



INNOVATIONS IN INSTANT MESSAGING APPS

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ABSTRACT

There are various free instant messengers existing now which allow people to be in touch with friends with texts, phone calls, videos, by sharing files, in group or not, and to maintain contact with them even internationally. But only very few of instant messengers have gained popularity and recognition. Recent studies have shown that the most popular instant messengers are WhatsApp and Telegram. Facebook acquired WhatsApp due to its huge number of users. While Telegram offers users a completely free open-source platform without any ads, a clean interface, and (the biggest selling point) security. So, which instant messenger is the best? Currently Telegram is the most downloaded messaging apps in the Google Play Store. But WhatsApp is the twinkling star among all these messengers.

INTRODUCTION

Now that smartphone usage is on the rise, instant messaging applications have become a necessity for users. The services provided by instant messengers allow people to communicate with friends with texts, phone calls, videos, shared files, in groups or not, and to maintain contact with them even internationally. But very few have gained popularity and recognition. Recent studies have shown that the most popular instant messengers are WhatsApp and Telegram. The features of all the available apps will be discussed in this paper.

WhatsApp

A recent survey shows the user base of whatsapp as 1 billion, and is the first messenger app to hit this milestone. In 2014, Facebook acquired WhatsApp because of its huge number

of users. In its initial years, it charged the user as much as USD 0.99 per year (the first 12 months was a free trial period). Later, subscription charge was completely cancelled since 18 January 2016. WhatsApp delivers facilities for text and audio messaging, free voice calls and exchanging photos or videos and even for sharing restricted types of documents and now they are expanding their application by adding the feature of transfer of money through their platform. But the main advantage of WhatsApp is its easiness for expanding the user base. When installing it, one can virtually reach all contacts in his/her address book on the phone who have installed the same apps. And with more extensive engagement between users in user-created WhatsApp groups, it acquires a healthy share in mobile space usage. WhatsApp clearly dominates the global instant messenger market at present. The following are the reasons why it has been chosen over Telegram or others messengers:

- 1) A top-of-mind brand in the market of instant messengers and they gained its popularity by of word-of mouth promotion by the users.
- 2) ease in installing and simple GUI keeps whatsapp favourite among its users
- 3) Ad free app is an added advantage of whatsapp
- 4) WhatsApp provides official web-based application that runs on Windows desktop environment.
- 5) Additionally, it can be used with the Chrome web based browser.

Telegram

It's not approximately flawless why Telegram arose as the substitute of choice resulting WhatsApp's downtime. Users could have swapped to Kik, or Facebook Messenger, or LINE. There's apparently something different

about Telegram. Telegram is a popular messaging service that is based on open-source platform. It also offers ads-free environment with a clean and fast interface. Telegram was initialized in August 2013 by the Russian-born entrepreneur Pavel Durov, but the "Russian WhatsApp" is in serious competition with the titans of the industry, WhatsApp or any other messaging app on that account. Telegram has gained the popularity status that it becomes the most downloaded messaging apps in the Google Play Store. Telegram has netted the parallel widespread social network among free downloaded apps in more than forty countries, including Germany and the United States, whipping other social network apps such as Facebook, WhatsApp, WeChat, and Kik.

Telegram is easy to sign up and use. It has several comparisons to WhatsApp in terms of dealing with user ID and contact. The phone number is used for user's primary identification. Once the user installs the app, he/she can communicate with all other users of same app. However, Telegram has more to offer. Any user can create a username as unique ID in Telegram, thus allowing others who know this username to directly contact without having to know the phone number of the respective party. Furthermore, toting other's username into Telegram's contact list will not automatically reveal the phone number. In view of that phone number is such privacy for numerous people, this feature is a great way to enhance the privacy fortification. In addition, the chat history will be stored in cloud and will be safe and easily accessible at anytime and at any place without any cost.

The sticker shop is a assortment of funny images that can be used in chats along with the text. It can share documents in more diverse file types that WhatsApp, as well as image and video sharing, without size limit. Telegram is a manifold platform app that can run on Android, iOS, Windows

Phone, Mac and Windows OS. Additionally, Telegram account can be retrieved from multiple devices, even at a given time, and messages appears simultaneously on all devices.

Telegram is designed as a light app, very fast and reliable. It offers platform for chatting in groups, with far more users can be encompassed in a group (up to 250000

participants) than what WhatsApp is capable of. Finally, Telegram also affords bots: an automatic answering account that can reply to specific text command by giving preformatted answers. The amalgamation of bots into Telegram's API offers unparalleled applications rather that are not found on WhatsApp.

Feature Comparison

As part of the social media, instant messaging tools are now frequently used. This is in line with social cognitive theory (SCT) which emphasizes reciprocal determinism in the interaction between people and their environments [24]. SCT posits that human behavior is the product of a dynamic interplay of personal, behavioral and environmental influences. A person's behavior can be influenced by the environment and also influence the environment. It is relevant to the current situation that the popularity of WhatsApp and Telegram are also influenced by the environment. The more people use instant messaging, the more people follow it. According to Bandura's theory, the use of WhatsApp and Telegram can be viewed as illustrations of these reciprocal determinisms, as providers must seek to influence the environmental and social factors that influence people's behaviour in using their product.

Person-behaviour relation is in context with the bi-directional interaction of one's thoughts, emotions and biological properties. For example, a person's beliefs, self-perceptions, goals and intentions greatly influence their behavior. A bi-directional interaction also happens between the environment and personal characteristics. The expectations of a human as well as its beliefs and cognitive competencies are greatly constructed by influx from social and physical environment. The interaction between behaviour and environment set the aspects for modification from each side. The environment partly determines the development of one's behaviour; in this case it happened to perform the behaviour of people in choosing WhatsApp, Viber and Telegram. Due to people having high expectations of the products they choose, providers must try to meet these expectations. They must always improve their product with many advantages, such as high technology, low prices and being user friendly.

WhatsApp bring detailed info when the exact status of messages, from the moment of

sending to when the messages are opened by the recipient, while Telegram includes read receipts with double ticks, but lacks the other aforementioned features. Now, all instant messengers focus on security issues, with completely private, safe and self-destructing messages.

All instant messaging providers claim that end-to-end encryption is implemented. As a natural result, people have wondered which service is safer: WhatsApp or Telegram?

DESIGN:

Design the foremost slice of any system design, understanding the features which the system should sustain. A designer must try to list down all the features about the system

CONSTRAINTS

1. Should be user friendly
2. Should provide real-time results
3. Fault tolerant
4. Scalable
5. Efficient management of resources

DESIGN PROCESS

The engineering design process is a series of steps that engineers follow to come up with a solution to a problem. Many times the solution involves designing a product (like a machine or computer code) that meets certain criteria and/or accomplishes a certain task. Here the process is divided into phases such as:

❖ **PROBLEM IDENTIFICATION:**

The problem identified in Telegram and Whatsapp common is that both of these is not

secure enough and some features are provided by WhatsApp but not by Telegram and vice versa. The credibility of user’s privacy is questioned.

❖ **PROBLEM DEFINITION:**

Messaging apps need to be more fault tolerant, provide fine control of connected systems and must be convenient.

❖ **DESIGN OBJECTIVE:**

Proposed design must be useful, affordable, efficient and user friendly.

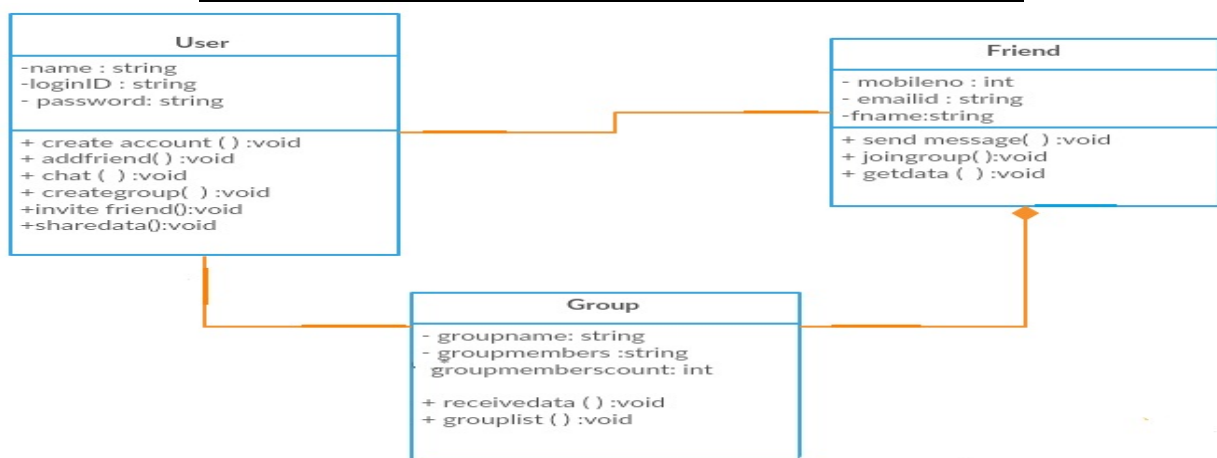
CONCLUSION

Whatsapp is twinkling among all the messengers with its additional out of the box features. Telegram bids the ability of synchronization, swift service, reliable backup and enhanced security feature. Although WhatsApp governs the social media cosmos due to its simplicity and the huge user support is on main reason for the social media ruling facebook for the huge acquisition of WhatsApp for US\$19 billion, its biggest acquisition to date. .

References

[1]<https://play.google.com/store/apps/details?id=com.twitter.android&hl=en>
 [2] <https://web.telegram.org/>
 [3] <https://www.quora.com/What-is-the-difference-between-Twitter-and-WhatsApp>
 [4]<https://www.financialexpress.com/industry/google-neighbourly-vs-whatsapp-vs-facebook-vs-twitter-the-difference-compared/1236113/>

DETAILED DESIGN: UML DIAGRAM: CLASS DIAGRAM



USE CASE DIAGRAM

