

Keeping Your Face Protected With Audience View

Lauren M. Hamilton

Hamill2@auburn.edu

1. INTRODUCTION

Social networking websites have grown rapidly over the past years. They are being used regularly by millions of people, and it now seems that social networking will be an enduring part of everyday life. Among these websites, Facebook is one of the most popular social networking websites. It was created as a forum for college students to interact with other college students, but now is open to everyone who is 13 years and older. Users are organized in Networks ranging from college, high school, hometown and region. Users can also add friends to share their information. The problem is what information is acceptable to disclose and who is actually able to see that information.

According to Information Week,

“Sophos researchers, a security company, noted that 25% of Facebook users revealed information relating to their work on their profiles, offering up details that could be used by cybercriminals to commit corporate ID fraud or infiltrate company networks.” [1]

Sophos took a random snapshot of 200 users in the London Facebook network, which is the single largest geographic network on the site, with more than 1.2 million members. They found that 75% of the social network's users allow their profiles to be viewed by any other member, regardless of whether or not they have agreed to be "friends". This presents risks for stalking, identity theft, spear phishing attacks, and embarrassment.

In other cases, people are incriminating themselves by postings of pictures and even the groups they belong to on Facebook. According to an article on JS Online called “Getting Booked by Facebook” [2], a group on Facebook called “Poop Patrol” lead to identifying student at University of Wisconsin-Milwaukee. The page had a detailed chronicle of how students had left feces under the door handle of a squad car after police broke up an off-campus party.

To address the issues with Facebook's privacy settings interface that will be discussed in the next section Dr. Lipford's research group came up with an idea of looking at Facebook privacy settings with an Audience View. It was created to help users easily set privacy settings and be confident that their information is secure and the way they want them. This paper will discuss the current Facebook interface, the new prototype Audience View and the study now being conducted.

2. Background

As demonstrated in the introduction of this paper, the user has a choice to disclose a lot of information about herself. She can even display sensitive information like an address, phone number and date of birth. If she does not know exactly what her privacy

settings are, she can put herself in danger or open herself to embarrassment or harassment.

In an earlier study done by Dr. Lipford and her research group, 18 undergraduate students were interviewed about their use of Facebook and privacy concerns and management. The lesson learned was that users do have privacy concerns, but often struggle with privacy management and can accidentally and unintentionally disclose personal information. One serious problem was that Facebook's usability of the current privacy settings. It was found that the privacy interface was confusing and time consuming. The current interface has limited visual feedback, confusing language, and promotes a poor mental model of how the settings affect the profile. After the users changed their settings they still were not sure their information was secure. This gave the ammunition to create a new interface that took all of their concerns into account. [3,4]

3. Current Facebook Privacy Settings

In order to set privacy settings on Facebook, a user would have to go to more than one page to set settings to her liking. The majority of them are under the “Privacy” link (see Figure 3.1) but others are spread throughout the site.



Figure 3.1 Privacy Link and page

3.1 Setting Privacy Settings for the Profile

To set privacy for the user profile information, the user would click the “Profile” link. This page has two page options “Basic” and “Contact Information” (see Figure 3.2).

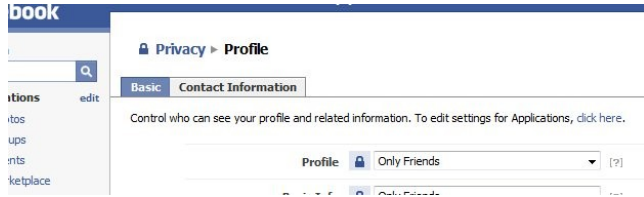


Figure 3.2 Basic and Contact Information links

3.1.1 Basic

In the Basic option, Facebook gives the user a chance to change privacy settings for her basic information on the profile. She has a choice to hide her entire profile, “basic information”, “personal information”, “status updates”, “photos tagged of her”, “videos tagged of her”, “friends”, “wall”, “education info”, and “work info”. She can not set most individual fields of information only sections of information. For example, the basic info would be hometown, birth date, networks, etc.. The photo albums privacy page can also be accessed on this page.

Clicking on the drop down menus (see Figure 3.3) allows the user to choose which people they want to display the corresponding information to. In the drop down menu there is also a custom option (also in Figure 3.3). Here the user can do combinations of settings. For example, the user can choose to allow friends and a certain network to only view the corresponding information.

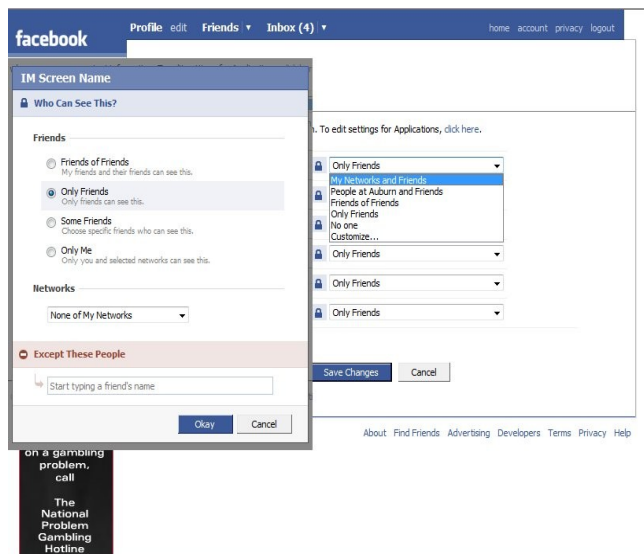


Figure 3.3 Drop down menu (Right) and custom pop up (left)

3.1.2 Contact Information

In the Contact Information option, the user has a chance to change her contact info privacy settings. She has a choice to hide her “IM Screen Name”, “Mobile phone”, “Other Phone”, “Current Address”, “Website”, and “Email” (see Figure 3.4). Same as in the “Basic” option, she sets setting with the drop down menu with the “Customize” option.

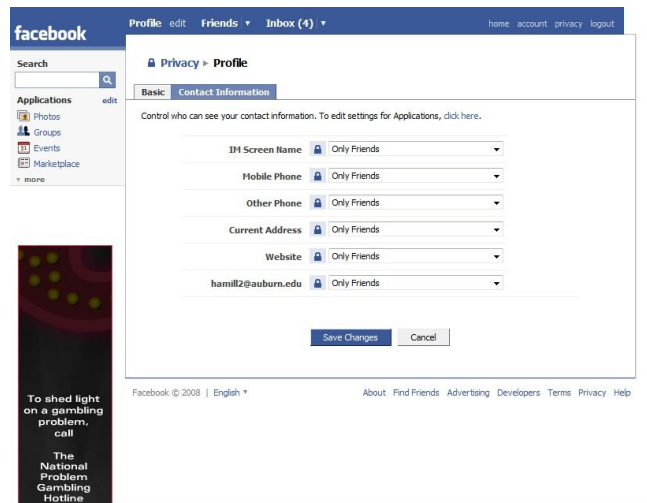


Figure 3.4 Contact Information page

3.2 Setting Privacy Settings for Search

In the Search page, the user can control her search visibility (see Figure 3.5). She can choose which persons can search for her. She can also control how they can contact her, allow others to see her profile picture, add her as a friend and view her friends list. The Search page also has a drop down menu and “Customize” option.

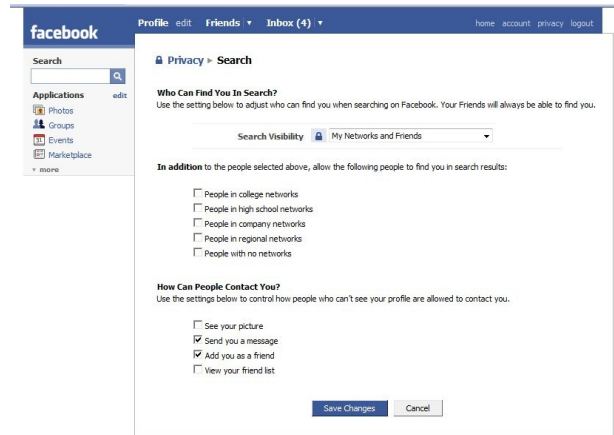


Figure 3.5 Search page

3.3 Setting Privacy Settings for Albums

To set privacy settings for photo albums, the user can go two places. There is a link in the Basic section of the Profile page, and there is a link in the Photos page. In the Privacy Photos page, she has a choice to display certain photo albums to friends, networks, or everyone (see Figure 3.6). There is also a “Customize” option for combinations. She can only control the different albums and not individual photos or photos others post of her.



Figure 3.6 Privacy Photos page

3.4 Setting Privacy Settings for News Feed and Mini-Feed

3.4.1 Actions within Facebook

There are three sections for the Privacy Setting for the News Feed and Mini-Feed. The first is Actions With in Facebook. Here the user can control what actions her friends and networks can see through the news feed and mini feed on her profile. (see Figure 3.7)

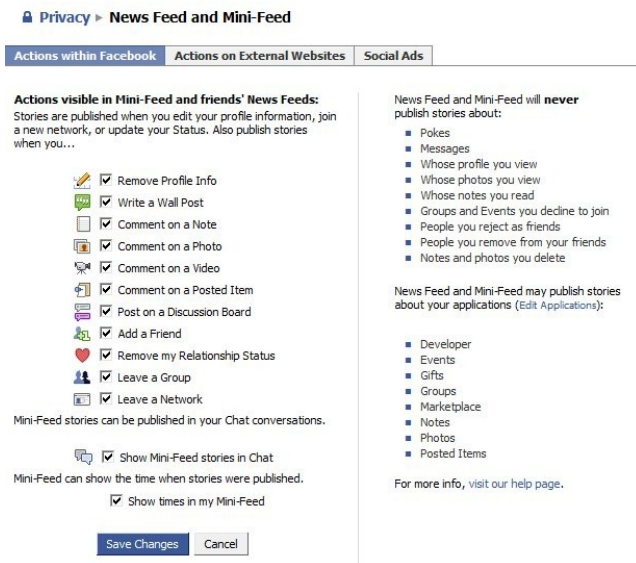


Figure 3.7 Actions within Facebook page

3.4.2 Actions on External Websites

This page is where Facebook informs the user of what websites post stories about her(see Figure 3.8). She can either allow Facebook to post this to her profile or not.

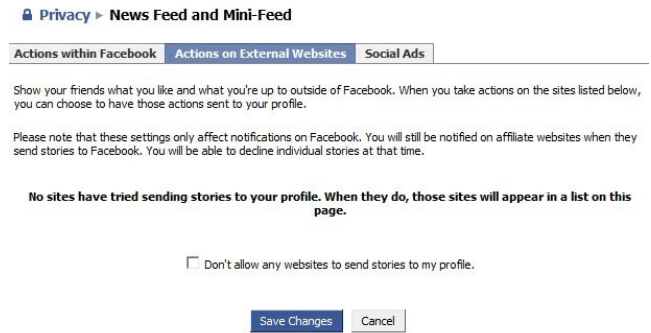


Figure 3.8 Action on External Websites page

3.4.3 Social Ads

This page informs her that Facebook will use her information for outside advertisement (see Figure 3.9). Facebook uses the user's name and photo to sell other products. Here she can control who gets to see these advertisements.



Figure 3.9 Social Ads

3.5 Setting Privacy Settings for Applications

3.5.1 Authorized Applications

To set privacy for Applications, the user has three options. Her first option is Authorized Applications (see Figure 3.10). Here is where Facebook displays the different Apps she has. She can remove whatever application she wants to here.

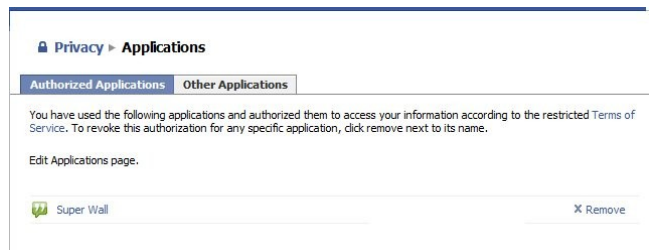


Figure 3.10 Authorized Applications

3.5.2 Other Applications

Here is where FaceBook informs the user that applications may be able to access a limited set of information about her through

friends who opt in to other applications (see Figure 3.11). She can restrict what information is available to these other applications.

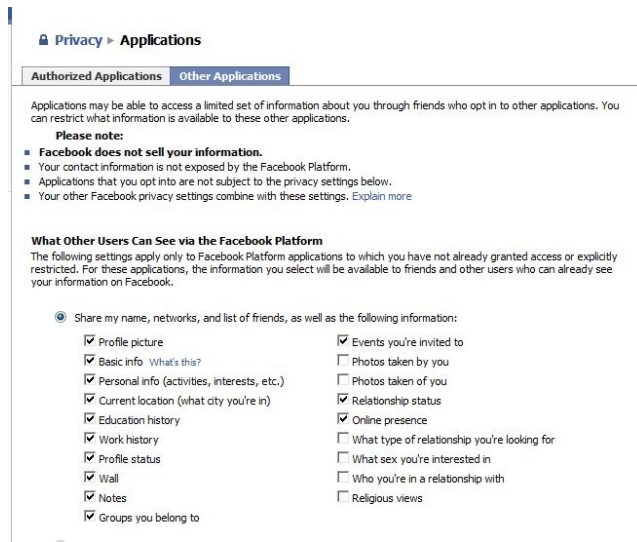


Figure 3.11 Other Applications

3.5.3 Edit Applications

This option is not in the privacy section. The user can find this in the side toolbar of her Facebook page by clicking on edit next to Applications. The Edit My Applications page has every default and added application the user has on her page. Here she can control who can see the particular Apps and also remove them (see Figure 3.12). To set the privacy, she would click the Edit Settings link and change the “Who can see this?”. This page also has the drop down menu and “Customize” option (see Figure 3.13).

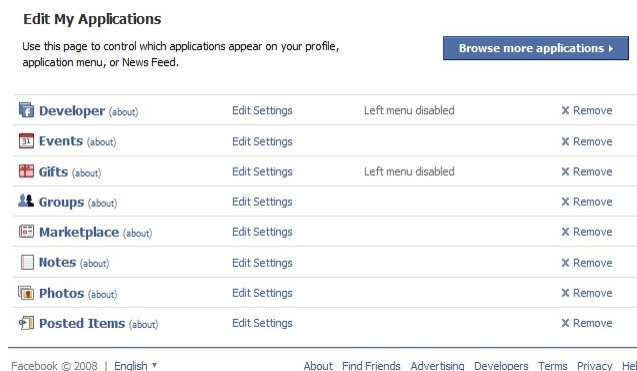


Figure 3.12 Edit My Applications page

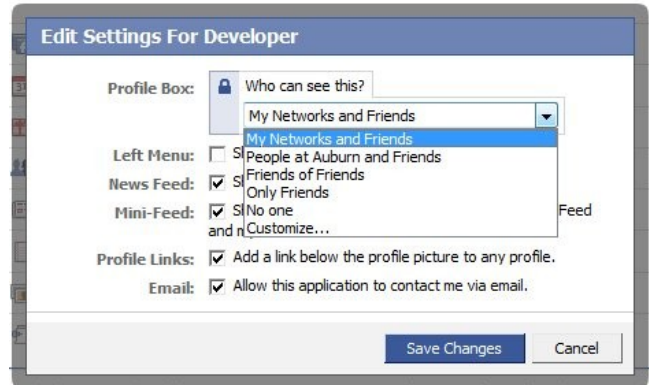


Figure 3.13 Edit Settings Pop-up and “Who can see this?” drop down menu

4. Audience View

Audience View was created to simplify setting privacy settings. Not only can the user change settings with ease, the user can also view her changes. The different audiences are separated into four categories “Only Me”, “All My Friends”, “All My Networks”, and “Search”. The “Only Me” category is just what the user would see, so the audience would be the user. The “All My Friends” category consists of the friend groups she created, so the audience would be her friends. The “All My Networks” category consists of the different networks she belongs to, so the audience would be people she goes to school with or work with. Each audience has its own profile view. The profile would be what that particular audience would see if they were to look at her profile on Facebook.

4.1 The Profile

A profile consists of the information the user supplies to Facebook. The profile also has lock buttons by every bit of information (see Figure 4.1). Lock buttons are what she would press to display or conceal information. When a lock button is locked, an image of a lock would appear and the information would be hidden. When a lock button is unlocked, an image of an unlocked lock would appear and the information is visible (see in Figure 4.1 the mini feed and albums boxes are locked).

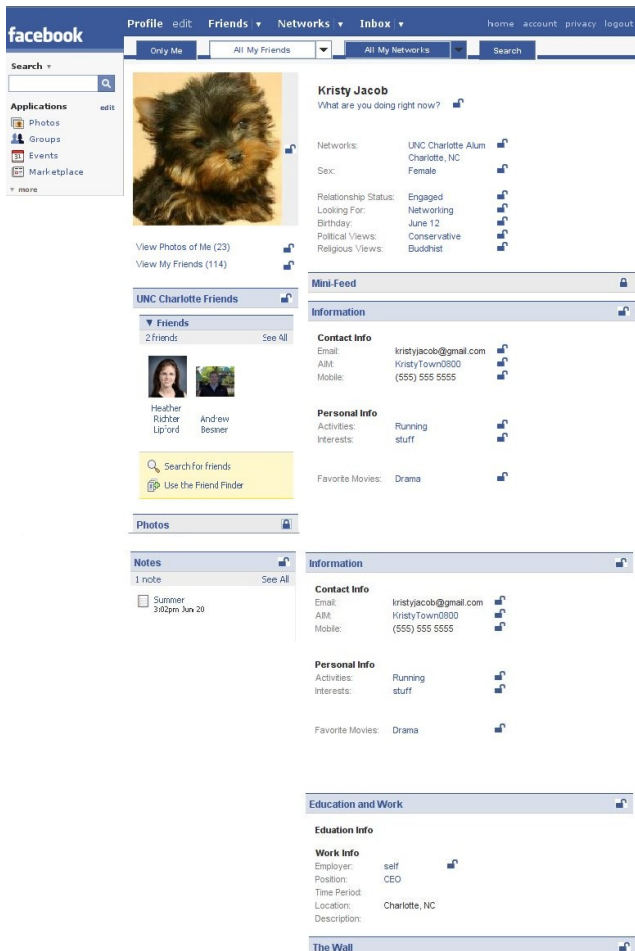


Figure 4.1 Audience View profile with locked and unlocked buttons visible

4.2 The Toolbar and Drop Down Menus

Each category is placed in a toolbar (see figure 4.3). The categories are tabs. The “All My Friends” and “All My Networks” tabs are also drop down menus for more specific groups (see Figure 4.4). When these tabs are clicked, they turn to white and the audience view for that particular tab is displayed with lock buttons (see figure 4.1 The “All My Friend” profile is displayed).

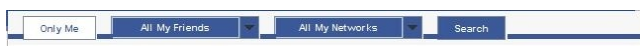


Figure 4.3 Audience View Toolbar



Figure 4.4 “All My Friends” Drop Down Menu

4.3 Propagation

One feature of Audience View is propagation, the friends and networks categories propagate downward to the subcategories, which mean if the user change something in “All My Friends” then it would change that same thing in the friend groups but then can be overridden in a subcategory. For example, if she wants to set her address to only be viewed by her “Close Friends” and no other friends, she would simply go to “All My Friends” view and lock the address field, and then go to the “Close Friends” view and unlock it.

5. Comparison of Both Interfaces

After going through Facebook's privacy settings interface, the user would realize it has many places where the privacy settings are stored. On the other hand, even though Audience View has many pages , setting privacy settings is all on one page and with one click of a lock button things are hidden or displayed. Also in setting privacy settings in Facebook, she would notice it does not hide individual pieces information. In Audience View users can set both individual fields and entire sections. In Facebook there is an option to control privacy settings for the news feed and mini-feed, but in Audience View the mini-feed can only be hidden and there is no option for the news feed. Facebook also has the option to block the entire profile from certain people and groups, but Audience View does not have this option. In dealing with both interfaces, it seems that one would prefer not go through many pages to set certain settings but there maybe some functionality missing.

6. Preliminary Results of the Study

The goal of the study is to compare both interfaces by measuring accuracy, speed, and confidence. Three profiles are being used: one for getting acquainted with both interfaces and two for executing tasks. The profiles are similar in content and they would be alternated between test subjects and interfaces. For example, test subject one would do tasks on profile one with Audience View and profile two with Facebook, and then test subject two would do tasks on profile 2 with Audience View and on profile one with Facebook. There are four combinations in all.

The tasks consist of two preliminary questions about what audience is able to view certain information and eight tasks that are to be done to the profiles. These questions are designed to demonstrate the abilities that both interfaces can do equally. We look for a right or wrong answer and the amount of confidence the subject may have about his or her answer.

The study is still on going so far ten people have participated. My impression of the results taken so far is that the majority of participants think Audience View is a great idea and it was executed fine but some had some suggestions for making it better. Some suggestions were: to make the lock buttons bigger, propagation between friends and networks, and the option to hide the entire profile from a certain audience. Some participants even preferred the drop down menu option that Facebook gives over the going to multiple pages to click one button. The results vary but I think from what I have witnessed so far Audience View is more popular among the participants.

7. Conclusion

In conclusion, privacy is very important when dealing with the social networking websites. It was found in an earlier study that Facebook's privacy settings were confusing and time consuming. The current interface has limited visual feedback, confusing language, and promotes a poor mental model of how the settings affect the profile. But with Audience View, we believe that users have a chance to set and view their privacy settings more correctly and confidently.

8. ACKNOWLEDGMENTS

I would like to give a special thank you to Dr. Lipford and her Group for welcoming into their research group. I learned a lot from them and will always be thankful for their help and advice.

9. REFERENCES

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