On Demand Multi-Network Data Offloading in Mobile Computing

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ABSTRACT -Wireless network have limited resources like battery life, storage capacity, network bandwidth and processor. These limitations possibly decreases via offloading data fom mobile device to cloud .but due to continuous transferring offloading data hammering problem occur. For removing this problem we used on demand data broadcast & queue management system Major aim of the system is to reducing the traffic load and execution time during offloading. In this article, We Design and developing the Multi network with ability to communicate with each other & making utilization of cloud by offloading user can access data through cloud computing & then Identifying the impact of traffic load for wireless network. Calculating the execution time of the network while accessing the Multi network in mobile computing. In this paper on demand multi network data offloading in mobile computing is given.

Keywords-HetNet, Multi-criteria, RSS, MCC

I.INTRODUCTION

Every wireless technology required at least amplifying of the signals till receiving head.This amplification needs more power.If the distance is less amplification will be requiring .This is why mobile service provider will establish more number of mobile tower this will save communication noise and the speed up the communication.To deliver cloud services in Multi Network, we have to face several problems[1].For example, wireless networks are not always reliable to guarantee cloud service delivery due to User mobility, Propagation effects of wireless channels,Traffic load..A recent research study from ARCchart estimates that HetNets will help drive the mobile infrastructure market to account for nearly $57 Billion in spending globally by 2017.MCC provides energy saving as a service to mobile users mainly called Offloading.Virtualization allow application as of singular mobile user toward sprint taking place unlike virtual machines.Thus it provide required compensation similar to safety as well as defense from interruption.The energy save in offloading depends under the wireless bandwidth,the amount of data may be transmit also amount of computation to be performed. Presently there be no require to drive all data to the service provider.The cloud stores data plus perform offloading on stored data.We Design and developing the Multi network with ability to communicate with each other & making utilization of cloud by offloading user can access data through cloud computing & then Identifying the impactof traffic load for wireless network.Calculating the execution time of the network while accessing the Multi network in mobile computing.

II.SYSTEM MODEL

In figure[1],we consider two network such as code division multiple access (CDMA)and Wireless local area network(WLAN).CDMA support a low data rates as compaire toWLAN. In following fig show how pakact transfer from one network to another network i.e.CDMA to WLAN.this process is called as vertical handoff or hetrogenous wireless network.The Mobile station are uniformly distributed in service area & they have one or more connection option in overlapped area,illustrated in fig 1.In t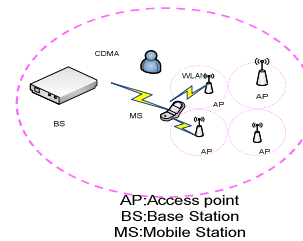erms of coverage, efficiency, or profitability would exploit better characteristics of different access technology in HWN[3].

Fig 1.System Model

III. PROPOSED SYSTEM

Consider SMD having handheld range and limited compute power,which are associated with Internet via HetNet[1]. Mobile computing are fully potential can be explored simply when computation as well as storage are offloaded keen on the cloud with acceptable latency and overhead, and doesn't disturb use interactivity with the mobile applications.As the wireless environments may change, the application has to shift its computation workload between MD and cloud without operation interruptions, considering the time-varying wireless connections in Het- Net[8].Major aim of the system is to reduce the power utilization by limiting the transmission power and reduce in execution time during offloading.Our proposed work will be worked out in following phases as follows:

Phase 1: Design a multiple network.
i)Every network having mobile nodes which can communicate with each other & nodes will be simulated over network simulator.
ii)By calculating the distance between every node system will calculate the energy utilized by every node.
Phase 2: Identifying the impact of traffic load on wireless network.
Phase 3: Calculating the execution time of the network though accessing the heterogeneous network in mobile computing.

IV.SOFTWARE USED

i)OMNeT++ is an Open source simulator & extensible, modular,component-based C++ simulation library and framework, primarily for building network simulators

ii)OMNeT++ provides a component architecture for models.

iii)OMNeT++ is released with full source code, and is free to use, modify and distribute in academic and educational institutions under its own license An example of what OMNET++may look like during execution is shown below

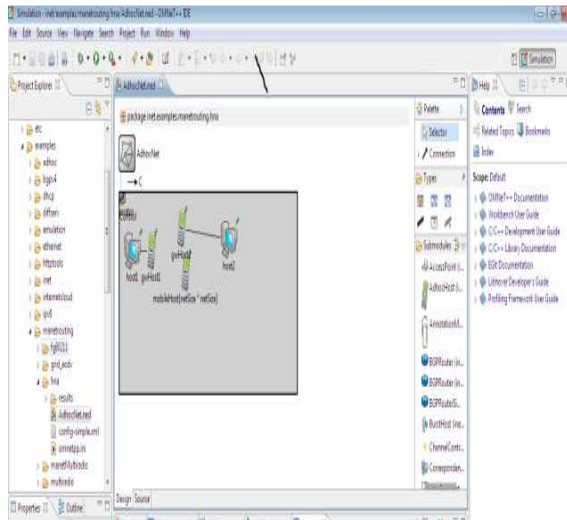in Figure. (2).Omnet is a integrated data environment(IDE).

Fig2:Omnet++

B). Simulation

V.PARAMETER

A.**Traffic Load**

In Mobile computing,the key idea is to offloading demand tasks from mobile device to the cloud, process them, and then transmit the results back to a mobile device .Wireless network have limited resourece like battery life,storage space .we can remove this limitation via offloading data into cloud but continuous transfer of data to cloud hammering problem occure.for overcoming this problem we used queue management system and on demand data broadcast[8]t. Due to this we consume less energy in the mobile device. The cloud could be accessed using the WLAN hotspot or cellular network.The latter option is only intermittently available, but can offer significant advantages in terms of cost and energy [2].In MCC, three types of tasks can be identified: (i) those which can be processed only locally in a mobile device, (ii) those which are processed in the cloud, and (iii) those which can be processed either in the mobile or in the cloud.This leads to multi-dimensional considerations where, energy consumption, transmission costs, task type network availability and rates, must be taken into account.
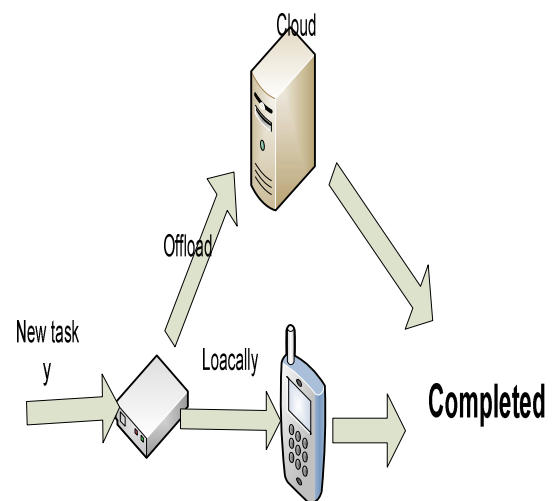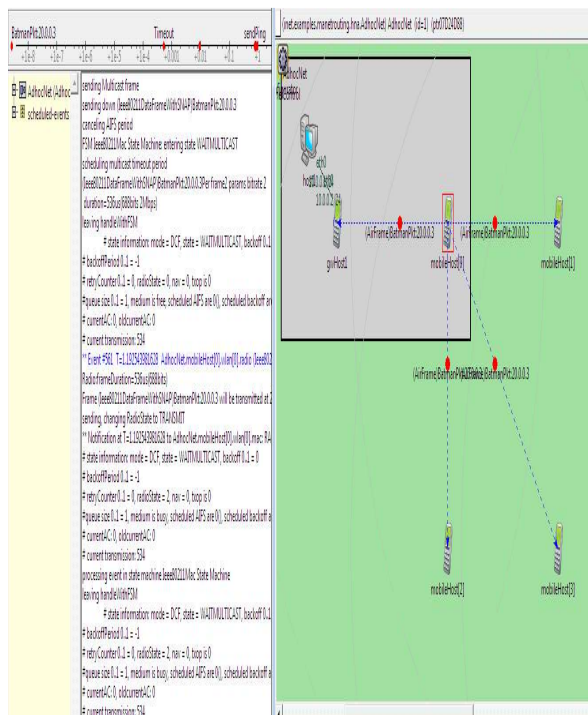

Fig3.offloading scenario for a mobile[7]

B. ENERGY SAVING

A primary control for mobile deviceis energy saving.A survey of 5,000 users crosswise 16 country demonstrate that 75% respondents detained

improved battery being is the main feature.SMD has no longer used just for voice communication.as a replacement for they are intended for acquire also watching videos, gaming,web surfing, and a lot of other purpose.As a result, these systems will likely consume more power and shorten the battery life.Even though battery technology has been steadily improving, it has not been able to keep up with the rapid growth of power consumption of these mobile systems. Offloading might expand battery life through migrate the energy-demanding parts of the calculation to servers

The amount of energy saved is=

$$P_C \times \frac{C}{M} - P_{tr} \times \frac{D}{B} - P_t \times \frac{C}{S}$$
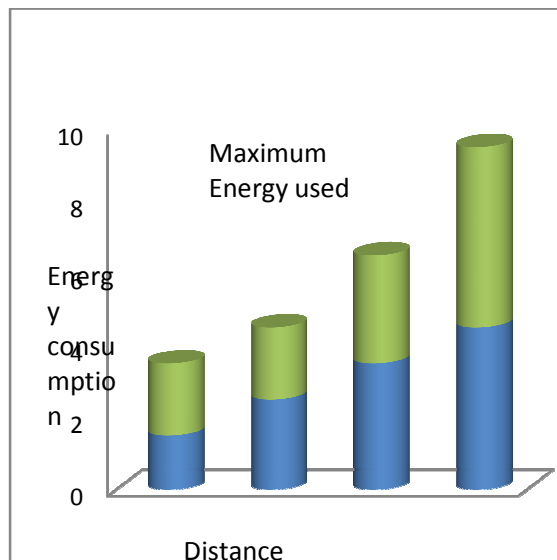
Where,
M=Speeds for MD
S=speeds for cloud server
D=Bytesfor MD & cloud,
B=transmission rate of the MD
Pc=Energy consumed by MD
 Pi=Energy consumed by MD for idle
Ptr=Energy consumed by MD for sending and receiving data.

VI.CONCLUSION

In this paper we implement challenges of offloading for mobile cloud computing in multi network.However.Major aim of the system is to reduce the power utilization by limiting the transmission power and reduce in execution time during offloading.In this article we provides an overview of the hetrogenous wireless network,.We also describe directions for future research.Future study on HetNet for MCC will be conducted based survey on multi criteria offloading decision for the MCC in HetNet

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