

Instant Message Transfer between Two Smart Phones Using Wi-Fi

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Abstract—Instant messaging has been widely used with the power of internet; people can use a message& talk to family, friends and co-workers. In the company, colleagues can send and reply instant message in real time without face to face; meanwhile the work report can be shared during the instant chat session. People can message to multiple people in the virtual share ideas and get conclusions. What's more, the staff can talk to customers or vendors online as well, in other word, now people can do business through the instant messenger direct rather than use the traditional method like make phone calls. The use of instant messaging nowadays is more than the calling function itself. The main objective of this paper is to introduce a methodology to provide instant Messaging Service over the android based smart phone users connected over via Wi-Fi. The proposed method is based on sending/receiving messages via Wi-Fi connection with the support of client –server programming without taking any service from mobile service provider and without the use of internet connection.

Keywords—Smart phones, messaging, client-server, Wi-Fi.

I. INTRODUCTION

Instant messaging is a set of communication technologies used for text-based communication between two or more participants over the Internet. Android is suitable for efficient communication, allowing immediate receipt of acknowledgment or reply. In the company, colleagues can send and reply instant message in real time without face to face, meanwhile the work report can be shared during the instant chat session; the Android can make a group chat get all the related people together in a physical meeting room. Using instant messages for interoffice communication is quicker than phone calls or emails. More than one person can chat at the same time. This is a huge benefit of using an instant messenger. Instead of relying on a conference call or copying others on an email message, everybody can join and have a discussion in real time. Better than email, if you truly want to communicate instantly you need to

Consider all your options. Sure, an email gets sent instantly but do you really know when if the other person receives it? With an instant message you can send a message and receive a reply within a matter of seconds. Email was the first killer application for the Internet but now instant messaging is coming to smart phones. Instant messaging (IM) is a form of communication over the Internet that offers quick transmission of text-based messages from sender to receiver. The instant messaging provides a means of sending messages to and from global system for communication, because of its ease of use and cost effectiveness it has become one of the popular service in the communication world. Instant messaging applications allow users to send/receive messages over the internet. It requires internet connection to transfer messages from one device to another device. There are various applications like BBM (Black Berry Messenger), Ping Chat, Imo etc. are messengers used for communication over the internet.



Fig.2.1: SMS service between two smart phones

BlackBerry Messenger (BBM) is a proprietary Internet-based instant messenger application included on BlackBerry devices that allows messaging between BlackBerry users. The service communicates over the phone's Internet connection using the mobile phone network. A wireless LAN ("Wi-Fi") network connected to the Internet may also

be used to send/receive messages. Most service providers will not allow sign-in to BlackBerry Messenger without the purchase of a BlackBerry data plan. All above application are based on internet that provides connectivity which includes internet access charges and also need to take the service from mobile service provider as shown in figure 2.1. What if a user wants to communicate only inside the organization? It means intranet based communication may not require the internet connectivity. However, to the best of our knowledge, there is still no instant messaging service that offers intranet based communication in such a way that does not requires internet connectivity as well as any messaging service from the mobile service providers.

II. LITERATURE SURVEY

Internet- based instant messaging applications allow users to send/receive messages over the internet. It requires internet connection to transfer messages from one device to another device. There are various applications like BBM (Black Berry Messenger), Ping Chat, Imo etc. are messengers used for communication over the internet. BlackBerry Messenger (BBM) is a proprietary Internet-based instant messenger application included on BlackBerry devices that allows messaging between BlackBerry users. The service communicates over the phone's Internet connection using the mobile phone network. A wireless LAN ("Wi-Fi") network connected to the Internet may also be used to send messages, however, most service providers will not allow sign-in to BlackBerry Messenger without the purchase of a BlackBerry data plan. All above application are based on internet that provides connectivity which includes internet access charges and also need to take the service from mobile service provider as shown in figure 2.1. What if a user wants to communicate only inside the organization? It means intranet based communication may not require the internet connectivity. However, to the best of our knowledge, there is still no instant messaging service that offers intranet based communication in such a way that does not requires internet connectivity as well as any messaging service from the mobile service providers.

III. METHODOLOGY

In this paper, we propose an internet based communication system that allows android based smart phone and tablet users to send and receive messages over the internet via Wi-Fi which requires neither any internet connectivity nor any messaging service from the mobile service providers as shown in figure 3.1. The motivation is to allow the smart

phone and tablet users to communicate in the internet without paying any internet data charges.

Proposed architecture basically consists of client and server module which may include the following steps.

1. Server apk and client apk should be installed in the smart phones.
2. When click on client apk, the client program runs on smart phone and send a request to connect with server smart phone.
3. Server creates connection for client, for that server creates a thread for client connection. This thread will be responsible to send/receive data to/from the client.
4. Once the client is successfully connected, it can send/receive message to the server.
5. In the same way server can send/receive message to the client.
6. This proposal basically uses the concept of socket programming and client server environment.

IV. RESULTS

Figure 4.1 represents TCP client project. Figure 4.2 represents TCP server project. Figure 4.3 represents both TCP client and TCP server projects which are interfacing with each other using Wi-Fi. Android platform to be used for implementing this proposal. Java 1.8 version is used as software to interface with android for developing suitable applications of this proposal. Adb software is used to install client and server into the smart phones. Figure 4.3 represents message transfer between client smart phone and server smart phone through Wi-Fi.

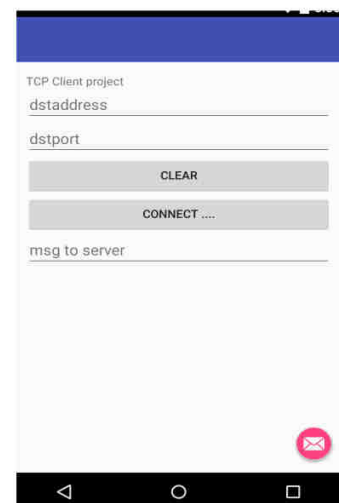


Fig.4.1: TCP Client user interface window



Fig.4.2: TCP Server user interface window

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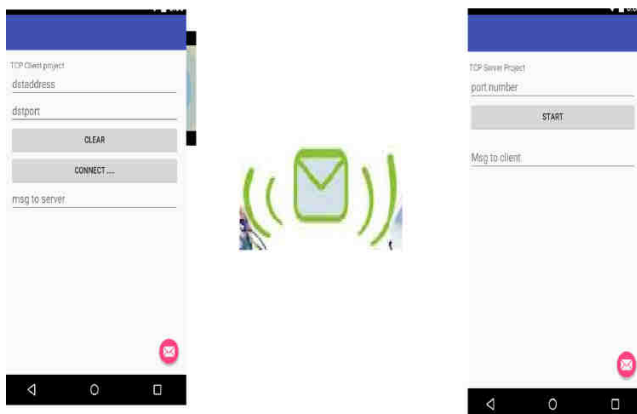


Fig.4.3: Message transfer between two smart phones through Wi-Fi

V. CONCLUSION

This paper presents an idea to develop messaging service for the Wi-Fi enabled smart phone users. This service will be deployed on the Wi-Fi service of any organization that allows smart phone users to send and receive messages within an organization at free of cost. This communication does not need to interact with mobile service provider or no need to take any data plan. Internet connectivity is also not required. So this way it reduces the cost of communication.

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