CELL PHONES THE PRIMARY PERSONAL MOBILE COMPUTING DEVICES

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Abstract- Increases in the computational power of mobile processors, improvements in mobile operating systems, and the popularity of mobile broadband make cell phones the best candidate for sophisticated mobile computing devices. Learn about potential applications and their corresponding challenges.

Mobile network Computing aims at enabling the users of the mobile to access the information of their personal system from anywhere in the world using their hand held device. This device can be either a Personal Digital Assistant or a Mobile phone. The users can access and control their PC with the help of this hand held device. This project is dependent on the General packet radio service otherwise called as GPRS. This project can run on any kind of a java enabled Device. Today almost all the phones are java Enabled and the phones and these are said to be a minimum configuration of any hand phone. System Analysis deals with the need of this project and explains the various stages of analysis that led to the development of the theme for the project. During the design phase various surveys were made to understand the needs and wants of the corporate preventing them from becoming handicapped. At today’s situation there is no practical availability of time for corporate people to have complete access can control over their system-based operations. They are practically handicapped to carry and use even trendy devices. In today’s environment the existence of mobility has increased very rapidly and the usage of mobile devices - handheld devices has increased rapidly. The corporate now are in a need of devices to prove and provide overall access and control via these mobile devices via proper authentication and security. They need secured data and information transfer through mini and micro comparable devices. By today’s technology mobile phones are now to serve the purpose in addition to communication. In this project I use a mobile as a remote to control the PC and access its files, databases, also edit them. We can also control the PC by shutting down and restarting it and also handle a number of applications through the mobile.

I. INTRODUCTION

The main goal of Mobile enterprise Engine (MBE) is “Empower administrators with quicker, easier and consistent way to access and manage their files and other business-critical datas accessible in the machines using a wireless element from a distant location.”

MBE objects at facilitating corporate users with increased access to machine, programs and network usage capabilities from a distant location using mobile elements. This project applies three techniques J2ME, JSP and WAP tools. The midlet require to be accessed through GPRS.

The project will assure for the suitable end-user with his/her Username, Password, and wireless Number. The end-user with the equivalent username & password but possessing different mobile number will not lean the access. The user can access his/her machine from anyplace utilising mobile by dedicating in the Internet Protocol address of the machine.

The machine /host you prefer to execute must give apache tomcat executing in the back-end. The user could execute operations similar to writing/reading/copying/deleting a text file, accessing network. The project constitutes simulated using J2ME and so the software package is uploaded to the mobile for function.

MBE is a Modular business form software package resolution, that extends total mobile scheme for Corporate. The resolution renders the users with quick, assure, and consistent right to use to the online enabled programs like,

- The Corporate Intranet
- Customized corporate internet programs

The Mobile Business Engine (MBE) objects at facilitating the corporate with increased right to use to their machines, programs and Network usage capabilities from a distant location using Mobile Devices.

II RELATED WORKS

The proposed mobile application is a fresh theme that can be carried out in several company end-to-end the global. Nearly all of them exist as internet based function, which could be accessing utilizing a PC or a laptop computer. This denotes the
projects are built up as dynamic websites and one requires a Computer system to read, delete, rename or to update the office tools. It becomes virtually unfeasible in several cases for several small companies to assure that every sales executive director or business managing director has a laptop computer or a personal computer. These method place a requirement that the employees are Computer system literate persons in order to use the machine. This induces a further burden of preparing the earlier staff to teach computers. The repairs price of the personal computers as well as laptop computers for a long term may reduce the price benefits of carrying out this sort of automation.

Employees could utilize the online facility irresponsibly to check out their personal electronic mails, engage themselves in chat sessions etc. Even the Computer system resources could be utilized for their own advantages and even performing games thus decreased their effectiveness as well as the cost-effectiveness of the machine.

Use of dedicated links is almost unfeasible for small company, which denotes that the system will never be useable at all period for the employee. The repairs of protection level in accordance to the vertical hierarchy of the organization aren’t so simple to carry out and modify as and when an organizational structural modify happens.

To check that the executives use a networked system to dock to is different uncertainty. The price of Net use through telephone line is costly to sales executive directors as well as the company. Having company internal methods to be useable on the Net at a uniform resource locator is very unsafe, as it becomes a simple entry for miscreants to browsing and even holds the information and erases the information from an unidentified position. The business people cannot bring laptops everywhere to access their information. In the existing system the process of accessing all the information is done in the wired network environment. In our proposed system the modules are implemented in the wireless environment.

III. PROPOSED SYSTEM

“Empower executive directors with quicker, simpler as well as reliable way to access and control their files and different business-critical data available in the machines applying a wireless device from a remote location.”

Fig 1.1: Concept of Mobile Business Engine

The proposed machine is planned to overcome almost every the problems that live in the earlier method. The proposed projects can be queried for file, application and system handling operability’s from mobile phones of the company employees only and they exist as a different function for varying hierarchy of the institution. Since, the project applies previous Global System for Mobile communication / General packet radio service basic common mobiles that are cheap and easy usable to the each individual the company challenges literally no problem. Since Java Technology is applied in wireless Applications mobile equipment are protected from computer virus Attacks. The company carrying out this method would never happen the problem of getting at documents for the misuse of its Computer system resources or the wasteful Internet charges of its workers. The mobile phones allow the simplicity of use and since the query inputs are already standard in a format one can expect almost no incorrect inputs. Also the executive directors can be ignorant of the method applied (computer illiterates). Since the method exists on a wireless network mostly of it the happen of the internet function to get discovered by hacks is kept the minimum, and even if discovered the system can’t be manipulated unless if accessed via the application provided to the client on the mobile. To impersonate and hacking the machine from computer terminals is never feasible as the machine all of the time checkouts for the access to originate from mobiles showed in the brasses directory. The simple of apply and the compactness of the mobiles make the client do their getting at documents from anywhere in the global and at almost anytime. The system is less likely to be struck by network traffic, as almost part of the machine will apply wireless networks rather than the internet. System could be promoted in modules as and when obligatory without having to expend large up graduation bills. Incase of small company the carrying out cost and repairs never affects their financial environment even in the initial levels, and the system assures a large gain in turnover.

**Modules:**

File handling
This module performs various file handling operations like create, delete, rename, etc.,

   Table handling
This module performs Table handling operations like create, delete, modify in the database.

   Database handling
This module performs operations like creating database and deleting database files.

   System handling
This module performs system operations like system shutdown, system restart, etc.

   Application handling
This module performs the operations like opening notepad, ms paint and windows firewall.

FEATURES:

Our cell phones are getting more and more versatile. Originally designed for voice communications. Cell phones can now do much more than just make phone calls. Today's cell phone can include a Web browser, camera or camcorder, music or video player, modem, GPS Navigator, gaming device, or radio or TV Receiver.

Furthermore, there's been a massive increase in the computational power of mobile processors and considerable improvements in modern mobile operating systems. Coupled with the popularity of mobile broadband, these changes make cell phones the best candidate for serving as mobile computing devices that can perform sophisticated or even scientific applications.

Here, I identify the features that give modern cell phones their potential, present some promising new applications, and discuss the corresponding challenges.

Cell Phones Potential:

Modern cell phones comprise many resources and properties that benefit mobile computing.

Fast Mobile Broadband:

Mobile networks have gone through several up-grades from analog to digital signals and from circuit to packet-switched artworks. The data transfer rate has increased substantially, from 9.6 kilobits per second for the Global system for Mobile Communications (GSM) to around 171 kbps for General Packet Radio Service (GPRS).

Recently, we have had speeds of 384 kbps with Enhanced Data rates for GSM Evolution (known as EDGE) and two megabits per second with the Universal Mobile Telecommunications System (UMTS). Furthermore, we have now reached 7.2 Mbps with High-Speed Downlink Packet Access (HSDPA). Also, in February 2007, Japan’s NTT DoCoMo achieved a maximum packet transmission rate of approximately five gigabits per second. They were using 100-MHz frequency bandwidth to downlink to a mobile station moving at 10km per hour in a field experiment of fourth generation radio access.

Along with continued upgrades to mobile network infrastructures, the number of mobile broadband users has also increased substantially in recent years, thanks to improved case of use, lower prices, and the convenience of being able to access the Internet almost anywhere. Internet connectivity has become the default function of smart phones, facilitating mobile computing applications needed to communicate with peers or between clients and servers.

Powerful Processors

Today, smart phones processors are so powerful that even low-end laptops or netbooks can use them. For example, Qualcomm’s 1-GHz Snapdragon processor can drive screens of up to 12 inches at resolutions of up to 1,440 x 900 pixels. Several recent smart phones use this processor, including HTC’s HD2, Google’s Nexus One, and Sony Ericsson’s Xperia X10.

The mobile processor is entering the era of dual or multicore configurations, and Qualcomm plans to release a dual-core Snapdragon processor sporting a pair of Scorpion cores at 1.5 GHz by the end of 2010. This kind of processor could facilitate even more sophisticated mobile computing applications.

Large Storage

Several years ago, smart phones commonly came with 32 to 512 Mbytes of internal storage. Today, they usually provide data-storage capacities of four to 32 Gbytes.

Considering the continued advances in storage technologies (such as small form-factor disks and flash memory), future smart phones will likely provide even larger storage capacities. Although most users store just multimedia content, they could start storing massive (raw or meta) data to conduct computing tasks on the go.

Rich Libraries for Application Development

Modern mobile platforms (such as the iPhone and Android) typically include a wide range of useful libraries and APIs for developers. In addition to libraries for accessing internal
sensors—such as accelerometers, GPS, or magnetometers (a digital compass)—there are libraries for making voice calls and connecting to the Internet, for playing multimedia, and for drawing maps.

These libraries and APIs let developers write new applications and control the phone with maximum freedom and flexibility. For example, an application can combine information from the Web with data stored on a cell phone (such as the user’s contacts or the phone’s geographic location) to provide a more relevant user experience.

**Advanced User Interfaces**

In recent years, there have been many advances in user interface designs for cell phones.

The most noticeable advancement is multitouch technology. A multi touch screen can track more than one touch simultaneously, providing more intuitive interaction. For example, to zoom in on a photo using a multi touch interface, a user can first touch the photo with two fingers and then spread the fingers apart. The interface reacts as if the two fingers were stretching a print out on a rubber sheet.

Many high-end cell phones use multi touch technology and software developers are also using it to design various innovative applications.

**IV. RESULTS**

**PERFORMANCE ANALYSIS**

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<th>Benefit for mobile computing</th>
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<td>Fast mobile broadband</td>
<td>Lets applications communicate among peers or with servers with short latency.</td>
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<tr>
<td>Powerful processors</td>
<td>Facilitates computationally Intensive mobile applications.</td>
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<td>Large Storage</td>
<td>Facilities applications that Require massive (raw or mets) Data.</td>
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<td>Advanced user interfaces</td>
<td>Facilitates applications with Designs for more intuitive and Easy-to-use user interfaces.</td>
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<td>Rich libraries for Application development</td>
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**V. CONCLUSION AND FUTURE ENHANCEMENT**

With the rapid technological advancements in Artificial Intelligence, Integrated Circuity and increases in Computer Processor speeds, the future of mobile computing looks increasingly exciting.

With the emphasis increasingly on compact, small mobile computers, it may also be possible to have all the practicality of a mobile computer in the size of a hand held organizer or even smaller.

Use of Artificial Intelligence may allow mobile units to be the ultimate in personal secretaries, which can receive emails and paging messages, understand what they are about, and change the individuals personal schedule according to the message. This can then be checked by the individual to plan his/her day.

The working lifestyle will change, with the majority of people working from home, rather than commuting. This may be beneficial to the environment as less transportation will be utilised. This mobility aspect may be carried further in that, even in social spheres, people will interact via mobile stations, eliminating the need to venture outside of the house.

This scary concept of a world full of inanimate zombies sitting, locked to their mobile stations, accessing every sphere of their lives via the computer screen becomes ever more real as technology, especially in the field of mobile data communications, rapidly improves and trends are very much towards ubiquitous or mobile computing.

**VI. REFERENCES**