Multiparty Access Control for Image Sharing in Facebook

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Abstract: **Online Social Networking (OSN) has experienced a tremendous growth in recent years. OSN has millions of users spread throughout the world. OSN mainly relies on business networking. The networking is done for different purpose depending on the user's interest. OSN allows people communication between family and friends throughout the network. Though this OSN establishes many networking facilities, it also raises security and privacy issues. The proof of concept Facebook is taken and the users of Facebook are restricted to share their image in their page. When the user shares the image, the notification is send to their friend list. Thus when some private data is needed to be shared the user is unable to share. There may be some users who try to hurt others with the comments. This must be prevented in Social Networks since many people can view this comments. To overcome these issues the MultiParty Access Control (MPAC) is used. MPAC creates a block when sharing image and posting comments. When the user shares image, the authorized users are only allowed to view it. A database is maintained in the system which has the list of hurting words, when user comments, the comments are checked with the database and the comment never be posted when the word is present in the database. Thus MPAC helps in secure sharing of images and secure posting of comments.**

Keyword **- MultiParty Access Control (MPAC), Facebook (FB), Online Social Networks (OSN).**

I. INTRODUCTION

An Online Social Networking is a platform to build social networks or social relations among people who share similar interests, activities, backgrounds or real-life connections. The variety of stand-alone and built-in social networking services currently available in the online space introduces challenges of definition. In OSN the user generates service-specific profiles for the site or app and these social networking services facilitate the development of connecting a user's profile with those of other individuals and/or groups. Most social network services are web-based and provide means for users to interact over the Internet, such as e-mail and instant messaging. Social network sites are varied and they incorporate new information and communication tools such as mobile connectivity, photo/video/sharing and blogging. Online community services are sometimes considered a social network service, though in a broader sense, social network service usually means an individual-centered service whereas online community services are group-centered. Social networking sites allow users to share ideas, pictures, posts, activities, events, and interests with people in their network. OSN such as Facebook, Twitter and Google+ are generally used to share personal data with friends, family, co-workers and goes on. A typical OSN provides an implicit space for profile information and to post comments. The user profile generally encompasses of name, surname, email-id, password, gender, date of birth and extra information's like education qualification and profile photos which would help to find friends in the network.

1.1 ADVANTAGES OF OSN

The advantages of OSN like Facebook are as below

Worldwide Connectivity:
No matter if one is searching for a former college roommate, first grade teacher, or an international friend, no easier or faster way to make a connection exists than social media. Although Facebook, Twitter, LinkedIn are probably the most well-known social networking communities, new websites are popping up regularly that let people connect and interact over the Web.

Commonality of Interest:
When one opts to participate in a social network community, they can pick and choose individuals whose likes and dislikes are similar to them and build their network around those commonalities

Real-Time Information Sharing:
Many social networking sites incorporate an instant messaging feature, which lets people exchange information in real-time via a chat. This is a great feature for teachers to use to facilitate classroom discussions because it lets them utilize the vast

store of information available on the Web. This can be a great time saver for the teacher - since students no longer need to visit a library to conduct research and it can be a great way to engage distracted learners

1.2 DISADVANTAGES OF OSN

Some of the disadvantages of OSN which leads to the issue in the society are as below

Backlash

A joke among friends is one thing but a joke with the world at large is much different. When potentially offensive content is posted online, the amount of feedback can be excessive and is often brutal. This is particularly true with highly opinionated subjects like politics and religion.

Cyberbullying and Crimes against Children

Use of social networks may expose individuals to other forms of harassment or even inappropriate contact. This can be especially true for teens and younger children. Unless parents diligently filter the Web content their family views, children could be exposed to pornography or other inappropriate content.

Risks of Fraud or Identity Theft

Whether one likes it or not, the information they post on the Internet is available to almost anyone who is clever enough to access it. Most thieves need just a few vital pieces of personal information to make one's life a nightmare. If they successfully steal their identity, it could cost them dearly.

II. EXISTING SYSTEM

People are more interested to share their personal and public information through the OSNs. The existing system (i.e.) Facebook helps in sharing photos with our circle. Privacy concerns with social networking services have been raised growing concerns among users on the dangers of giving out too much of personal information. The privacy concern is more since the users have less control over the data residing outside their space. Each user has their own interests in sharing the images. Consider a person wants to share an image to 20 people specifically and doesn't want other to get any information about the sharing of the image then the user has no option in the present system. The user has to send as a private message to each person. But sending message is not as efficient as posting the image; this is the drawback in existing system. But there are also some of the simple protection mechanisms in the existing system; they are removing a tag from the photo. But these mechanisms also have certain limitations since it removes the name tag from the photo but the photo still remains there. Hence it is necessary to develop an access control mechanism including all the authorization requirements from the multiple user. Each of the controllers of the content can set his/her privacy settings and can specify who can see the content. If two users disagree on whom the shared data is to be exposed, then privacy conflict occurs. So a mechanism is required to identify the privacy conflicting segments and resolve those privacy conflicts.

II. PROPOSED SYSTEM

The solution to the issues in the existing system is to analyse the MultiParty Acces Control (MPAC) model and mechanism systems, the execution of the system is corrected using the control model. The MPAC is generally used to enhance the flexibility for data sharing with privacy, which may potentially reduce the system authorization conflicts. The proposed system uses the proof-of-concept Facebook application for the collaborative management of shared data. Generally, our approach can be generalized to deal with other kinds of data sharing and comments, in OSNs as long as the stakeholder of shared data are identified with effective methods like tagging or searching. A flexible access control mechanism in a multi-user environment like OSNs should allow multiple controllers, who are associated with the shared data, to specify access control policies. In our multiparty access control system, a group of users could collide with one another so as to manipulate the final access control decision. The proposed system has the following advantage of enhancing the privacy for photo sharing and for preventing the bad comments from being posted. In the proposed system the following procedure is carried out, first the user uploads the images to be shared then selects the people with 2 options Allow and Deny, when the user selects Allow option the account holders can view the image and others cannot view the image. When the user comments using the words that cause mental stress, those words would not be posted. This is done by maintaining a database with those hurting words and when the user comments the database is checked, if the word is present in the database then the word never be posted, else it would be posted.

IV.MODULE DESCRIPTION

A. USER MODULE

In User module, the User Registers into the webpage by providing the following data Name,

Surname, Date of Birth, Email Id, Password and Gender. When the user enters into their Login for the first time, the additional information such as School details, College details, Company details are entered. These secondary datas would be helpful in matching their profile with other people and choose the circle which would be more useful in searching their friends in the network. The user can upload photos by choosing the upload option. The profile photo can also be uploaded. The images to be posted can also be chosen from the system, and when they are posted the options displaying categories is shown and based on the user's preference the 2nd user is categorized into one of the circles. The user can login into the internet and then view the posts. The user can also accept or deny the friend request sent to their account. The user can also view other users account and they can provide friend request

Fig No 1.1 User Login Page

B.ADMINISTRATOR MODULE

In administrator module the admin manages the user data such as the profile data, the friend request data, the friend list and the category and the circles in which the friends are. The admin also maintains a database with the abuse words. When the user tries to comment for any post the words to be posted is checked with the database and if the word is not present in the database then the comment is posted, else the comment is not posted. The admin also maintains a threshold and sensitivity value with which the user profile is checked always, if the user uses abuse words then the threshold value is increased and when the max value is reached the user is given warning about the activities that are done which hurts other users in the network. The MPAC categorizes the users into groups based on the sensitive values. When the sensitive value is more the user is considered as harmless user and when the sensitive value is less the user is considered as harmful user.

C. IMAGE SHARING MODULE

In Image Sharing Module the user posts the images in their page. When the image is posted the following process takes place, first the list of friends is displayed and the user selects the required persons, then the group is listed and the user selects the group and lastly the category or the circle is listed and the user selects the circle. The MPAC is helpful in posting the image by filtering many categories. While selecting there are two options 'Allow' and 'Deny' which are used for threshold value calculation. The image is shared only to the friend who has been filtered from these three conditions. This would generally increase the privacy concern in OSN. The MPAC helps in secure image sharing.

Fig No 1.2 Image Sharing

D. COMMENT BLOCKING MODULE

In Comment Blocking Module when the user posts any comment the admin checks whether the words are abuse or not. For this purpose a database is maintained which has all the abuse words collection. When the user posts any comment the system checks the words to be posted with the database and if there are any matches then the comment is not posted. This database is generally updated when new abuse words are found in OSN. This technique would prevent the users of OSN with MPAC from hurting other users and from being hurt by other users. The MPAC plays a major role in blocking the comments from being posted. This technique would generally be helpful in healthy communication between the users among the world.

IV.CONCLUSION

Multiparty Access Control for Online Social Network has proposed a novel solution for collaborative management of shared data in OSNs. A Multiparty Access Control model was formulated, along with a multiparty policy specification scheme and corresponding policy evaluation mechanism. A solution for privacy conflict is resolved in collaborative data sharing in OSNs.

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