

# Requirement Elicitation in Mobile Apps: A Review

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**Abstract:** In today's scenario Social networks have changed our day to day life and they've the potential to significantly enlightened and for supportability of Requirements Engineering (RE) activities The social network are used in RE in which mobile based social network (such as WhatsApp) have the great advantages to get the end users requirements more quickly over the internet Social Network application are used as light weighted social mobile based application and make the collaboration platforms. In this paper firstly author makes a survey on existing Social network application and their features which can be interesting in requirements engineering and after that focus on the specific social network application for requirements engineering are analyzed and compared based on the features identified in the first step. We conclude this review paper with favorable features which are provided by mobile based social network with reference to useful for requirements engineering.

**Keywords:** requirement elicitation, social networking sites and mobile app.

## I. INTRODUCTION

When going inside about the Requirements Engineering, it is vital to begin the idea driving the Engineering. Designing exercises are dependent upon the improvement of new Knowledge, new 'made things' or better approaches for working and doing. Requirements building begin with Requirements elicitation [7]. In this we are attempting to show the improved reasonable concept for Requirements elicitation process. This paper at first takes a gander at what research has let us know about Requirements elicitation and what regardless we have to know. A study is proposed to further our comprehension.[8] Requirements elicitation is the

process of getting for innovative ideas, obtaining, and explaining Requirements for workstation based frameworks. It is by and large comprehended that Requirements are evoked as opposed to recently caught or gathered. This implies there are revelation, rise, and improvement components to the elicitation process. Requirements elicitation is a procedure including numerous exercises with a mixture of accessible strategies, methodologies, and devices for performing them. The relative qualities and shortcomings of these focus when every is fitting relying upon the setting and circumstance. [9] In this paper we just concentrate on the Requirement Elicitation Concepts through Mobile based Social Networking Apps.

## II. REQUIREMENT ELICITATION: SOCIAL NETWORK IN MOBILE APPLICATION

As Requirements Engineering is used to many fields that requires communication between different stakeholders/end users. As we have various models with reference to Requirements Engineering in which Requirement elicitation, Requirement analysis and negotiation exists. In this paper author mostly focus on requirement elicitation where, there are various activities after identifying key stakeholders/end users like brainstorming, prioritization etc. Social networking has the great effective by increasing the number of end users and hence getting the requirements more quickly to make a great business. In today's virtual media scenario social network plays a vital role to connect peoples anywhere and anytime. Mobile based social network provide mobile

holder's user to make public, semipublic and private profile (e.g. WhatsApp), a list of connected peoples and can share the thoughts or anything in the mode of text, voice, video, images.

### III.PREVIOUS WORKS: RE AND SOCIAL NETWORK APPS

Requirements Engineering is that requires active communication and interaction between different stakeholders. Several RE approaches and tools follow these high level models and provide step by step guidance and support (e.g. EasyWinWin [10,11]). Mobile based Social network apps are an example of social software that are used as connecting billions of end users and communicating with others at anytime and anywhere. Norbert Seyffl, Irina Todoran, Kevin Caluser, Leif Singer and Martin Glinz [1] describes social network applications to draw in a substantial number of heterogeneous, all around conveyed, and conceivably unknown stakeholder, including end-clients, during the time spent requirement analysis. Along these lines, they adapt to the present requests for brief time-to-market periods and quick, simple, and economical techniques. The writers propose a methodology including an arrangement of exercises for requirement elicitation, prioritization, and negotiation, and show how Facebook might bolster these activities. This is especially valuable when end clients are not inside quick reach and it flawlessly coordinates mobile devices simultaneously. The creators researched the convenience of the current components and they directed three exploratory studies inside of requirement engineering. Their discoveries demonstrate that end clients could take after the procedure, communicating their needs, captivating in dialogs, and utilizing the Facebook "preferring" highlight for organizing their needs. The thought appears to be encouraging and can be further. Bart Hoenderboom, Peng

Liang[2] makes a survey on existing semantic wikis and their features, which can be invoked in requirements engineering. Secondly, specific semantic wikis for analyzing/comparing requirements engineering based on the features identified in the first step. Author conclude this paper with effective qualities which are available Requirement elicitation, Requirement analysis and negotiation by semantic wikis, and can be useful for requirements engineering." Nillofer Latheef and A. Alice Nithya[3] says that in the field of software engineering, requirements elicitation is the process where stakeholder needs are understood. A close interaction between stakeholders of the system is required for requirement elicitation. As prior methods not able to get recognized and prioritized requirements are not suitable to large projects. Requirements prioritization methods require substantial efforts from the requirements engineers when there are many requirements. In large-scale projects, requirements elicitation leads to three problems: unnecessary information overloading, insufficient stakeholder involvement, and biased prioritized requirements. The model addresses the problems using the following steps - Identify the large project, Analyze the requirements, Identify and prioritize stakeholders, Collect profiles, Predict requirements and Prioritize requirements. The best method that uses social involvements and collaborative interaction and filtration to get and prioritize requirements. Malicious stakeholders with false recommendations or ratings are considered. For making predictions, author approach will use one of the most well-known algorithm called k-Means clustering algorithm. Finally, the manual process of stakeholder recommendation is automated. The stakeholders refer and connect to another stakeholder, build the social network environment, and make prioritization of the requirements. The method identifies and prioritizes a complete set of stakeholders and their requirements automatically and accurately. These methods outperform the existing methods used in the projects, and

require significantly less time from the stakeholders and requirements engineers.[3] Xu Kaixuan, Long Yuting's article[4] presents situation, and the direction of mobile social networking business, by analysing Japan, Korea, Europe and the United States and the other foreign operators in the mainstream of business oriented development for mobile social apps. Then, it summed up the foreign mobile operators' experience of making business oriented mobile social networking and put forward China's telecommunications operators to create mobile social networking business, therefore promote the development of mobile Internet strategic thinking. Authors focus on analyzing the different features of mobile social networking from origin to present situations of mobile social networking through analyzing different countries. And try to measure the role of different features of mobile social network in business and in promotion of development of mobile social network. Dr. Andres Fortino, Aparna Nayak[5] develop social networking services architecture applied to business purpose and make develop a analysis process for, how technologies are useful in business environments

Mobile based social network application where everybody can communicate and connected to each other with through mobile. As in previous work studied, all talking about the web based mobile application. As the web based social network application, mobile based social network application also exists in virtual world with enhanced properties. Social network has enlightened in the past few years by performing their major role in business prospective. There are three main objective of this paper to investigate whether and how popular social network apps have the potential to support RE activities.

1. We will attempt to discover whether existing components continued by a mobile based social applications, for example, Facebook, WhatsApp, Telegram can help in

gathering, prioritizing and negotiating client's requirements and next-

2. We recognize in what manner and under which situation such mobile based social network apps is preferable suitable other over conventional Requirement Elicitation (RE) strategies and then-

3. We focus on issues related to Mobile Based Social Network apps to deal with RE activities

#### IV. ANALYZING MOBILE BASED SOCIAL NETWORK APPS FOR RE SUPPORT

Facebook, Messenger, WhatsApp and Telegram are prominent examples of SNS that have millions of users. We select them to become our participates for an implementation of our RE approach as all are have a numerous number of registered and active end users - according to the statistics provided by Alexa. Another criterion was regional popularity – the selected SNS are popular in India. In order to identify the most suitable SNS, the authors performed an initial comparison after defining the key requirements for Mobile based social network supported RE approach. We investigated which of their features are used to support the predefined key requirements (Table 1). By Our analysis revealed to allow an individual end user's idea – i.e. a requirement, a users reach(RQ1) all social networks have connected end users for an idea (RQ20,21). This, for example, includes *like* in Facebook.. Facebook, WhatsApp users are even able to restrict the access to their ideas(RQ20) by privacy and group(RQ23) and hence control the distribution of the ideas. Although people could discuss an idea on a user profile, we consider a private, protected and dedicatedspace for group discussions to be more usefulness (RQ22). Facebook, WhatsApp, Telegram etc. allow their users to create such a space. Those *groups* represent a dedicated space for discussion and communication of new

ideas and allow to invite stakeholders and manage user settings – e.g. define which group members have to be given permission to access or communicated(RQ23).[1] Telegram is a completely free service while WhatsApp is a yearly subscription program. There are advantages and disadvantages to both approaches. As messages are not stored on the server by this app which gives feeling of high security.[13]After an initial comparison of the three social network apps, we concluded that three of above would allow us to instantiate and apply our Mobile Based Social Network System supported RE approach. Although all three candidates (i.e. Facebook, WhatsApp, Telegram) would have fulfilled our initial requirements, we selected WhatsApp and Facebook to become the platform for further investigation as the both are free installed services in cheapest mobile too which is available the less budget mobile users also. Our main reasons were:

**TABLE 1: COMPARISON OF MOBILE BASED SOCIAL NETWORK APPLICATIONS**

Requirements	Facebook	WhatsApp	Telegram
RQ1: Users reach	Less than WhatsApp	more frequently used	Less frequently used
RQ2: Free	Yes	Yes	Yes
RQ3: Free voice calling	Yes	Yes	No
RQ4: Account	FB or mobile number	mobile number	mobile number
RQ5: Message seen confirmations	Yes	Yes	Yes
RQ6: Automatic backup	Yes	Yes	Yes

RQ7: Security	Not great	improved	Excellent
RQ8: Send pictures	Yes	Yes	Yes
RQ9: Send videos	Yes	Yes	Yes
RQ10:Send voice messages	Yes	Yes	Yes
RQ11:Search function	Yes	Yes	Yes
RQ12:Send location data	Yes	Yes	Yes
RQ13:Option to log out	No	No	Yes
RQ14:Video calling	Yes	Yes	No
RQ15:Set wallpapers	No	Yes	Yes
RQ16:Notifications	Only on or off	Yes	Yes
RQ17:Secret Chat	Yes	Yes	No
RQ18:Group Chat	Yes	Yes	No
RQ19:Broadcast List	Yes	Yes	No
RQ20:Communicate ideas	Yes	Yes	Yes
RQ21:Comment on ideas	Yes	Yes	Yes
RQ22:Group discusion	Yes	Yes	Yes
RQ23:Contro group access	Yes	Yes	Yes

1. Facebook and WhatsApp have over a billion users worldwide and is currently the leading social network app;

2. Target group for our experimental studies (students and their friends) would be more likely to already have an account and be accustomed to Facebook, WhatsApp.[1]

Mobile Based Social Network Apps are a broad concept . They refer to mobile services that include user-generated content and the possibilities of communication and networking. Typical examples of Mobile based social network apps are Facebook, WhatsApp, YouTube etc. The content types can vary from status updates to user-created videos. Many users participate by sharing, commenting, liking or rating others' content or just watching it. In the literature, social media has a variety of broad definitions, such as Mobile-based tools and practices enabling participation and collaboration based on individuals' activities, – Tools that people use to share content and to interact, and the process that this interaction and the interlinking of services. User created content means digital content that is produced outside professional routines by “ordinary people”, shared with a group of people on a social networking apps. Mobile based solutions that support mutual sharing and open dialogue between users, meaning that people other than the active participants in the communication can also see the shared content or discussion and can join in. Mobile-based technologies to support interactive dialogue and to introduce substantial and pervasive changes to communication between organizations, communities, and individuals” [18]and hence increase the end user involvement.

## V.CONCLUSION

Since the today's scenario is changed by more utilization of mobiles rather than the personal computer or laptop or notebook.

Mobile based solutions is the best way to reach the end users more frequently where Social networking apps play a vital

role to enrich the end users involvement that support mutual sharing and interactivity, either they are active users or not in a group, are able to communicate and share their ideas to each other. As in different papers says, we conclude that the WhatsApp is more user-friendly and near to end user's reach as compared to others mobile based social apps.

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