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Abstract- With the development of wireless communication, the popularity of android phones, the increasing of social networking services, mobile social networking has become a hot research topic. Personal mobile devices have become ubiquitous and an inseparable part of our daily lives. These devices have evolved rapidly from simple phones and SMS capable devices to Smartphone's and now with android phones that we use to connect, interact and share information with our social circles. The Smartphone's are used for traditional two-way messaging such as voice, SMS, multimedia messages, instant messaging or email. Moreover, the recent advances in the mobile application development frameworks and application stores have encouraged third party developers to create a huge number of mobile applications that allow users to interact and share information in many novel ways. In this paper, we elaborate a flexible system architecture based on the service-oriented specification to support social interactions in campus-wide environments using Wifi. In the client side, we designed a mobile middleware to collect social contexts such as the messaging, creating group, accessing emails etc. The server backend, on the other hand, aggregates such contexts, analyses social connections among users and provides social services to facilitate social interactions. A prototype of mobile social networking system is deployed on campus, and several applications are implemented based on the proposed architecture to demonstrate the effectiveness of the architecture.

Keyword- Wifi, Androids, Social networking,

I. INTRODUCTION

Mobile phones progressed and became popular in a speedy manner since they facilitate and improve communication among people in an impressive way. It is foreseen that the future mobile phone will advance their current role by becoming a device that will act as an organizer, a financial task manager, an entertainment platform, a security center, etc. The evolution of communication (3G, GPS, Wi-Fi, WiMax, etc.) and hardware (microprocessors, storage space, touchscreens, etc.) technologies offer mobile industry a scene to develop many useful user-oriented services, which are able to "collaborate" with existing Web technologies and services. Today's mobile phone offers a computer-like and on-the-go user access to the Web with browsers that support current web technologies (HTML, CSS, Javascript, Java, etc.). Social networking has become a popular application among wireless phone users. Typical applications, such as Facebook allow mobile users to share information with other users. The application facilitates communication, such as messaging between users.

II. SYSTEM PREREQUISITE

Social networks are growing day-by-day, having a broad impact on our societies. In particular, mobile social networks offer a novel user-interaction paradigm that combines the benefits of social networks (e.g., Facebook and Twitter) with mobile computing devices. Devices such as smart phones, PDAs and portable tablet PCs have become everyday-tools for many people. Mobile social

software refers to software designed to explore the social possibilities of urban environments through mobile devices. of the basic requirements of such software is that it must be very simple to use and efficient to operate, so that it integrates seamlessly into users' lives.

A Existing System
BlueFriend
BlueFriend is an application that takes advantage of mobile devices and Bluetooth technology to promote social networks, thus allowing to generate what is usually referred to as a mobile social network. The main goals sought are: (i) the application must be able to match user interests locally, (ii) no communications infrastructure should be required, thus allowing the application to operate in places where it is not available, or when the costs involved are too high, (iii) no user intervention shall be required at any moment during its execution, and (iv) the implementation must be efficient for it to be able to scale to large numbers of users, and also adopt multi-threading to handle parallel profile matching. One of the important properties of this application is that its operation relies heavily on geographic context. In fact, user profiles are only exchanged when two members of BlueFriend's social community are nearby (within Bluetooth's radio range, which is about 10 meters). Another important property has to do with its mode of operation; contrarily to most social networks, where the user himself has to interact intensively with the network to participate actively, with BlueFriend all the tasks are

performed automatically by the mobile terminal. So, after the user introduces his personal data and profile, the application will move into the background, operating by continuously trying to detect other members of the community and exchanging profiles.

B Proposed System

Bluetooth bandwidth and transfer rate is slow some time it does not support some application or takes longer time to load the application. Which degrades the performance of application can slow down the speed of mobile phone. To overcome this problem we further enhance this application using "WIFI". Wi-Fi Community is a fully automated system that provides security, reliability, authentication and controlling our network at one click.

This application is platform independent such as capability of working on all platform of computer system such as any version of Windows systems. This application is also capable of supporting the cellular phone models such as Nokia, Samsung, Sony Ericson, tablet PC's, and PDA's. Of any model having Wi-Fi facility and android operating system having version 2.3.0 above on that cell phone device.

III. IMPLEMENTATION

The "Wifi-community" is Android based application which uses Wifi as a hot-spot to communicate.

A J2EE (Java™ 2 Platform, Enterprise Edition)

The J2EE platform uses a distributed multitier application model for enterprise applications. Application logic is divided into components according to function, and the various application components that make up a J2EE application are installed on different machines depending on the tier in the multitier J2EE environment to which the application component belongs.

a) Servlet

A servlet is a Java technology based web component, managed by a container that generates dynamic content. Like other Java-based components, servlets are platform independent Java classes that are compiled to platform neutral bytecode that can be loaded dynamically into and run by a Java enabled web server. Containers, sometimes called servlet engines, are web server extensions that provide servlet functionality. Servlets interact with web clients via a request/response paradigm implemented by the servlet container.

b) MySQL

MYSQL is a Relational Database Management System (RDBMS). MYSQL is open-source and freeware software which has over 11 Million installations. The program runs as a server providing multi-user access to a number of databases.

c) Apache Tomcat

It is an open source web server and servlet container developed by the Apache Software Foundation. Tomcat implements the java servlet and the Java Server Pages (JSP) specifications from Oracle Corporation, and provides a "pure Java" HTTP web server environment for java code to run.

B Android

Android is a Linux-based operating system primarily designed for mobile devices such as smart phones and tablet computers utilizing ARM processors. Android consists of a kernel based on the Linux kernel with middleware, libraries and APIs written in C and application software running on an application framework which includes Java-compatible libraries based on Apache Harmony. Android software development is the process by which new applications are created for the Android operating system. Applications are usually developed in the Java programming language using the Android Software Development Kit. Android uses the Dalvik virtual machine with just-in-time compilation to run Dalvik dex-code (Dalvik Executable), which is usually translated from Java byte code.
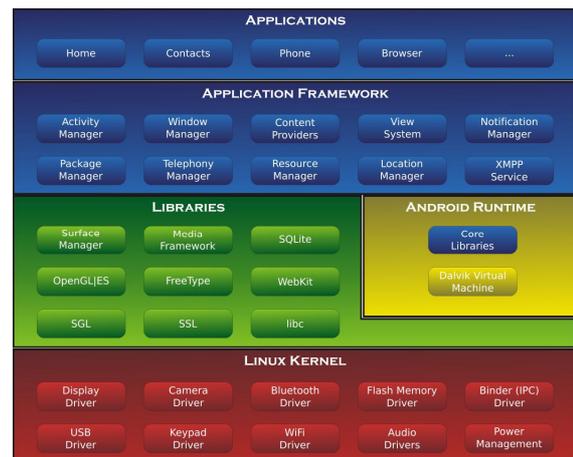

Fig 1 Android Architecture

Android applications run in a sandbox, an isolated area of the operating system that does not have access to the rest of the system's resources, unless access permissions are granted by the user when the application is installed. The sandboxing and permissions system weakens the impact of vulnerabilities and bugs in applications. Android smart phones have the ability to report the location of Wi-Fi access points, encountered as phone users move around, to build databases containing the physical locations of hundreds of millions of such access points. These databases form electronic maps to locate smartphones, allowing them to run apps.

C Wi-Fi Access point and Hotspots

A necessary component of any Wi-Fi network is a router connected to the Internet by some wired

method, such as a DSL cable or phone line. A WAP serves as a central hub of communication between wireless devices that want to access the network and the actual wired Internet connection itself. By converting information from the Internet into radio signals, and then broadcasting them, the WAP actually creates the wireless network itself. Wifi hotspot is a network adapter when the computer is turned on the computer will inform you that the network exists and ask whether you want to connect to it.

IV. SYSTEM FEATURES

- *Free Internet Access*
  It provide the users to use internet service from any of their electronic gadgets such as laptop, tablet pc's, mobiles and all other devices which support Wi-Fi service anywhere in the Wifi premises.
- *Secure access*
  Another system feature of the application is secured access to Wi-Fi service. Every user is assigned a user name and password and privileges according to its authority. So the system maintains the database accordingly, as user try to connect the Wi-Fi network, application server verifies it, if it is valid then only server grants its request.
- *Keeping In Touch*
  People join Friending communities to satisfy their need to belong to a group – or
  Multiple groups – in a community in which there are people known in the real/physical world, or people who were unknown but share a common interest or passion.
- *Entertainment and curiosity*

Mobile entertainment communities are designed to meet the need to have fun alone or in a group; this includes consuming all types of professional and UGC. Some of the mobile entertainment communities with UGC uploading, downloading. Entertainment communities could also share real-world experiences and recommendations (eg college, restaurants, clubs, cultural activities, sports and musical performances). Using photo status updates, it is possible to satisfy this category with Friending, and therefore creating a strong cross-over between the two categories.

V. CONSTRAINTS

A) Wi-Fi networks have limited range.
B) The Internet protocol was designed for a wired network in which packet loss due to noise is very rare and packets are lost almost exclusively due to congestion. On a wireless network, noise is common. This difference causes TCP to greatly slow or breaks transmission when noise is significant, even when most packets are still arriving correctly.
C) The most common wireless encryption-standard, Wired Equivalent Privacy (WEP), has been shown to be easily breakable even when correctly configured.
D) Wi-Fi connections can be disrupted or the internet speed lowered by having other devices in the same area.

VI. CONCLUSIONS

We presented the design and implementation details of an application based on Wi-Fi technology for Wi-Fi enable devices (i.e.: mobiles, laptop, PDA's, tablets) supporting communication and provides security to Wi-Fi network, based on open technologies such as Java programming language and Mobile Edition support. Our goal was to create an easy to use, mobile, interactive, flexible and extensible client-server solution, which support to client for managing wireless network effectively and in an appropriate way. The cost involved is only the initial set up cost and all communication within the network is free. This model will be very useful to reduce communication overhead in large organizations, in terms of revenue, space, efficiency portability and availability.

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