

# Poster: Ephemerality in Social Media

Erik E. Northrop  
The University of North Carolina at Charlotte  
Woodward Hall 300  
9201 University City Blvd.  
Charlotte, N.C. 28213  
United States  
ErikNorthrop@uncc.edu

Heather Richter Lipford  
The University of North Carolina at Charlotte  
Woodward Hall 305E  
9201 University City Blvd.  
Charlotte, N.C. 28213  
United States  
Heather.Lipford@uncc.edu

## ABSTRACT

Users of many social media sites such as Facebook and Twitter may not realize that information persists on these social networks indefinitely by default. Little research has explored how users perceive this, and future privacy problems that may arise as a result. To test such perceptions of the permanence of information on social media sites, we developed an application called the Facebook Timebomb (fBomb) that allows users to set expiration dates on any post made through the application, as well as the Twitter birdBomb, a similar Android mobile application. With these applications, we are studying how users behave and think about the life of their information on these sites when it can be ephemeral. We are currently collecting data using the fBomb application, while the birdBomb is still in development.

## 1. INTRODUCTION

At times, users of social media make posts that offend, intentionally hurt, or are simply miscommunicated as a result of emotion, a misunderstanding of cultural norms, or even being under the influence of drugs or alcohol [2]. In addition, Facebook users often overlook other features of the site like targeted advertising and the emphasis on global business during times of heightened emotion or stress. Additionally, users are now required to maintain social media profiles spanning years, where old information may no longer be accurate or relevant. Yet, by default, information that users post stays on users profiles permanently and they must manually delete posts in order for them to be removed.

As Palen and Dourish point out, one of the challenges of networked privacy is the time boundary, where users must not only manage their information privacy at the moment of sharing, but also into the future [1]. We wanted to explore this space by providing users with an alternative to permanent information, and studying the resulting behaviors and perceptions of users. As such, we developed the Facebook fBomb and Twitter birdBomb applications. These applications allow users to post information to the social media site, while defining a time when the post will be deleted. To inform the design and explore early perceptions, we first conducted an interview study of Facebook and Twitter users focused around their current behaviors and perceptions for keeping and deleting information.

In this poster, we present early results of this formative study as well as the methodology of the current study utilizing fBomb and birdBomb, and the expected results.

## 2. FORMATIVE STUDY

Prior to implementing our applications, a preliminary interview study was conducted with 15 Facebook and 10 Twitter users to establish a sense of their viewing, deleting, posting/tweeting habits plus, their feelings towards the potential of the fBomb and birdBomb application.

Of Facebook participants, 14 of 15 admitted to deleting posts with varying degrees of frequency. 6 participants reported deleting once or hardly ever, 3 deleted often with one specifying deleting once per week, and 2 others reviewed and deleted items from their profile monthly or semi-annually.

Out of 10 Twitter participants, 8 reported to delete and 2 did not delete. Of these users, 6 participants deleted for misspellings and grammatical errors and 3 deleted whether the content was appropriate or not. Thus, while users reported sometimes deleting previous posts, it was rather infrequent for most participants. Users also reported that many times they deleted for short term reasons, such as the grammatical errors or because they rethought a post. Few users expressed desires to remove very old posts from their profiles.

While participants did not seem to mind information being kept indefinitely on their profiles, we also asked participants about how important it was that their information remains on Facebook and Twitter. 9 of 15 Facebook participants agreed there would not be much of a problem if their status updates older than 1 year were deleted, as long as photos and other links remained. Yet, 3 Facebook participants noted they disliked the idea of losing some of their information and would find that *"annoying"*, according to one participant. Two Facebook participants talked about how they liked the idea of looking back at posts to reminisce about some of the good and bad times they've had. In other words, a significant minority of participants had strong desires to keep their information, as Facebook served as a scrapbook that enabled them to review previous activities.

With Twitter participants, 9 out of 10 reported that tweets older than 1 year could be removed with no problem; 1 participant expressed concern of having her tweet count altered as a result of removing content on a yearly basis. These early findings show that Twitter participants have less personal attachment to the information on their Twitter accounts. Personal concern only emerged towards explicit, racial, or profane tweets where these tweets were deleted.

When asked, Facebook participants liked the idea of a tool for setting the duration of Facebook posts, 67% of users felt this would be a useful tool. As for Twitter users, 5 out of 10 expressed interest in having such a tool while other users did not care or would not use it.

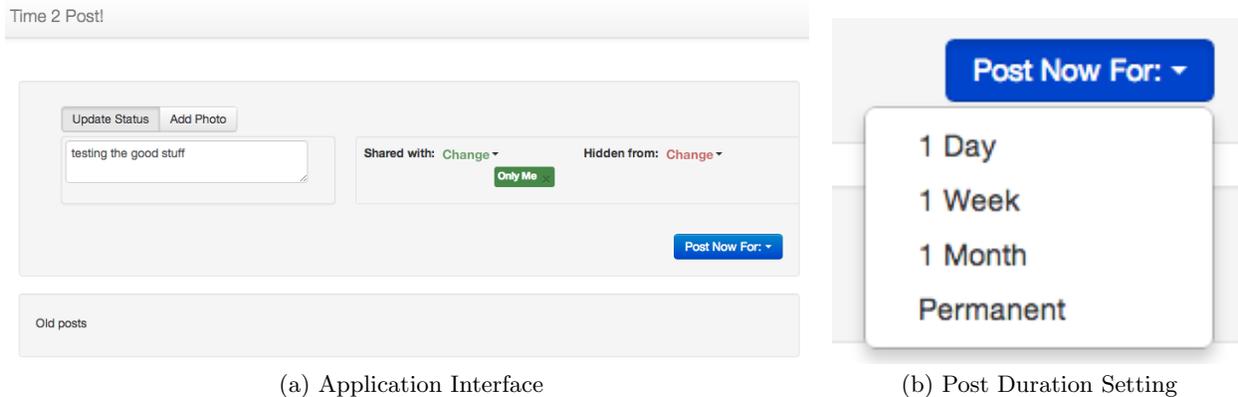


Figure 1: fBomb Application Interface and Post Duration Setting

### 3. THE FACEBOOK FBOMB

#### 3.1 Mechanics

The Facebook fBomb is an application installable by users after logging into their Facebook accounts. Shown in Figure 1a, home application page viewable to the user after installing the application. The fBomb allows users to post images, text, set privacy settings for any post made through the application, and add an expiration date to the post. The feature separating the fBomb apart from other known applications is the ability given to the user to set a date which their post will be automatically deleted.

Using the fBomb, users can choose post duration settings of: 1 day, 1 week, 1 month, permanent as shown in Figure 1b. These settings were chosen to give the user flexibility while avoiding a cumbersome list of options. By giving users a duration setting for their post to expire, we can then study any behavior change as a result of the added functionality. When a post is removed by the fBomb, all information associated with the post will be deleted from Facebook. Our application only maintains a record of the post (data in the form of numbers), but not the post content, for the purpose of the study. We should note, if the post is shared or forwarded to anyone the shared version remains unaffected even though it is removed from the original authors timeline.

### 4. THE TWITTER BIRDBOMB

#### 4.1 Mechanics

Similar to the fBomb, the birdBomb is designed with the same functionality and intention, but with some differences. First, the birdBomb is an application for an Android mobile computing device. The interface is designed to accommodate mobile devices and leverage sliders and drop down selection boxes to make best use of the limited space. The user can construct a tweet, set privacy settings for the tweet, then set an expiration date before sending the tweet. Expiration dates on the birdBomb are more fine grained compared to the fBomb as to accommodate the relatively fast paced nature of Twitter. But just like the fBomb, when the tweet has expired, the application will delete the tweet made by the user but cannot remove retweets.

## 5. STUDY METHODOLOGY AND STATUS

We are using the two applications to conduct a study on user perceptions of the longevity of information on their social media profiles. We issue participants a pre and post survey to gain insight into privacy perceptions as a result of using the fBomb and birdBomb, respectively. These surveys examine perceptions of privacy, frequency of Facebook and Twitter use, deleting, and post habits and other areas of interest. Participants are invited to use the applications for a month before completing the post survey. We are also collecting data on their behavior with the applications and on the sites. A subset of participants will be interviewed to explore more in-depth perceptions of how and why they chose to make posts temporary or permanent.

The fBomb is accepting participants and the study progressing. There is an active effort to recruit using various means and incentive structures. The birdBomb is in the late stages of development and will be released sometime during the summer of 2013.

## 6. ACKNOWLEDGMENTS

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Much of the technical development and guidance on the fBomb application was given generously by Andrew Besmer and Jason Watson.

Serge Egelman is a collaborator in this project. This work is supervised by Dr. Heather Lipford.

## 7. REFERENCES

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