

Privacy Policy Inference of User-Uploaded Contents on Social Networking Sites With Parental Control

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Abstract-Online social networks (OSNs) have experienced tremendous growth in recent years. These OSNs offer attractive means for digital social interactions and information sharing, but also raise a number of security and privacy issues. While OSNs allow users to restrict access to shared data, they currently do not provide any mechanism to enforce privacy concerns over data associated with multiple users. This paper enhances existing and introduces new social network privacy management models and measures their human effects. First, it **introduces a mechanism using proven clustering techniques that assists users in grouping their friends** for traditional group-based policy management approaches. It found measurable agreement between clusters and user-defined relationship groups. Second, it **introduces a new privacy management model** that leverages users' memory and opinion of their friends (called example friends) to set policies for other similar friends. Finally, it **explores different techniques that aid users in selecting example friends**. It is found that by associating policy templates with example friends (versus group labels), users author policies more efficiently and have improved perceptions over traditional group-based policy management approaches. In addition, the results show that privacy management models can be further enhanced by utilizing user privacy sentiment for mass customization. By detecting user privacy sentiment (i.e., an unconcerned user, a pragmatist or a fundamentalist), privacy management models can be automatically tailored specific to the privacy sentiment and needs of the user.

I. INTRODUCTION

The papers leverages traditional group-based policy management as our baseline and progressively improve upon this privacy management model. With each new enhancement, we measure their human effects including cluster/user defined relationship group alignment, user privacy sentiment, efficiencies and user perceptions. The thesis introduces a user-assisted friend grouping mechanism that enhances traditional group-based policy management approaches. Assisted Friend Grouping leverages proven clustering techniques to aid users in grouping their friends more effectively and efficiently.

It introduces a new privacy management model that is an improvement over traditional group-based policy management approaches. The new paradigm leverages a user's memory and opinion of their friends to set policies for

other similar friends, which we refer to as Same-As Policy Management. Users associate the policy with an example friend and in doing so have this friend in the forefront of their mind. This allows users to be more selective and careful in assigning permissions. Users are thinking of people, not groups. Using a visual policy editor that takes advantage of friend recognition and minimal task interruptions, Same-As Policy Management demonstrated improved performance and user perceptions over traditional group-based policy management approaches. It further enhances Same-As Policy Management by introducing Example Friend Selection—two techniques for aiding users in selecting their example friends that are used in developing policy templates. Both techniques reduced policy authoring times and were positively perceived by users. In addition, the thesis proposes an approach to

enable the protection of shared data associated with multiple users in OSNs.

II.RELATED WORK

Barbara Carminati stated that the existence of online social networks that include person specific information creates interesting opportunities for various applications ranging from marketing to community organization. On the other hand, security and privacy concerns need to be addressed for creating such applications. Improving social network access control systems appears as the first step toward addressing the existing security and privacy concerns related to online social networks. To address some of the current limitations, they have created an experimental social network using synthetic data which they then used to test the efficacy of the semantic reasoning based approaches they have previously suggested.

YUAN CHENG stated that users and resources in online social networks (OSNs) are interconnected via various types of relationships. In particular, user-to-user relationships form the basis of the OSN structure, and play a significant role in specifying and enforcing access control. Individual users and the OSN provider should be allowed to specify which access can be granted in terms of existing relationships.

They proposed a novel user-to-user relationship-based access control (UURAC) model for OSN systems that utilizes regular expression notation for such policy specification. They developed a path checking algorithm to determine whether the required relationship path between users for a given access request exists, and provide proofs of correctness and complexity analysis for this algorithm.

PAUL DUNPHY stated that Graphical password systems based on the recognition of photographs are candidates to alleviate current over-reliance on alphanumeric passwords and PINs. However, despite being based on a

simple concept – and user evaluations consistently reporting impressive memory retention – only one commercial example exists and overall take-up is low. Barriers to uptake include a perceived vulnerability to observation attacks; issues regarding deployability; and the impact of innocuous design decisions on security not being formalized.

CATHERINE DWYER stated that it is not well understood how privacy concern and trust influence social interactions within social networking sites. An online survey of two popular social networking sites, Facebook and MySpace, compared perceptions of trust and privacy concern, along with willingness to share information and develop new relationships. Members of both sites reported similar levels of privacy concern. Facebook members expressed significantly greater trust in both Facebook and its members, and were more willing to share identifying information. Even so, MySpace members reported significantly more experience using the site to meet new people. These results suggest that in online interaction, trust is not as necessary in the building of new relationships as it is in face to face encounters. They also show that in an online site, the existence of trust and the willingness to share information do not automatically translate into new social interaction. This study demonstrated online relationships can develop in sites where perceived trust and privacy safeguards are weak.

LUJUN FANG stated that Privacy is an enormous problem in online social networking sites. While sites such as Facebook allow users fine-grained control over who can see their profiles, it is difficult for average users to specify this kind of detailed policy. In this paper, they proposed a template for the design of a social networking privacy wizard. The intuition for the design comes from the observation that real users conceive their privacy preferences (which friends should be able to see which information) based on an implicit set of rules. Thus, with a limited amount of user input, it is usually possible to build a machine learning model that concisely

describes a particular user’s preferences, and then use this model to configure the user’s privacy settings automatically.

III.EXISTING SYSTEM METHODOLOGY

The existing system introduces three new improvements to privacy management models:

- Assisted Friend Grouping an incremental improvement to traditional group-based policy management.
- Same-As Policy Management a new paradigm improvement over traditional group-based policy management.
- Example Friend Selection an incremental improvement to Same-As Policy Management.

DRAWBACKS OF EXISTING SYSTEM

- If one person (A) specifies a policy to hide her friend list from the public and (B) one of the friends in that list specifies a weaker policy that permits his friend list visible to anyone, then relationship between A and B could be learnt
- Automatic configuration of privacy preferences is not included.
- Conflict resolution between privileges is not effective. For example, A uploads one photo which can be shared between friends list (F) and not visible to friends of friends, then B (one of the friends in F) can share it to friends list in F but not to all others.

IV.PROPOSED SYSTEM

In addition to the existing system approaches, the proposed system takes care of conflict resolution in privilege

settings. Moreover, weaker policy settings of a person will not violate the policy settings of his/her friends. Privacy settings adjustments are shown such that violaters if included in the friends list, they are shown and suggested that they cannot allow to disseminate the photo contents to others. Privacy settings like Owner overrides are implemented.

ADVANTAGES OF THE PROPOSED SYSTEM

- Weaker policy on one of the friends will not violate his/her friends’ policy.
- Automatic configuration of privacy preferences is included.
- Conflict resolution between privileges is effective.
- Uploading duplicate content is description is avoided.
- More number of privacy settings is suggested.

V.RESULT AND DISCUSSION

i) USER WISE PROCESSED RESULT

Table 1.1 is describing the experimental result for user wise process result in proposed system. The table contains user id, share id count, comment count details, thread count details, and replies details count are shown below.

USER ID	SHARE	COMMENT	THREAD	REPLIES
1	1	2	1	4
2	1	2	3	1
3	0	1	1	3
4	2	3	2	4
5	4	2	0	5

Table: 1.1 Table Representation For User-wise Processed

Result

Fig 1.1 is describing the experimental result for user wise process result in proposed system. The figure contains user id, share id count, comment count details, thread count details, and replies details count are shown below.

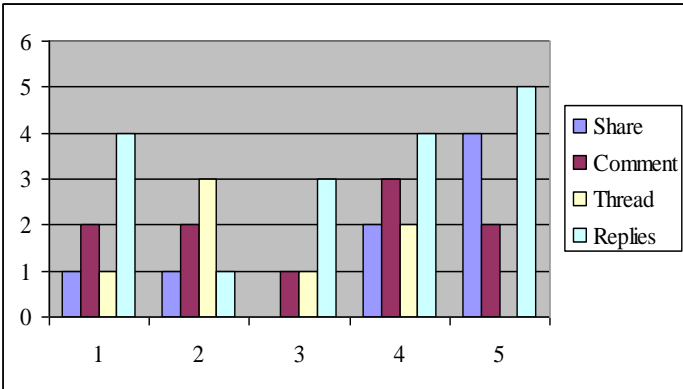


Fig: 5.1 Chart Representations For User-wise Processed

Result

ii) PHOTO WISE ACCESS DETAILS

Table 1.2 is describing the experimental result for photo wise access details in proposed system. The table contains photo id, view details, comment details and share details count are shown below

PHOTO ID	VIEW	COMMENT	SHARE
1	10	15	2
2	15	6	3
3	12	5	2
4	9	5	1
5	6	6	0

Table No: 1.2 Table Representations for Photo Access

Details by User

Fig 1.2 is describing the experimental result for photo wise access details in proposed system. The figure contains photo id, view details, comment details and share details count are shown below

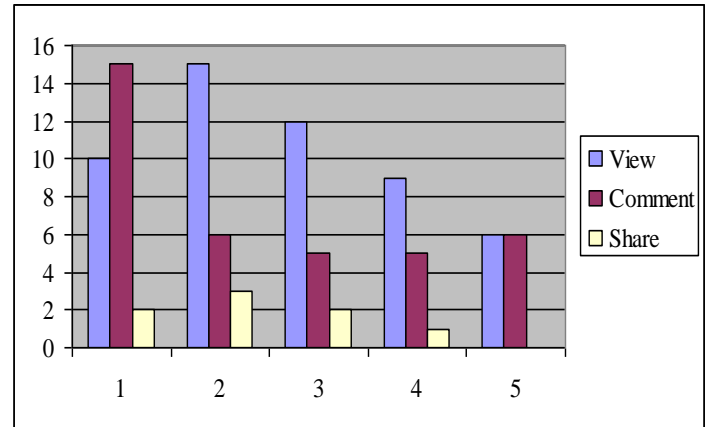


Chart No: 1.2 Chart Representations for Photo Access

Details by User

V.CONCLUSION

The proposed system is used to filter message from OSN walls. The system is classifier to customizable content dependent for FR and flexibility of the system in term of filtering option through the management of BLs. In this proposed system is an early encouraging results user obtained on the classification procedure prompt and to improve the quality of classification. In particular, future plans contemplate a deeper investigation on two interdependent tasks. The first concerns the extraction and/ or selection of contextual features that have been shown to have a high discriminative power. The second task involves the learning phase. Since the underlying domain is dynamically changing, the collection of pre-classified data may not be representative in the longer term. The present batch learning strategy, based on the preliminary collection of the entire set of labeled data from experts, allowed an accurate experimental evaluation but needs to be evolved to include new operational requirements.

The dissertation has been successfully completed within the time span allotted. Every effort has been made to present the system in more user-friendly manner. And the GUI provided here make the user feel friendly. All the disadvantages of the existing system have been overcome by using the present system. A trial run of the system has been made and is giving good results. The system has been developed in an attractive dialog fashion and the entire user interface is attractive and user friendly and suites all the necessities lay down by the users initially. So user with minimum knowledge about the computers and the system can easily work with the system.

VI. SCOPE FOR FUTURE ENHANCEMENT

In future work, user plan to address this problem by investigating the use of online learning paradigms able to include label feedbacks from users. Additionally, it is planned to enhance the system with a more sophisticated approach to decide when a user should be inserted into a BL. The development of a GUI and a set of related tools to make easier BL and FR specification is also a direction user plan to investigate, since usability is a key requirement for such kind of applications. In particular, it aims at investigating a tool able to automatically recommend trust values for those contacts user does not personally know. Users do believe that such a tool should suggest trust value based on users actions, behaviors, and reputation in OSN, which might imply to enhance OSN with audit mechanisms.

Several areas to be developed in future, so the application must be upgraded for the new ones required and it is possible to modifications according to new requirements and specifications. The thesis work adds the facilities like fast data backup and restoration in case of data loss situations and planned to share the multi media content data. The policy creation process is improving security in advances automatic configuration for social relationship between users. The

experimental result is designed such that the required enhancements can be integrated with each policy management easily with less integration work without modifying the present system.

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