INNOVATIVE FEATURES IN INSTANT MESSAGING APPLICATIONS

(ANLIK MESAJLAŞMA UYGULAMALARINDA YENİLİKÇİ ÖZELLİKLER)

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LIST OF SYMBOLS

IM **:** Instant Messaging
IMA **:** Instant Messaging Applications
OTT **:** Over the Top
GSM **:** Global System for Mobile Communication
IMG **:** Instant Messaging Groups
CMC **:** Computer-Mediated Communications

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ABSTRACT

Instant Messaging Applications (IMA) are the most preferred applications for smartphone users. As a means of communication, it has not only been influential at the personal level, but has also affected interaction between members of groups. However, it is seen that the technical solutions currently used by IMA users are insufficient and simple at many points. The aim of this study is to bring improvements to existing methods and solutions in IMA, to develop them as a vision and to provide users with a more effective and comfortable experience. In this study, seven novel ideas in IMA that will recognize users from their past actions, provide useful suggestions for them as a group, and facilitate communication / meeting as a group are discussed. The reasons as to why these solutions are needed and their features were explained in detail.

ÖZET

Mobil mesajlaşma uygulamaları (MMU), akıllı telefon kullanıcıları için en çok tercih edilen uygulamalardır. Bir iletişim aracı olarak sadece kişisel düzeyde değil, aynı zamanda grup üyeleri arasındaki etkileşimi de etkilemiştir. Ancak şu anda MMU kullanıcılarının kullandığı teknik çözümlerin birçok noktada yetersiz ve basit olduğu görülüyor. Bu çalışmanın amacı, MMU'da mevcut yöntem ve çözümlere iyileştirmeler getirmek, bunları bir vizyon olarak geliştirmek ve kullanıcılara daha etkin ve konforlu bir deneyim sunmaktır. Bu çalışmada, kullanıcıları geçmiş eylemlerinden tanıyacak, grup olarak onlara faydalı önerilerde bulunacak ve grup olarak iletişimi/toplantıyı kolaylaştıracak MMU'daki yedi yeni fikir tartışılmaktadır. Bu çözümlere neden ihtiyaç duyulduğu ve özellikleri detaylı olarak anlatılmıştır.

1. INTRODUCTION

This study aims to examine the innovative features of Over-The-Top (OTT) Instant Messaging (IM) service. OTT refers to any streaming service that delivers content over the internet. IM is the term used to describe the technology through which ‘users can set up a list of partners who will be able to receive notes that pop up on their screens the moment one of them writes and hits the send button’. The accessibility of OTT content is one of the many reasons it’s so popular. To stream OTT, customers only require an internet connection and a compatible hardware device. Mobile messaging is moving from SMS to OTT Chat [1], market trends are really not in favor of Telecom Service providers with increasing use of OTT Applications like WhatsApp, Facebook Messenger, Google Hangouts, Skype, Viber, etc.

Today, due to the increasing number of mobile devices, users intensively use IMA for communication over the Internet. As technology develops, mobile applications used in mobile devices also develop. Mobile device users prefer IMA as the primary communication channel in group calls or one-on-one conversations. Likewise, it is used extensively as a channel for accessing information. When we look at the recent successful initiatives in IMA, we can say that innovation has a great impact on the basis of strategies, and we can say that one of these successful examples is WeChat. WeChat, Tencent's primary product, is one of the world's four largest mobile messaging applications [2]. Tencent is the third largest internet company in the world, after Google and Amazon. We see Tencent implementing micro-innovation strategies to develop and improve its product WeChat as well as manage its strong competition. In addition, Tencent has innovative strategies such as functional additions through micro innovation, reverse micro innovation through extraction, and strategic alliances for internationalization. When we examine today's technologies, we can easily see the importance of innovative features in intergroup interaction. With the advent of instant mobile messaging applications,

traditional SMS lost its feature of being the king of mobile messaging. This success has been achieved thanks to the innovations in group correspondence brought by WhatsApp from IMA.

The use of IM mobile communication services has attracted great interest in many different fields and sectors in recent years, has become increasingly widespread in the education and training sector and has been experienced by the whole world during the Covid-19 process, it is inevitable. At the same time, it can be said that IMA make the development of social existence easier than other forms of computer mediated communication (eg. discussion forum) [3]. Many current studies draw attention to the place and importance of IMA in our education life [4-7]. As a mean of communication, IM was not only effective on a personal level but also influenced the interaction between group members. Previous studies mainly focus on the use of IM at the personal level and do not investigate its use within groups.

This study proposes four new features that will facilitate the group messaging environment. The first innovation is based on the system that takes actions to restart communication within people or groups whose communication has almost disappeared over time in IMA [8]. Here, the past data of the users are interpreted through artificial intelligence (IA) algorithms and the system tries to make the communication of the users live again by taking the predictive actions that may be useful. The main purpose of this system is to bring together people with reduced communication face to face or through messaging. The second innovation realizes a system that enables IM groups (IMG), where more than two users can message as a group, to be managed by a messaging bot, and that users who are members of the same group can use this messaging bot as a resource [9]. The third innovation is a feature of IMA, where the locations of group users can be tracked online as a group via smart maps, location information and distances are calculated, and online traceable routes are created for their meetings [10]. The fourth innovation is based on collecting group members under certain titles in group messaging of IMA and sending them notifications and alerts through these titles [11]. A feature where we can gather some of the group members under the same tag. The fifth idea relates to a system for enabling users to create storage area in cloud for common group members on IMA and to perform data sharing such as photo, video [12]. The sixth idea relates to a system for enlarging or

reducing the message area on the screen without any scrolling on the application, in order to make it easier to read a large number of incoming messages, especially in an IMA [13]. The seventh idea relates to provide a system in IMA that enables users to transmit messages that can be read to each other, provided that they are in a predetermined position and / or at predetermined times [14]. When we look at current applications, there are suggestions seeking the solutions to similar problems, but they are not fully sufficient [15-21].

2. FULL LİFE CYCLE USE CASE EXAMPLE

We will define the full lifecycle use case by conducting end-to-end research by selecting one of the seven ideas (Data Sharing Over Cloud in Messaging Applications) described in this section. This idea was born out of the need to find a solution to one of the problems in daily life. We can express this problem and need as follows; people, who take a photo with their smartphones, want to share photos in a group of people, and they have to pick photos one by one for each person that group. If they share photos with all people at the same time, that people have to pick their own photos one by one.and they searching these photos in the album. It takes a lot of time, and also it makes the phone depreciated because of full of storage and decrease the speed of the processor of the smart phones.

In order to determine how often this problem is experienced by users, we conducted a survey to hear from the mouth of the users without mentioning the solution directly, and as a result of this survey, we got the following results. According to our survey which we are done with 80 people so far, we collect those data listed below. %40 of people have more than 10 group in their Messenger apps. %50 of people take photos with their smart phone for social life. %67 of people share those photos everyday with group that they have in your Messenger apps. Most of the people back up the photos into their computers for the storage. When the targeted market segmentation was examined, the following information was obtained; why people take and share photos with their friends in the groups that they have in their smart phones? (Use of case). Social life, education life (homeworks, assignment, work paper etc.), professional life (event, meeting notes etc.). In terms of our survey, %50 of people who we talked use take and share photos for social life. They share photos in the groups that they have in their Messenger apps almost every day. They mostly belong 18-40 aged groups. According to those out comes, our beachhead market segment is 18-40 aged people, who take and share the photos in daily life frequently with their smartphones. Moreover, medium and high social status are the

main target fort his project, because photo sharing and ınternet access in every area can not occur in the countrie.

When we look at the total addressable market size, we have reached the following data and results. WhatsApp in its official blog made an announcement that it reached a user base of 1 billion daily users and a massive 1.3 billion monthly users of the app. The instant messaging platform is already the biggest in the world and is growing rapidly. Last year, the messaging app had released data suggesting that 1 billion people used WhatsApp monthly. The data also revealed that around 55 billion messages were sent per day on WhatsApp [22], 4.5 Billion photos shared per day and 1 billion videos shared per day. According to the analysis we made on whatsapp data, there is a market size as follows. If for WhatsApp 4.5 billion photo sharing per a day and it exist 1 billion whatsapp user so it means 1 person share 4.5 photo per a day. 1 photo equals to 3,5 MB so 4.5 photo equals to 15,75 MB. In tihis case for 1B person annual data will be 5.748.750 TB. In Turkcell operator in Turkey 1 GB equal 10 TL (without campaign), hence 1MB is 0,009 TL and 3.5MB will equal to 0,0315 TL. In this case, the annual photo sharing cost is 51.73 BTL for whatsapp which gives us a good example to see the total addressable market size.

For example, Mehmet who is 25 years old likes taking and sharing photos with his mobile phone. Mehmet lives in İstanbul. He likes to travel a lot. He is graduated from university in 2020. If we think a scenario, Mehmet went to a vacation with his 6 friends and they took a lot of photos. When they want to share all those photos which is taken by smart phones of others in the group, they create a group in a Messenger app to do that. Every member starts to send the photos to this group and all the members have a lot of notification during this process. After that, all the members have whole photos, and they need to check and pick the photos which is their wanting to keep or delete. They make a lot of effort and it takes time to do this. Also Mehmet has to save those photos in another device because he doesn't have enough place in his phone. Because of these type of issues, we basicly want to integrate BİP and Lİfebox. In details, We create a cloud area for a specific group which is created in our Messenger app. (Cloud: Lifebox, Mesennger App: BİP) A, B, C, X, Y, Z refers a group of people. When X, Y, Z need to create a group to share media documents, the admin of the messaging group creates this cloud group and also can choose the options to exist a Lifebox area for this group. Ourbox is the name of

this service which can be provided by integration of Lifebox and Bip. X, Y and Z directly reached the photos from the BIP group to the lifebox via inner way which we call it “Ourbox”. When we go to BİP and create a group, we are going to have an option to “create Lifebox area” when we want to go this common area, we go to group details on BİP and in that screen we will have a new option which is “View Ourbox" When we click “View Ourbox” then it will lead us to Lifebox and show our documents. Advantages of this integration are saving time, effort, energy, data and storage. People will be able to share medias highly fast without distraction chatting screens at the message app. There will be only one step to reach photos instead of other methods. Ourbox uses less 50% data, less battery consumption and less 80% time comsuming. Because when we reach the sharings with one link, it removes unnecessary work flow and makes more accesibility. In this way, it occurs energy saving and more storage area. Cost of Customer Acquisition is zero. There will be no additional cost of customer acquisition, because our main target is that also Turkcell’s product BIP customer, who are member of the other operators. Turkcell will send the BIP’s customer for advertising the Ourbox and there will be no COCA.

For extending to usage area of this idea, GSM operators can provide new campaigne for the users and pulling people from toher operators. As an example, 3.7 Million of BIP users are members of other operators. 30% of these people actively use BIP and share media. In this case, our target population is equal to 1 million people. Our strategy is giving 1 GB free internet campaign for these users on a monthly. In summary, users who currently use BIP and are not Turkcell users will be given a monthly 1 GB internet package that will be valid for messaging, video calling and media sharing on Bip, in exchange for switching to Turkcell. With this campaign, even if we think that only 10% of the target clients of 1 million, that is 100K people, will switch to Turkcell, it will be great profits for the business. The average monthly invoice fee at Turkcell is 30 TL. 1 GB internet fee is 10 TL. With this strategy, Turkcell will increase the number of its subscribers and will have a new income source of 2 million TL per year.

This idea relates a system existing a storage area and performing data to share such as photo, video for users and common group members of OTT applications. Today, people use OTT applications more often for communication over Internet depending on

increasing number of mobile devices. Users can share data such as photo, video over OTT applications by means of this increasing and due to the fact that large file sizes can be transferred over Internet. In addition to this, users use cloud platform more for storing and sharing file upon cloud technologies have become widespread. We can explain the parts where this technical solution differs from existing technologies as follows: There are applications which enable use of cloud storage areas over OTT applications, in usages available in the prior art. Users can use the cloud storage area over OTT applications and record the data. However, there is no application for use of cloud storage area commonly by group members for OTT applications comprising group feature in this usage. Besides, carrying out authentication transaction for use of cloud storage areas by means of e-mail account does not provide a proper use for OTT applications which are used by GSM (Global System for Mobile Communication) number. Due to these reasons, there is need for a system enabling group members -which are provided on OTT- to use common cloud area by performing authentication through GSM as well and to perform data sharing over common area. The United States patent document no. US9240962, an application in the state of the art, discloses a system for providing integration between instant messaging application server and cloud storage server in order to enable users to perform file sharing with group members in instant messaging applications.

The following methods can be used to protect personal data like the shared photos and prevent them from falling into the hands of third parties: For media content such as PDF and Photographs to be shared, they are uploaded to the relevant server in encrypted form using one of the Symmetric or Asymmetric encryption methods. (Encrypt is done on the back-end side) The most common AES-256 encryption algorithm can be used for symmetric encryption. The private key should be available on both the back-end and the client side. While the content is encrypted on the back-end side, it should be encrypted with a different key every month. During the normal process, when a request is opened on the backend side of the client with an ID, the backend should redirect this request to the cloud server with a token, as a result, the cloud server will download the relevant photo to the relevant client. At this stage, the client side will decrypt the downloaded photo with the key in its hand. While doing this, users should be prevented from accessing the key on the client side using certain devices. The symmetric password decryption (AES-256) algorithm can be used for the decryption proces

3. INNOVATIVE FEATURES

3.1 A System That Ensures Communication Continuity in IMA

When IMA users communicate with a lot of people, the conversation history with a person they had previously messaged with can be minimized and overlooked in the users' conversation history lists. Today, studies are conducted to ensure that warning messages are generated for communications that are below a certain threshold value by analyzing messaging applications, calls and messaging. However, in these studies, which aim to keep the communication of people with each other above a certain level, it is not possible for users to receive reminders for the people they have not met for a long time at the locations and times they have specified. For this reason, considering the studies and deficiencies found in the current technique, it is understood that a system that allows users to offer suggestions for conversation and messaging at certain times or locations for people who used to frequently meet but have recently decreased frequencies is needed.

The aim of this technical model is to create a system developed in an IMA to analyze the intensity of the messaging between individuals through AI based on rules to identify the people with whom the user communicates most. In addition, this technical model analyzes the messaging data of the people with whom an IMA user communicates the most, and enables users to identify the users who are in the main user's contact list from the people with whom they most frequently communicate. Finally, it determines the users of an IMA, who are in the contact list of the user of the IMA and who are in the frequent conversation list of the people with whom the user communicates most, and that the main user does not communicate for a certain period of time. Then it sends the warning messages to the main user to communicate with those user.

Proposed Model. A System That Provides Communication Continuity in Messaging Applications, developed to achieve the aim of the present innovation is shown in Figure 3.1.1. The parts in the figure are numbered as follows:

1. System
2. Electronic device
3. Messaging application
4. Database
5. Server

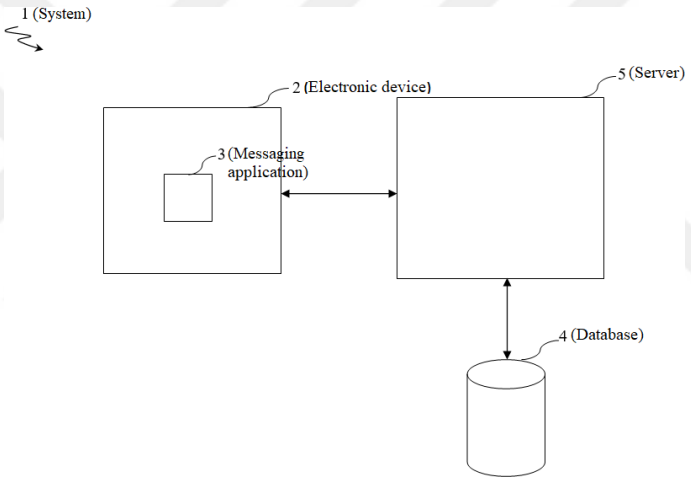

Figure 3.1 It is a schematic view of the system according to the innovation.

The innovative system (1) developed in an IMA to analyze the messaging density of the users and provide communication and meeting suggestions to the users according to their messaging intensity.

- This system need to at least one electronic device (2) that runs at least one application on it and can communicate with a remote server using any remote communication protocol.
- Likewise, this system need to at least one messaging application (3) running on the electronic device (2), configured to enable users to communicate with other

- users individually and / or collectively with text, audio, video content messages and to show suggestion notifications.
- It is necessary at least one database (4) configured to keep track of users' messaging data, contact lists and the list of the people they talk to the most.
- This system can communicate with the electronic device (2) using any remote communication protocol, and through this communication, it can exchange data with the IMA (3) carried out on the electronic device (2). In this system, communication with the database (4) is continuous and the system can receive the messaging data of the users from the IMA (3) and analyze this data according to the location and time information specified by the user through IMA (3).
- As a result of the analysis made by this system, an IMA (3) can identify the people with whom the user communicates most. The system is able to select a certain number of people who are determined to communicate the most by the main user, and by analyzing the messaging data of these people, it can determine the other users with whom the users communicate the most.
- This system can identify the people with whom the main user communicates the most and the people with whom these people communicate the most. Based on the common ones on these two lists, the IMA (3) of the main user can detect the persons who are in the contact list but the main user has not communicated for a certain period of time. The system can create a warning tag for these people it detects and hosts at least one server (5) configured to transmit it to the IMA (3).

The electronic device (2) in the system (1) of the present innovation is configured to communicate with the server (5) using any remote communication protocol in the prior art. In the preferred embodiment of the innovation, the electronic device (2) is configured to communicate with the server (5) over a data network such as the Internet. It is a device such as mobile phone, smart phone, tablet, computer, desktop computer configured to execute at least one IMA (3) on the said electronic device (2). The IMA (3) in the system (1) of the present innovation is carried out on the electronic device (2) and is configured to exchange data with the server (5) through the communication established between the electronic device (2) and the server (5). Said IMA (3) is configured to at least enable users to send and / or receive text, voice, and image messages with other users. In the preferred embodiment of the innovation, the IMA (3) is configured to provide an interface adapted

to allow users to enter the desired location data and time range for analysis. The IMA (3) is also configured to create and display a conversation and communication alert notification to the user information transmitted from the server (5).

The database (4) in the system (1) of the innovation is in communication with the server (5) and is configured to be managed by the server (5). Within the said database (4), an IMA (3) is configured to record the contact list and messaging data of the user. In the preferred embodiment of the innovation, the most frequently contacted users determined by the server (5) within the database (4) are configured to record their lists. The server (5) in the system (1) of the innovation, to communicate with the electronic device (2) using any remote communication protocol in the prior art, and IMA (3) carried out on the electronic device (2) through this established communication. is configured to exchange data with. The said server (5) processes data such as registering new data in the database (4), deleting the recorded data in the database (4) or updating the registered data in the database (4) by changing the registered data in the database (4). It is configured to manage its base (4). The server (5) is configured to receive the users' messaging data from the IMA (3) through the communication with the electronic device (2) and to analyze the said messaging data with an artificial intelligence application.

The server (5) is configured to take the location and time interval information entered by the user via the IMA (3) to combine and analyze it with the messaging data. In the preferred embodiment of the innovation, the server (5) is configured to identify the most frequently contacted users of an IMA (3) from the analyzed messaging data at the specified time interval and location. The server (5) is configured to save the detected persons to the database (4) in the form of a list with the most frequently contacted person tag. The server (5) is configured to connect to the database (4) by triggering at the time intervals and locations specified by the user through the IMA (3) and to receive the information of a certain number of people in the contact list that the main user contacts most often. The server (5) is configured to analyze the messaging intensity of the people with which the main user is in the most frequent communication by accessing the messaging data via the IMA (3) and to identify the ones that the most frequently communicated users are in the main user's contact list. The server (5) identifies the people who are in the contact list of the main user and who have a high frequency of

communication with the contacts that the main user contacts with, and send them to the main user's IMA (3) by creating a warning label for these people. It is structured to be.

In an exemplary embodiment of the innovation, the message and communication data of person A, who is a user of an IMA (3), is analyzed together with the time and location information entered through the application, and the three people that person A communicates with most are determined. Then, the messaging data of the B, C and D people, the three people with which the said A person communicates most, are analyzed and the users who the most communication of these people and the person in the IMA (3) of the person A are identified. For an E person determined that any of the B, C and D persons, for example, person B is the most communicating and person A is on the contact list, the communication density with person A is determined and it is determined that person A has not communicated with person E for more than a certain period of time. For the time intervals and locations specified by the person A through the IMA (3), an alert notification is generated for communication or conversation with the person E and the person B and sent to the person A IMA 3.

Thanks to the system (1) of the present innovation, users of IMA (3) are provided with reminder notifications for users who have been in contact before, have not been communicating for a long time but are in communication with other friends. Thus, the problems of meeting, organization and communication disruption of the users of IMA can be eliminated and incentives are provided not only for communicating in the virtual environment but also for face-to-face meetings.

3.2 A System Managing of IMA by a Bot

In the present technique, IMG (IMG) are usually managed by the user who created the group or other users authorized by the user who created the group. Such a manager (administrator) can review the messages usually written in IMG, follow the actions of users, keep the group active if the IM group is for a specific interest (for example, a training class) and respond to questions and information requests sent to the group. However, considering the intensity of the movement in the IMG, it is not possible for the administrators to follow the IMG and to reply to every message in a short time.

An increasingly popular feature for IMA and services is messaging bots. These bots run continuously on a server, can be accessed via IMA and can give certain answers to keywords. These bots can often be added to the user's contacts in the IMA as a contact, so that users can interact with these bots. It is understood that there is a need for a solution for IMA and services in terms of management of the group and considering the shortcomings arising from the nature of the users and features of IM bots, which enables IMG to be managed by a bot. This technical model will provide an unprecedented common communication opportunity with the new options that IMA will provide to group members in in-group messaging. The purpose of this technical model is to realize a system that enables IMG to be managed by a messaging bot and that group members can use this messaging bot as a resource.

Proposed Model. In order to achieve the aim of the present innovation, A System That Enables IMG to be Managed by a Bot is shown in Figure 3.2.1. The parts in the figure are individually numbered as follows:

1. System
2. Mobile device
3. IM server
4. Bot server

21. IMA

K. User, U. End system

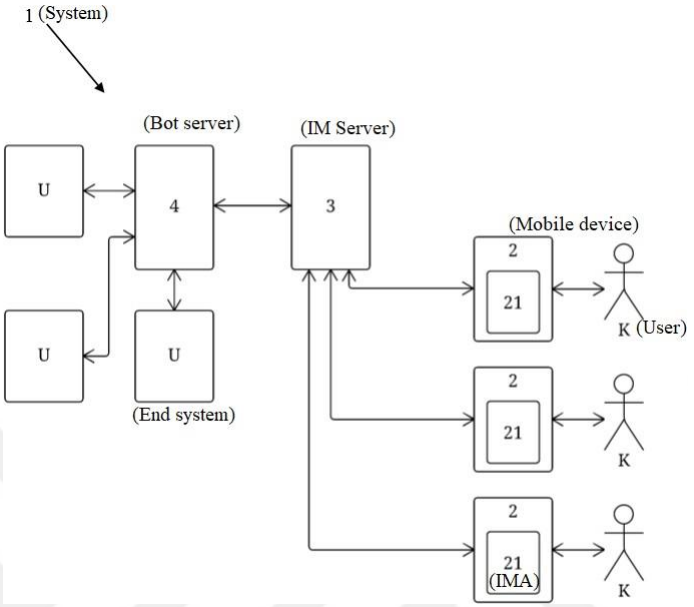

Figure 3.2 A schematic view of the system subject to the innovation.

The subject of the innovation is the system (1) that enables IMG to be managed by a bot;

- In this system, there is a need for at least one mobile device (2) used by the user (K) that will enable the user (K) to benefit from mobile applications and services.
- In this system, there is at least one IMA (21) that runs on the mobile device (2) and is configured to allow the user (K) to use the IM service.
- In order for the system to operate, the user (K) communicates with the IMA (21) used by the mobile device (2) and receives the messages sent by the user (K) via the IMA (21), transmits the messages to the relevant recipient and or at least one IM server (3) configured to transmit messages sent to IMG where the user (K) registers via IMA (21) to the mobile device of the user (K).
- The system, where the IM server (3) transmits all messages to IMG where a bot is assigned as the manager for evaluation, evaluates these messages by taking these messages and examines the messages in terms of compliance with the group, including keyword, determining which subject the message contains keywords, It comprises at least one bot server (4) that can access various end systems (U)

according to the content of the message and if any, and takes the relevant action regarding the message and / or the user (K) sending the message.

The mobile device (2) is an electronic communication device used by the user (K) that will enable the user (K) to benefit from mobile applications and services. The mobile device 2 is a smart phone capable of running mobile applications in the preferred embodiment of the innovation. The IMA (21) is a mobile application running on the mobile device (2) and configured to allow the user (K) to use the instant messaging service. IMA (21), in the most basic way, the user (K) can send written, audio and visual messages to other users (K), view messages from other users (K), create IMG, join IMG, IMG assigned to IMG, sending messages to the IMG, viewing messages sent by other users (K) and bot server (4), adding and removing other users (K) to IMG, managing IMG, assigning bot managers to IMG, IMG The bot is a unit that is configured to allow it to obtain management authority from the administrator.

The instant messaging server (3) receives the messages that are communicating with the IMA (21) that the user (K) uses via the mobile device (2) and sends the messages to the relevant recipient (K) via the IMA (21), and to the user (K) or the server (K) configured to transmit the messages sent to the instant essaging groups when the user is registered via the IMA (21) to the mobile device (2) of the user (K). The instant messaging server (3) is an XMPP (Extensible Messaging and Presence Protocol) server in the preferred embodiment of the innovation. The bot server (4) transmits all messages received by the instant messaging server (3) to the IMG when a bot is appointed as an administrator, evaluates them by receiving these messages and determines the topic of the messages in the group, including keywords, if the message contains keywords. It is the server that takes the relevant action in relation to the user (K) who examines it and sends the message and / or message. In the preferred application of the innovation, the bot server (4) is sent to the instant messaging server (for violating the content of violence, insults, swearing, etc.), which firstly examines all messages transmitted to it by the instant messaging server (3) in terms of group suitability. 3) is a server that sends the instruction and sends this message to the group (K) via the instant messaging server (3) and the IMA (21). In one embodiment of the innovation, the bot server 4 is the unit configured to instantly send the

instruction to remove the user (K) from the group membership to the messaging server (3) in the event that any user (K) receives a message that does not comply with the predetermined number of group rules.

The bot server (4) perceives the messages sent by users by talking about the bot in the role of group manager through IMA (21), as messages directed directly to them and by making sense of these messages on the mobile devices (K) of users who are members of the IMG (K). 2) The server configured to send to the instant messaging server (3) to be transmitted to the IMA (21) running. In an exemplary application of the innovation, users can request that their messages be interpreted and answered directly by the bot server (4) by using "@master", "@admin", "@administrator", "@bot" in their (K) messages. The bot server (4) accesses this message by accessing various end systems (U) after performing an interpretation of the message content for the messages that the users (K) send by referring to the bot in the role of the group manager via IMA (21) and perceives them as messages directed directly to him. It is a unit that can exchange information with these end systems (U) in order to create the content to be used in responding. For example, in an application of the innovation, if any user (K) sends a message "@bot English education online" to the IMG via the IMA (21), the bot server (4) is a search engine to search for online resources related to English education. (U) accesses and sends the English language training links obtained from this end system (U) to the instant messaging server (3) to be transmitted as a message to the IMA (21) running on the mobile devices (2) of the users of the IMG (K).

When the bot server (4) talks about any subject title by the users (K) through IMA (21) to collect the messages they send as a content under that subject title and then any user (K) wants to see the content accumulated under this subject title It is the unit configured to send this content that it has accumulated to the instant messaging server (3) to be transmitted as a message to the IMA (21) running on the mobile devices (2) of the users of the IMG (K). For example, in an embodiment of the innovation, the bot server (4) stores the music source links that the users (K) send to the IMG using the "@ music" pattern, and then "list music @" of any user (K). If it sends a message, such as, it can instantly forward a message containing these links to the messaging group.

The bot server (4) also collects information or resources on this subject by periodically accessing various end systems (U) for messages sent by users (K) by mentioning any subject title via the IMA (21) and new information and resources. Instant messaging to be transmitted as a message to IMA (21) running on mobile devices (2) of users of IMG (K) as it collects or periodically or when any user (K) requests content in that subject title. It is the unit configured to be sent to its server (3). For example, in an embodiment of the innovation, the bot server (4) collects the information and resources that the users (K) send to the IMG using the "@yapayZeka" pattern, while also adding to an end system (an artificial search engine) that is an article search engine. U) accesses this end system (U) to receive information and resources on new articles published on "artificial intelligence" and receive them from the end system (U) or periodically once a week or a user (K) such as "list @yapayZeka" When requested by message, it instantly transmits it to the messaging group.

When the bot server (4) also wants to share their location via the IMA (21) of the users (K), to take the location of all users (K) in the form of instant location or live location, and then this location information. it is a unit configured to be sent automatically to the instant messaging server (3) to be displayed on a map to be displayed in the IMA (21), either automatically or upon request by any user (K). For example, in an application of the innovation, two or more users (K) of the IMG who wish to meet can instantly notify the bot server (4) via the messaging server (3) that they want to share their current location via a message they write using the "@address" pattern. Then the bot server (4) automatically transmits this location information to the instant messaging server (3) to be displayed on a map to be displayed in the IMA (21) when any user sends a message such as "list address". In this way, users of IMG (K) who want to meet in a certain place can see where they meet or where users (K) are trying to reach the meeting point.

In an embodiment of the innovation, the bot server (4), in the event that the users of the IMG (K) do not send the correct message to the instant messaging server (3) from the IMA (21) for a predetermined period of time, in order to keep the group alive or It is a unit that is configured to send one or more messages in a style suitable to the general taste of the group to the instant messaging server (3) to be sent to the IMA (21) running on the mobile devices (2) of the users of the IMG (K).

3.3 Intelligent Meet Maps and Navigation Features in OTT Applications

OTT Applications work with voice over internet protocol (VoIP) technology and enable data transmission over the internet. They can provide data, voice, message and video services over the internet. With this technical solution, OTT applications will be a feature where users' locations can be tracked online via smart maps, location information and distances are calculated and routes are created for their meetings. Today, because of the very large number of employees in corporate companies, the importance of service for employee comfort and motivation began to be great. As a feature, that makes life easier for employees and people who want to meet at certain points in daily life, this technical solution will bring great convenience to our lives.

In order to better understand the necessity of this function, let us explain the issue through a routine event that occurs almost every morning in daily life. All employees use the shuttle service to go to the company in the morning and almost every shuttlehas an IMG on WhatsApp or BIP. Employees communicate by group to don't miss the shuttle and stay informed of their current location. This communication causes correspondence traffic in every group almost every morning, but it cannot be prevented from instant rush. In addition, shuttle drivers are not aware of their employees who do not show up, so they have to endure unnecessary waiting or unnecessary stops. If a smart map feature is integrated into the groups of IMA as described in this technical model instead of this existing phone traffic method, the contacts are synchronized with the points they will be received by the shuttle, comparing the location information to the stop location with a certain period of time and showing it to the shuttle driver and the users of the shuttle, that is, on a map visible to everyone in the group, will provide great convenience and practicality. At the same time, each individual will be able to follow the shuttle instantly and be free from the need to search for and obtain information.

In addition, the smart map will be able to change the shortest route according to the existing users in the shuttle related section, i.e. online, while determining the shuttle users and the route of the destinations. If there is no person in one of the destinations, it will be able to find the shortest route and update the route automatically so that everyone can see it according to the existing destinations. Another problem is that the groups of friends

who want to meet at a certain point call each other continuously and learn their last position according to the meeting point and give directions. If this feature is integrated into OTT applications, people who want to meet at a certain point can take advantage of this service and instantly see their location according to the location they will meet and see where each other is on the map.

Proposed Model. Only two levels of headings should be numbered. Lower level headings remain unnumbered; they are formatted as run-in headings. A location tracking system realized in order to attain the aim of the present innovation is shown in Figure 3.3.1. Parts shown in the figure are numbered as follows:

1. System
2. User access device
3. Mapping application
4. Application server
5. Calculation unit

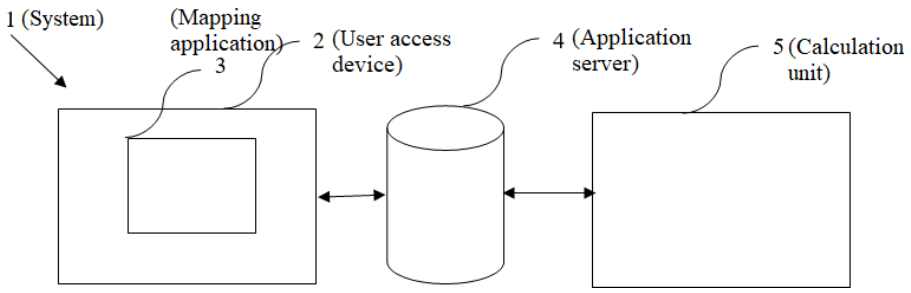

Figure 3.3 A schematic view of a location tracking system.

A location tracking system where the locations of users of the innovation are tracked online (1).

- In this system, there is a need for at least one user access device (2) on which the user (K) is interacting, capable of playing video and / or audio, containing at least one camera and running at least one IMA.
- In this system, at least one map application that works on the device of the user access device (2), where the locations of the users are monitored and shared instantly with the permission of the users, and also shows the locations of other users on a map and where the users can define a meeting point (3) available.
- This system also includes at least one map application (3) running on the user access device (2), where the obtained location data are collected for calculations and shared online among users to show the location information on other user electronic devices (2). There is a need for an application server (4).
- With the permission of this system users, the user mobile device that monitors itself, other users and the meeting point instantly on the smart map application (3) using the location information of the users on the application server (4), calculates the location information of each user by comparing it with the meeting point (2) it contains at least one calculation unit (5) that displays it over the map application.

With this technical solution model, OTT applications and users can be tracked online via smart maps. There will be a system where users' locations can be tracked online by activating with the authorization of the user, and again forming a route from the users' locations to the meeting point, calculating the distance of the users' locations to each other and the location of the meeting point. Another benefit of this solution is that it provides a shuttle driver with an ideal route-to- shuttle that describes the shortest route to a shuttle driver based on the location of existing group members. There will be a system in which group members can follow each other through the specified applications without a leading application, a controller or a computing device, and a system where the user's location can be monitored if authorized. In this technical method, the user access device exchanges data with the u other users over the application server using the map application running on it.

With the smart map application on the devices, users can be followed instantly. The smart mapping application works on the user access device and brings the other users together via OTT applications and shares the location information of the users online with other

users. The smart mapping application works in a preferred time period and/or within a certain distance area to eliminate security problems. In addition, the smart mapping application can be disabled manually to terminate the transfer of location tracking information to the application server. In addition, the smart mapping application can be disabled manually to terminate the transfer of location tracking information to the application server. The server provides online tracking of users' location information via smart mapping application online. In the calculation unit of this technical method shows itself on the smart map, other users and the meeting point instantly in the smart map application via the application server when a meeting point is determined via the map application with the data it receives through the application server. When a meeting point is determined via the smart map application, the calculation unit calculates the location information of the users by comparing the meeting point and converts it to the format to be displayed on the smart map application. The calculation unit shows the location of each user's location information compared to the meeting point and calculated on the smart map application instantly.

In an exemplary embodiment, the shuttle driver is able to establish a group through the user access device and select a route, other users in the group are able to track the presence of other users in the group and their distance to the station online. In this example, the calculation unit arrives where they want to arrive on the shortest route by creating alternative routes without taking into account the users who are not on the route. In addition, users in the group can be tracked by integrating their stations with user access devices. In addition, the system and the user access devices, established selecting the location and the friends they want to meet and of the smart map application to select the location and distance of the people can be seen according to the destination.

3.4 Title Feature In-Group of IMA

With the group messaging feature provided to IMA, users can send and receive messages to more than one person on a single chat page. In groups created to communicate with more than one person in IMA, sent messages can be viewed by all users in the group. Currently, a user in the group can still send alerts to that person by selecting any user in the group and / or tagging that person. Users need to select and / or label individual contacts to send alerts to multiple people in the same chat group. This situation creates problems in group messaging with a large number of users and causes users to lose time. For this reason, considering the studies and deficiencies found in the current technique, it is understood that a system is required in which people who are asked to be warned can be gathered under a single label to alert more than one person at the same time.

The aim of the present innovation is to realize a system and method developed in order to create name tag groups in which more than one person can be included in group messaging, which enables people to communicate with more than one person in IMA where people can communicate with other users in voice, text and visual form. Another object of the present innovation is to provide a system and method developed to ensure that more than one user is gathered under a single label group and that every user in that label group receives a warning notification when that label is used during chat.

Proposed Model. In order to achieve the aim of the present innovation, System and Method that Enables the Warning of Multiple Persons in Group Chats in IMA is shown in Figure 3.4.1 and Figure 3.4.2 The parts in the figure are numbered as follows:

1. System
2. Electronic device
3. IMA
4. Server

100. Server

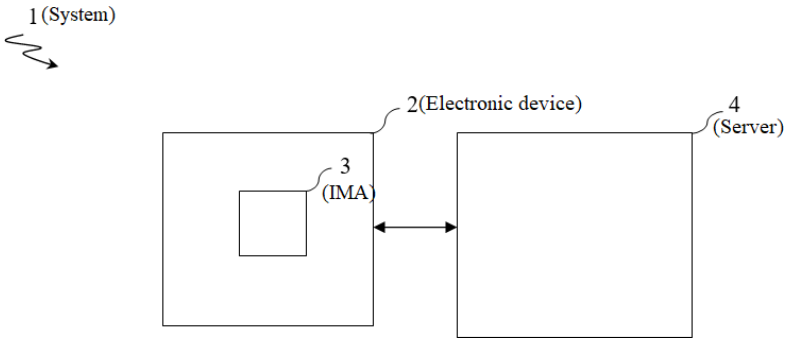

Figure 3.4 A schematic view of the system according to the innovation.

In IMA where users can communicate with other users over a network in voice, text, and visual communication, the name tags used to warn a particular person in groups created to communicate with more than one person are used to warn more than one person, so that more than one person is warned. Invented system (1)

- Needs at least one electronic device (2) configured to perform data exchange using any remote communication protocol and to run at least one application on it.
- Should also be at least one IMA (3) executed on the electronic device (2), configured to at least enable users to send and / or receive messages containing text, sound and video.
- Includes at least one server (4) that is in communication with the IMA (3) using any remote communication protocol and configured to receive and send messages over the IMA (3).

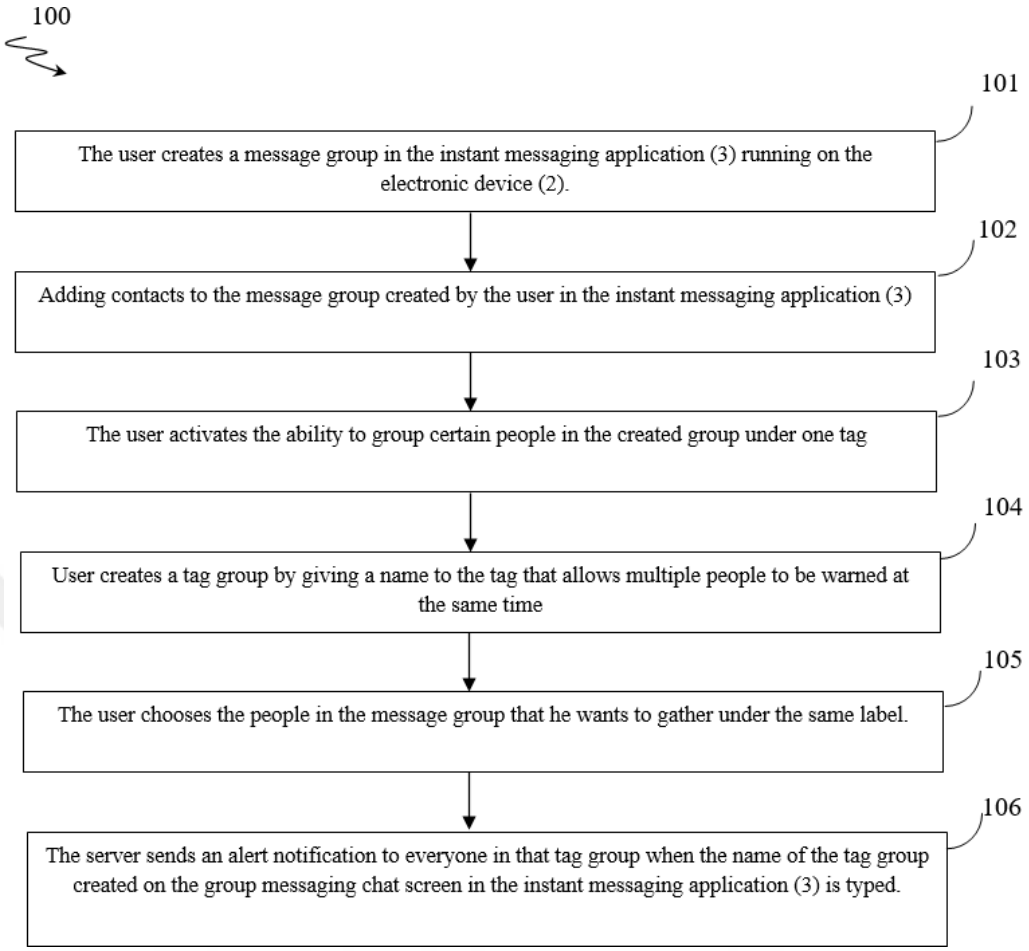

Figure 3.5 Flow chart of the method according to the innovation.

The electronic device (2) in the system (1) of the present innovation is a device such as mobile phone, smart phone, tablet computer, portable computer, which are configured to execute at least one application on it. The electronic device (2) is configured to exchange data using any remote communication protocol. In the preferred embodiment of the innovation, the electronic device (2) is configured to exchange data using a bus such as the Internet. The electronic device (2) is configured to communicate with the server (4) using any remote communication protocol and to enable data exchange between the IMA (3) and the server (4) through this established communication. Said electronic device (2) is configured to enable the user to communicate with the IMA (3).

The IMA (3) in the system (1) of the present innovation is carried out on the electronic device (2), and data using the server (4) through the connection established between the electronic device (2) and the server (4) using any remote communication protocol. It is

structured to perform shopping. Said IMA (3) is configured to at least enable users to send and / or receive messages with text, voice and image content. In the preferred embodiment of the innovation, the IMA (3) is configured to enable users to start a chat by selecting the person or persons they want to communicate with, via a presented interface. The IMA (3) is configured to allow the user to exchange data with more than one person through chat groups that the user creates by selecting more than one person over the presented interface.

The server (4) in the system (1) of the present innovation is configured to be in communication with the IMA (3) executed on the electronic device (2) using any remote communication protocol. The said server (4) is configured to exchange data between users using the IMA (3) and to enable users to send messages with audio, text, and image content to each other. In the preferred embodiment of the innovation, the server (4) is configured to ensure that an alert notification is sent to the tagged user when a user is tagged with his registered name, in group chats created to communicate with more than one person in the IMA (3). The server (4) is also configured to ensure that a notification group is sent to multiple users with a single name tag by creating a tag group in group chats created to communicate with more than one person in the IMA (3). In the IMAs (3), the innovative method (100) developed to ensure that the name tags used to warn a particular person in groups created to communicate with more than one person are used to warn more than one person, and thus, more than one person is warned with a single name tag;

- The user creates a message group (101) in the IMA (3) running on the electronic device (2),
- Adding people (102) to the message group created by the user in the IMA (3),
- The user activates the ability to gather certain people in the created group under a single label (103),
- Creating a tag group by giving a name to the tag that allows multiple users to be warned at the same time (104),
- The user chooses from the people in the message group whom he wants to gather under the same label (105),

- When the server's name of the tag group created in the IMA (3) is entered into the group messaging chat screen, it includes the steps (106) to send an alert notification to everyone in that tag group.

Within the method (100) of the present innovation, the user first creates a message group (101) in the IMA (3) running on the user electronic device (2) and selects the persons to be included in this group (102). In the IMA (3), after the creation of the messaging group, the user activates the feature of alerting more than one person in the group with a single name tag (103). The user creates a group of labels by giving a name to the label that will cause multiple people to be warned at the same time (104). The user selects one and / or several of the people in the group and adds them to the tag group he created (105). When this tag is written on the chat screen, the server ensures that all users included in the tag receive a warning notification (106).

3.5 Data Sharing Over Cloud in Messaging Applications

Today, users use OTT applications more intensely for communication over Internet depending on increasing number of mobile devices. Users can share data such as photo, video over OTT applications by means of this increase in use of OTT applications and due to the fact that large file sizes can be transferred over Internet. In addition to this, users use cloud platform for storing and sharing file upon cloud technologies have become widespread. There are applications which enable use of cloud storage areas over OTT applications, in usages available in the prior art. Users can use the cloud storage area over OTT applications and record the data. However, there is no application for use of cloud storage area commonly by group members for OTT applications comprising group feature in this usage. Besides, carrying out authentication transaction for use of cloud storage areas by means of e-mail account does not provide a proper use for OTT applications which are used by GSM (Global System for Mobile Communication) number. Due to these reasons, there is need for a system enabling group members -which are provided on OTT- to use common cloud area by performing authentication through GSM as well and to perform data sharing over common area.

An objective of the present innovation is to realize a system for enabling use of cloud storage area commonly over OTT applications performing authentication particularly through GSM number. Another objective of the present innovation is to realize a system for enabling group members to share and view file on common cloud area over OTT application.

Proposed Model. Existing methods both leave users connected to separate systems and multi-step processes. Users use IMA (whatsapp, beep, etc.) to communicate as a group. They have to use cloud applications (lifebox, dropbox, etc.) to keep their data in a common area. Whatsapp and BIP provide access via gsm number, while lifebox and dropbox use mail addresses. Realized to fulfil the objectives of the present innovation is shown in the figure attached, in which: figure 3.5.1. The components illustrated in the figure are individually numbered, where the numbers refer to the following:

1. System
2. User access device
3. Application server
4. Cloud storage unit
5. Authorization unit

The innovative system (1) for enabling group members to use common cloud storage area in OTT applications comprises:

- At least one user access device (2) with which the user (K) interacts and which can run at least one OTT application.
- At least one application server (3) which is in communication with the user access device (2), receives the request information created by the user (K) over the OTT application and takes the related actions in accordance with the request information.

- At least one cloud storage unit (4) which is in communication with the application server (3), records the data received by the user (K) in accordance with his/her requests and submit them for access of other users.
- At least one authorization unit (5) which is in communication with the application server (3) and the cloud storage unit (4), carries out authorization transactions necessary for data exchange between the application server (3) and the cloud storage unit (4) by using the GSM number related to the user (K) that it receives from the application server (3) (Figure 3.5.1).

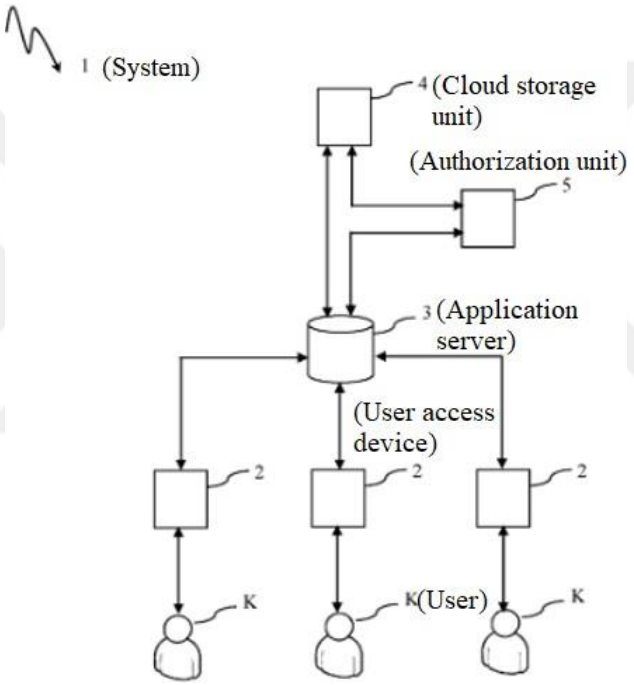

Figure 3.6 is a schematic block diagram of the fifth innovative system

The user access device (2) included in the innovative system (1) is a unit with which the user (K) interacts and whereby s/he determines his/her preferences. The user access device (2) runs an OTT application with which they can communicate vocally, in video and/or writing and whereby it can perform file sharing such as photo, video. In a preferred embodiment of the innovation, the OTT application running on the user access device (2) performs authentication by means of GSM number. The user access device (2) is in communication with the application server (3), transmits the action requests -which are received by the user (K) over the OTT application to the application server (3) and

displays the reply information which are received from the application server (3) to the user (K) by means of a suitable interface over the OTT application. In a preferred embodiment of the innovation, the OTT application running on the user access device (2) comprises an interface which enables the user (K) to create storage area in the cloud storage unit (4) on another user (K) or group chat screen, to display the files located in the storage area and categorize them according to certain criteria such as date and place and to determine the user(s) with whom s/he wants to share the files.

The application server (3) included in the innovative system (1) is in communication with the user access device (2) and takes the related actions in accordance with the preference information transmitted by the user (K) via the OTT application running on the user access device (2). The application server (3) performs voice, video and/or text message traffic in accordance with the preferences transmitted by the user (K). The application server (3) makes request from the authorization unit (5) together with the GSM number information of the user (K) for the user (K) authentication, in the event that the user (K) transmits request for creating cloud storage area and/or displaying the files located in the storage are over the user access device (2). Upon receiving the feedback about the fact that the user (K) authorization is carried out and the connection definition information of the cloud storage unit (4) from the authorization unit (5), the application server (3) establishes communication with the cloud storage unit (4). The application server (3) transmits the requests, that it receives from the user (K) and that are related to the cloud storage unit (4), to the cloud storage unit (4) and transmits the received result information to the user access device (2). In one embodiment of the innovation, the application server (3) carries out transactions of adding, deleting, classifying files and determining share permissions on the file included in the files in the storage area in accordance with the user (K) preferences that s/he has performed over the integration by the cloud storage unit (4) through his/her GSM number.

The cloud storage unit (4) included in the innovative system (1) is a unit which keeps users' files such as photo, video under record. The cloud storage unit (4) is in communication with the application server (3) and the authorization unit (5). The cloud storage unit (4) transmits the connection definition information, that are required by the authorization unit (5) in the authentication transaction of the user (K) through the GSM

number of the user (K), to the authorization unit (5). The cloud storage unit (4) performs integration with the application server (3) in accordance with the request of the application server (3) when the user (K) receives the information that the authentication is carried out from the authorization unit (5). In the event that the application server (3) sends request over the integration performed by thereof, the cloud storage unit (4) takes action in accordance with the related request and transmits the result information to the application server (3).

The authorization unit (5) included in the innovative system (1) is in communication with the application server (3) and the cloud storage unit (4) and it is configured such that it can carry out authentication transaction of the user (K) through the GSM number of the user (K) transmitted by the application server (3). The authorization unit (5) determines the definition information of the cloud storage unit (4) matching with the GSM number of the user (K), when it receives request comprising the GSM number for the authentication transaction from the application server (3). In one embodiment of the innovation, the authorization unit (5) performs the transaction of determining the definition information by determining the e-mail account information which are associated with the related GSM number over a data source comprising the GSM number and the e-mail account information that it updates synchronously with the application server (3) and the cloud storage unit (4) and keeps in association with the user (K) definition information. The authorization unit (5) determines the definition information of the cloud storage unit (4) comprising the storage area that is created by the related e-mail account information in the event that there are e-mail account information related to the GSM number. Upon performing the user (K) authentication, the authorization unit (5) gives notice to the application server (3) and the cloud storage unit (4) for carrying out integration.

In one embodiment of the innovation, the authorization unit (5) performs the integration between the application server (3) and the cloud storage unit (4) on itself and provides data exchange after the user (K) authentication. With the innovative system (1), transaction of users' data sharing with cloud storage areas is carried out over OTT application. Users can perform file sharing with the group members that they create over the OTT application, over cloud storage areas in the said system (1). Users can perform

file shares such as photo, video with other user(s) over the OTT application configured with a suitable interface in order that all types of actions can be taken on the cloud storage area. Users can carry out transactions of adding/deleting, searching, classifying file in the cloud storage area over the OTT application and arranging share permissions for files. Besides, transactions of getting permission from all or part of group members can be carried out for transactions of adding/deleting and editing file on the common cloud area in the said system (1). Integration of OTT applications which perform user (K) identification by the GSM number with the cloud storage areas created by the e-mail account information, can be carried out in the system (1). The innovative system (1) enables to perform data sharing over OTT applications in an efficient and easy way and provides a user-friendly structure.

3.6 A System That Provides Zoom In Zoom Out The Message Area In IMA

Users of IMA can communicate with one person or groups with more than one person, and share content such as text, sound, and image, or access content such as text, sound, and image. In the instant messaging groups with a large number of people, the number of messages is also high, which causes the user to encounter a large number of messages in cases where the user is unable to log into the application for a certain period of time. When users encounter too many messages, they cannot read all of the messages at once or have difficulty trying to reach the messages because there are too many messages in the message field. Such situations create difficulties for the user, the user cannot easily navigate in the message area, cannot enlarge or shrink the messages to be read. For this reason, there is a need for a solution that enables the users that are put into practice today to easily read a large number of messages by shrinking the message field with many messages or to enlarge the message field with many messages to reach the desired message in detail.

There is no ability to implement instant messaging that allows the detailed information contained in single and / or group messaging to be accessed by zooming in or out.
In the chat area of existing messaging applications, people have to scroll up and down the screen to go to old messages, which makes it very difficult for us to go to any of the old

messages in groups with many messages. In the same way, when we want to take screenshots of the messages, we have to take multiple screenshots where the message area can be reduced and taken at once.

The aim of the present innovation is to realize a system that allows the access of all messages in the dimensions allowed by the electronic device's screen without shifting the screen by reducing the message area in IMA. Another aim of the innovation is to realize a system that enables the messages to be reached more easily by enabling the message area to be reduced in addition to the reduction of the message area in IMA.

Proposed Model. In order to achieve the aim of the present innovation, a "A System that provides zoom in / zoom out the message area in IMA" is shown in Figure 3.6.1. The parts in the figure are numbered one by one and their equivalents are given below.

1. System
2. Electronic device
3. IMA
4. Database
5. Application server

The system of the innovation (1), which provides easy viewing of messages,

- At least one electronic device (2) having at least one input unit and display capable of executing at least one application, communicating with external servers, and enabling the user to communicate with the application.
- At least one IMA (3) executed on the electronic device (2), where users can transmit their text, voice, and video messages, receive messages of the same content, and communicate with a message area via the screen of the user and the electronic device (2).
- At least one database (4) in which messages transmitted to an IMA (3) or messages received from an IMA are recorded on the user's electronic device (2), and The IMA (3) message area of the user, which provides data communication

between the messaging applications (3), is transmitted to the IMA (3) being executed in the user's electronic device (2) and transmitted by the user via the IMA (3).

- The IMA (3) comprises at least one application server (5) which allows the IMA (3) to be displayed on the electronic device (2) in the message area by adapting the message contents stored in the database (4) to the desired size in accordance with the magnification or reduction movements.

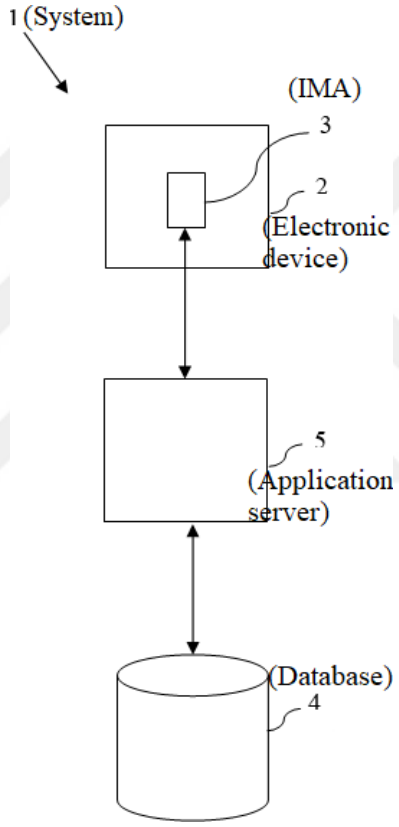

Figure 3.7 is a schematic view of a system that enables zooming in / out of the message area in IMA of the present innovation.

The electronic device (2) in the system (1) of the present innovation is capable of communicating with the user, where the user enters the content that he / she wants to share or download the content he wants to share via IMA (3), preferably via the input unit or having touch It is a device such as mobile phone, smart phone, tablet computer that it can access from a feature screen. The electronic device (2) provides a message field to the IMA (3) and transmits the IMA (3) to the application server (5) by detecting the

zooming or removal operations performed by the user. In this way, the application server (5) can understand which message area should be processed.

In the preferred application of the innovation, the electronic device (2) allows users to messaging with one person or with instant messaging groups with many people, thanks to the IMA (3).IMA (3) to be executed on the electronic device (2), to communicate with other users via external servers, to share the messages of users mostly with text, sound, image in another IMA (3) or from text, voice, image from other applications It is configured to receive its messages and to detect which of the movements on the message area are scrolling, which are enlarging, which are shrinking, and to share with the application server (5). The IMA (3) shows the message sent by the application server (5) from the message contents kept in the database (4) in order to present the desired image in the message field in accordance with the request communicated by the user through the communication with the application server (5). Thus, the user IMA (3) can enlarge and reduce the message area without scrolling on the message area.

The number of messages displayed on the screen of the electronic device (2) can increase or decrease with triggers such as enlargement or reduction on the IMA (3) on the message area of the user. In this way, the user can read a large number of messages without any scrolling. In the system (1) of the innovation, the application server (5) of the message contents, which records the flowing messages between the IMA (3) of the application server (5) and according to the request for enlargement or reduction from the application server (5) and the IMA (5) is the unit that shares it with. Thanks to the sequential recording of the messages on the database (4), the application server (5) can compile the messages according to the request from the message area and display them in the message area.

The application server (5) is configured to provide data communication with the IMA (3) and database (4) and to decide which messages to show to the user via the IMA (3) depending on the request received from the message area shown in the electronic device (2). The application server (5) defines the actions performed in the IMA (3) in the preferred application and accordingly, sends the message contents kept in the database (4) to the IMA (3). The application server (5) IMA (3) shows the message contents from the database (4) on the IMA (3) in a request for a zoom out coming from the message

area. Similarly, the application server (5) shows the message contents from the database (4) on the IMA (3) in the form of a zoom request from the message area (3). With the system (1) of the present innovation, the history of the messaging contents realized with users in instant messaging groups can be easily accessed. For this, in the IMA (3), it is sufficient to perform a zooming motion on the message area. In this way, the IMA in the bird's eye view of all correspondence history can be observed over the message area. For this process, we do not need to scroll in the messaging area, so correspondence can be reached much more quickly.

3.7 Location and Time Conditional Instant Message Notification System

In the IMA in use today, there are studies that offer the opportunity to chat among people who are in the same position. In addition, users can receive messages only when they are in certain locations. Considering the studies in the present technique, it is understood that a system is required that enables instant messaging users to receive notifications informing each other that they can view them when they are in a pre-determined location or when a predetermined time period is reached, and that the recipient is able to access the content of the message when it is in the relevant location. The object of the present innovation is to provide a system in IMA that enables users to transmit messages that can be read to each other, provided that they are in a predetermined position and / or at predetermined times.

Proposed Model. The "Location and Time Conditional Instant Message Notification System" implemented to achieve the aim of the present innovation is shown as attached, and this figure 3.7.1; the parts in the figures are individually numbered and their equivalents are given below.

1. System
2. Electronic device
3. Application
4. Database

5. Server

The innovation is a system (1) that enables users to transmit messages that can be read in predetermined times and / or at pre-determined times in the IMA;

- Module and / or at least one electronic device (2) configured to run an application that enables location determination on it.
- At least one application (3) configured to work on the electronic device (2) and to allow users to send instant messages to each other.
- At least one database (4) configured to receive and store location information related to the electronic device (2).
- It includes at least one server (5) configured to trigger the application (3) on the application (3) of the user receiving the message by following the location information stored on the database (4), when the user sending the message is in the position specified by the user.

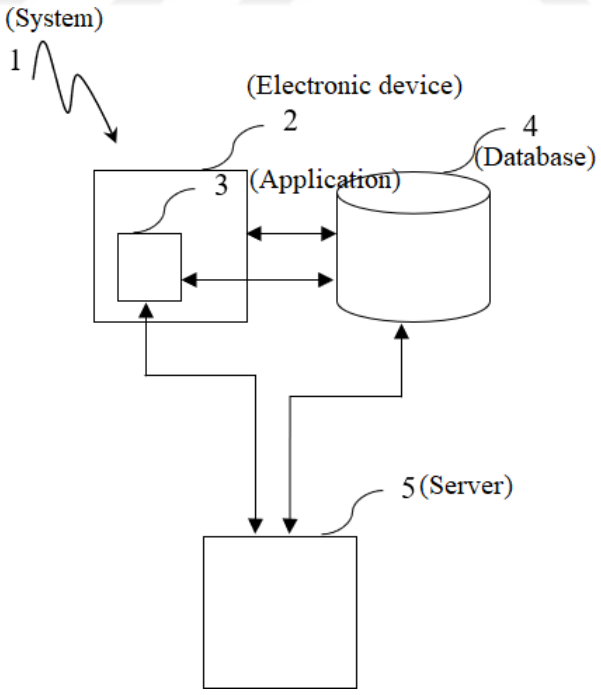

Figure 3.8 It is a schematic view of the seventh system according to the innovation.

The electronic device (2) in the system (1) of the present innovation is configured to run at least one module and / or application configured to enable its position to be determined. The electronic device (2) is a device such as mobile phone, tablet. The application (3) in the system (1) of the present innovation is configured to work on the electronic device (2) and enable users to transmit messages to each other in photo, video, audio and text formats, and to determine where the user who sent the message can access the message content of the user receiving the message. The application (3) is configured to ensure that the user receiving the message receives a notification containing the information and the related location that the message user can display the message content when it is in the location specified by the user sending the message. Application (3) is configured to enable users to make one-to-one and / or group messaging. In an embodiment of the innovation, the application (3) is configured to enable the user who sends the message to set a time as a condition for the user receiving the message to view the message content.

The database (4) in the system (1) of the present innovation is configured to take the position of the electronic device (2) by taking the positioning module on the electronic device (2) and / or any application (3) that has the positioning feature. The database (4) is configured to store the location information associated with the message determined by the user sending the message via the application (3). The database (4) is configured to store the time information associated with the message determined by the user sending the message via the application (3). The server (5) in the system (1) of the present innovation is configured to trigger the application (3) to display the message content as soon as the message receiving user is in the position determined by the sending user by following the location information in the database (4). In an embodiment of the present innovation, the server (5) is configured to trigger the application (3) to display the message content when the time comes, following the time information determined by the user sending the message (4).

In the system (1) of the present innovation, a user first creates a message through the application (3) running on the electronic device (2) and determines the location and / or time the receiver must be in order to be able to access the relevant message content by the receiver. Then the application (3) writes the time and / or location information associated with the relevant message to the database (4). At the same time, current

location information about the electronic device (2) used by the receiver is kept in the database (4). By receiving the location information stored in the database (4), the server (5) makes the message content accessible by triggering the application (3) as soon as the receiver determines that the user is in the location determined by the sending user. Using the time information stored in the database (4), the server (5) triggers the application (3) so that the receiving user can view the message content when the time comes.

4. CONCLUSION

In this study, we mentioned about seven inventive systems to make users' life easier. If we explained them shortly, first invention system is about a system that ensures communication continuity in IMAs. With this system, instant messaging application users are provided to receive reminder notifications for users with whom they have been in contact before, who have not communicated for a long time, but who have been in contact with other friends. Thus, instant messaging application users' meeting, organization and communication disconnection problems can be eliminated and incentives are provided not only to communicate in a virtual environment but also to meet face to face. The second one is about a system managing of IMA by a bot. The bot users can collect the messages that they send by talking about any topic via the instant messaging application as a content under that topic and then when any user wants to see the content collected under this topic title, this content they have collected as a message to the relevant group of instant messaging group members. Another feature in this technique, bot is a unit that is configured to send one or more messages to the instant messaging group in a manner that is suitable for the group's interest or the general taste of the group in order to keep the group alive if the members of the instant messaging group do not share a message in the group for a predetermined period of time.

The third one is about intelligent meet maps and navigation features in OTT applications. With this method, the users will be able to track online whether the other users in the group are at their places and their distance from the station when the user sets up a group on the access device and selects a route. With this, they can arrive at the place where they want to arrive on the shortest route by creating alternative routes without taking into account the users who are not on the route. The fourth one is about title feature in-group of IMA. Within this technical method, the user creates a message group in the instant messaging application running on his electronic device and selects the people to be

included in this group and adds them to the group. After the messaging group is created in the instant messaging application, the user activates the feature of alerting more than one person in the group with a single name tag. The fifth one is about data sharing over cloud in messaging applications. With the inventive system, transaction of users' data sharing with cloud storage areas is carried out over OTT application. Also users can perform file shares such as photo, video with other user(s) over the OTT application configured with a suitable interface in order that all types of actions can be taken on the cloud storage area.

The sixth one is a system that provides zoom in / zoom out the message area in instant messaging application. With the system of the present invention, the history of the messaging contents realized with the users in the instant messaging groups can be easily accessed. For this purpose, in the instant messaging application, it is sufficient to make the zooming movement on the message area. In this way, it is ensured that the whole correspondence history can be observed over the message area of the instant messaging application in the form of a bird's eye view. The last one is location and time conditional instant message notification systems. In this technical method, first of all, a user creates a message through the application running on the electronic device and determines the location and / or time that the recipient should be located in order for the relevant message content to be accessed by the recipient. Then, the application writes the time and / or location information associated with the message to the database. The server receives the location information stored in the database, triggering the application when the receiver detects that the user is in the location specified by the sending user, and makes the message content accessible. As a conclusion, IM mobile applications that we use almost every ten minutes are explained in detail with new features that are easier, more practical, user-friendly and effective than existing methods, which will provide great convenience in the group messaging environment. Practical solutions for IM group users to meet as a group, to keep their communication alive and to socialize more easily were explained. All these technical solution suggestions are different and more advantageous than the existing methods and options in terms of ease of use and practicality. When the technical flows and methods proposed to provide these features are examined worldwide, it is seen that they differ from the existing methods.

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BIOGRAPHICAL SKETCH

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