

# Chatting Application with Real Time Translation

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**Abstract** - Social networking is the most common task performed by people. There are roughly 6,500 spoken languages in the world today. However, about 2,000 of those languages have fewer than 1,000 speakers. People travelling different cities or countries have hard time with the language for socializing; even the sign boards or the menu's in hotels are in regional languages. To help out with such problem our application is very beneficial and easy to use. We have achieved translating almost all the languages. Social networking is not only with text but also with images we have achieved to process the image for doing face detection and the expressions. Our image processing also helps you to crawl the internet for the. Internet uses hash tags to categorize data. Over a billion images over the internet we can protect/inform you about any illegal usage of your image. With the help of same image processing we can also get the information about landmarks. We have managed to pull out all these features by using Google Cloud API and Google's Machine Learning. The application is built in hybrid environment by using Ionic Framework 3.6.0 which uses Angular 4.3.\* and for database we have Firebase(mongodb) and for backend we are using Express(node.js).

**Key Words:** Android, Instant Messaging, Intranet Server, client-server, peer to peer.

## 1.INTRODUCTION

Instant messaging is a set of communication technologies utilized for text-predicated communication between two or more participants over the cyber world. It sanctions efficacious and efficient communication, sanctioning immediate receipt of acknowledgment or reply.

In the company, colleagues can send and reply instant message in authentic time without face to face, meanwhile the work report can be shared during the instant chat session; it can make a virtual conference without get all the cognate people together in a physical meeting room. Utilizing instant messages for interoffice communication is more expeditious than phone calls or emails. More than one person can chat concurrently. This is a sizably

voluminous benefit of utilizing an instant herald. In lieu of relying on a conference call or facsimileing others on an electronic mail message, everybody can join and have a discussion in authentic time. Better than email, if you genuinely want to communicate instantly you require considering all your options. Sure, an electronic mail gets sent instantly but do you authentically know when if the other person receives it? With an instant message you can send a message and receive a replication within a matter of seconds. Email was the first killer application for the cyber world but now instant messaging is coming to cellphones. Instant messaging is a form of communication over the cyber world that offers expeditious transmission of text-predicated messages from sender to receiver. The instant messaging provides an expedient of sending messages to and from ecumenical system for communication, because of its ease of avail and cost efficacy it has become one of the popular accommodation in the communication world. Multi-utilizer applications are commonly implemented utilizing a centralized server. All participants share their views by exchanging the cryptographic digests of the chat room data set. An incipiently engendered message causes a vicissitude of the digest at the message progenitor, which leads to retrieving the incipient data by all other participants in an efficient way and resynchronization of chat room views.

## 1.1 Motivation of the Project

The person who has interaction with lot of people with different language faces lot of issues while communicating. There are lot of translation applications available in the market to help solve this issue. In existing applications there is a lot of work to be done to get the translated text. This is hectic and boring process. It also consumes a lot of time. So I used the functionality of google translate and combined it with the chatting application. Also on top of it I gave the user the ability to change the preferred language in which he wants the text message to be.

## 1.2 Goals and Objectives

1. Social networking in preferred language
2. Image backup.
3. Image theft alert on demand.
4. Landmark detection.
5. OCR.
6. Information on almost any image.

## 1.3 Internet Based Messaging Architecture

Internet- predicated instant messaging applications sanction users to send/receive messages over the cyber world. It requires internet connection to transfer messages from one contrivance to another contrivance. There are sundry applications like BBM (Ebony Berry Herald), Ping Chat, Imo etc. are heralds utilized for communication over the cyber world. BlackBerry Herald (BBM) is a proprietary Internet-predicated instant herald application included on BlackBerry contrivances that sanctions messaging between Blackberry users. The accommodation communicates over the phone's Internet connection utilizing the mobile phone network. A wireless LAN ("Wi-Fi") network connected to the Internet may additionally be habituated to send messages; however, most accommodation providers will not sanction sign-in to BlackBerry Herald without the purchase of a BlackBerry data plan. All above application are predicated on internet that provides connectivity which includes internet access charges and additionally need to take the accommodation from mobile accommodation provider as shown in Fig. 1. It betokens intranet predicated communication may not require the Internet connectivity. However, to the best of our cognizance, there is still no instant messaging accommodation that offers intranet predicated communication in such a way that does not requires internet connectivity as well as any messaging accommodation from the mobile accommodation providers.

### Project working

- 1) Android/iOS application
- 2) Send text message in any language
- 3) Receiver will RCV message in which the sender has send him the message
- 4) If receiver wants to translate it then he has to select the language from menu and then all the messages he RCV will be translated in that language

## 2. Multipurpose Chat Application

Multi-purport chat application is predicated on Jproxy fewer versions ported to Peer droid. It sanctions users to send synchronous messages, and enable sharing image files with other peers on the JXTA world. The application is designed for Android mobile phone users. The application first connects to the JXTA world, and then revelation the peers already connected to the network and the resources available. The peer should withal publish advertise the resources it has multipurpose chat application has a edit text field which sanction a utilize to in dote the message content then press the send button to send message content out the unicast bi-directional pipe. The edit text is designed to handle a certain amount of characters. When number of characters exceeds the buffer size, an exception occurs. Along with message is the denomination of the sender. The denomination is included to show the receiver from whom the message emanates from and the time of advent. The Incoming messages will be exhibited in scrollable form and can be retrieved later as chat history. When a peer received a message can reply back. A utilizer will be able to download image from the remote web server and apportion with other users of the system. The downloaded image files could be preserved in a local SD card as compressed files and retrieved later for the future uses. As it seems my mobile chat application has many features in prevalence as features available on chat applications above but still all applications already on market utilize a prevalent communication technology (client-server) to work while my application is predicated on P2P technology. The Bluetooth Chat uses Bluetooth to transfer data /instant messages between contrivances. The IMS SIP chat uses IMS SIP protocol for communication. In my case peer does not require a central server to revelation and verbalize with each other, they just needs a rendezvous peer to enable revelation and make advertisement for resources They have Multi-purport chat application downloads files directly from remote web Server then apportion with other peers online. When a peer has a content to apportion then must retrieve it from the secure digital card (sd card) and send the compressed file to other users. Multi-purport chat receives messages with vibration in scrollable format with al application is implemented to sanction users to log out when they opiate to do so, but period sample doesn't. Multi-purport chat sanctions users to download files from

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

steps. 1. First of all server program runs on server machine. 2. Then client program runs on android based mobile device and send a request to connect with server. 3. Once the client is successfully connected, the server broadcast the list of all other active users to the client. 4. Client can view the list of all active users and can communicate with them. 5. Server creates a separate connection for each client, for that server creates a separate thread for each client connection. This thread will be responsible to send/receive data to/from the client. 6. When a client sends a message to another client, this message first goes to the server. 7. Then server sends this message to the appropriate receiver. 8. Once the receiver receives the message, can read it. 9. In the same way receiver can reply message to the sender. 10. This application basically uses the concept of socket programming and multithreading. There will be one thread for executing server program and a separate thread to handle each client connection

### 3. CONCLUSIONS

This paper presents a conception to develop an accommodation for the intranet users, this accommodation will be deployed on the intranet server of any organization that sanctions smart phone and tablet users to send and receive messages within an organization at free of cost. This Communication does not require to interact with mobile accommodation provider or no desideratum to take any data plan. Internet connectivity is withal not required. So this way it reduces the cost of communication and increases the communication between sundry contrivances which gives compatibility with the Personal Computers with the avail of Blue stacks which provides an interface between the utilize and the personal computers or tablets to provide an efficient communication by incrementing its performance. It can be downloaded free of cost, so it is economical additionally.

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