Peer To Peer Communication Using Heterogeneous Social Networks

Omkar Gaonkar (Student), Priyanka Kenchi(Student), Priyanka Muttanwad (Student), Dipali Narale (Student), Laxman Deokate (Guide)
Information Technology, Sinhgad Academy of Engineering, Kondhwa
Information Technology, Sinhgad College of Engineering, Kondhwa

Abstract—Today Social Networking Sites (SNS) have become a part of our day to day life. We share a lot of data on these sites. They helped us to make the world smaller and integrated with each other. There are many SNS available today and many more are support each day. Thus a user uses many SNS each day and communicate, share data with friends and family. This communication medium give rise to complex structure whether a user really like the SNS which he uses more or he needs another SNS other than he uses more. As a result, a user may register with multiple SNSs for different social network applications, carry multiple SNS accounts, interact with contacts from different SNSs, publish and access different web contents, and share contents within each SNS community. While SNSs offer different services, one key feature shared among SNSs is how they are built around users and users’ existing social networks. Yet each SNS is isolated, so users manage their profiles and build relationship separately on different SNSs. The content for the same user in different SNSs may overlap, so it becomes a burden for users to manage contents across different SNSs. This is the landscape of heterogeneous SNSs. This gave rise to the need of integrating all the SNS a user uses together and help the user understand and share the data and friends lists and many other things provided by the SNSS together and help the system analyze the user need and help him use the SNS efficiently in any case such as online and offline.

Keywords: Social Network sites(SNSs), Global Relationship Model(GRM) ,Peer-to-Peer i-search mechanism, Heterogeneous SNSs.

I. INTRODUCTION

A social networking sites is to bring people together and get them to stay connected with each other. Today’s SNSs support only homogeneous SNSs in which user cannot communicate with other SNSs users and cannot maintain relationship globally. In order to overcome this problem there is need of heterogeneous SNSs along with homogeneous SNSs system. In proposed system by identifying "global relationship” among registered users over heterogeneous SNSs, system allows different SNSs to interconnect with various network. Integrated heterogeneous SNSs provide different services of different SNSs over a single platform and establishes path between two users with less time.

II. LITERATURE SURVEY

[1] Phone lin and Pia chun chang,“P2P: A peer to peer Architecture for heterogeneous social networks,” IEEE Network, January/February 2014. A peer-to-peer network architecture to integrate multiple SNSs without incurring excessive overhead to the SNSs. With integrated model, we could develop an effective approach, a Global Relationship Model, to evaluate the global relationship strength between two users with more precision.the i-Search mechanism to find the social path with certain level of social relationship strength in a P2P social network.[2] C. Zhang et al., “Privacy and Security for Online Social Networks: Challenges and Opportunities,” IEEE Network, vol. 24, no. 4, July/Aug. 2010, pp. 13–18. The security and privacy design issues on online social networks and pointed out a few research directions for mitigating the design conflicts between the various design goals of OSNs. However, an ultimate solution will require experts from the social science and network security communities, industry, regulatory bodies, and all other relevant communities to collaboratively make decisions on both secure mechanisms and policies. This article is intended to provide a starting point for developing effective secure and privacy-preserving OSNs. We hope that this work will motivate OSN researchers and developers to move forward with more creative design of OSNs without compromising users’ data security and privacy.[3] A. Mislove et al., “Measurement and Analysis of Online Social Networks,” Proc. 7th ACM SIGCOMM Conf. Internet Measurement, 2007, pp. 29–42. An analysis of the structural properties of
online social networks using data sets collected from four popular sites. Our data shows that social networks are structurally different from previously studied networks, in particular the Web. Social networks have a much higher fraction of symmetric links and also exhibit much higher levels of local clustering. We have outlined how these properties may affect algorithms and applications designed for social networks. Establishing the structure and dynamics of the content graph is an open problem, the solution to which will enable us to understand how content is introduced in these systems, how data gains popularity, how users interact with popular versus personal data, and so on.[4] H.-L. Fu et al., “Energy-Efficient Reporting Mechanisms for Multi-Type Real-time Monitoring in Machine-to-Machine Communications Networks,” Proc. IEEE INFCOM 2012 Conf., Mar. 2012, pp. 136–44.
Many third-party sites have adopted social-networks connect services to extend their presence in the Social Web. Integrating these third-party sites with SNCSs creates a more feature-rich online social community and promises to break down the garden walls of social-networking sites. However, many challenges come with this growth, and the social-networking community must collaborate to design and deploy secure services that both protect privacy and deliver a satisfactory user experience.

1.1. What is FACEBOOK GRAPH API?
1) 1.1.1. Graph API
The Graph API is the core of Face book Platform, enabling developers to read from and write data into Face book. The Graph API presents a simple, consistent view of the Face book social graph, uniformly representing objects in the graph (e.g., people, photos, events, and pages) and the connections between them (e.g., friend relationships, shared content, and photo tags).

2) 1.1.2. Authentication
Face book authentication enables developers applications to interact with the Graph API on behalf of Face book users, and it provides mobile, and desktop apps.

3) 1.1.3. Social plug-in
Social plug-in – including the Like Button, Recommendations, and Activity Feed – enable developers to provide social experiences to their users with just a few lines of HTML. All social plug-in are extensions of Face book and are specifically designed so user data is shared with the sites on which they appear.

1.2. What is TWITTER?
Twitter is an online social networking service that enables users to send and read short 140-character messages called "tweets". Registered users can read and post tweets, but unregistered users can only read them. Users access Twitter through the website interface, SMS, or mobile device app. Twitter is based in San Francisco and has more than 25 offices around the world.

Twitter was created in March 2006 by Jack Dorsey, Evan Williams, Biz Stone and Noah Glass and by July 2006 the site was launched. The service rapidly gained worldwide popularity, with more than 100 million users who in 2012 posted 340 million tweets per day.

1.3. What is Face book?
Face book is a social networking website that makes it easy for you to connect and share with your family and friends online. Originally designed for college students, Face book was created in 2004 by Mark Zuckerberg while he was enrolled at Harvard University. By 2006, anyone over the age of 13 with a valid email address could join Face book. Today, Face book is the world's largest social network, with more than 1 billion users worldwide.

Have you ever wondered why people like using Face book? After all, there are already lots of other ways to communicate online, such as email, instant messaging, and so on. What makes Face book unique is the ability to connect and share with the people you care about at the same time. After registering to use the site, users can create a user profile, add other users as "friends", exchange messages, post status updates and photos, share videos, use various apps, and receive notifications when others update their profiles. Additionally, users may join common-interest user groups organized by workplace, school, or other characteristics, and categorize their friends into lists such as "People From Work" or "Close Friends". Also, users can complain or block unpleasant people.

1.4. What is GMAIL:
Gmail is a free advertising-supported Email service provided by Google. User may access GMail as secure web mail. GMail server messages including attachment may be up to 25 MB. GMail has a search oriented interface and a "conversation view" similar to an internet forum. GMail was originally launched with 1 GB of storage space. GMail features introduced on June 5, 2008 allow users to test new or experimental features of GMail such as bookmarking of important Email messages.
1.5. Existing system:-
In today’s life the user uses the homogeneous network in which the user can communicate only on homogeneous SNSs.(for e.g. User can send message from face book to face book and Gmail to Gmail).In existing system user cannot maintain relationship between various SNSs , cannot share data over different SNSs. A user have different account on different SNSs so users manage their profile and build relationship on different SNSs may overlap. So to overcome this problem we will integrate different SNS on single platform.

1.5.1. Limitations of the existing system:
1. The existing system is a single SNS system.
2. It lacks the peer to handle the SNS.
3. It cannot understand the relationship between different SNS.
4. It cannot effectively use offline and online SNS data together.
5. It cannot share data with various SNS.
It cannot maintain the data that is common offline which can be used for analysis of the data. We refer the following paper from this we get the information of existing system: C. Zhang et al., “Privacy and Security for Online Social Networks: Challenges and Opportunities” SNSs is online service platform that focuses on facilitating the building of social network ,but with increasing demand of social networking sites privacy and security concern have also increased.

➢ To overcome this problem we use some policy:
   1) Name  2)Comment  3) Pop up box
➢ In this paper we are studied the definition, history and different features of SNSs. Social networking sites are not
➢ Only for you to communicate or interact with other people globally but, this is also one effective way for business promotion.

1.6. Proposed System:
To overcome the problem and limitations of an existing system we proposed the P2P-iSN system. In proposed system social networks connect services allow users to leverage their information on multiple SNSs, from using single ID to access multiple SNS accounts to publish contents simultaneously on multiple SNSs. In P2P-iSN allows users to communicate with each other across heterogeneous SNSs we proposed GRM to capture the relationship strength between users and then develop searching mechanism (i-search )between the any two users who are connected in a heterogeneous SNSs.

1.7. Architecture Diagram

Fig.1 Block Diagram

Fig.7.1.1 System Architecture
P2P-iSN would consist two nodes index peer and peer node a heterogeneous SNSs would be integrated by a peer node which would be installed on an end device. A user log in on peer node can use more than one SNSs at some time a unique user ID would be required to create a database of different SNSs. IP address would establish a connection of peer nodes to make a social path for users form different SNSs to develop a global relationship. To connect the user from different SNSs for example, Snapchat and Instagram user we will be developing a peer node using a database created by the index peer. Peer node function would be create heterogeneous social network sits database which would enable login or connect from numerous SNSs or different account at the same time. The function of index peer would develop a database which would detect the online/offline status of the person. Therefore the person’s status would change or become online when the report of peer node turning on reaches to inde

III. CONCLUSION
This paper present a social network with a peer-to-peer architecture that facilitates social Computing services in distributed environments. This social network aims to provide users. The social network employs a super peer-to-peer architecture that contains peer and super peers. Users use peers to participate the network and services. Peer with sufficient storage, bandwidth and processing power become super peers that support peers for complex operations such as user authentication or group communication. We have extended the Gnutella protocol to provide the authentication and posting services on the social network. The design of these services copes with the distributed setting of the social network. The evaluation of the prototyping social network has performed on a number of laboratory workstation to investigate its scalability, reliability and performance.

IV. REFERENCES

1. “P2P-iSN: A Peer-to-Peer Architecture for Heterogeneous Social Networks” Phone Lin and Pai-Chun Chung, National Taiwan University Yuguang Fang, University of Florida. (January/February 2014)

