

User Research Report

Final Report for the Photograph and Video Sharing Project

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Executive Summary

Project Overview and Goal:

In this research project, the process of how people share, organize, and access photos and video recordings was studied using qualitative user experience research techniques and interview questions. The goals of this research was to:

- Identify who the target users are that share and organize photographs and videos, and how they access others images.
- Find out what the needs and the jobs-to-be-done are for users who share and organize their photos and videos, as well as when they access others' images.
- Identify pain points and problems that arise for users when sharing and organizing photos and videos, as well as when they are accessing others' images.
- Recommend features from collected research data that will help users accomplish their jobs-to-be-done when sharing and organizing photos as well as accessing others' images.

Research Methods:

Nine participants who use cameras to take photos and videos were interviewed to find out how they share, organize, and access photos and video recordings. During these sessions, participants were asked a series of questions that revolved around three research themes, and were also asked to demonstrate how they shared, organized, and accessed photos and videos. Sessions were moderated and conducted remotely in the participant's home environments.

Key Findings:

- Text messaging is the #1 way participants share photos and videos with others.
- When accessing others' photos and videos, texting is the preferred method, with social media being a close second preference.
- There are major issues with sharing, accessing, and the quality of photos and videos between Android and iOS platforms.
- Phone cameras are used frequently for "virtual post-it notes" and screen shots to help participants remember and document information.
- Film photography is not dead.

Key Recommendations:

- Design programs to make it easy for patrons to share and access images through text messaging.
- Address compatibility issues between Android and iOS platforms through design and software programming.
- Design features that allow users to organize and find photos quickly or automatically.
- Design features that make it easier to use phone cameras for virtual post-it notes and documenting information.
- Keep in mind that film photography is still utilized by many.

Introduction

This document provides a final overview of the data collected from the user experience research sessions for the Photograph & Video Sharing User Experience Research Project. In this research project, the process of how people share, organize, and access photos and video recordings from memorable events was studied using qualitative user experience research techniques and interview questions. The study focused on three high level research themes, and has provided data and information that has given team members a strong understanding on how people organize and share images; how people access images from others; what works well for people as they perform these tasks; and how the process can be improved to make it easier and more intuitive for users. Recommendations from the research data is also provided in this final report.

The Research Approach & Method

The goals of the user research that was performed was to:

- Identify who the target users are that share and organize photographs and videos, and how they access others images.
- Find out what the needs and the jobs-to-be-done are for users who share and organize their photos and videos, as well as when they access others' images.
- Identify pain points and problems that arise for users when sharing and organizing photos and videos, as well as when they are accessing others' images.

- Recommend features from collected research data that will help users accomplish their jobs-to-be-done when sharing and organizing photos as well as accessing others' images.

The research themes for the research that was conducted are as follows:

- How do people share photos and videos from memorable events with others?
- How do people organize photos and videos so they can easily be shared with others?
- How do people access photos and videos from others who are sharing these files?

The project utilized qualitative user experience research techniques and interview questions, and focused on three high level research themes listed above. Nine research participants (six in the initial round and three in the secondary round) from a broad range of demographics, who have experience taking photos and video recordings and sharing these images with others, were interviewed by a moderator remotely in their home environments. Sessions ran between 45-60 minutes in length and were video recorded.

Participant Information

For this project, we chose people from a wide range of demographics who have cameras and/or video recorders, and who also have experience taking photos and videos. The total number of participants interviewed for the research sessions was 9, with people

identifying themselves as 3 men and 6 women. Further participant information and characteristics can be found in the following tables:

Participant Characteristics	Number of Participants
Total Number of Participants in Initial Study Sessions	9
Number of Participants Who Have and Have Used Cameras	9
Gender Identity	
Male	3
Female	6
Age	
21-30	1
31-40	0
41-50	3
51-60	4
61-70	1

Participant #1: Claus B. (61-70 yo age) Registered Nurse First Round of Interviews	
What do you normally use to take photos and/or video recordings?	Sony A6000 Digital Camera with additional lenses and filters, and a Samsung smart phone.
Do you prefer taking photos or videos?	Photos
How often do you take photos and/or video recordings?	Once every couple weeks.
Do you take photos and/or videos for personal or professional reasons?	Personal
What kinds of things do you like to take photos/videos of?	Architecture, people, places, monuments, historical sites, animals, any thing that catches his eye. He takes photos on vacations, outings, and his day off.
Do you prefer digital or analog (film) photos and videos? Why?	Digital. Ability to snap several pictures until you have a good one.

Participant #1: Claus B. (61-70 yo age) Registered Nurse First Round of Interviews	
Additional information	<p>Uses his digital camera exclusively for taking pictures 100% of the time.</p> <p>Uses his phone camera pictures 90% of the time as a “post-it note” to help him remember things. Usually these get deleted afterwards.</p> <p>Texting and email are the platforms he uses to share photos and videos with others.</p> <p>He accesses others’ photos via text messages and Facebook.</p> <p>Actively organizes her photos using Microsoft Windows Explorer and NAS by year, month, and event.</p>

Participant #2: Rosa B. (51-60 yo age) Bookkeeper First Round of Interviews	
What do you normally use to take photos and/or video recordings?	Samsung Galaxy S7 phone camera.
Do you prefer taking photos or videos?	Photos
How often do you take photos and/or video recordings?	Once a week
Do you take photos and/or videos for personal or professional reasons?	99% of the time it is for personal reasons. Every once in a while she will snap a photo of a document for a client.
What kinds of things do you like to take photos/videos of?	Dogs, granddaughter, selfies with her husband, when she is out to dinner to remember the moment.
Do you prefer digital or analog (film) photos and videos? Why?	Digital, because it is instantaneous.

Participant #2: Rosa B. (51-60 yo age) Bookkeeper First Round of Interviews	
Additional information	<p>Uses phone camera to take photos.</p> <p>Texting is the platform she uses to share photos and videos with others.</p> <p>She accesses others' photos via text messages.</p> <p>Actively organizes her photos using Microsoft Windows Explorer and NAS by year, month, and event.</p>

Participant #3: Debbie H. (51-60 yo age) CPA/Tax Advisor First Round of Interviews	
What do you normally use to take photos and/or video recordings?	iPhone 12 Pro. At parties, she will use a Polaroid camera and a portable Polaroid digital photo printer.
Do you prefer taking photos or videos?	Photos. Sometimes she will take videos of her dogs doing something funny.
How often do you take photos and/or video recordings?	Screenshots-daily, photos-once a week, videos-once a month.
Do you take photos and/or videos for personal or professional reasons?	Personal
What kinds of things do you like to take photos/ videos of?	She takes photos of her kids, her husband, family, and events.
Do you prefer digital or analog (film) photos and videos? Why?	Both digital and film photos. She likes the ease of use with digital but finds the Polaroid camera and portable printer a fun activity at parties, where photos can be printed off instantly

Participant #3: Debbie H. (51-60 yo age) CPA/Tax Advisor First Round of Interviews	
<p>Additional information</p>	<p>Likes to use an older Polaroid camera that instantly prints out photos at parties.</p> <p>Also likes to bring a portable digital photo printer to print-off digital photos at parties.</p> <p>Uses her iPhone camera mostly for screen shots to help her remember things. These usually are deleted afterwards.</p> <p>Texting is the platform she uses to share photos and videos with others.</p> <p>She accesses others' photos through text messages and Facebook.</p> <p>She does not actively organize her photos and allows the Photo program on her iPhone to organize it by day, month, and year. She will also customize albums for specific events.</p>

Participant #4: David H. (51-60 yo age) Software Developer First Round of Interviews	
<p>What do you normally use to take photos and/or video recordings?</p>	<p>He has a digital camera he uses for events, but he uses his phone most of the time, which is a Samsung Galaxy Note 20.</p>
<p>Do you prefer taking photos or videos?</p>	<p>Photos</p>
<p>How often do you take photos and/or video recordings?</p>	<p>Three or four times a week.</p>
<p>Do you take photos and/or videos for personal or professional reasons?</p>	<p>Personal</p>
<p>What kinds of things do you like to take photos/videos of?</p>	<p>Takes photos with his phone to help him remember things mostly, and also takes photos of his dogs. Uses his digital camera to take photos of special events.</p>
<p>Do you prefer digital or analog (film) photos and videos? Why?</p>	<p>Digital because the quality is better and he can instantly see if the photos are good and retake the photos if needed.</p>

Participant #4: David H. (51-60 yo age) Software Developer First Round of Interviews	
Additional information	<p>Uses his phone camera to take photos to help him remember things.</p> <p>He uses his digital camera to take photos.</p> <p>Uses flickr.com to share photos with others.</p> <p>Accesses others' photos via text messages.</p> <p>Tries to organize photos from events, but really doesn't enjoy it.</p> <p>He misses the excitement of film photos but feels there are no benefits to using film anymore.</p>

Participant #5: Jenny M. (51-60 yo age) Phlebotomist First Round of Interviews	
What do you normally use to take photos and/or video recordings?	Sony Digital Camera and an iPhone 8.
Do you prefer taking photos or videos?	Photos. Takes videos of her son's band concerts.
How often do you take photos and/or video recordings?	iPhone photos-daily, digital camera- three times a year, videos-ten times a year.
Do you take photos and/or videos for personal or professional reasons?	Personal
What kinds of things do you like to take photos/videos of?	She likes to capture photos that represent "life" and anything that catches her eye as beautiful or unique. This includes people, animals, places, and things.
Do you prefer digital or analog (film) photos and videos? Why?	She misses film photography and the excitement of the darkroom, but as far as ease of use and being able to instantly see what her photos look like, digital is her choice.

Participant #5: Jenny M. (51-60 you age) Phlebotomist First Round of Interviews	
Additional information	<p>Currently uses her iPhone the most for taking photos.</p> <p>Did a lot of film photography and developing of her own photos in the 1990s. Has a very artistic and sacred view of photography as a work of art.</p> <p>Texting is the platform she uses to share photos and videos with others.</p> <p>She accesses others' photos via Facebook.</p> <p>She doesn't organize her photos and lets the Photos program on her iPhone organize them by day, month, year.</p> <p>Doesn't feel comfortable posting pictures on Facebook anymore and is very selective as to what she posts. Worries that strangers can steal your information (very careful about posting pictures of her kids) and photos (she comes from the old school thought that your photos are sacred and you just don't take other people's works of art).</p>

Participant #6: Zackary K. (21-30 yo age) Chemical Engineering Student/Bus Driver First Round of Interviews	
What do you normally use to take photos and/or video recordings?	iPhone 8 camera
Do you prefer taking photos or videos?	70% photos and 30% videos.
How often do you take photos and/or video recordings?	Twice a week
Do you take photos and/or videos for personal or professional reasons?	Personal
What kinds of things do you like to take photos/videos of?	Usually takes screen shots of memes or pictures of stuff he wants to remember. For photos, he usually takes pictures of things he thinks are cool.
Do you prefer digital or analog (film) photos and videos? Why?	Digital. He hasn't had much interaction with film photos or taking them with a camera other than on his phone.

Participant #6: Zackary K. (21-30 yo age) Chemical Engineering Student/Bus Driver First Round of Interviews	
Additional information	<p>Uses his phone camera mostly to take screen shots to help him remember things.</p> <p>Texting is the platform he uses to share photos and videos with others.</p> <p>He accesses others' photos via text messages.</p> <p>He organizes his photos into albums (events).</p> <p>Although he is the youngest participant in the study, he was spoke about printing off digital photos for a scrapbook gift and also spoke about actually looking at other's photo albums.</p>

Participant #7: Tania M. (41-50 yo age) Certified Master Naturalist Second Round of Interviews	
What do you normally use to take photos and/or video recordings?	Canon 70D digital camera with a 100-400mm lens, a Panasonic Lumix DCX80 "point and shoot" digital camera, and an iPhone 11.
Which statement best describes your use of cameras?	<ul style="list-style-type: none"> -I use cameras to practice the art of photography, either professional or amateur professional. -I use cameras to take pictures of people, places, animals, and things for personal reasons. -I use cameras to help me remember things or to document something.
Do you prefer taking photos or videos?	Photos. Will take videos once a month.
How often do you take photos and/or video recordings?	Several times a week
Do you take photos and/or videos for personal or professional reasons?	Personal
What kinds of things do you like to take photos/ videos of?	Anything that has to do with nature, plants, animals and herbs.
Are there any other tasks that you do with your phone camera other than taking photographs or videos of people, places, animals, or things?	60% time she uses camera to document things; 40% to take photos; screenshots 1-2 times per month.
Do you prefer digital or analog (film) photos and videos? Why?	Digital. She likes the ease and instant gratification of having a photo right away.

Participant #7: Tania M. (41-50 yo age) Certified Master Naturalist Second Round of Interviews	
<p>Additional information</p>	<p>Uses phone camera to mostly document things and her digital cameras to take photos.</p> <p>Used to take professional photos with her Canon digital camera.</p> <p>Texting is the platform she uses to share photos and videos with others.</p> <p>She accesses others' photos via text messages.</p> <p>Does not organize photos but allows the Apple Photos program to do that for her.</p> <p>Brought to light the issues of picture quality and ability to access photos and videos between iOS and Android platforms.</p> <p>The persona of Joshua resonated with her most because she used to be more into photography and sharing photos, but life has gotten busy and she's had to step back from photography.</p>

Participant #8: A.O. (41-50 yo age) Biologist Second Round of Interviews	
<p>What do you normally use to take photos and/or video recordings?</p>	<p>Samsung S10E camera</p>
<p>Which statement best describes your use of cameras?</p>	<p>-I use cameras to take pictures of people, places, animals, and things for personal reasons. -I use cameras to help me remember things or to document something.</p>
<p>Do you prefer taking photos or videos?</p>	<p>Photos. Rarely takes videos (once quarterly). Only takes videos if she wants to document an activity.</p>
<p>How often do you take photos and/or video recordings?</p>	<p>Daily</p>
<p>Do you take photos and/or videos for personal or professional reasons?</p>	<p>Personal and professional.</p>
<p>What kinds of things do you like to take photos/ videos of?</p>	<p>Animals and landscapes, for both personal and professional reasons.</p>

Participant #8: A.O. (41-50 yo age) Biologist Second Round of Interviews	
Are there any other tasks that you do with your phone camera other than taking photographs or videos of people, places, animals, or things?	No
Do you prefer digital or analog (film) photos and videos? Why?	Depends on what she is going to use them for. She does like the ease of digital and uses digital the most.
Additional information	<p>Uses her phone camera personally and professionally to take photos and document information.</p> <p>She doesn't enjoy sharing photos because her photos are personal, but if she does share them, texting and social media (Facebook and Instagram) are how she shares photos with others.</p> <p>She accesses others' photos via text messages and social media.</p> <p>She does not organize her photos and finds it "time consuming."</p> <p>With an Android phone, she finds it very difficult to access others' photos and videos who use iOS, and wishes there was more seamless sharing between the two platforms.</p> <p>Security of photos being shared and accessed is a very big concern for her, as she doesn't want others to gain access of her photos without her permission.</p> <p>The persona of Mary resonated with her most because it centers more around daily life and not as a hobby or a profession.</p>

Participant #9: Staci G. (41-50 yo age) High School Physical Education Teacher Second Round of Interviews	
What do you normally use to take photos and/or video recordings?	iPhone 13 camera and a Canon FTB 35mm film camera.
Which statement best describes your use of cameras?	-I use cameras to take pictures of people, places, animals, and things for personal reasons.
Do you prefer taking photos or videos?	Photos. Will take videos a couple times a week.

Participant #9: Staci G. (41-50 yo age) High School Physical Education Teacher Second Round of Interviews	
How often do you take photos and/or video recordings?	Takes photos daily and videos a couple times a week.
Do you take photos and/or videos for personal or professional reasons?	Personal and professional reasons.
What kinds of things do you like to take photos/videos of?	Animals, her daughters, her family, her mom and her students when she has permission to take photos of them for school slide shows.
Are there any other tasks that you do with your phone camera other than taking photographs or videos of people, places, animals, or things?	Screen shots, TikTok, YouTube Music
Do you prefer digital or analog (film) photos and videos? Why?	She prefers film photography because you are actually doing the work and there is a little more art involved with it. With digital, it does all the work for you.
Additional information	<p>Uses her phone camera the most to take photos. She also has been taking photos with her old Canon 35mm film camera as well.</p> <p>She also uses her phone camera to take screen shots.</p> <p>She shares photos via text messaging.</p> <p>She accesses others' photos via social media (Instagram and Facebook).</p> <p>Uses the iPhone Photos program to organize her photos and organizes them into albums for specific events.</p> <p>The persona of both Mary and Joshua resonated with Staci the most: Mary because she lead a busy lifestyle and trying to find time to share photos of her family on social media and Joshua, because it can be difficult to find the time to do film photography and she is looking to purchase a new lens for her 35mm camera.</p>

Research Findings

Our first goal in our research was to find out more information about the participants in the photograph and video sharing project. With the nine participants used in this project, we found that they are, on average, in their 40-50s age range, college educated, work full-time, and have partners and/or children at home. Other important information that was gathered about participants include the following:

- When taking photos or videos, it was found that 9 out of 9 participants used the cameras on their smart phones to take photos and videos, with 5 out of 9 participants using the iOS platform and 4 out of 9 using the Android platform.
- Out of the nine participants, 5 out of 9 enjoyed taking high quality photos as amateur professional photographers. 4 out of 5 of these participants use Sony digital cameras with additional photographic equipment such as lenses and filters, and 1 out of 5 of these participants currently use a Canon 35mm film camera.
- Photos seemed to be the preference amongst participants, with 9 out of 9 stating they preferred taking photos vs. videos, but out of these nine participants, 7 out of 9 stated they also took videos occasionally.
- 9 out of 9 participants stated they took photos for personal reasons, but out of these 9 participants, 3 out of the 9 stated they also took photos for professional reasons as well.
- The range for how often participants took photos and videos ranged between daily to once every couple of weeks.

Participant Types/Personas

In analyzing the data about the participants and their use of photographic cameras, we found that there are two specific types of users that emerged from the research data. From our initial interview data, two main personas emerged from our interviews. They are:

- **Mary**-The busy professional who uses her smart phone camera regularly to help her remember specific information as well as snapping and sharing photos and/or videos of family and friends.
- **Joshua**-The amateur photographer who enjoys taking high quality, artistic photographs with a digital camera and other photographic equipment for pleasure and special occasions.

The persona of Mary seemed to represent the majority of participants and how they share, organize, and access photos and videos: using their smart phone cameras to take photos, screen shots, and images to document reminders and information, and also utilizing text messaging and social media platforms to help them accomplish their tasks and jobs to be done. But the persona of Joshua was also a very prominent persona as well, with several of the participants being involved in professional or amateur professional photography. One of the most prominent features amongst this group of participants was time constraints in their busy lives that prevented them from being able to go out and practice the art of photography. Out of the five participants who used professional digital or 35mm cameras to take high quality photos, 4 out of the 5 stated they wished they had more time or opportunities to take more high quality or artistic photos, but that the “business of life” sometimes prevents them from getting out doing what they love doing, which is capturing photographs. It was for this reason that they use their phone cameras more often to take photos because of the ease of use and less set up, unless they had a

specific reason to pull out their photographic cameras and equipment.

“I love taking pictures but I don’t have a lot of reasons to do it...I want to get back into it” David H.

“I used to enjoy photography a lot more and sharing pictures more but because, you know, life gets in the way, I kind of stepped back from it and then, you know, eventually I may start getting a little more involved with it.” Tania M.

“...but to be able to break out and do real photos, but again, it’s having the time to do it. Staci G.

“I’ve never stopped taking pictures, I’ve just stopped doing photography.” Jenny M.

The two personas of Mary and Joshua were further supported with our second round of interviews by asking participants if these personas resonated with them. From our research, it was found that the second round participants felt there was one or both personas that they felt described them and their approach to taking photographs and videos, with 1 out of the 3 participants stating Mary resonated with her, 1 out of the 3 stating Joshua resonated with her, and 1 out of the 3 stating different aspects of both Mary and Joshua resonated with her.

“There are some things that I can connect with on that (Joshua) because I used to enjoy photography a lot more and sharing pictures more but because, you know, life gets in the way, I kind of stepped

back from it and then, you know, eventually I may start getting a little more involved with it.” Tania M.

“It was just more daily life and not as a hobby or a profession.”(Mary) A.O.

“There are definitely bits and pieces of each because with her busy lifestyle and having the time to do a lot of that stuff, that is me to tee, with the girls and their dance and all that stuff, but being able to break out and do real photos, but it is again, it’s having the time to do it. When you mentioned the saving up for another lens, with this camera, it’s just finding one, but it would be cool, that is on my list too.” (Mary and Joshua). Staci G

Key Findings from the Research Data

There were several key take-aways from the final research data that we feel are important to highlight in regards to the sharing, organizing, and accessing of photographs and videos, as these key findings came up for a majority of the participants in this project. After presenting these key findings, data from all three research themes will then follow this section of the report.

1. Text messaging is the #1 way participants share photos and videos with others.

Texting was by far the most popular way for participants to share photos with others, with 8 out of 9 participants stating that the text messaging platform was their preferred way of sharing photos and videos with others. Participants stated that they liked the ease and

convenience of being able to quickly and seamlessly share photos via text messaging.

2. When accessing others' photos and videos, texting is the preferred method with social media being a close second.

When it comes to accessing others photos and videos, texting was again the preferred method, with 6 out of 9 participants stating this is how they normally see others' photos and videos. Even though texting was preferred, there were also a good number of participants who stated that they also used social media platforms like Facebook and Instagram to access others' imagery, with 5 out of 9 participants stating they utilized social media platforms as well.

3. There are major issues with sharing, accessing, and the quality of photos and videos between Android and iOS phone platforms.

“(When I share photos via text message from my iPhone), If people have an Android, the photo quality is reduced (on the Android phone), and if I send something, like Adam has an Android, and if I send something to him, it will be a little bit more pixelated and it won't be as clear quality, and the same thing happens when people with Androids text me, it's kind of grainy as well. If I have a video, those translate way easier through iPhone than Android, and those get really pixelated (on an Android phone)...it shouldn't be that way with the way technology is.” Tania M. (Speaking about how the quality of photos from her iPhone decreases and becomes pixelated when she shares photos with someone with an Android phone)

“If they are larger file formats, one is very limited on what one can send to others via text or email in size limitations, and when you compress the file, the quality of the photo goes down...it definitely is

a limitation. You can send a snap shot to somebody, but if somebody wants a really good photo, it's limited to where you can post it or how you can deliver it...it would be nice if the companies didn't put restrictions on how big of a file one can send to others" Claus B.

"One of the things that I've noticed between Android and Apple phones, like my friend, what are they? iOS videos or something like that, anyways, she tried to send me a video, and I couldn't watch it because I have a different phone, so having Apple phones and Android phones be more seamless in sharing I think would be a big thing." A.O.

"The size. The photo is too big is my biggest challenge with sharing photos via text messaging and it can't be sent. In that case, the link in Google Photos usually works...I think within the app if they could automatically re-size it (the photo) so that it will be sent as a text would be nice, so it would always go through as a deliverable size." Rosa B.

"If I want to send multiple photos, just the size of the file is limited, and the same with videos. It will either say it can't do it or if I have multiple photos, it will just allow however many photos and the others I'll have to send in a separate message. This is annoying. I guess in a perfect world, there would be no size limitations." A.O.

Participants love to share and access photos via text messages, but it became abundantly clear that participants with Android platform phones are at a major disadvantage when sharing and accessing photos and videos via text. In looking at the participants who used Android vs. iOS phone platforms, it was interesting to note that 3 out of the 4 participants who use an Android platform phone stated they had issues sharing and accessing photos and videos via text

messaging because of size limitations, whereas none of the participants who use iPhones stated they had any issues with sharing, accessing, or quality of photos or videos via text messages. One participant, who uses an iPhone, stated she notices the difference in the quality of photos and videos when her friends with Android phones send her images. And when she sends a good quality photo from her iPhone to a friend with an Android phone, the images show up “grainy” and/or “pixelated” on the Android phone. As we continued our research, this issue definitely started to become identified as a major difficulty for the users of Android phones, with participants stating it was a major challenge that prevented them from sharing and accessing photos and videos easily with others.

4. Phone cameras are used frequently for “virtual post-it notes” and screen shots to help participants remember and document information.

“90% of the time I use my phone camera as a ‘post-it note’ for reminders, and then they usually are deleted.” Claus B.

“I take a lot of screen shots, usually everyday, of things on the internet that I want to remember or show my husband later on.” Debbie H.

“Sometimes I’ll snap a photo of a document for one of my clients and send it to them.” Rosa B.

“I mostly take photos to help me remember things.” David H.

“Usually I’ll take pictures of things I want to remember, like a date on a billboard or books that I want to read.” Zackary K.

“Sometimes I am just taking my iPhone out to take a picture of something so that I remember it later or to try and identify a plant out on the trail.” Tania M.

One of the most interesting things we found in our research data was that participants often use their phone cameras as a reminder system or “post-it note” rather than just being used to take pictures. Although 8 out of 9 participants stated they used their phone cameras to take photos, 8 out of 9 also stated that they used their phone cameras to take photos of things as a way to remember things, sometimes more often than taking photographs of people, places, or things. Screen shots, photos of documents, written information, or billboards were just some of things participants stated they use their phones for when using it as a reminder, and many times, participants stated that when they didn’t need the information anymore, these photos were deleted from their phones.

This information initially was gathered from the interview question *“What kinds of things do you like to take photos/videos of?”*, and in the initial research interviews, we were surprised to find that phones were used in this way as much as it was relayed to us. To follow up more on this use of phone cameras, we devised several more questions to probe this use of phone cameras a bit more with our second round of interviews. These additional questions included in our interviews were:

- *“Which statement best describes your use of cameras? I use cameras to practice the art of photography, either professional or amateur professional; I use cameras to take pictures of people, places, animals, and things for personal reasons; I use cameras to help me remember things or document something.”*

- *“Are there any other tasks that you do with your phone camera other than taking photographs or videos of people, places, animals, or things?”*

When participants from the second round of interviews were asked these two additional questions, their responses supported our initial finding, with 3 out of the 3 participants stating they used their phones to document information or to take screen shots

5. Film Photography is not dead.

“Sometimes I think it’s important to physically hold a picture...it makes it more real.” Debbie H.

“I have to say that I truly miss a dark room. Dark rooms were therapeutic and they were your own space, your own place where you could just kind of let the world go and you could just become one with this photograph that you took. It was almost kind of magical because you would take a roll of film and you wouldn’t know, like you would be like ‘This is the roll! On this roll, there’s that one picture and I’ll keep my fingers crossed that it came out ok!’ And it was such an excitement thing. And if it succeeded, as a photographer, you’d always take more than one picture of a specific thing, because there will always be someone doing something weird, so you’d always have to be able to pick which one was best...It was definitely a magical time. And I definitely have to say I miss that...but as far as preference for ease of use, obviously digital. It’s like you can take a picture, you can see it, and cool, you have so many options”. Jenny M.

“Film photography is actually kinda cool, because you're actually doing the work. Whereas digital, it just does it for you. I think that’s what I appreciate about film at least. I think there is a little bit more art with that (film photography).” Staci G.

Another really interesting finding amongst our participants was several of them were still very much into film photography. This information was gathered when they were asked the interview question, “*Do you prefer digital or analog (film) photos and videos? Why?*”. 5 out of 9 participants stated that they preferred digital vs. analog/film images, but 3 out of 5 participants stated that they had a preference for both digital and film images and 1 out of the 9 participants stated she preferred film photography. Taking film photos was accomplished by participants using an older Polaroid camera that instantly printed out photos and the taking and developing of film photographs that were taken with a 35mm professional camera. Although all nine participants stated digital files are, by far, easier and more convenient to use, in a world where film photos and movies are almost obsolete and unheard of, these four participants still enjoyed and found value taking and sharing film photographs.

Research Theme Data

Research Theme 1: How do people share photos and videos from memorable events with others?

Why do you share photos and video recordings?

- *“I’ll share photos of my granddaughter with my daughter while I’m babysitting to let her know what she’s doing when she’s hanging out with us. If we are at Train Town and she’s on the train and she’s happy, I’ll take a video of her and send it to her mom.” Rosa B.*

- *“I’ll share event photos that I take with others because that is the whole reason why I am taking the photos.” David H.*
- *“My favorite photography instructor said once, and I never forgot it ‘A photograph is proof we all existed at one time.’ He was showing us these really old silver based photos from way back in the day, and he was saying ‘And we have these but how would we have known about these people? Because so many generations go by and things change, but this photo captures this moment in time.’ I never forgot this and it has always stuck with me” Jenny M.*

There were several reasons why participants share photos and videos with others. The main reason why participants shared photos centered around important moments in their lives, with 8 out of 9 participants stating they want to share a memory of a special time, event, or celebration. Some participants used photos to communicate with others, with 3 out of 9 participants stating they shared photos to update others as to what they are doing in their lives. 3 out of 9 participants share photos of interesting things they have found or unexpected places, and 1 out of 6 participants stated she shares photos to prove someone or something existed at one time.

Do you like sharing photos and videos? How does it make you feel? Who do you like sharing photos and videos with?

- *“I used to look at Facebook as a way to stay in contact with friends and to share experiences, now I look at Facebook as a way that strangers can steal your information, and I just feel like it is too much. If my friends really want to see things that I’m doing, they’ll get in touch with me. I’m not really comfortable*

with putting a lot of stuff about my kids online anymore. I just found that there is too much sharing of information on Facebook that's not necessarily good. As far as Instagram goes, I used to use it as a venue to edit photos, but then I asked 'Why am I putting all this stuff on social media where people can take stuff?'" Jenny M.

- *"I don't necessarily enjoy sharing photos, because that's not the point of taking them. It's personal for me." Claus B.*
- *"I just think they are personal (photographs), and I'm not somebody that shares a lot of personal information." A.O.*
- *"I've done photography for years, and for anyone who does photography, their photos are sacred. From the old school view point of photography, you didn't give your images away. It was kind of a big deal. Now everyone screenshots everything and sends it everywhere and nothing really is sacred anymore. It was a big deal to do a non digital photographic print, and when you got that perfect print, this was your work of art." Jenny M.*

Although 6 out of 9 participants stated that they liked sharing photos with others, 3 out of the 9 stated they don't like sharing photos. Their reasons centered around the art of photography and seeing one's photographs as sacred, not trusting social media, and also seeing their photos as a personal thing for themselves. One participant stated he likes to take photos for himself and that his reasons for taking the photos are for "personal reasons". He also stated that he doesn't like to "photobomb" people with his photos. The other participant stated she was wary of sharing photos on Facebook and Instagram, which is currently a major platform that she has used in the past for the sharing photos with others. When participants were

asked who they like sharing photos with, 8 out of 9 participants stated family and friends, and that the feelings evoked when sharing photos included happiness, joy, and connectedness.

What kinds of feelings are evoked when you share photos with others?

- *“It makes me happy to know they want the pictures.” Claus B.*
- *“There is definitely a joy there, as long as I feel like I did a good job, then I feel excitement. If I do a bad job then there is a feeling of regret and all that.” David H.*
- *“(When I share a photo of my granddaughter with my daughter) I’m excited because I want her to see it.” Rosa B.*
- *“I’m excited, because it’s something we both enjoy.” Tania M.*

When asked what kinds of feelings are evoked when participants share photos or videos with others, there was a range of answers including “happy”, “excited”, “connected”, “pride”, and “depends”. The “depends” response centered around what was being depicted in the photo that they were sharing.

What do you currently use to share photos and video recordings with others?

- 8 out of 9 participants use text messaging as their #1 way to share photos and videos.
- 3 out of 9 participants used online services to share links to photos via email.
- 3 out of 9 participants use social media platforms.

- 2 out of 9 participants give hardcopies of a film or printed photo to others.

Sharing photos via text messaging was by far the most popular way to share photos with others, and participants stated it was a quick, easy, and straight forward way to share photos with others. Other ways of sharing included social media platforms, Google Photos, Google Drive, Flickr.com, and giving a hard copy of a film or printed photo to others.

What types of things or situations prompt you to share photos and/or recordings with family and friends?

- *“If someone says to me “Hey send me a picture” or it is a picture that is remarkable, I’ll share my photos, but generally, I don’t like to photobomb people.” Claus B.*
- *“I’ll share photos when I’m really proud of something one of my kids has accomplished or seeing a really beautiful thing that I want to share with others.” Jenny M.*
- *“I’ll be prompted to send a photo to friends when I get a photo of a funny moment, like when my dog is on her back snoring or in a costume.” Rosa B.*
- *“If it’s a milestone moment of something funny that occurred. I like to make people laugh. If I think it’s something funny that they’ll get a kick out of it, I’ll share it.” Staci G.*
- *“Just seeing something unique, like we have 13 different rattlesnakes here, and I saw a tiger rattlesnake for the first time and that was pretty interesting because coming from Southern California prior to Arizona, you only see a couple of varieties*

there...Seeing something for the first time encourages me to share my photos with others.” Tania M.

4 out of 9 participants stated they are prompted to share a photo with others when they have a picture that they find really interesting and remarkable. 3 out of 9 participants stated they will share photos of funny moments, usually of their animal companions. Other reasons given were to update people on what they were doing, events, and if someone asked them for a copy of a photo.

What do you find to be the biggest challenge in sharing photos and/or video recordings with family and friends?

- *The biggest challenge for me is the size limitation when sending via email or text. When you compress the photos, the quality level really goes down. Claus B.*
- *“One of the things that I’ve noticed between Android and Apple phones, like my friend, what are they? iOS videos or something like that, anyways she tried to send me a video, and I couldn’t watch it because I have a different phone, so having Apple phones and Android phones be more seamless sharing I think would be a big thing.” A.O.*
- *“If people have an Android, the photo quality is reduced (on the Android phone), and if I send something, like Adam has an Android, and if I send something to him, it will be a little bit more pixelated and it won’t be as clear quality.” Tania M.*

Like discussed earlier in this report under the Key Findings section, the size limitations on photos and videos when text messaging or emailing with Android phones is a major challenge for participants and makes sharing and accessing photos and videos difficult or impossible. Out of the 4 participants who use Android phones, 3 out

of 4 participants stated they had issues with this challenge, whereas the 5 participants who use iPhones stated they didn't have these kinds of problems when sharing or accessing photos via text messaging or email. 2 out of the 4 Android participants found work arounds by sending links to photos through Google photos. 1 out of 4 participants used email with a link to Google Photos. One iPhone participant stated she uses an app called Telegram to share and access high quality photos with her husband who has an Android phone. According to participants, these work arounds are not ideal and they would rather have the ability to be able to text photos and videos, but it helps them get the job done. When Android participants were asked how these jobs-to-be-done could be made easier, they came up with the following suggestions:

- Have the phone and internet provider companies not put restrictions on the size of an image file being sent out via text messages and emails.
- Have a feature in photo applications that can automatically resize a photo or video so it can be easily and seamlessly sent via text or email.
- Have the Android and iPhone platforms "get along".

Although size limitations was brought up the most, 1 participant stated the quality of photos from Androids to an iPhone were "grainy and pixelated" and that when she sent a high quality photo to a person who has an Android, the image would come across on the Android phone as pixelated. She mentioned that this is something that should be addressed as well between the two platforms.

How do you safely and securely share photos and/or video recordings online? Does this concern you?

- 7 out of 9 participants do not feel there are any safety issues with sharing photos and videos online.
- 1 out of 9 participants has concerns about sharing photos and videos on social media platforms.
- 1 out of 9 participants has concerns with sharing photos and videos on the internet in general.

The question of safely and securely sharing and organizing images, and accessing photos and videos of others was asked across all three research themes, and almost all participants stated that these issues did not concern them. If this did concern them, they took the necessary precautions to protect themselves. Although most participants were not concerned with this situation, there were two participants who stated the safety and security of their photos online concerned them greatly. One participant stated that she was wary of sharing photos on Facebook and the other stated she was worried about the security of her photos anywhere on the internet. Given the current controversy and past ethical dilemmas concerning some social media giants, it seemed appropriate to post these participants' concerns in this report.

"I used to look at Facebook as a way to stay in contact with friends and to share experiences, now I look at Facebook as a way that strangers can steal your information, and I just feel like it is too much. If my friends really want to see things that I'm doing, they'll get in touch with me. I'm not really comfortable with putting a lot of stuff about my kids online anymore. I just found that there is too much

sharing of information on Facebook that's not necessarily good. As far as Instagram goes, I used to use it as a venue to edit photos, but then I asked 'why am putting all this stuff on social media where people can take stuff?' Jenny M.

"Yes it does concern me, security absolutely concerns me, it is one of my biggest concerns. I have my privacy settings as high as possible. I just don't want anybody to have access to my photos and videos that don't have my permission. Anywhere just on the internet in general. I even wonder about texting and messenger as well. Security is my number one concern." A.O.

Do you share analog (film) photos and/or movies with others? Do you share these images online digitally or in a physical form? How do you go about doing this?

- 5 out of 9 participants have shared analog/film photos with others
- 4 out of 9 participants have not shared analog/film photos with others.

For this research question, the data was closely 50/50 for the sharing of film/analog photos, with 5 stating they have shared and 4 stating they have not. All of the participants stated they have not shared any film videos or movie clips with others. When asked how they went about sharing these photos, 2 out of the 5 participants who share film photos stated they have scanned the original photos into digital files and have sent them to family via text message or email (email if they wanted to send a good quality copy). 3 out of the 5 participants also stated that they just took a photo of the original film photo with their

phone cameras and shared the photos with others this way as well. Participants state that the quality of the image when taking a photo of the original is not as good as a scanned photo, but if they are just looking to send a copy quickly and quality is not an issue, this method worked well.

Research Theme 2: How do people organize photos and videos so they can easily be shared with others?

Do you organize your photos and video recordings? And if so, why do you organize your photos? What feelings are evoked when you organize your photos and videos?

- 4 out of 9 participants actively organize their photos and videos.
- 2 out of 9 participants do not take an active role in organizing and allow the photos program to do the organizing.
- 1 out of 9 participants state that he sometimes will organize groups of photos.
- 2 out of 9 participants state they do not organize their photos.
- 6 out of 9 participants stated the reason they organize their photos and videos is so they can easily find the images.
- 2 out of 9 participants state their biggest challenge with organizing is the amount time it takes to organize their photos and videos and finding the time to do it.

- 2 out of 9 participants state their biggest challenge with organizing is procrastination and actually doing it.

This question amongst participants was mixed with different types answers and approaches to this task, with 4 out of 9 participants stating they took an active role in organizing their photos; 2 out of 9 participants allowing the photos program to organize the photos for them; 1 out of 9 participants organizing photos “begrudgingly” when he took photos for an event that he would be sharing with others; and 2 out of 9 participants stating they didn’t organize their photos at all. The reasons why participants either organized their images or not were very clear and consistent across the board, with 6 out of 9 participants stating they organized their photos and videos for ease in finding them when they needed them. Those that didn’t organize their photos stated the amount of time it took, finding the time to organize, and just sitting down and accomplishing the task were the main reasons why they did not organize their photos and videos. Feelings evoked when organizing photos and videos ranged widely amongst participants from “fulfillment”, “job completed”, “accomplishment”, “satisfying”, not having any feelings associated with the process, and “annoyance”.

“Organizing my photos is automatic for me because I like things neat and tidy.” Rosa B.

“It’s easy to go back in and easily access them. There are thousands of photos on my phone so if I had to scroll down, it would take forever...It’s nice because it’s a little less sense of chaos because I’m not very organized to begin with.” Staci G.

*“The biggest challenge is making time. It’s too time consuming.”
Tania M.*

“It’s just time consuming...competing priorities...it’s like ‘organize photos’ or ‘do laundry.’” A.O.

How do you organize your photos and videos within the platforms that you use?

- 4 out of 9 participants organize their photos by year, month, day.
- 3 out of 9 participants organize their photos in albums or files.
- 2 out of 9 participants don’t organize their photos.

Organizing by year/month/day vs. albums seemed to be pretty equal amongst participants and were the two organizing systems that participants used when organizing their photos and videos. Only 2 participants stated they did not organize their photos and videos.

What do you find to be the biggest challenge in organizing photos and/or video Recordings?

- *“My biggest challenge is procrastination, actually sitting down and doing it (organizing the photos).” David H.*
- *“The biggest challenge for me is the time it takes to organize the photos. I can get really distracted easily when I’m going through photos-‘Oh Look! I remember this event!’, that kind of thing. It really takes a large amount of time to do.” Rosa B.*
- *“The reason I don’t organize my photos is the time it takes to do it. It’s really not a priority for me and I feel the Photos app on my iPhone does a pretty good job organizing my photos.” Debbie H.*

- *“It just becomes too many, too many to go through, too many to remember what’s there, it’s just too many...The number of photos one is able to take also makes it really challenging.” A.O.*
- *“The biggest challenge is making time. It’s too time consuming.” Tania M.*

The biggest challenge for participants in organizing their photos and videos is the time it takes to organize the photos, with 4 out of 9 participants stating it takes too long to properly organize them. The other challenge for participants is procrastination and actually sitting down and organizing their photos, with 3 out of 9 participants stating this was the reason why they didn’t actively organize their photos in a timely manner.

When asked what might make these challenges easier, one participant stated having the filing system work like an app, where it automatically knows where the photo is supposed to go, would help greatly as far as the time it took to organize. Currently, she has to go to several folders, go to the hard drive, and tell it where it goes. Another participant noticed that the iPhone Photos program has a search tool that allows her to type in a word and the program finds all the photos in her Photos program that match that word. She feels this feature could possibly fill-in for her as an organization tool since she doesn’t currently organize her photos, but also admitted the process was a bit “creepy”. *“Wow, that’s pretty fascinating and creepy at the same time because how does it know?”* Other participants stated it was just a matter of deciding to sit down and finish the task, and could not think of any ways the organization of their photos could be made easier.

Do you organize analog (film) photos and/or movies? Do you organize these images online digitally or in a physical form? How do you go about doing this?

- 4 out of 9 participants organize their film photos
- 5 out of 9 participants do not organize their film photos
- 4 out of 9 participants place film photos in a box without any organizational system.
- 2 out of 9 participants have scanned in their film photos and organized them with their digital images.
- 2 out of 9 participants have organized film photos in binders with plastic sleeves inside a box and also in photo albums/scrap books.
- 2 out of 9 participants state they organize printed or film photos in manila envelopes or keep them in the development envelopes they came in without any organizational system.

The organization of film photos tended to show that participants are not concerned about organizing their film and/or printed photos, with 5 out of 9 participants not taking the time to organize their film photos and 4 out of 9 participants organizing them. Amongst the participants who organized their film photos, 2 out of 4 scanned them in as digital files and organized them with their digital photos, and 2 out of 4 had their photographs organized in binders or scrapbooks. Out of the 5 participants who stated they didn't organize their photos, 4 out of 5 stated they had the photos placed in a box with out any organization and 2 out of 5 participants stated they placed printed photos and film photos in manila envelopes or their development envelopes without any organizational system.

When asked if there was anything that would make the organization of hardcopy film photos easier, some mentioned purchasing photo boxes with dividers but many of the participants could not think of anything, and a majority of the participants communicated that the organization of their film photos was not important enough for them to take the time to organize them.

Research Theme 3: How do people access photos and videos from others who are sharing these files?

Why do you access photos and video recordings that others have shared with you?

- *“If we have a common interest, I’m usually interested or have a desire to see the picture. It is a way of sharing that moment with them.” Claus B.*
- *“It keeps me in the loop and I can visualize what’s happening...it’s a good way of communicating.” Debbie H.*
- *“It’s being polite.” Debbie H.*

The main reason found in the research data for wanting to see or access other people’s photos and videos was out of interest, desire, and curiosity in what the person was doing, with 8 out of 9 participants stating this was their main reason for looking at others photos and videos. Other reasons for seeing others photos was wanting to share the moment with them; seeing family members and events; the photo was being used to communicate a specific topic; to learn more about the person; if the photos were sent to them; and being polite.

Do you enjoy seeing friends and family members photos and/or videos? Whose photos/videos do you want to access? How does it make you feel?

- *“Whatever people want to share with me I find that it’s important to them so it is important to me, so whatever comes, I’m always happy to hear from people in general.” Tania M.*
- *“My sister Stacy likes to take videos of her cat and she constantly sends them to us and it’s all the time...I’ll play it and respond because I don’t want to hurt her feelings but this is probably why I don’t send too many photos out to others because I get tired of getting so many from my sister...it’s like ‘Oh God, not another one!’” Debbie H.*
- *“Ahh, oh man, I hate being honest here but...” David H.*

When it comes to seeing or accessing others photos, 6 out of the 9 participants stated they enjoy seeing others’ images. They stated seeing others’ photos helped them feel connected and evoked feelings of happiness. 2 out of 9 participants stated it depends on the situation if they want to see the photos, and 1 out of 9 stated no, he does not enjoy seeing others photos. The reasons for not wanting to see others’ photos and videos ranged from not having anything in common with the person and what they were seeing; having to look at photos for long periods of time; and being “photobombed” regularly with images they don’t have interest in seeing.

What kinds of feelings are evoked when you access photos and video recordings from friends and family?

- *“It’s cool when you haven’t seen that person for a while...It is neat to see their pictures, sometimes it’s surprising, sometimes it’s cool, sometimes it’s depressing.” Jenny M.*

- *“That excitement and also that excitement for that other person too because she got to see something really cool so it’s almost like we are sharing that experience together even though I wasn’t there, so that’s what cool about photos.” Tania M.*
- *“Why did they send me that? to warm and fuzzy feelings to laughing if it is funny.” Debbie H.*
- *“Ahh, oh man, I hate being honest here but...”. David H.*

There was a wide range of feelings that are evoked when looking at and accessing other people’s photos. 5 out of 9 participants stated that they felt “happiness” and “pleasure” when seeing others’ photos and videos, and that there was a feeling of connection when viewing others’ images. 4 out of 9 participants stated that the feelings evoked depends on the photos they are seeing, as demonstrated with the above quotes from participants.

What platform do you find used most often when accessing friends and family’s photos and video recordings?

- 6 out of 9 participants access others’ photos and videos via text messages.
- 5 out of 9 participants access others’ photos and videos via Facebook and/or Instagram.
- 1 out of 9 participants access others' photos and videos via email.

By far, the most popular way to see and access others' photos and videos was by text message, with 6 out of the 9 participants stating this was how they usually saw others’ photos and videos. 5 out of 9 stated they saw others’ photos and videos on Facebook and/or

Instagram, and only 1 out of the 6 participants stated he looked at photos of others on their email.

What types of things or situations prompt you to access photos and/or recordings that are being shared with you?

- 4 out of 9 participants stated that pictures of special events will prompt them to look at others' photos and videos.
- 2 out of 9 participants stated that pictures of family and friends will prompt them to look at others' photos and videos
- 2 out of 9 participants stated having a curiosity or desire to see someone's photos will prompt them to access others' photos and videos.
- 2 out of 9 participants stated they will be prompted to look at others' images when notified or see it in their social media news feed.

There was a wide range of reasons around what enticed participants to look at others images. The most prominent reason was special events, with 4 out of 9 participants stating this reason. The other situations that prompted participants to look at others' photos centered around family and friends, curiosity/desire to see the photos and videos, and being notified and/or seeing the photos in their social media news feeds.

What do you find to be the biggest challenge in accessing others photos and/or video recordings?

- 3 out of 9 participants stated there are no major challenges when accessing others' photos and videos.

- 2 out of 9 participants stated the Android/iPhone disconnect made it a challenge to access others' photos and videos.
- 2 out of 9 participants stated that poor internet service or no connectivity or cell service can sometimes be an issue but not on a regular basis.

Interestingly enough, when asked this question, the majority of participants stated they couldn't think of any major challenges when accessing others photos and videos, with 3 out of 9 participants stating it was easy and straight forward, but 2 out of 9 participants brought up the Android/iPhone issues with sharing and accessing photos between the two platforms. We are not sure why more participants did not bring up the Android/iPhone issue when asked about accessing others' images in the first round of interviews, as it was clearly an issue with many when asked about sharing images. The two participants who stated this issue in regards to accessing others' images were in the second round of interviews, so it is highly recommended that the Android/iPhone issue in regards to accessing others' photos and videos be researched further to gather more information about this issue.

Another interesting thing to note was that 2 out of 9 participants stated that poor internet service and/or no connectivity or cell service was a major challenge sometimes when accessing photos and videos of others, but they were also quick to say that this was not usually a problem or issue.

Do you access other's analog (film) photos and/or movies? Do you find that these images are accessed online digitally or in a physical form? How do you go about doing this?

- 4 out of 9 participants access others analog/film photographs.

- 5 out of 9 participants do not access others analog/film photographs.
- 3 out of 9 participants access film photos of others through scanned digital copies of the original pictures.
- 1 out of 9 participants access film photos via digital photo taken of the original picture.
- 1 out of 9 participants access film photos of her mother's because she is storing them at her home.
- 1 out of 9 participants access others' film photos by looking at them in a photo album.

The majority of participants stated that they do not access others' film photos, with 5 out of 9 participants making this statement, but it was also found that 4 out of 9 participants stated they did access others film photos. Film photos were shared and accessed by participants as digital files created from the original photos, with 3 out of 9 participants accessing these film photos from scanned images of the original picture, and 1 out of 9 participants accessing the photos via digital photo of the original film photograph. It was interesting to note that the youngest participant in the research study (age 22 years old) was the only participant who had actually accessed and looked at others' photos in a photo album. Even though this data is in the minority, it did show that some people still do organize and keep film photos in photo albums.

Jobs To Be Done (JTBD)

In analyzing the above research data, we were able to find out what the needs and jobs-to-be-done are for participants in this study. Even

though there are two different persona types from our research data, we found with our final data that these jobs-to-be-done crossed over to both persona types and were pretty universal amongst all of our participants. The following list are the jobs-to-be-done that people are looking to accomplish when sharing, organizing, and accessing photos.

Busy Professional who uses their Cell Phone Cameras/Amateur Professional Photographer

- Be able to easily text and/or email high quality photos to others between Android and iOS platforms without having to re-size the photos or having size limitations when sending them.
- Be able to organize photos quickly and easily so it doesn't take large amounts of time to do, and be able to find photos and videos easily when people want to share them with others.
- Having the ability to access other people's photos and videos easily without issues with Android/iOS incompatibility, problems with connectivity, quality issues, or inability to download the images.
- Using cell phone cameras to help users remember things by using the photos as "virtual post-it notes".

Recommendations

From our research data, the following is a list of our recommendations on how to make the sharing, organizing, and accessing of photographs and videos easier for people who use cameras on a regular basis, and also how their jobs-to-be-done can be completed in a straight-forward, seamless fashion.

1. Make it easy for patrons to share and access images through text messaging.

Texting is the #1 way people share photos and access others' images as well. The majority of people who take photos use their phone cameras because they are readily accessible and easy to use. Therefore, keep the texting platform in mind when designing photo and video apps and programs for patrons. Incorporate features in apps and programs that make it easy and intuitive for patrons to be able to share their photos and videos via text messaging, as well as accessing others' images. Be aware of incompatibility issues between Android and iOS when designing these apps and programs.

2. Find ways to address compatibility issues between Android and iOS platforms and don't allow size limitations to prevent patrons from successfully completing their tasks at hand.

The compatibility issues between Android and iOS platforms became quite evident in our research data and is a source of frustration for patrons with both types of phones. These frustrations includes size limitations, poor quality images, and inability to access images. This is a larger issue that involves the inner workings of two, very different phone platforms, and visible changes to help with the compatibility between these two phones will take time. In the mean time, design products that will compensate for these current differences so sharing and accessing of images can be accomplished. Some ideas that some of the participants brought up to help with this issue includes:

- An app or program that can automatically re-size photos for text messages on Android phones.
- Software or app that will enhance or keep the high resolution and quality of photos that are shared between iOS and Android platforms so images are not pixelated.
- Software or app that will allow patrons to access and share videos and photos between Android and iOS phones.

Also, continue to advocate for similar and/or compatible platforms between the two major phone designs so communication on all levels, not only photos and videos, can be accomplished easily and seamlessly.

3. Design features in photograph programs that allow users to organize and find photos quickly or automatically.

The time it takes to organize photos was a major pain point for participants and one that prevented some from even attempting to organize their images. This, in turn, caused “annoyance and frustration” in finding photos and videos when they wanted to share them with others. To help with this task, design features in photograph programs and apps that allow users to organize their photos quickly and easily. Suggestions for features that participants gave that would help them to be able to organize their photos and videos faster include:

- Automatic uploading and filing
- Drag and drop options
- Quick click menus for album organization
- Ability to move easily between screens with finger swipes
- Checking off multiple checkboxes for one command
- Automatic day/month/year categorization

Easily finding photos was also an issue as well, and incorporating things like AI search bars and clearly marked files or albums would help users be able to quickly and easily find photos and videos they are looking for without having to scroll through pages of unorganized photos.

4. Design features in photograph apps and programs that make it easier to use phone cameras for virtual post-it notes and documenting information.

People not only use their phone cameras for photos and videos of people, places, or things, but also as a “virtual post-it note” to remember or document information. When designing apps or programs, incorporate features that will make this task easier for patrons to find their information and reminders. Some design ideas include:

- Have a quick and intuitive way to mark photos as reminders or information.
- Include filing systems specifically for reminder images for ease in finding at a later date.
- Incorporate easy and intuitive customization for information and reminder images that can set specific parameters for each photo.

5. Keep in mind that film photography is still utilized by many.

Although the majority of users who take photos and videos prefer and use digital formats, and their JTBD don't revolve around film, there are many people who still take photos using film. Keep this in mind when designing products that may carry over to those who use film as well.

By incorporating these above recommendations, challenges found in the research data can be addressed, and patrons will be able to successfully complete their JTBD in regards to sharing, organizing, and accessing photographs and videos recordings.

Personas and Journey Map

The following pages include the two personas and also a journey map that lays out a JTBD by the persona of Mary.

Mary

Age: 40

Location: Seattle, WA

Education: B.A. Education

Job Title: School Teacher

Goals

- Organize photos of her kids and have a printed photo album made for her parents.
- Scan old family film photos into digital format and organize them with her digital photos.

JTBD

- Text photos to others without having to re-size them.
- Share photos and videos on social media platforms.
- Keep photos organized so they can find and share.
- Use her phone camera to help her remember and document things.

Mary lives a full life with her family, kids, and her job as an elementary school teacher. Mary has a Samsung Galaxy phone that she uses to take photos of her kids, and either sends the photos via text message or posts them on Facebook so she can keep family and friends up to date on her kids and family. She also enjoys seeing her friends photos on text messages and Facebook as well. Mary loves the convenience of having a camera on her phone so she can capture these moments of her kids, but finds it frustrating when there are size limitations and she is not able to send photos via text. She prefers taking photos but also will take videos with her phone if her kids or dogs are doing something cute or funny. Last week, her youngest took her first steps, and Mary was able to video record this first moment with her phone, but had to text a link to the video instead of texting it directly to her parents. Mary prides herself in keeping her photos well organized on her computer and phone so she can find photos quickly and easily when she wants to share them with others, but sometimes finds it a challenge to find the time to do it. Mary also uses her camera daily to take screen shots and photos of things she wants to remember. She thinks of it as a “virtual post-it note” and finds it really helpful in remembering things in her busy life.



“I love the convenience and ease of being able to send and receive photos via text messaging on my phone, but I wish there was a way to be able to send larger image files without it failing to send.”

Pain Points

- Finding time in her busy schedule to keep her photos organized.
- Unable to view videos from her best friend who has an iPhone.
- Videos and photos that are too large to send via text message.

Joshua

Age: 50

Location: Sonoma, CA

Education: B.S. in Computer Science

Job Title: Software Engineer

Goals

- Share more of his photography with others by joining a community art gallery.
- Find more time to go out and take photos with his digital camera.
- Save up some money for a new telephoto lens.

Pain Points

- Finding that the quality of his photos are diminished and pixelated on Androids.
- Organizing photos in his photo application.
- Deciding which photos to keep and which ones to get rid of when editing.

Joshua has always loved taking photos ever since he took a Photography class in High School. His very first camera was a Canon 35mm camera and he remembers how excited he was to start using it for his photo class. Although Joshua pursued a Computer Science degree in college, he continued to take photos and refine his skills through the years. Joshua loved developing his own photographs in the darkroom. “Developing photos in the darkroom was a magical time for me. It was time for myself during my hectic school schedule, a time to be with myself and the photos I took. I miss the excitement and artistry of film photography.” Today, Joshua works full time and has a family, and he still takes photos on a daily basis with his iPhone camera, but he now finds it difficult to find the time to go out and take photographs with his new professional digital camera. He is hoping he can find a photo project or a community gallery where he can become more involved in photography and share more of his photos with others.



“I like to just capture life, things that represent life in any way, shape, or form. So if I see something that strikes me in a certain way, like a beautiful sunset, or a person doing a certain thing, a beautiful flower that is photoworthy, or the water glistening like diamonds, I’ll take a picture of it. That will never be there again. You may see it again, but not in that instance.”

JTBD

- Share high quality photos with friends and family via text or email.
- Organize photos on an online photo gallery so they can be shared with others.

Share photos via Text Messages

Mary, Elementary School Teacher and Mom

