utilize these computational capacities. It is possible to combine Android devices into a distributed cluster in a way that does not interfere with the running Android system and applications. A limitation is that it is mostly not a good idea to run CPU intensive applications on battery, but as we have shown there are applications which can be used when the devices are charging anyway.

Task Mapping and scheduling in Wireless Sensor Networks
M.H.A. Awadalla

This paper presents the competent allocating algorithm for the real time tasks in a sensor network. The algorithm of linear task which helps to make the mapping along with duplication and migration of the task values. In the future, functions of failure sensors are being done.

Map Reduce over Heterogenous Mobile Devices

Peter R. Elespuru, Sagun Shakya and Shivakant Mishra

The proposed MapReduce System over Heterogeneous Mobile Devices has three major components: a server component, a mobile device client, and a traditional client and to obtain baseline data. If non-captive user bases could be properly motivated, there is a large potential to process massive amounts of data for a wide range of uses. This is concept similar to existing cloud computing, but where computation and storage resources happen to be mobile devices, or they interoperate between the traditional cloud and a new set of mobile cloud resources.

PRISM: Platform for Remotr Sensing using Smartphones
Tathagata Das, Prashanth Mohan, Venkata N. Padmanabhan, Ramachandran Ramjee Asankhaya Sharma
In this paper, PRISM concept is being used in the opportunistic network. This model mainly focuses on the flexibility in terms of applications. This model is based on the small scale laboratory experiments. The flexibility in prism has the number of challenges scalability, reliability, security, resource allocation.

REPC: Reliable and Efficient Participatory Computing for Mobile Device

Zheng Dong, Linghe Kong, Peng Cheng, Liang He, Yu Gu*, Lu Fang, Ting Zhu,Cong Liu

In this paper, the participatory computing technique is being used. A generic randomized task for making the efficiency of the individual participating devices is improved. This type of devices may perform 90% completion of tasks in a 10% of system overhead. Participatory computing extends to volunteer computing which makes the computation power of the mobile to lend its resources when idle. With 20 mobile participants we can able to find the criminals within the specified area on the Android platform. We can able to achieve reliable participatory computing.

The Challenges in Large-Scale Smartphone User Studies

Earl Oliver

The preliminary results of the users help to know about the interaction between user and mobile, energy consumption. The datasets where the traces of the BlackBerry 17300 mobile user views help to make it enhanced. Approximately 80% of the devices interact less than 90seconds of duration.

A First Look at Traffic on Smartphones

Hossein Falaki, Dimitrios Lymberopoulos, Ratul Mahajan, Srikanth Kandula, Deborah Estrin

The data of the 43 people across two different platforms gives an idea where the browsing took over half of the traffic while other media has roughly 10%. By detailed study of radio power management and Smartphone traffic the radio power has 35% power less. Reducing small transfers through cloud proxy helps to reduce the radio sleep power and computation power.

Computing While Charging – building a distributed computing infrastructures using smartphones

Mustafa Y. Arslan, Indrajeet Singh, Shailendra Singh, Harsha V. Madhyasta, karthikeyan Sunderasan, Srikanth.V.

The procedures to develop CWC - a distributed computing infrastructure using smartphones. Specifically, the contributions are: (i) profile the charging behaviours of real phone owners to show the viability of our approach, (ii) enable programmers to execute parallelizable tasks on smartphones with little effort, (iii) develop a simple job migration model to resume interrupted job executions, and (iv) implement and evaluate a sample of CWC that employs an primary scheduling algorithm to minimize the makespan of a set of tasks.

Conclusion:

This survey paper is based on the power efficiency and computing infrastructures. The Micro CellStore(MCS) consists of the recycled smartphone where we found that the cost is the drawback. The Droid Cluster paper where the smartphones are clustered and the limitation is

not a good idea for the cpu cycle. Map Reduce is the way of combining the smartphones and making it efficient. From all these papers surveyed the distributed infrastructures play a major role and computations are better.

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