

SnapGroupz

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ABSTRACT

SnapGroupz is an mobile application, inspired by Snapchat that allows for the creation of password-protected groups where ephemeral videos and photos can be shared. This application was the result of Snapchat's lack of a user controlled group-sharing feature. This report will detail the features implemented in the development of this application, the technologies involved in the development of this project, and the future steps for this application.

Categories and Subject Descriptors

H.3.5 [Online Information Services]: Web-based services;

J.7 [Computers in Other Systems]: Consumer products

General Terms

Performance, Design, Human Factors,

Keywords

Ephemerality, group-sharing

1.INTRODUCTION

Messaging and messaging applications, although viewed as trivial by many, have recently been demonstrated to be lead influences in the development of society today. The ease of use and flexibility of these applications allow ideas and themes to be communicated with unprecedented reach and rapidness.

An interesting challenge for current developers is building messaging applications that meet the needs of this upcoming technologically advanced generation. Many of the members of this generation have grown up with computers and so expect to be connected at all times to the pulse of their friends, their area, and the world. The rapidness with which this generation adopts and discards applications allows for quick iterations on previous failures and the development of great successes.

Some of the great successes in current society have been breakthroughs which allow individuals to communicate ideas with increased clarity and quickness. One of these success is Snapchat, a rapidly rising company. Snapchat's revolution of picture and video messaging has provided a quick but also personal service through which individuals are able to connect with family and friends.

However, analysis of current users of applications such as Snapchat and Facebook shows a trend towards groups and collaborations which Snapchat does not currently have capable support for. Many of the most recognizable themes in social media are the results of memetic collaboration, where groups of individuals put new spins and perspectives on ideas, creating insightful and often comedic productions. This trend is key to note and drew my interest for a possible project.

2.MOTIVATION

This application is inspired by the lack of comprehensive group sharing capabilities in Snapchat. Although Snapchat is a clear leader in providing one-to-one or one-to-many photo/video communication they have yet to address the many-to-many and many-to-one communication needs of this upcoming generation. Recently a number of third party developers modified current Snapchat features to allow for these capabilities however Snapchat quickly terminated most if not all of these accounts for violation of Snapchat's terms of use. Thousands of users accessed and viewed these modified accounts so in the wake of the terminations, there appears to exist a demonstrated need lacking a clear solution. This gap in demand and supply gave strong impetus to my pursuing of such a project.

3.COMPARISON TO ALTERNATIVES

3.1.Snapchat

Snapchat is currently considered by many to be the lead photo-sharing application. Although they do not currently support the many-to-many and upcoming many-to-one capabilities provided by SnapGroupz, they have the technological architecture and flexibility to implement the key features of SnapGroupz. It is key to note that Snapchat's plans for a revenue stream may impede their ability to develop a user-controlled group-sharing feature. Snapchat is currently using its group-sharing feature "Our Stories" to promote major events and advertisements and so giving users full capability and control would infringe on their ability to generate profit. Hopefully an application like SnapGroupz would be a possible acquisition target for Snapchat and if not hopefully this application would serve as an impetus for Snapchat to enhance the current offerings of their service.

SnapGroupz borrows most of its functionality from processes implemented by Snapchat. As will be discussed below media is captured in a similar manner and the ephemeral nature of content is preserved. The purpose of this application is not to provide a complete alternative to Snapchat but however to enhance Snapchat's current offerings.

3.2.Cluster

Cluster is a service seeking to become a dominant force in the collaborative photo album space. Although this service lacks ephemerality and does not provide the capabilities of a messaging service it is a simple way to pool together photos from friends. A strong weakness of this application is flexibility and quickness. Although it performs its intended task of collecting photos, its photo-capturing process is still cumbersome and the service is built to be a tool rather than an enhancement to one's life. This disparity between functionality and enhancement may be one of the factors why the application isn't an astronomical hit like Snapchat and is relatively unknown to younger individuals.

3.3.Kik

Kik is an application currently dominating communication between middle-school and high-school students. Some of the key reasons for its success are its use of usernames (provides a level of privacy), ease of use, group-messaging capabilities, and fun exciting features (stickers). A key differentiator between an application like Kik and SnapGroupz is that Kik is intended to be a full messaging service; therefore, less care is put into its photo and video messaging capabilities. Many users of this application still rely on Snapchat to perform most of their photo and video messaging but then return to the application for group capabilities. An app like SnapGroupz would hope to consolidate the benefits of both of these services, with the same flexibility and ease of use provided in both applications.

3.4.GroupMe

GroupMe is a notable application as it is totally driven by a belief in the aforementioned trend towards groups and collaborative messaging. GroupMe's intent was to take the group messaging capabilities provided by services such as Apple messaging, Facebook messaging etc and put great focus in improving key aspects. This is a great example for SnapGroupz to follow as it demonstrates the benefit and success that can be derived from taking an additional feature and focusing resources into making this feature a stand-alone application. Although SnapGroupz and GroupMe overlap in some regards, GroupMe is more focused on group communication rather than video and media sharing. This difference is why Snapchat is still used by many GroupMe users for photo/video sharing.

4.Design

4.1.Name

The name SnapGroupz is clearly inspired by Snapchat's naming however it is intended to be sort of a snide jest at Snapchat. The name clearly elucidates the purpose of the application, groups where "snaps" are shared; however the unique spelling, use of a z, is in reference to Snapchat's feature, Snapkidz, a minimalistic version of their application intended for use by kids 13 and under. The name SnapGroupz is intended to imply that SnapGroupz is a minimalistic version intended for use for group-sharing capabilities. The idea is to spite Snapchat for not providing such capabilities and for choosing to punish developers would tried to provide these capabilities. Although it is noted in the application that the service is in no way associated with Snapchat, marketing benefits can be gained from the fact that users may be misled by the name to think that the application is a service provided by Snapchat.

4.2.Logo

The logo, three smiley faces, is intended to be very simplistic. In trend with the texting characters, and emoji's frequently used by this upcoming generation this logo should seem very familiar to younger individuals, the application's initial intended audience. The logo also has a childish element to it which may appeal to users looking for a "cool" application lacking the moderation of parents. The decision to use three smiley faces is derived from the idea "three's a crowd." Snapchat and many messaging services often excel in providing communication mechanisms between two individuals and so it is to be made clear that SnapGroupz is intended for communication between three or more users.



Figure 1. SnapGroupz Logo

4.3.User Interface/Features

The UI (user interface) for this application is inspired by aspects of Snapchat's current UI however care was taken to modify/enhance UI elements of Snapchat that have often been criticized. The result is a very simplistic and minimalistic app which, due to its early stage, relies on the use of very basic and standard UI making the application relatively easy to navigate. A noteworthy feature of this application is the use of a navigation bar as can be seen in at the top of figure 2. A key complaint about Snapchat is that it lacks clear navigation instructions so in order to remedy this complaint a navigation bar was added to SnapGroupz to allow the user easy access to the number of views in the application.

4.3.1.Main

Unlike Snapchat's main view which immediately presents the user with a camera, the main view of this application opens up to a list of the user's current groups, sorted so that groups with new media updates are at the top. The purpose of this is to place more emphasis on content being shared and gathered. It is well known that a majority of users prefer to consume rather than produce content so the application was structured in preference of consumers.

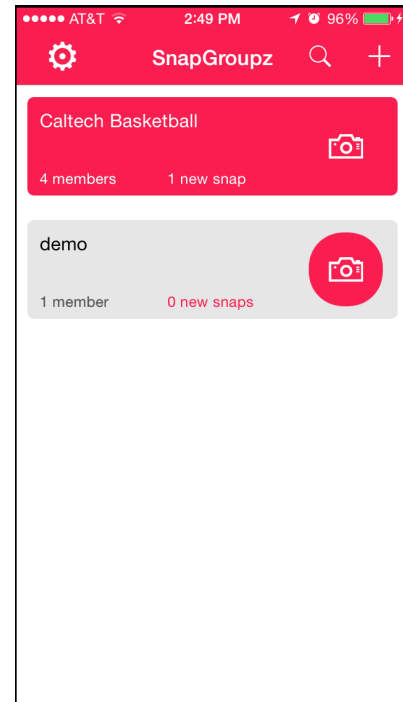


Figure 2. SnapGroupz Main View

As can be seen in figure 2 the group cells are designed with a large camera button which directs the user to the camera view detailed below. This is necessary as although content consumption is the main focus of the application, content creation is still also to be strongly encouraged as it is vital to the functionality of the service. As can be seen above, the group cells have different color schemes to draw increased attention to new content. The primarily red color scheme designates groups with new content whereas the primarily gray color scheme designates groups with no new content. Tapping a group with new content directs the user to a content view as detailed below, whereas tapping a regular group or tapping the number of members directs the user to the group

members view as detailed below. The navigation bar also contains, from left to right, the settings, search, and create buttons. These buttons direct to the setting, search, and create views respectively.

4.3.2. Camera View

The camera view is very similar to Snapchat's camera view. Both views take advantage of the entire phone display screen to capture images and videos. Similar to other photo and video sharing applications the view allows the user to toggle between the regular and front-facing cameras through the use of the flip button. The prominent button towards the bottom of the screen is used for both photo and video capture. Tapping the button captures a photo where as holding the button immediately begins video capture. This is similar to Snapchats media recording mechanism however a crucial difference exists in the video capturing process. Once video capture begins, if at any point the button is released video capture is temporarily paused and can be resumed again by holding the button. This can be done up to a duration of 10 seconds. This additional flexibility allows users to create more creative works and helps differentiate this application from the services Snapchat provides.

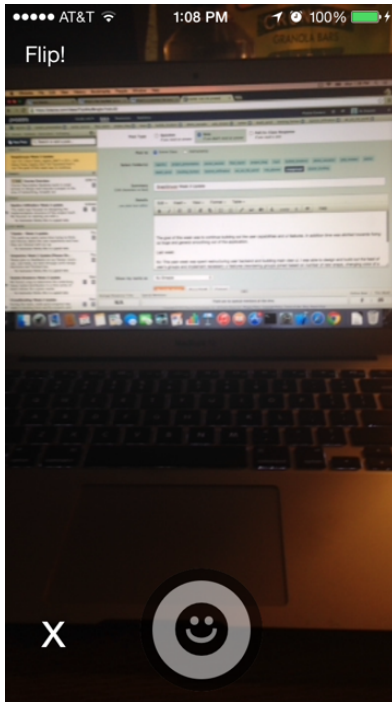


Figure 3. SnapGroupz Camera View

Once media is captured a couple of customization features exist. The user has the ability to draw on the image, currently only in red, and also add text boxes similar to Snapchat. These features are crucial in transforming the application from merely a photo and video collection/sharing service to a viable communication and messaging platform.

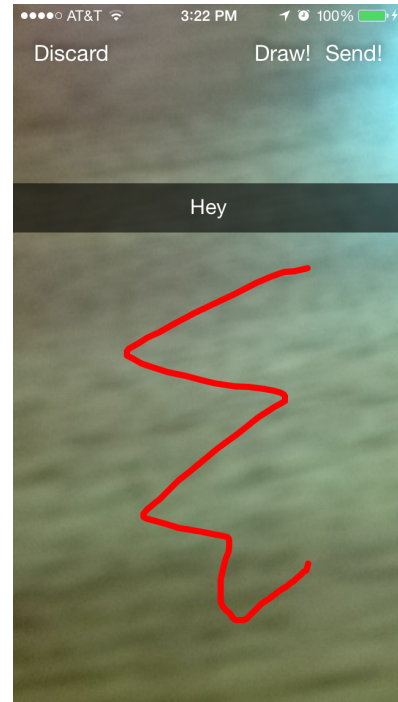


Figure 4. SnapGroupz Content Customization

4.3.3. Content View

Viewing content in this application is similar to viewing content in Snapchat. Once again, as can be seen in figure 5, the application takes advantage of the phone's entire display size to display the captured content. Similar to Snapchat a timer is used to alert the user of how much remaining time they have to view the media. Viewing the currently displayed content can be terminated at any time by merely tapping the screen. A key difference in viewing content on SnapGroupz vs on Snapchat is that viewing content on Snapchat requires keeping at least one finger placed on the screen. This was intended to make it hard for users to "screenshot" and store media; however as media posted on SnapGroupz is intended to be viewed and enjoyed by many this annoyance was removed to allow for easy content consumption. Also key to note is the inclusion of the contents creator/submitter as a key aspect of a piece of content is its creator.



Figure 5. SnapGroupz Content Viewing

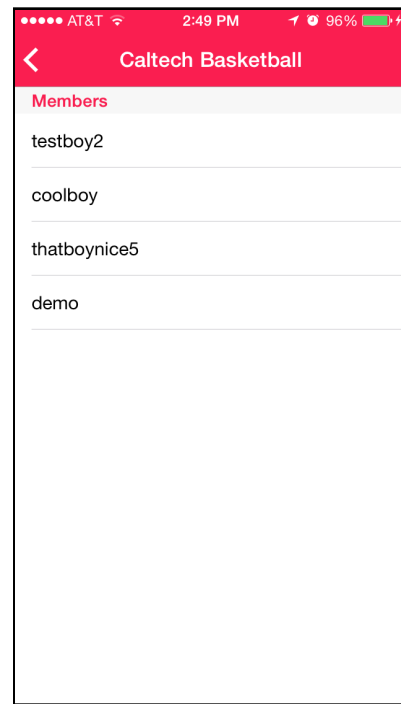


Figure 6. SnapGroupz Group Members View

4.3.4. Group Members View

The group members view is intended to be very simple and lightweight. This view is designed to give the user an idea of who else may be participating in the group. A key feature to note is this view allows a the groups creator to remove a user by tapping the user and then tapping the remove button that pops up; furthermore it also allows a user to remove him or herself from the group through a similar method. This is intended to allow a level of moderation for the groups and to also facilitate the joining and leaving of many groups. Although the initial purpose is to encourage users to join groups with their friends, the goal is that users will be eventually enjoy groups like channels on a tv, tuning into what they find most interesting at the time.

4.3.5. Search View

The search view is intended to behave similar to many other mobile application search mechanisms. This view was designed to allow for quick location of desired groups and to also facilitate the discovery of new groups. The dynamic search bar retrieves new results as the search query grows. Although this dynamic approach is expensive on the backend, it is a worthy cost as it exposes the user to many other groups that they may also be interested in joining.

This view also features cells similar to those used in the main menu. These cells let you know the name of the group, number of members, the groups creator and your join status. Each cell, if not yet joined features a prominent join button in order to encourage users to join groups.

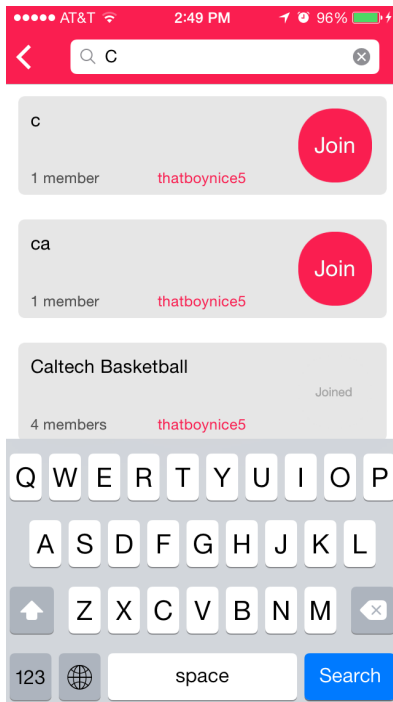


Figure 7. Search View

4.3.6. Create View

The create view was designed to be relatively straightforward and quick. This view features merely two-text boxes to be filled out before a group can be created. This view was designed to ease the creation process so that users would be more inclined to create and share groups.

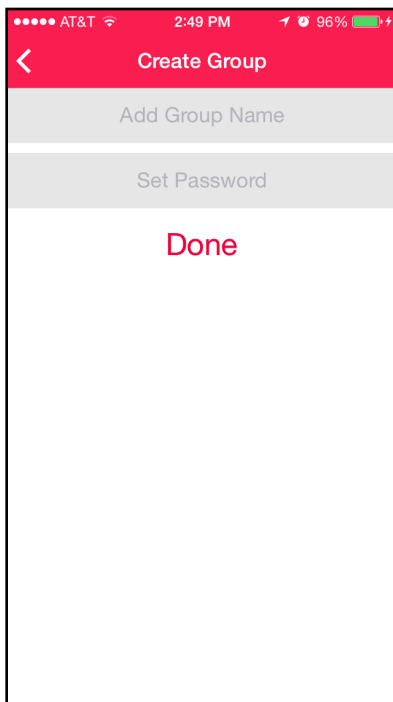


Figure 8. SnapGroupz Create Group View

4.3.7. Settings View

This is most likely not the final iteration of this view however as it is currently constructed it allows the user to view basic information about their profile, allows the user to logout, and provides basic information about SnapGroupz and possible contact methods.

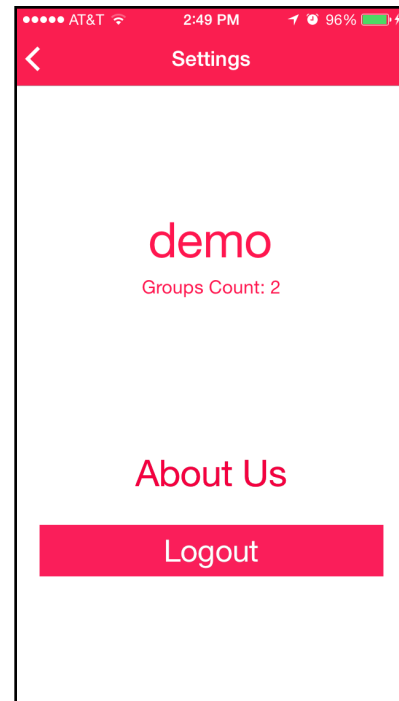


Figure 9. Settings View

4.3.7. Login/Sign Up

The login and sign-up views and flow was designed to be as painless as possible. As can be seen in figure 10, signing up merely requires an email address and password. It is also encouraged that the user uses their snapchat username (figure 11) to make it possible for their friends to easily recognize them. This portion of the application was designed to be a quick as possible because logging/signing up are usually great pain points that lead to low conversion rates for applications.

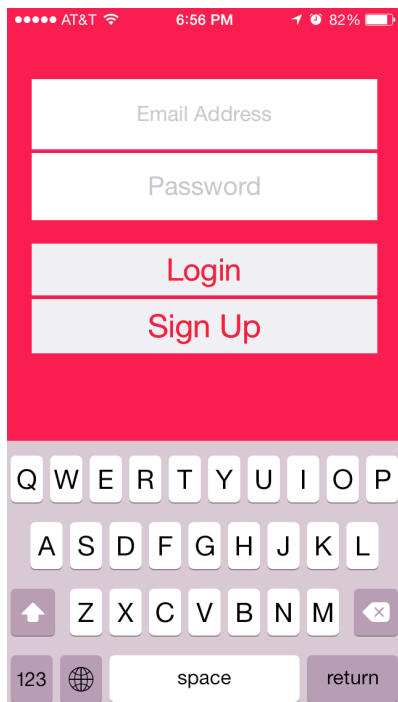


Figure 10. SnapGroups Login/Sign Up View

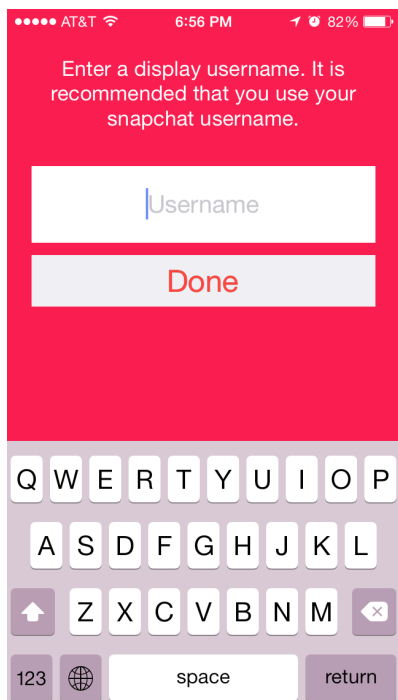


Figure 11. SnapGroupz username selection

5.IMPLEMENTATION

5.1.Frontend

The front-end for this application was implemented with basic IOS features. Although this application is intended to also be developed for Android, for the initial construction IOS seemed

like the better option as development is standardized for all models of iPhones and adoption rates are generally higher for IOS mobile applications.

Most of the views developed for the application feature the use of customized table views. IOS has a pretty comprehensive SDK so customization didn't require more than traversing documentation and experimenting with different techniques.

An interesting implementation challenge was developing the camera and camera interaction. Although Apple provides a camera solution for IOS development, it is not very modern or flexible and makes the process of capturing media relatively cumbersome. It was an interesting challenge to delve into gpu manipulation in order to replicate the ease of use featured in applications such as Snapchat. A framework/template that was really beneficial in competing this portion of the project was PBJVision developed by Github user piemonte. This library provided most of the brunt work needed to build a custom camera controller.

5.1.Backend

The backend architecture and support for this project was provided by the Parse Cloud Application Platform. This service is really lightweight and allowed for rapid development and iteration. Some weaknesses of this service include a lack of flexibility and speed in terms of backend calls. Although some optimizations can be made to reduce pain points there isn't much customization that can be made to the underlying architecture. This solution is fine for the early-stage development as it allows for the building of a proof-of-concept however in time a more custom and comprehensive solution may be preferred.

6.FINAL PRODUCT

The final product is a lightweight, minimalistic application that performs the necessary tasks. It appears to be relatively easy to grasp and use which will hopefully serve well for adoption rates. All in all though it is still in need of overall polishing. Most modern applications are very slick and well designed so improving the general look and feel of the application may be a necessary step.

7.FUTURE STEPS

The immediate next step for the application is to get approval for the Apple app store. This requires polishing the application a little more and improving some of the speed bottlenecks.

The upcoming next steps will involve marketing and putting the application in the hands of users. In order for the application to be successful user input needs to be gathered and iterations need to be made to improve the general use of the application. In order to market successfully I will be looking to take advantage of existing social networks especially among younger individuals. This application has a viral factor in that it requires that one invites his or her friends in order to maximize functionality. I will also be looking to get great content creators on the application in order to draw individuals who may be interested in interacting with such creators.

Some long term goals for the application are to build support for public groups and to partner with events so that this application can be used to provide a level of interactivity. It should be interesting to see how users adopt this application and adapt it to their needs.

8.ACKNOWLEDGEMENTS

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