

MOBILE COMPUTING A CHALLENGING TASK

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ABSTRACT

In this paper we discussed about mobile data communications and improve mobility immobile computing devices and Mobile Adhoc Networks. Mobile computing become a popular trends in modern era of 21st century Information and Communication Technology. In Mobile support stations the link created by node to node transition awareness protocol is Adhoc manner and the energy consumption is maximize.

KEYWORDS: Mobile Computing, Mobile Adhoc Network, Mobility.

I. INTRODUCTION

Mobile data communication become a hotly debate issue in interest of surrounding of paging, circuit switched and packet switched networks has lit the fire for the debate and announcement of new technology networks. Voice communication has already been introduced by the mobile phone and its spreading around the world. The current generation network is very fast and secure then earlier networks in the field of Mobile Adhoc Networks due to better mobility and energy efficiency issue taken care by the research and new innovative technologies entire the world. In mobile computing technology the peoples are enjoying when traveling or out of the office convincing as a virtual office due to technology and feel free to share data over the secure networks. Do we have the mobile mobility of user such as locating the mobile computer? Bandwidth and power are important issue as well, in this report we will first look at wireless networks existing today and discuss the problem of having many different networks. The challenges of mobile computing and mobility problems how we might be solved included these issues are as under-

- Energy Efficiency Data Management
- Reduce Power Consumption
- Disconnection and Network Failure
- Bandwidth Management
- Wireless Network Security

II. MOBILE COMPUTING TRENDS

The fascinating world of the mobile computing has only been around since the 1990s. Since then, devices that have been developed for mobile computing have taken over the wireless industry. This new type of communication is very powerful tool both business and personal uses. Mobile computing is defined is the ability to use technology that is not physically connected to any physical networks. This actually used to mean radio transmitters that operated on a stable base, usually with the help of large antennas 2 way radios used by police officers were also considered mobile technology but now, it means people can connect wirelessly to the internet or to a private network also anywhere. As long as a person has one of the devices capable of wirelessly accessing the internet, they are participating in mobile computing. Chances are, you have done it with a laptop computer or a personal digital assistants or PDA. These days, most laptops and a personal digital assistants all have wireless cards or Bluetooth interfaces built into them for convenient mobile internet access. Mobile solutions are right under everyone's nose these days, and connectivity has never been easier. Other common tools for mobile computing include devices like global positioning systems and smart phones like the Cingular Blackberry. Tons of PDA software development has been going on in the past five years simply because companies have been trying hard to make PDA technology more available to the general public. These days, software companies almost make more software for PDAs and smart phones than for actual desktops. Pocket PCs are another way to conveniently access the internet on fly. Everyone has probably heard of the palm Pilot. While they were the pioneers of the pocket pc, many other companies such as Dell, HP, and Toshiba have all

delved into the market. Pocket PC software has also become much easier to use. Most Palms use the familiar Windows interface allowing the general public to access the internet via the usual Internet Explorer or other ISPs. Also, people can easily download useful software, including games, Media editing tools, organization tools, and even electronic books. Mobile computing has evolved from two-way radios that use large antennas to communicate simple messages to three inch personal computer that can do almost everything a regular computer does. People can't go to their local Starbucks and not see a laptop linked up to a hotspot these days, and mobile computing is still in its baby phase and Natalie Aranda writes about mobile computing. The fascinating world of mobile computers only been around since the 1990s.

III. DESIGN ISSUES & CHALLENGES

Technical Design: First comes the Technical Design issues, which consist of network design, capacity planning, response time calculations, data compression considerations, system availability design and security issues. The technical design plays a key role in a mobile computing project and offers unique challenges to the system professionals. Network Design Issues regarding Wireless LAN design and Wide Area Radio Network Design which network design comprises are discussed as follows.

A- Wireless LAN Design Issue

- The number of mobile users who will use wireless network and the number of them active during the peak period.
- Power consumption is maximize during access of wireless networks and node to node connectivity.

B- Wide Area Radio Network Design issue

- The need of private radio network building for nearby nodes.
- Integration of RNA technology with a radio network infrastructure.

C- Mobile Computing Mobility Issue

- The bandwidth of data communication and transfer is very less which currently introduced in Vehicular Adhoc Networks for better improving.
- Managing the VANET device record.

D- Security Issue

- Network usage by criminal elements.
- Authorization over the network where unmanned base stations.

IV. CONCLUSION

Since the portable computers technology is evolving rapidly, the need for wireless network connectivity increases. Users would like to be able to send and receive information regardless of the time and current location. Today there is no worldwide network that supports mobile computing and improving mobility and power consumption by node to node connectivity. Standards are needed in order to get different computers and network to work together. In this report we discussed some of the challenges introduced by wireless computing; mobility, disconnection, energy and bandwidth management. There are different ways to solve these problems, and we looked at a few of them. Agent based network will improve the performance of today's wired network as well as drastic improvements in wireless networks also.

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