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Individual Report

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Introduction

This research is designed to provide solutions to T-Mobile to increase its customer base and make its service more efficient with goal of attracting more mobile users from student population in College Park.

Research Technique: Diary Study

I chose this technique because it provides detailed information on how people use a particular device or application in day to day life. It also explains as how this use and activities unfolds over time. For the project goal, I thought diary study would help me

- Understand how actively the users use the internet and its application on their phone. And also provide the additional information on their data plan requirements and user needs.
- The information then collected would give accurate usage information and eliminate biases. This is will also help T-Mobile to understand the user's internet usage and formulate a better plan to keep users attracted to their plans. Recommend changes based on the study.

Recruitment: Four participants were recruited who have a smartphone and use internet and its applications on their phone. One user was from T-Mobile, one user from AT&T, and two from Sprint. I think to recommend changes in current T-Mobile plan it's important to understand how other service providers have their data plans in order and how the users use them differently from T-Mobile. The primary reason for this recruitment was to understand how actively users make use of internet on their phone. This diary study was conducted for a span of two weeks.

- Initial Survey: This was done to understand the users, what kind of smartphone they use, type of service provider, what type of network they have, do they use their phone everywhere and basic purposes they use their phone internet for. This was done using a form via Google Docs, a link was sent to the users to fill out the form.

Diary Study Format:

- Email was sent to the users after recruitment with the introduction and guidelines to fill the diary.
- Collected screenshots of the applications and certain data cap app that users use for better understanding.
- The diary includes the daily activities from morning to evening because the first and last thing that people do is check their phone. From the surveys result, based on the generally used applications and activity, I prepared an Excel sheet. This included, time place, network used cellular or Wi-Fi, activities, any issues faced and additional comments. Then Google doc was created, which I asked the users to fill online.

- Constant reminder was given to the users via message.
- Follow up interview and wrap up.

The analysis on the information collected on the activities that the users used heavily is mentioned in the Appendix 1. The issues and comments are not mentioned here but are covered in the Findings and recommendation.

Limitations:

- Users' participation and dedication was difficult to achieve.
- Users were reminded constantly to fill out the diary.

Key findings:

T-Mobile User:

- The user chose T-Mobile for its cheap family plan. User already had a phone and wanted to use budget friendly data plan.
- These points were cleared in the follow up interview and the after analyzing the data.

Connectivity and Network:

- User faced several connectivity problems during school timings as T-Mobile has poor connectivity in many of the university buildings. There was no network or very poor network.
- The data plan was never fully used because the user has very less usage of the applications in general and also, because of the poor connectivity and data cap reasons user made use of the Wi-Fi at school and local places with Wi-Fi.

Speed and data cap:

- User monitors the Data cap by making use a T-Mobile app called my T-Mobile account. The usage of the data plan was never exhausted because more usage of Wi-Fi. Not fully serving the purpose of the data cap app.
- Speed of the internet was an issue, only when the data cap is full, the speed goes from 4G to 3G but the user couldn't use the phone during school and seminars because of the poor connectivity.

Other Users Feedback:

- AT&T user faced problem with connectivity at specific locations like the building Van Munching hall, Glenn Martin Building and Susquehanna Hall in the university as mentioned in the diary.
- AT&T users also faced issues with call drops and phone is disconnected even when there are fully shown bars. AT&T user had to manually reset the 4G network for getting the voicemail of the missed call in this case cleared during the follow up interview.

- AT&T user had no 4G issues. No 4G related issues were logged in the diary.
- AT&T user relies on the AT&T website for data cap. The data plan available is sufficient as it's not fully used this was cleared during the follow up interview.
- The Sprint user faces problems with network coverage in the university buildings like Glenn Martin. There is also no network at the Rhode island Avenue and Bethesda as mentioned in the diary and in the follow up interview.
- Sprint music streaming is poor at times due to less network coverage.
- Sprint has bad download speed and video streaming is not great as well it's mentioned in the diary but got more information when the follow up interview was taken.
- Sprint user generally used cellular network when out as the local Wi-Fi network is not trustworthy. Sprint users have no issues with the data cap plan but the internet speed is slow mentioned in both diary study and in the interview.

Implications of Findings/Recommendations for Client:

- The network of T-Mobile is poor in the university buildings and better outside. The same problem is faced with AT&T and Sprint as well but is more severe in T-Mobile.
Recommendation: T-Mobile should invest in creating more cell reception towers near college park. As the nearest cell tower is in Hyattsville, MD, 20782 according to their T-Mobile Tower site (T-Mobile, 2013), the bad network can be avoided.
- T-Mobile has reasonable data plans and family plans for students but due to poor service they switch to other service providers. As one of the user switched to AT&T after continuous poor service from T-Mobile.
Recommendation: Enhance the plan as the students may join the plan but then would eventually switch to other service provider. To make sure that the user should stick to them, give more lucrative deals and provide easy upgrade with cell phones once the students upgrade. Improve network connectivity.
- T-Mobile has no deposit prepaid plan and has the better prepaid plans than the AT&T and Sprint. They have already attracted students with a smartphone not trying to change their phone. But the data plan is as low as 500MB in prepaid.
Recommendation: For students who want to use the data plan fully. They can give better data plans with more GBs.
- Students generally don't prefer Verizon in College Park, as the rates are high and they don't give mobile phone upgrades, for instances one of the user complaint that the Nexus 5 is still not launched with Verizon.
Recommendation: T-Mobile can use this to their advantage, provide high end phones before other service providers and keep the prepaid rates reasonable, students will definitely buy them.
- Users spend most of their time on phone, using social networking apps, email, and entertainment to the fullest according to the diary study. There are few complaints with 4G data cap but the speed is definitely a problem with all the users.

Recommendation: Include unlimited plan for 4G speed in the plan without reducing it to 3G. This will make sure that these users use the internet and its applications. Sprint has a similar plan but Sprint users' complaint that the speed is not 4G. T-Mobile can upgrade their 4G LTE network and deploy the same.

Evaluation of Diary Study UX Research Method

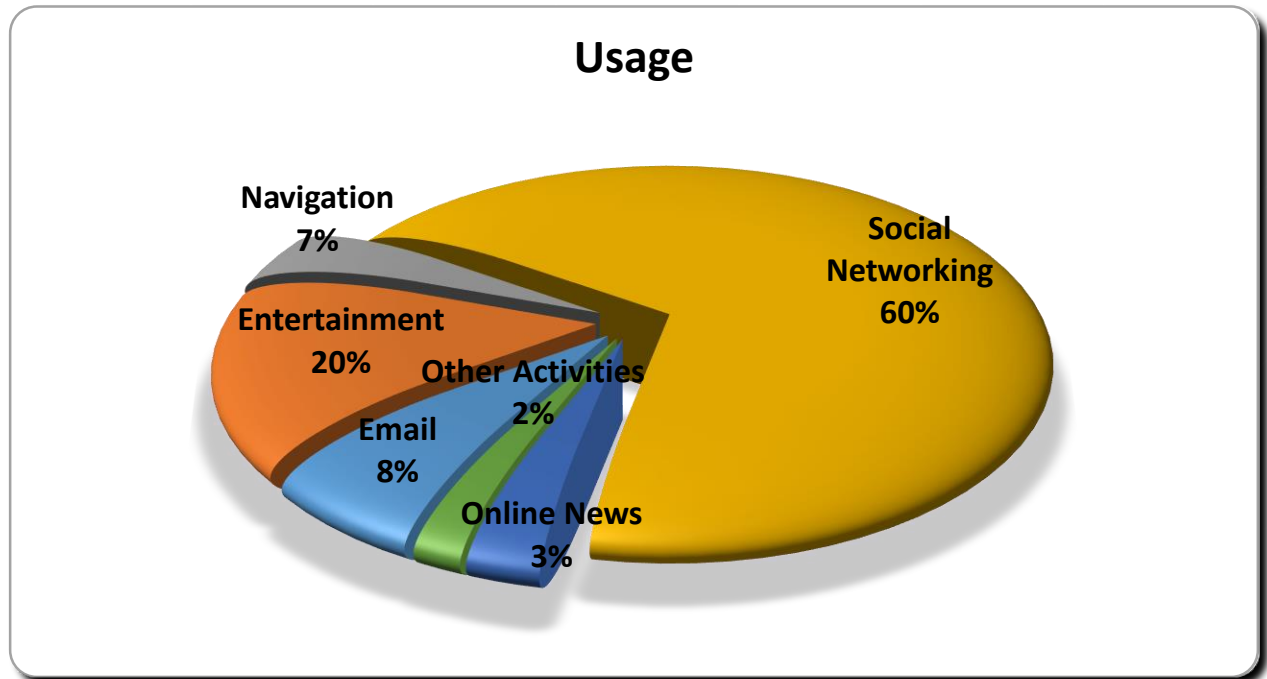
- Diary Study is great to capture the specific user experience over a certain period of time. It creates detailed information of daily activities.
- My major focus on diary study was to capture the actual usage, so I had to create diary keeping in mind the basic activities will be different from what I use. So creating a survey or interviewing the user before and after the study was a great help.
- Recruiting motivated and user using internet on their phone daily, in my case was important.
- Diary study will help recommend changes to improve or enhance the current plan. It gave a very specific and accurate usage as the memory based activities are difficult to pin down.

Suggestion for other users:

- Recruiting highly motivated users is important. They will fill the diary without any complications like couple of my users were very enthusiastic and didn't need constant reminders and gave complete information to the best of their activities.
- Creating diary which is easy to fill, a guideline to complete a diary is a must. My users use internet heavily so creating google docs was a better solution than to give them a pen paper diary. One more advantage of Google docs or web based application is that researcher can also monitor the activities this helps in sending reminders, so I used to send reminders only to the users who used to forget documenting.
- One drawback is convincing the users to note the user experience on a daily basis for couple of weeks' time. So sending reminders without being too pushy is vital.
- Overall it generates accurate information, so helps in understanding the user experience to the fullest. It's a long procedure, so one should start early.
- The analysis after the study was great and the follow up interview also generated information which was not documented while filling the diary.

Appendix 1:

Below is a chart and tabular data for the usage of internet on smartphones according to the diary study:

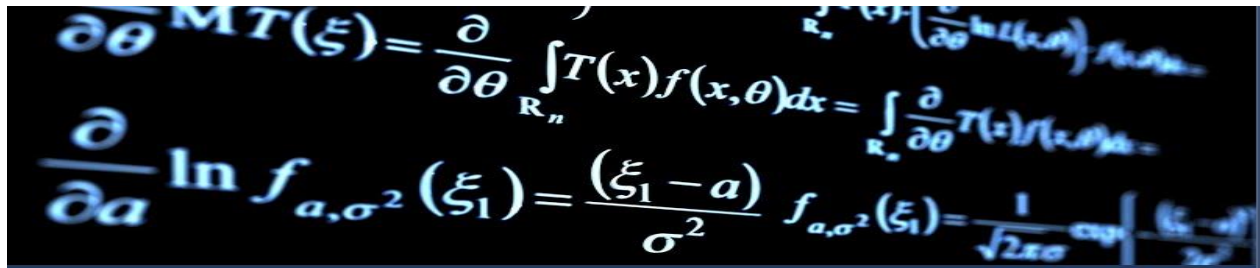


Activities	Time Spent
Social Networking(Facebook, twitter, whatsapp)	Highest(on average all the users spend most of their time on internet using it)
Entertainment(Music and Video Streaming	High(online streaming of videos and music is also very popular)
Email	Less High(Emails are refreshing in background and the apps are not used that heavily)
Navigation(apps Track UM Shuttle, Google Maps)	Less High (while traveling and tracking UM buses.)
Online News(google News)	Low
Other Activities(downloading and online booking)	Low(very few downloads and booking)

Appendix 2:

Below are the materials used for the study:

A. Survey for recruitment and creating the diary template



Pooja's Diary Study

Please fill out this form. This form will help us get started for the diary study. It shouldn't take long, you have to fill it just once.

* Required

Please Type in your name *
First Name<space> Last Name

Type of Smartphone you use *
(Select all that apply)

- iPhone
- Samsung
- LG
- Nokia
- HTC
- Sony
- Other:

Type of Service Provider you have on your cell phone *
(Select all that apply)

- Verizon
- T-Mobile
- AT&T
- Sprint
- Other:

Type of Plan that your cell phone has *
(Select all that apply)

- Pay by the Day
- 30\$ Monthly Plan
- 50\$ Monthly Plan
- 70\$ Monthly Plan
- 110\$ Monthly Plan
- Family Plan
- Unlimited My way
- My all in
- Don't Know
- Other:

What type of network you use on your phone *
(Select all that apply)

- 2G
- 3G
- 4G HSPA/HSPA+
- 4G LTE
- Other:

Do you carry your phone everywhere you go? *
 (Choose One)

Yes
 No
 Other:

For what purposes you use for phone internet *
 (Choose all that fits)

Browse Web
 Stay Connected(Social Networking sites like Facebook or twitter or Skype or messaging apps like gtalk, yahoo messenger, whatsapp)
 Entertainment(Music Download, Video download)
 Reading e-books
 Maps
 Work apps (ms office, iwork keynote, pages,numbers etc)
 Other:

All other activity that you do on the internet *
 (Please include information as applicable such as games downloading: multiplayer or online gaming, productivity app, weather app, online banking, finding restaurants, bookings tickets for movie travel etc)

Sample Result of the Survey:

Please Type in your name	Type of Smartphone you use	Type of Service Provider you have on your cell phone	Type of Plan that your cell phone has	What type of network you use on your phone	Do you carry your phone everywhere you go?	All other activity that you do on the internet	For what purposes you use for phone internet
Pranshu Patel	Samsung	AT&T	Family Plan, Mobile Share (Unlimited Talk,Text,Internet)	4G LTE	Yes	Checking Bus Arrival Times, Searching & booking zipcars, checking email, Downloading games, Checking Weather, Online banking, Finding restaurants, Booking Tickets	Browse Web, Stay Connected(Social Networking sites like Facebook or twitter or Skype or messaging apps like gtalk, yahoo messenger, whatsapp), Maps

B. Diary Form:

	A	C	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
1	Time(hours)	Place	Network Use	Activities with Em.	Online News	Social Networking	Navigation	Entertainment	Online Booking	Download	Reading Novel	Studying	Other Activity	Issues with connec	Other Issues	Comments
2	6.00-7.00															
3	7.00-8.00															
4	8.00-9.00															
5	9.00-10.00															
6	10.00-11.00															
7	11.00-12.00															
8	12.00-13.00															
9	13.00-14.00															
10	14.00-15.00															
11	15.00-16.00															
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18	22.00-23.00															
19	23.00-0.00															
20	0.00-1.00															
21	1.00-2.00															
22	2.00-3.00															
23	3.00-4.00															
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Diary Study Day1 Day2 Day3 Day4 Day5 Day6 Day7 ⊕

C. Follow up Interview

Same questions were asked to all the users.

- Did you face any issue with diary study?
User 1, 2, 3, 4 faced no problem.
- What made you choose the current service provider?
T-Mobile user: I wanted a cheap reasonable plan.
AT&T user: I switched from T-Mobile to AT&T because of poor service of T-Mobile.
Sprint user 1: I didn't get any AT&T family plan when I came to US.
Sprint user 2: I wanted a cell phone which was available only at Sprint.
- Did you face any issue with the current service provider before or after the diary study?
T-Mobile user: Network coverage is very poor I don't receive cellular network in few of the buildings where seminars are held.
AT&T user: I have problems in few buildings generally where there is no network or like one bar. Before I had several problems with call drop and connectivity issue where people used to call me and I used not receive any calls or voicemail but after resetting the network I used get call logs this was bad from AT&T's side.
Sprint user1: I never get signal on Rhode Island road while travelling. Also, in school most of the buildings it works fine but in Glen Martin the network is very poor.
Sprint user2: I have faced problem of poor connectivity in Bethesda. There is no network there ever, it's like you are disconnected from phone for that time.
- In near future are you planning to change your service provider? Why yes or no?
T-Mobile user: I might change to other service provider if the connectivity remains the same not now but after school.
AT&T user: No not currently, the data plan is sufficient and the connectivity is fine most of the places, I might change when I earn.
Sprint user1: I will change once my contract is over, I will go for AT&T or Verizon. But Verizon has this other problem where there are no new upgrades which are quickly launched. There is no Nexus 5 yet on Verizon. For tech savvy people like me it's a problem.
Sprint user2: I'm changing soon to Verizon.
- According to the study use for entertainment is high are there any issues faced during accessing them on your phone?
T-Mobile: If more usage is there I use Wi-Fi.
AT&T user: I generally stream music while walking its fine but when in University I use Wi-Fi.
Sprint user1: Streaming is very poor I generally don't stream on cellular network.
Sprint user2: I Stream where I work, or when I drive its fine. No network issues other than Bethesda.

Appendix 3:

Sample Data of a user:

diary_study ☆

File Edit View Insert Format Data Tools Help All changes saved in Drive

Comments Share

	A	C	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
	Time(hours)	Place	Network Used	Activities with Email	Online News	Social Networking	Navigation	Entertainment	Online Bo	Download	Readi	Studying	Other Activ	Issues with connectiv	Other Issues	Comments
2	6.00-7.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
3	7.00-8.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
4	8.00-9.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
5	9.00-10.00	Home	WiFi	Auto check email every	-	-	-	-	-	-	-	-	-	-	-	-
6	10.00-11.00	Home	WiFi	Auto check email every	-	Browse FB	-	-	-	-	-	-	-	-	-	-
7	11.00-12.00	School	Cell Network	Auto check email every	-	-	Track UM Shuttle	-	-	-	-	-	-	-	-	-
8	12.00-13.00	School	Cell Network	Auto check email every	-	-	Track UM Shuttle	-	-	-	-	-	-	No connection	No Network connection	Location: Van Munchin
9	13.00-14.00	Home	WiFi	Auto check email every	-	-	-	-	-	-	-	-	-	-	-	-
10	14.00-15.00	Home	WiFi	Auto check email every	-	-	-	-	-	-	-	-	-	-	-	-
11	15.00-16.00	Home	WiFi	Auto check email every	-	-	Track UM Shuttle	-	-	-	-	-	-	-	-	-
12	16.00-17.00	School	Cell Network	Auto check email every	-	-	Track UM Shuttle	-	-	-	-	-	-	-	-	-
13	17.00-18.00	School	WiFi	Auto check email every	-	-	-	-	-	-	-	-	-	-	-	-
14	18.00-19.00	School	WiFi	Auto check email every	-	-	-	-	-	-	-	-	-	-	-	-
15	19.00-20.00	School	WiFi	Auto check email every	-	Browse FB	Track UM Shuttle	-	-	-	-	-	-	-	-	-
16	20.00-21.00	School	Cell Network	Auto check email every	-	-	Track UM Shuttle	-	-	-	-	-	-	-	-	-
17	21.00-22.00	Home	WiFi	Auto check email every	-	-	Track UM Shuttle	-	-	-	-	-	-	-	-	-
18	22.00-23.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
19	23.00-0.00	Home	WiFi	-	-	-	-	Games	-	-	-	-	-	-	-	-
20	0.00-1.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
21	1.00-2.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
22	2.00-3.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
23	3.00-4.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
24	4.00-5.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-
25	5.00-6.00	Home	WiFi	-	-	-	-	-	-	-	-	-	-	-	-	-

References:

T-Mobile Towers. (2013, November 3). Retrieved from <http://www.t-mobiletowers.com/>