Usability REPORT

DATE:　　　　4/27/2018
TO:　　　　　Daniel Olivares, CptS 443 Instructor
FROM:　　　 Marcus Blaisdell, Joseph Crissey, Brendan Lauck, Carly Ott, Tim Rice
RE:　　　　　Snapchat Usability Test
Highlights Video URL: https://youtu.be/E_zd61SyKzM

SUMMARY

Purpose and Scope

On April 15 and 18, we conducted a usability study of the Snapchat, which enables one to take and edit photos and videos to send to friends, send messages to friends, view friends locations on a map, view photos and videos that friends have added to their story, and find help on how to use the app. In the study, participants used their own cell phones to access the app and complete each of these tasks. The purpose of the study was to analyze the usability of the Snapchat app. Following a recent update to the app, many users had complaints that too many things had been changed and made the app difficult to use. The intention of this study is to evaluate how easy Snapchat is to use for users at multiple levels, heavy, medium and light users. Heavy users are users that use the app multiple times a day. Medium users are those that use the app nearly daily for one or two pics/messages. Light users are those that do not use the app daily and may go multiple days without using it.

Methods

We recruited three participants for this usability study. The participants are all college students at WSU from a variety of majors. One is a women's studies major, one a computer science major, and one a mechanical engineering major.

We ran the study in the usability lab in EME 228. The sessions were recorded with the Morae recorder program using the desk camera and the over-the-shoulder camera for the picture-in-picture perspective. Each user used their own smart phone.

We allotted thirty minutes for each study session. At the beginning of the test, participants filled out a background questionnaire. See *Appendix A* for a copy of the questions and their responses. Next, they were asked to unlock their phone before recording began to safeguard their security. The recording was then started and they were asked to open the Snapchat app, and then asked to think aloud while they used the Snapchat interface to complete a series of five tasks. See *Appendix B* for a copy of the original task sheet that participants received for the test. As they worked through these tasks, participants were instructed to think aloud by verbalizing their thoughts and actions. If they became silent, or if it was unclear what they were up to, they were prompted to explain what they were doing.

Upon completion of the tasks, participants filled out an exit questionnaire that solicited their impressions of the Snapchat app. *Appendix C* includes the exit questionnaire and participants' responses.

Findings

Overview

Task 1: Send a message to a friend:
All users were able to send a message to a friend with no problems.

Task 2: Take and send snap to a friend:
All users were able to take a snap and send it to a friend with no problems.

Task 3: Find the story of a friend:
Two users were able to find friends Stories with little difficulty.
One user was not familiar with what stories were and had to use Google to learn how to access them.

Task 4: Open the SnapMap:
One user stated that they were not able to figure out how to use the map on their own and had to be taught by someone else.
One user had to use Google to find instructions on how to access the map.

Task 5: Open the support page:
Two users mistook the settings page for the Support page and had to be prompted to continue searching for the Support page.
One user was not able to locate the Support page on their own and had to utilize Google.

Table 1. Summary of key results vis-à-vis the usability and user experience goals we established for our software.

Usability or U.E. Goal	Relevant Empirical Result	Commentary
Users must be able to take and send a snap	All users were able to accomplish this with no difficulty	This works well. New users are able to quickly learn this task.
Users must be able to send a message to a friend	All users were able to accomplish this with no difficulty	This also works well. New users can quickly complete this task.

Users must be able to access friends stories	Two of three users were able to accomplish this with little difficulty. Of those two users, one user first looked at a friends page that did not have a story and then had to look for another friend that did have a story. One user had to look up how to find friends stories.	Snapchat does not label "Stories", so new users would not know what Stories are. There is a signifier of a white circle around the "buddy" icon that indicates a user has a story that new users may not be aware of.
Users must be able to locate a friend on the map	Two of three users were able to accomplish this with no difficulty. One of those users verbalized that they did not figure out how to access the map on their own, another user showed them how. One user had to look up how to do it.	The two users who were able to find the SnapMap, were told how by someone else in the past; they did not know on their own. One user had to look up how to do it online and used Google.
Users must be able to get help on how to use the app from within the app	One user had to look up how to do this using Google. Two users assumed the settings page was the support page and had to be prompted to continue searching for the support page	There are no signifiers on how to access the support page. The page is located inside the Settings page and is not intuitive. New user had to seek help outside of Snapchat through Google to learn how to find the Support page.

We begin each subsection below with a brief description of the user subtask to which the problems listed in the subsection pertain. Next, in order of decreasing severity, we describe the associated usability problems, and provide "Severity" and "Scope" ratings**[Appendix F]** based on the empirical evidence. Following the problems, we cite evidence of each problem based on our analysis of the usability study. Each subsection concludes with specific design recommendations that we believe will remedy the problems.

1. Send a message to friend
In this task, the user must swipe right or tap on the bottom-left chat icon. Next, the user must tap on a friend, not on the friend's story. From here, the user will type a message and tap send on their keyboard.

Problems:

1. No users had problems with sending messages (Severity = N/A, Scope = N/A).

Evidence:

    1. 3 of 3 participants were able to send a message to a friend with no problems.

Diagnosis:

    1. Sending a message is easy and intuitive for new users.

Recommendations:

    1. No recommendations.

2. Create and send a snap to a different friend from the previous task

In this task, the user must navigate to the home page and tap the large circle towards the bottom-center. After taking the picture, the user must tap the large blue circle with an arrow inside at the bottom-right. Next, the user tap a different friend from their "Recents" list or by typing it in the search bar. The user then taps the white circle with a blue arrow inside at the bottom-right of the screen.

Problems:

    1. No users had problems with sending messages (Severity = N/A, Scope = N/A).

Evidence

    1. 3 of 3 participants were able to send a message to a friend with no problems

Diagnosis:

    1. Taking and sending a snap is easy and intuitive for new users.

Recommendations:

    1. No recommendations

3. Find a story of a family member or an old friend you don't communicate with frequently

In this task, the user must tap the chat icon at the bottom-left of the home-page. Next, the user must scroll down to find a family member or old friend who they don't communicate with often. After finding the person, the user must tap the blue-highlighted circle with a preview of their story inside.

In this task, the user must navigate to the home page and tap the large circle towards the bottom-center. After taking the picture, the user must tap the large blue circle with an arrow inside at the bottom-right. Next, the user tap a different friend from their "Recents" list or by typing it in the search bar. The user then tap the white circle with a blue arrow inside at the bottom-right of the screen.

Problems:

1. Newer user was not sure where to find stories and was not aware of what a story was. The problem creates a significant delay and frustration for new users that will affect all new users but seasoned users have the knowledge of how to access stories. (Severity = 2, Scope = 2).
2. Some users had a hard time finding a certain friend's Story. Seasoned users were able to locate a friend with a story relatively quickly. (Severity = 3, Scope = 3).
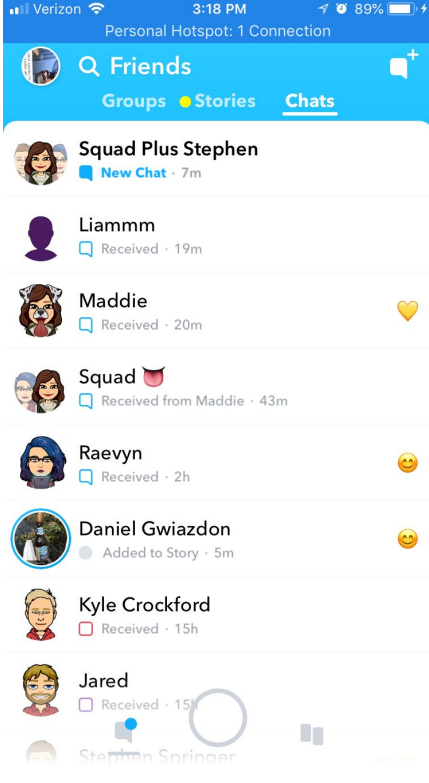
Evidence:

1. 1 of 3 participants did not know what stories were and had to have them explained. Once they knew about them, they did not know how to find them. They tried clicking on icons of people in their contacts list and did not see anything. They did not know that Snapchat puts a white circle signifier around the "buddy" icon when there is a story to view and if there is no circle, there is no story. The user clicked on multiple people in their contact list before getting frustrated and going to Google to find out how to find a story. They then had to scroll through several contacts before they found someone with a story.
2. 1 of 3 participants had to scroll through several contacts to find someone with a story to view because they were not able to sort contacts by stories.

Diagnosis:

1. Snapchat lacks signifiers that clearly define what "Stories" are.
2. Snapchat lacks the ability to sort by stories

Recommendations:

1. To help new users learn about stories, Snapchat does have tutorials for new users but they appear as 'snaps' that disappear after they are viewed once. New users will likely need to review such tutorials multiple times so they should be persistent.
2. Adding a sort feature on the friends page will allow users to sort friends list by multiple relevant criteria such as: alphabetical by name or by recent posts. Snapchat did roll out an update during the week of April 16-20 that added this feature though only one iPhone user in our group has it, three other Android users have updated their apps and still don't have this ability. Their new option appears to have an underline signifier for the current view and a filled, colored circle next to a sort view that has new content (see attached photos).

Our sorting suggestion	Snapchat's new sorting option

4. View the map and find one of the people from the previous tasks

In this task, the user may navigate to the map by pinching the screen or by tapping the search bar and waiting for it to load beneath "Current Place". Next, the user must navigate the map around by swiping, pinching, and spreading their fingers to find people.

Problems:

1. Most users had to be told there was a SnapMap and how to access it. No user interviewed found out about the map from SnapChat. They all found out about it from another user. If they are asked to access the map before they are taught how, they are forced to search for instructions. (Severity = 1, Scope = 1).

Evidence:

1. 3 of 3 participants did not even know that Snapchat had a map until they were told by another user. No one we evaluated found out about it from Snapchat.
2. Heavy and medium users were able to recall quickly how to access the map by pinching on the camera screen.

3. The light user had to use Google to find instructions on how to access the map.

Diagnosis:

1. Snapchat lacks signifers to tell users about the SnapMap and how to access it.
2. "Pinching in" the screen forces users to recall (instead of recognize) that information.

Recommendations:
1. Add a map icon labeled "map" on all screens (except the camera screen).
2. Swiping up from the bottom of the messaging screen.
3. Use persistent tutorial snaps to tell new users about the map and how to access it.

5. Open the support page
In this task, tap your user-profile icon in the upper-left of the home-screen. Next, tap the settings icon in the top-right of the screen. Lastly, the user has to scroll down to the "Support" menu-item and tap click on it.

Problems:
1. Some users did not know where to look to find the Support page. Seasoned users were aware of the Settings page which does contain the Support page but mistakenly assumed Settings was Support but after being told it was a different page, they were able to locate it quickly. (Severity = 2, Scope = 3).

2. New users did not know there was a Support page. They overlooked the Settings icon because they did not associate it with Support until they learned to go there by looking at Google. (Severity = 2, Scope = 2).
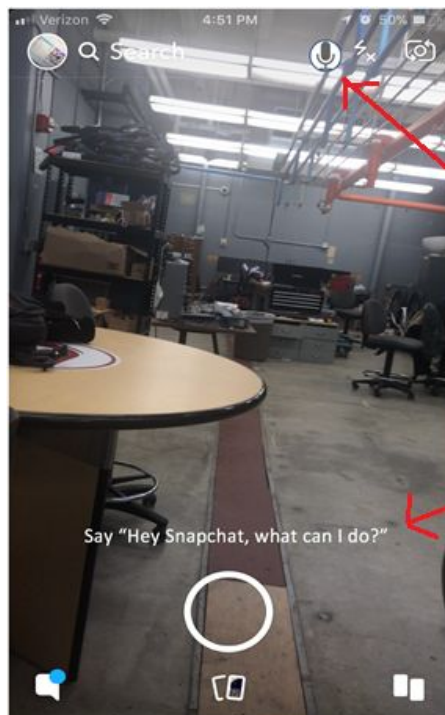
Evidence:

1. 1 of 3 participants had to use Google to learn how to access the support page.
2. 2 of 3 participants went to the settings page assuming that was the support page and had to be prompted to continue to search for the actual support page.

Diagnosis:

1. The support page is accessed by going to the settings page. This is not intuitive. Settings are typically used to customize the behavior of the app. Help/Support is usually its own page and typically uses a question mark signifier.

Recommendations:

1. Since part of Snapchats appeal is its minimal interface, we believe a speech recognition option would maintain the minimalist appearance and provide the guidance users need. A microphone signifier can be added at the top part of the camera screen and when the user taps on it, it can provide a recommendation of what the user could say at the bottom of the screen to get help on the app.

Appendix A: Background Questionnaire Responses

	Participant 1	Participant 2	Participant 3
Age	19	21	21
Gender	Female	Female	Male
Major	Technical	Non-Technical	Technical
Snapchat user level	Light	Heavy	Medium
How many hours a day do you use your phone?	2	Throughout the day	2
For Snapchat in particular	0	1/3 of the time	10-15 minutes
What do you use Snapchat for?	To see fun videos and pictures my friends send me and to send some myself	Chat, pictures, viewing stories, map	Memes
Do you plan your Snapchat activities?	No	I don't plan activities	No
How?			
Do you monitor your Snapchat activities?	No	Look at how many people have seen my story	no
How?		Swipe up on the picture in my story	
Do you analyze your Snapchat activities?	no	yes	no
How?		See who has opened messages	
Do you share your Snapchat activities with others?	no	I send them directly or put it on my story	sometimes
What is your motivation to use Snapchat?	<Left blank>	filters, friends, (communicating)	memes
Do you use any resources to assist you in using Snapchat?	yes	no	no
Which resources?	Google		
How do you use them?			

Appendix B: Usability Test Tasks

Participant Instructions

Welcome to the WSU Usability Laboratory, and thank you for agreeing to help us with this usability test. We sincerely appreciate your time and effort!

We are designing a new version of Snapchat's user interface in order to make the app more user friendly and intuitive. In today's test, you will use the current user interface to work through some of Snapchat's core tasks such as messaging, editing, stories, etc. We expect that you will need somewhere around 15 minutes to work through these tasks.

As you participate in today's test, please keep the following points in mind:

- The software tool, and *not* you, is the entity under test! Your interaction with our software will help us to better understand our software's strengths and weaknesses, so that we can ultimately improve the software's design.

- You are free to take a break at any time.

- Before beginning each exercise, please read all written instructions aloud.

- When you are finished with a page of instructions, please do not advance to the next page until you are instructed to do so.

- **If you are working alone**: Please read the problem aloud before you begin. As you work through each exercise, please **"think aloud."** Let me know what you are up to by verbalizing your thoughts and actions. In addition, please share any opinions, questions, or concerns that come to mind. If, at any point, you become silent, I will remind you to continue thinking aloud.

- Have fun!

Please await further instruction before going on to the next page.

Background

You have been asked to participate in a study using SnapChat! As a user, you are already partly familiar with some of its functions. During the study, you will be asked to perform five specific tasks.

Please await further instruction before going on to the next page.

Access the Software

In today's test, you will be using the Snapchat app. The app includes video, image, and text messaging, story creation, image and video editing, map viewing, and voice-activated support. You can send messages, videos, and images; create stories, edit your videos and images, and view a map.

1. Open the Snapchat app that is installed on your phone

Please await further instruction before going on to the next page.

Task 1

Send a message to a friend

Please await further instruction before going on to the next page.

Task 2

Create and send a snap to a different friend from the previous task

Please await further instruction before going on to the next page.

Task 3

Find a story of a family member or an old friend you don't communicate with frequently

Please await further instruction before going on to the next page.

Task 4

View the map and find one of the people from the previous tasks

Please await further instruction before going on to the next page.

Task 5

Open the support page

Please await further instruction before going on to the next page.

Exit Questionnaire

Congratulations! You have completed all tasks in this usability test. Before you go, we'd like you to complete an exit questionnaire that elicits your opinions on the software you just used.

Thank you for your participation!

Appendix C: Exit Questionnaire Responses

	Participant 1	Participant 2	Participant 3
On a scale of 1-10, how would you rate the system with respect to ease of use?	6	9	7
Did you find any of the tasks to be confusing? Which ones? How would you change the tasks to make them easier to understand?	I didn't know that Snapchat stories were videos. I wasn't sure I had found the story when I found the video.	The last task to find the support was confusing because I didn't know it existed. They were all easy to understand	Finding the map function when first learning to use it; during this test, no.
What did you like about the software you used? Were there any features that you found particularly useful? Why?	It's easy once you learn how to use it.	I like how easy it is to use and I can keep up with my friend throughout the day.	I like that I can send a quick message or use facial expression it it because it helps communication
What did you not like about the software you used? Were there any features that gave you particular grief? Why?	It took me a while to find the support page on the app.	When a message doesn't send, you have to keep trying to send it as the error message doesn't go away. It's annoying.	I did not like having to find stories again because it's not obvious who has one.
If you were designing this software, how would you change it so that it worked better for you?	An optional tutorial when a user first opens the app.	Error messages go away by choice.	Make a separate place that shows all stories available.

Is this software something that you could see yourself using in your day-to-day life? Why or why not?	Yes, most likely I would only use it to send photos to my contact list of friends.	Yes. I use it to contact people to check up on them.	Yes because it helps to enable communication & meme level
On a scale of 1-10, how would you rate your overall experience using Snapchat?	7	9	8
On a scale of 1-10, how easy is finding the map on Snapchat?	5	10	3
On a scale of 1-10, how easy is it to find the help page on Snapchat?	5	6	6

Appendix D: Critical Incidents Log

Participant 1:
Critical Incidents:

Time	Task	Subtask	Description of Incident
2:37	Find a story		Not sure what stories are
3:19	Find a story		doesn't know how to find someone's story
5:08	Find a story		Can't access friends story
6:40	Find a story		can't figure out how to exit a story
7:07	View the map		doesn't know where the map is
8:19	View the map		can't find map with instructions, uses different web page to get better instructions
10:53	Open support page		Has to look up how to get to help menu

Usability Problems:

Description of usability problem	Timer Location	Severity	Scope	Design Recommendation
New Users may not know Snapchat's terminology	2:37	3	3	Introduce user to terminology early and often

Participant 2:
Critical Incidents:

Time	Task	Subtask	Description of Incident
3:23	Open the Support Page	Scroll down to Support in the Settings Page	Participant 2 asked if she was on the Support page when she was on the Settings page

Usability Problems:

Description of usability problem	Timer Location	Severity	Scope	Design Recommendation
User may not know what a support page is	3:23	3	3	Make help and support page more accessible and known to the user

Participant 3:
Critical Incidents:

Time	Task	Subtask	Description of Incident
1:50	Find a Story	Scrolling through Friends looking for Story	Participant 3 did not know whether or not a friend had a story. After clicking on one friend who did not, he scrolled down to *remember* that another friend did have a story.
2:56	Open support page	Finding Settings page	Participant 3 clicked on settings gear icon with pin on it. This brought him to a settings page for the map only.
3:30	Open support page	Scrolling down to Support page	Participant 3 thought the Settings page was the Support page

Usability Problems:

Description of usability problem	Timer Location	Severity	Scope	Design Recommendation
User may not know whether or not a user has a story	1:50	2	1	Do not rely on recall. If a user's story has been viewed, display a signifier which shows a story and that the user has viewed it.

Appendix E: Summary of Usability Problems

1. The support page is in the settings page. This is not intuitive. Two of three users mistakenly assumed the Settings page was the Support page, one user had to utilize Google to locate the Support page and noted that it took too long.
2. No user was aware of the SnapMap until they were told about it by another user. The app itself does a poor job of informing users of the existence of the map and the method of accessing it by pinching in on the main camera screen is not intuitive.
3. All users encountered problems in finding a friend with a story. The lack of an ability to sort the friends list limited their ability to quickly find new stories.

Appendix F: Severity and Scope ratings

Severity and scope ratings are included to communicate which problems are most important.

Severity

Severity is an assessment of a problem's impact on user performance. The following scale is derived from Dumas and Redish (1993):
1. **Severity 1** problems prevent users from completing a task. Participants give up after a few tries or they need a hint to continue. For example, users consistently select an incorrect dialog option and do not know what else to do.
2. **Severity 2** problems create significant delay and frustration. Participants continue to get lost or to use inefficient methods to accomplish a goal. For example, the lack of feedback to users confirming what they have just done causes them to do the task over to make sure they did it correctly.
3. **Severity 3** problems have a minor effect on usability. For example, an unusual term in a dialog causes users to hesitate for a moment before making the correct choice.
4. **Improvements**. While not problems *per se*, improvements will make the task even easier to perform or learn. The interface doesn't hamper users but there is something that could make it even better.

Scope

Scope is an assessment of how frequently users will encounter a problem. The more users that a problem affects, wider its scope.
1. **Scope 1** problems will affect almost all users.
2. **Scope 2** problems will affect many users.
3. **Scope 3** problems will affect few users.

---

[1] Severity indicates the level of difficulty that the problem caused users (1 = most severe). Scope indicates the range of users that the problem is likely to impact (1 = broadest). See Appendix E for precise definitions of these terms.

[2]When we cite evidence, we indicate the numbers of the actual participants who experienced the problem. If you are interested in further exploring the nature of each problem, you are invited to check the Critical Incidents Log (Appendix D) and to look at the videotapes. The Critical Incident Log contains a separate sheet for each participant. Each entry indicates the

approximate time (from the start of the videotape) of the corresponding critical incident. You can use this number to index the videotape.

Appendix G: Signed Informed Consent Forms

Informed Consent Agreement to Participate In

Study

Marcus Blaisdell
Joseph Crissey
Carly Ott
Brendan Lauck
Tim Rice

School of Electrical Engineering and Computer Science
Washington State University

Description of Study: I understand that I, _Madison Lindell_ have been asked to participate in a contextual inquiry to inform the design of a new software application being created as part of the above persons' (henceforth, "the designers") course project for CptS 443/543 at Washington State University. My participation in this activity will help the designers to better understand the needs of prospective users of the software. I have been asked to spend about 30 minutes participating in this test. This will involve my engaging in using SnapChat while the designers observe, ask questions, and take notes.

By initialling below, I agree to allow the designers to record the session on videotape and audiotape. My name will not be on the videotape or audiotape. When the designers describe their work to other people in class (which may entail showing segments of the videotape), they will not use my name.

Initials: _ML_

Risks and Benefits Expected: The contextual inquiry will not do me any harm. It is not expected to help me directly. The results may help inform the design of the designers' software.

Confidentiality: I understand that any information about me that is obtained from this contextual inquiry, including what I say, will be confidential. My real name will be kept in a locked file and only the researchers will have access to it. Only my code name will be associated with data collected on me. Reports and presentations involving those data will not use my real name and will not present other data that could be used to identify me. Any recordings made within this contextual inquiry will be destroyed within two years.

Right to Refuse or End Participation: I understand that I may refuse to participate in this study or stop participating at any time.

Certification: I certify that I have read and that I understand the foregoing, that I have been given satisfactory answers to my inquiries concerning this contextual inquiry, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project or activity at any time.

I herewith give my consent to participate in this activity with the understanding that such consent does not waive any of my legal rights, nor does it release the researchers or any agent thereof from liability for negligence. I understand that I shall remain anonymous in all written and verbal reports of this study. If I am recorded, I agree to allow the designers to present to their instructor and classmates excerpts of any recordings taken during the study for educational purposes. I understand that I may request a copy of this form to keep.

[signature]   4/18/18

Signature of individual participant   Date

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this activity, please contact instructor Daniel Olivares, Washington State University, daniel.olivares@wsu.edu)

Informed Consent Agreement to Participate In

Study

Marcus Blaisdell
Joseph Crissey
Carly Ott
Brendan Lauck
Tim Rice

School of Electrical Engineering and Computer Science
Washington State University

Description of Study: I understand that I, _____Jonathan Cochran_____ have been asked to participate in a contextual inquiry to inform the design of a new software application being created as part of the above persons' (henceforth, "the designers") course project for CptS 443/543 at Washington State University. My participation in this activity will help the designers to better understand the needs of prospective users of the software. I have been asked to spend about 30 minutes participating in this test. This will involve my engaging in using SnapChat while the designers observe, ask questions, and take notes.

By initialling below, I agree to allow the designers to record the session on videotape and audiotape. My name will not be on the videotape or audiotape. When the designers describe their work to other people in class (which may entail showing segments of the videotape), they will not use my name.

Initials: _____

Risks and Benefits Expected: The contextual inquiry will not do me any harm. It is not expected to help me directly. The results may help inform the design of the designers' software.

Confidentiality: I understand that any information about me that is obtained from this contextual inquiry, including what I say, will be confidential. My real name will be kept in a locked file and only the researchers will have access to it. Only my code name will be associated with data collected on me. Reports and presentations involving those data will not use my real name and will not present other data that could be used to identify me. Any recordings made within this contextual inquiry will be destroyed within two years.

Right to Refuse or End Participation: I understand that I may refuse to participate in this study or stop participating at any time.

Certification: I certify that I have read and that I understand the foregoing, that I have been given satisfactory answers to my inquiries concerning this contextual inquiry, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project or activity at any time.

I herewith give my consent to participate in this activity with the understanding that such consent does not waive any of my legal rights, nor does it release the researchers or any agent thereof from liability for negligence. I understand that I shall remain anonymous in all written and verbal reports of this study. If I am recorded, I agree to allow the designers to present to their instructor and classmates excerpts of any recordings taken during the study for educational purposes. I understand that I may request a copy of this form to keep.

4/18/2018

_____   _____
Signature of individual participant   Date

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this activity, please contact instructor Daniel Olivares, Washington State University, daniel.olivares@wsu.edu)

Informed Consent Agreement to Participate In

Study

Marcus Blaisdell
Joseph Crissey
Carly Ott
Brendan Lauck
Tim Rice

School of Electrical Engineering and Computer Science
Washington State University

<u>Description of Study:</u> I understand that I, _____Laura Bate_____ have been asked to participate in a contextual inquiry to inform the design of a new software application being created as part of the above persons' (henceforth, "the designers") course project for CptS 443/543 at Washington State University. My participation in this activity will help the designers to better understand the needs of prospective users of the software. I have been asked to spend about 30 minutes participating in this test. This will involve my engaging in using SnapChat while the designers observe, ask questions, and take notes.

By initialling below, I agree to allow the designers to record the session on videotape and audiotape. My name will not be on the videotape or audiotape. When the designers describe their work to other people in class (which may entail showing segments of the videotape), they will not use my name.
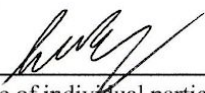
Initials: LB

<u>Risks and Benefits Expected:</u> The contextual inquiry will not do me any harm. It is not expected to help me directly. The results may help inform the design of the designers' software.

<u>Confidentiality:</u> I understand that any information about me that is obtained from this contextual inquiry, including what I say, will be confidential. My real name will be kept in a locked file and only the researchers will have access to it. Only my code name will be associated with data collected on me. Reports and presentations involving those data will not use my real name and will not present other data that could be used to identify me. Any recordings made within this contextual inquiry will be destroyed within two years.

<u>Right to Refuse or End Participation:</u> I understand that I may refuse to participate in this study or stop participating at any time.

<u>Certification:</u> I certify that I have read and that I understand the foregoing, that I have been given satisfactory answers to my inquiries concerning this contextual inquiry, and that I have been advised that I am free to withdraw my consent and to discontinue participation in the project or activity at any time.

I herewith give my consent to participate in this activity with the understanding that such consent does not waive any of my legal rights, nor does it release the researchers or any agent thereof from liability for negligence. I understand that I shall remain anonymous in all written and verbal reports of this study. If I am recorded, I agree to allow the designers to present to their instructor and classmates excerpts of any recordings taken during the study for educational purposes. I understand that I may request a copy of this form to keep.

_____ 4/15/18

Signature of individual participant   Date

(If you cannot obtain satisfactory answers to your questions or have comments or complaints about your treatment in this activity, please contact instructor Daniel Olivares, Washington State University, daniel.olivares@wsu.edu)