Selected User Need Report

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Report Prepared by: Haiying Ren

Kenichiro Inada

Kittipong Techapanichgul

Thomas Higdon

Wassim Bassalee, and Delgermaa Munkhbaatar

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1. A Description of Chosen User Group

The user group selected by the team is "*Users of Portable Electronic Devices (PED)*". People who use mobile/smart phones, portable media players, laptops, PDA's and other portable electronic devices will fall into this group. Below table indicates class (including on-campus, distance) feedbacks on each three user groups.

User group	Portable Electronic Devices	Retail / Shopper	Apartment residents
Class vote [person]	22	18	12

Table 1. Product Design and Development Class feedback

The market size of PED has been growing dramatically since 1990's and each sub segment has been increasing with great speed over last few years. The following sections show the past and forecast growth of various PED user markets.

Mobile/Smart phones

By the end of 2007, about 3.3 billion, which is equivalent to about half of the worlds total population, has subscribed to mobile phone service. According to recent figures by the International Communications Union (ITU), the number of mobile phone subscribers approached, and possibly surpassed, the 4 billion mark at the end of 2008. By the end of 2013, the number of subscriptions worldwide will have risen to more than 5.3 billion, according to Informa Telecoms and Media forecast, 2008. ¹

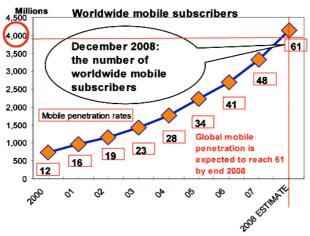


Figure 1. Worldwide mobile subscribers
Source: ITU World Telecommunication/ICT Indicators (WTI) database.²

Portable Media Players

¹ http://shop.informatm.com/marlin/30000001001/MARKT_EFFORT/marketingid/20001744808

² http://www.itu.int/newsroom/press_releases/2008/29.html

One of the fastest-growing segments in the PED is the Portable Media Player (PMP) and MP3 player market. According to iSuppli, unit shipments of PMP/MP3 player will grow almost twice between 2005 and 2011 (Figure 2). In addition, Market and Research forecast estimates there is a strong expectation for growth in the videoenabled PMP market and approximately 21% of PMP is expected to have Wi-Fi enabled function by 2012.

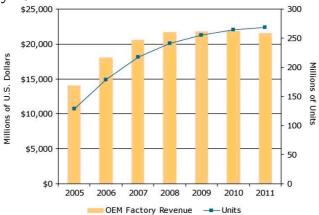


Figure 2. Global PMP/MP3 Player Shipment and Revenue Forecast, 2005-2011 Source: Market Watch - iSuppli³

Laptops/PDA's

A demand of notebook/PDA is accelerated by the corporate purchases, education market and individual customers over last 2-3 years. Laptop shipments in the US notebook market have risen by 21 percent, to a total of 31.6 million units.⁴ According to market analyst of IDC India, in the third quarter of 2007 against the corresponding quarter 2006, the laptop computer market in India grew by 84.8% whereas overall PC market growth of the same period was 25.1%.

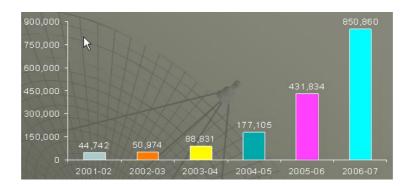


Figure 3. Notebook sales in India, 2001-2007

Source: IDC India. 5

³ http://www.pcb007.com/pages/zone.cgi?a=15755&artpg=1

 $^{^{4}\,}http://arstechnica.com/apple/news/2008/01/2008-could-be-the-year-laptop-sales-eclipse-desktops-in-us.ars$

⁵ http://www.idcindia.com/press/dec16a.html

2. The Compelling, Unmet User Need

For user group of PED, five user needs are identified in our previous user market research:

- ➤ The need of using devices without an interruption:
 - o The need for enhanced battery life
 - o The need for continuing to perform daily activities while using the device
 - The need for performing concurrent tasks using the same device
- ➤ The need of maintaining the confidentiality of the information
- > The need of improving the device reliability
- ➤ The need of organizing and space saving of multiple devices
- > The need of separating between personal and professional uses of portable devices

To identify the compelling and unmet user need, our team had a review on the Product Design and Development class feedback (Figure 4) as a first step. There was not a groundbreaking result, but was up to the team's expectation.

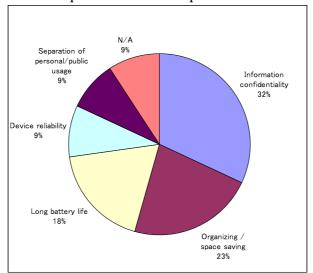


Figure 4. Product Design and Development class feedback

As a second step, we were able to clarify criteria selecting user needs and discussed on each user need based on these criteria:

- 1. Interests of team members
- 2. Estimated/expected market size
- 3. Feasibility with an appropriate effort/time
- 4. Feasibility of technological side

After a thorough review and intensive discussion, "*The need for enhanced battery life*" was selected as the compelling and unmet user need our team is going to address. From its broad range, we decided to divide into three sub-needs which are "longer battery life", "easier way to charge battery" and "other needs relevant to battery" and conducted further researches and user interactions.

3. User Needs Not Chosen

Below are the user needs we discussed in team meetings, but were not chosen:

- The need of maintaining the confidentiality of the information
- The need of improving the device reliability

In fact, these user needs are very critical, especially for mobile and smart phone where personal data are stored. Some of our team members had very interesting ideas and we had discussed them from various perspectives. However, by considering the outputs of the criteria and balancing group's interests, these two needs were not selected.

4. Further Research on Compelling/Unmet User Need

To clarify what makes the selected need compelling and how it is unmet, we took three actions.

- Research on solar backpack, battery for laptop and cell-phone.
- Research on existing and new technologies on energy.
- Carry out more user interviews.

Each action results are described below.

> Solar backpack, battery for laptop and cell-phone



Figure 5. Voltaic mobile solar power generator

Source: Voltaic Systems⁶

The Voltaic solar bag is a mobile solar power generator. It has a **solar panel** embedded outside of the bag. It also has a **battery pack** which stores any surplus power generated and **standard adaptor** for common cell phones and other handheld devices.

⁶ http://www.voltaicsystems.com/bag_backpack.shtml





Figure 6. Reactor Solar Backpack

Source: Eclipse Solar Backpack⁷

Figure 6 shows Reactor® Solar Backpack which is originally made for the student, mobile commuter, and outdoorsman. It provides a quality pack with an integrated solar charging solution. These two solar backpacks are summarized in the Table 2.

Table2. Comparison of solar backpacks8

Features				AC	12V Car
Brand	Price (\$)	Charge Capacity	Battery	Adaptor	Adaptor
		Cell phone to			
Voltaic	199 – 499	laptop in a day of	Yes ¹	Yes 1	Yes ¹
Voltaic	1	solar exposure	res	res	res
		(15W) ¹			
Reactor	113 ²	2.5W ²	No ²	No ²	Yes ²
Juice Bags	199 ³	7W ³	No ³	No ³	Yes ³

Table3. A battery life of cell-phones

Battery life		
Cell Phone		
Rank	Talk Time	Standby
1. RIM Curve	5.5 hrs ¹	360 hrs ¹
2. Apple iPhone	8 hrs ²	250 hrs ²
3. RIM Storm	6 hrs ¹	360 hrs ¹
4. LG Voyager	4 hrs ³	480 hrs ³
5. LG Dare	4.7 hrs ³	260 hrs ³

> Research on existing and new energy technologies

⁷ http://www.eclipsesolargear.com/productcart/pc/viewPrd.asp?idcategory=4&idproduct=1#details

⁸ http://www.rewarestore.com/bags.html, http://www.rewarestore.com/bags.html, http://www.rewarestore.com/ba

As our team found out that one of the most critical needs of the portable electronic device users is battery life, we have been researching on both the existing and new technologies on energy to identify possible solution to serve this aspect of customer needs.

Energy Source

There are 3 types of energy sources⁹ that can be grouped as follow:

- Renewable Energy: Oil, Natural Gas, Nuclear and Coal
- <u>Non-Renewable Energy</u>: Wind, Solar, Geothermal, Hydro, Wave and Biomass
- <u>Secondary Energy Source</u>: Electricity and Hydrogen

From the classification above, the non-renewable energy source seems to be most promising source that is applicable to portable electronic devices.

Energy Technology

Table4. Energy Sources and Applicability to PED

Type of Energy Technology	Applicable to Portable Electronic Device
* Alternative Fuels	No
* Batteries ¹⁰	Yes
* Fossil Fuels	No
* Fuel Cells	No
* Nuclear Energy	No
* Solar Energy ¹¹	Yes
* Wind Energy ¹²	Yes

Based on the current energy technologies mentioned above, battery, solar and wind are 3 technologies that are thought suitable for the portable electric devices. Advanced technologies developed upon these 3 technologies will be should be

⁹ http://www.eia.doe.gov/kids/energyfacts/sources/whatsenergy.html

¹⁰ Wikipedia: A battery is a device that converts chemical energy directly to electrical energy.

¹¹ Wikipedia: Solar Energy is the radiant light and heat from the Sun that has been harnessed by humans since ancient times using a range of ever-evolving technologies.

¹² Wikipedia: Wind power is the conversion of wind energy into a useful form, such as electricity, using wind turbines.

searched more in detail. There are several examples of the products developed upon the 3 energy technologies.

Solar Energy for PED: Plastic Solar Cell¹³

"Solarmer Energy Inc. is developing plastic solar cells for portable electronic devices that will incorporate technology invented at the University of Chicago"



Figure 7. Nanofibres to power portable devices 14

"Power dressing could take on a whole new meaning if the electric charge from a new fabric is magnified enough to be deployed commercially to run portable devices."

Wind Energy for PED: HYmini Wind Power Charger¹⁵

"HYmini is a handheld, universal charger device that harnesses renewable wind & solar power to power almost any portable device including phones, iPod's, MP3 and much more. The HYmini can be attached to your bike, car window and even your shoulder to charge it from the wind."



¹³ http://www.sciencedaily.com/releases/2009/01/090121215012.htm

 $^{^{14}\}underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.energysavingtrust.org.uk/Resources/Daily-news/Energy-Efficient-14}\underline{http://www.en$

Appliances/Nanofibres-could-power-portable-devices/(energysavingtrust)/22188

¹⁵http://www.todae.com.au/Products/portablesolarchargers/hyminiwindsolarpowerdevicecharger/

Figure 8. HYmini Wind Power Charger 6

> More User Interactions

To be more specific on the user need, we have conducted a user survey and user interviews on "battery life" (Appendix A: User Interaction Report)

5. Summary of the User Method

We used two types of user method this time: Survey and Interviews. To understand more about the specific needs on battery of PED, both of them were very useful.

Having interviews among users in different age groups, with various work/life styles, has brought us some insights on the user need we selected. Also, by conducting multiple interviews on the same topic, we were able to compare different needs of the users arising from same root cause.

Regarding the survey, we have found it is the most useful and effective way to get quantitative information within short time period. Even though the questions and answers were mostly covered by previous interviews, it confirmed that our thoughts and statements on user needs were in the right direction.

Appendix A: User Interaction Report

User Interaction Summary Table

UIF ID.	Target User Group	Number of people contacted	Type of interaction	Location	Duration of actual interaction	Team member(s) involved
3-1	Users of	1	Phone	Phone	15 minutes	Ken Inada
	Portable		Interview	Conversation		
3-2	Electronic	1	Phone	Phone	15 minutes	Ken Inada
	Devices		Interview	Conversation		
3-3		2	Face-to-Face	House of	10 minutes	Delgermaa
			Interview	Subject		Munkhbaatar
3-4		2	Phone	Phone	5 + 10 minutes	Delgermaa
			Interview	Conversation	(husband, wife)	Munkhbaatar
3-5		1	Video	House	10 minutes	Delgermaa
			Interveiw			Munkhbaatar
3-6		1	Phone	Phone	9 minutes	Delgermaa
			Interview	Conversation		Munkhbaatar
3-7		27	Survey	Internet	30 minutes	Kittipong
						Techapanichgul

Interview: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this interview is a mother in her early 30's with two children. We decided to meet her because she is an average user of portable electronics devices and since she is a mother of two children she is an extremely busy person.

How did you get connected with them?

The subject is a relative of one of the team members.

How much time and what did you do to prepare for interaction?

To confirm that our chosen user need is compelling and still unmet to most users of portable electronic devices, we asked the following question.

- 1. What portable electronic devices do you usually carry?
- 2. Is there anything frustrating about your portable electronic devices?
- 3. What is frustrating about battery of portable electronic devices?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

We talked on the phone with a woman in her early 30's who is a relative of one of the team members. The phone interview took place on February 21th, 2009 at 7:30pm and lasted for approximately 15 minutes.

Response

What is the takeaway message from this interaction?

- 1. She always carries her cell phone and digital camera.
- 2. She is having difficulty with her battery.
- 3. Some of the frustration she has about battery were:
 - She wants it to last longer.
 - She wants easier ways of charging battery. Possibly a portable battery charger.
 - One of her idea was to user lighter to charge battery. In a word, create energy using different devices at hand.

Are you planning to meet with them again? Explain.

No, not at this point, unless we encounter any necessity for additional ideas.

Were there any unexpected findings from this interaction?

No. What we heard from her were the same ideas we achieved earlier. We were able to confirm that "longer battery life" and "easier way of recharging battery" is a compelling need for this subject.

How does this affect the decision making process for your team?

Interview: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this interview is his late 20's. He has just finished his Master's degree here in Boston. We decided to meet him because he is a heavy user of cell phone and laptop personal computer. In addition, he used to be one of our potential consumer target, students.

How did you get connected with them?

The subject is a friend of one of the team members.

How much time and what did you do to prepare for interaction?

To confirm that our chosen user need is compelling and still unmet to most users of portable electronic devices, we asked the following question.

- 1. What portable electronic devices do you usually carry?
- 2. Is there anything frustrating about your portable electronic devices?
- 3. What is frustrating about battery of portable electronic devices?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

We talked on the phone with a man in his late 20's who is a friend of one of the team members. The phone interview took place on February 22th, 2009 at 10:00pm and lasted for approximately 15 minutes.

Response

What is the takeaway message from this interaction?

- 1. He always carries his cell phone and occasionally his laptop.
- 2. Two frustrations:
 - o Life cycle is too short. Too many new technologies coming out in short period of time.
 - O Battery life is too short. Either make it longer or provide easier ways to recharge.
- 3. Some of the frustration he has about battery were:
 - He wants the battery to last forever. Why does it need charging?
 - To recharge his portable electronic device outside his home
 - He carries device to charge with normal dry battery.
 - He carries device to charge in his car.
 - He carries additional code to charge at school.

He carries three extra devices so that he can charge anywhere.

Are you planning to meet with them again? Explain.

Not at this point. However, since he is a heavy user of portable electronic devices and has great frustration regarding its battery life, we feel that carrying out additional interview might be interesting.

Were there any unexpected findings from this interaction?

No. What we heard from him was nothing new but a stronger need. We were able to confirm that "longer battery life" and "easier way of recharging battery" is a compelling need and still unmet for this subject.

How does this affect the decision making process for your team?

Interview: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this interview is a married couple in their late 50's. I've decided to interview them because of the large market of "baby boomer" in their age.

How did you get connected with them?

The subject is a friend of one of the team members.

How much time and what did you do to prepare for interaction?

To reach more specific user need about battery life, I've prepared the following questions.

- 1. How many portable electronic devices do you use?
- 2. Are you a heavy user or not? How often do you use them?
- 3. How long does it last? Are you satisfied with it?
- 4. How often do you charge a battery of your portable electronic device?
- 5. If you want any improvement in your devices, which device you want to be improved?
- 6. In that device (if there is), what you want to have?
- 7. How much can you pay for No6's answer?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

We met face-to-face. The interview took place on February 21st, 2009 at 11:00am and lasted for approximately 10 minutes.

Response

What is the takeaway message from this interaction?

- 1. They use only cell-phone.
- 2. Not a heavy user. Make a call 7-10 times a day, mainly with family and friend, sometimes business purpose.
- 3. Battery stays alive for two or three days. They are NOT frustrating with it.
- 4. Once every two days. And that's the most reason why they are not frustrating, because they are never in a out-of-battery situation.
- 5. Cell-phone.
- 6. Definitely charger. Want to have universal charger.
- 7. Up to 20\$.

Are you planning to meet with them again? Explain.

Not at this point.

Were there any unexpected findings from this interaction?

Yes. Even for this type of users who charges battery on time and never fall into out-of-battery situation, they still have a need for charger.

How does this affect the decision making process for your team?

Interview: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this interview is a married couple in their mid 30's. They are originally from Japan, but now living in Boston for second years. I've decided to interview them because they have been a user in both Japanese and US market which might give us a different sight of the things.

How did you get connected with them?

The subject is a friend of one of the team members.

How much time and what did you do to prepare for interaction?

To reach more specific user need about battery life, I've prepared the following questions.

- 1. How many portable electronic devices do you use?
- 2. Are you a heavy user or not? How often do you use them?
- 3. How long does it last? Are you satisfied with it?
- 4. How often do you charge a battery of your portable electronic device?
- 5. If you want any improvement in your devices, which device you want to be improved?
- 6. In that device (if there is), what you want to have?
- 7. How much can you pay for No6's answer?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

We've talked over the phone. The interview took place on February 20th, 2009 at 10:30pm and lasted for approximately 15 minutes. (the first 5 minutes with the husband, and the remaining 10 minutes with the wife)

Response

What is the takeaway message from this interaction?

- 1. The husband uses both cell-phone and PMP, separately. The wife uses only cell-phone.
- 2. None of them are heavy users. The wife makes only 1-2 calls a day in US.
- 3. Wife's battery stays alive for 5-7 days or so on. But she has a problem with the battery, because sometimes the battery goes off without her notification (due to small number of interaction with the phone).
- 4. Wife: It was once every week. But it was shortened to 5 days recently.
- 5. PMP is really fine. Cell-phone battery is the problem for them.
- 6. Want to have some function to notify:
 - Battery's detail information (how many minutes can have a call, or some percentage)
 - A new function to notify the user about battery shortage. Icon on the screen is not enough.
- 7. Don't want to pay extra money.

Are you planning to meet with them again? Explain.

Not at this point.

Were there any unexpected findings from this interaction?

Yes. Usually, heavy users have a strong demand of battery life very. Regardless of the frequency of using her cell-phone is extremely few, the wife had a need on battery, not its life but its notification.

How does this affect the decision making process for your team?

Interview: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this interview is a woman in her 30's. She is living and working in Denver, Colorado. Her major is banking, so she is non-engineering person. That's the main reason I've interviewed her.

How did you get connected with them?

The subject is a friend of one of the team members.

How much time and what did you do to prepare for interaction?

To reach more specific user need about battery life, I've prepared the following questions.

- 1. How many portable electronic devices do you use?
- 2. Are you a heavy user or not? How often do you use them?
- 3. How long does it last? Are you satisfied with it?
- 4. How often do you charge a battery of your portable electronic device?
- 5. If you want any improvement in your devices, which device you want to be improved?
- 6. In that device (if there is), what you want to have?
- 7. How much can you pay for No6's answer?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

We've talked over Skype's video chat, face-to-face. The interview took place on February 21th, 2009 at 11:30pm and lasted for approximately 10 minutes.

Response

What is the takeaway message from this interaction?

- 1. She uses cell-phone, laptop, CD player, portable media player.
- 2. The cell-phone and laptop are used a lot.
- 3. Battery doesn't last a day. Specially, laptop requires to charge every 1-2 hours which is really annoying her. She has to go to her client's, but always has to carry laptop and its battery charger and sometimes another extra battery together. -> 2kg weight.
- 4. Almost everyday except weekends.
- 5. Need not heavy battery with long life. Also she uses a car for her job. However she can charge only one device at the same time.
- 6. Wants a universal charger which can handle multiple devices at the same time. Also should be able to use AC and car outlet's as an input.
- 7. 50\$.

Are you planning to meet with them again? Explain.

Not at this point.

Were there any unexpected findings from this interaction?

Yes. If we consider some portable battery charged as our product, then we need to consider the place that is going to be used and the weight, so many things we have to think carefully.

How does this affect the decision making process for your team?

Interview: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this interview is a male in mid 30's. He is living in Japan and very heavy user of mobile phone.

How did you get connected with them?

The subject is a relative of one of the team members.

How much time and what did you do to prepare for interaction?

To reach more specific user need about battery life, I've prepared the following questions.

- 1. How many portable electronic devices do you use?
- 2. Are you a heavy user or not? How often do you use them?
- 3. How long does it last? Are you satisfied with it?
- 4. How often do you charge a battery of your portable electronic device?
- 5. If you want any improvement in your devices, which device you want to be improved?
- 6. In that device (if there is), what you want to have?
- 7. How much can you pay for No6's answer?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

The interview over a phone took place on February 22nd, 2009 at 9:30am and lasted for approximately 9 minutes.

Response

What is the takeaway message from this interaction?

- 1. He uses only smart phone with Windows Mobile OS. The usage varies; as a phone, as a music player, as a full browser/internet access, as a email/message and organizer of calendar, so on.
- 2. Very heavy user. Uses the smart phone all the day except he is sleeping.
- 3. If depends on the usage, especially when he uses internet browsing using WiFi, then phone just dies after 2-3 hours. So he has one USB charger, two AC charger (home/job) and always one disposable battery charger.
- 4. Twice every day.
- 5. His smart phone.
- 6. Some efficient and automatic way of using phone's function. (e.g. If battery level comes down, then shut down unnecessary applications. If no WiFi access point is detected, then shutdown WiFi).
- 7. 5\$.

Are you planning to meet with them again? Explain.

Not at this point.

Were there any unexpected findings from this interaction?

Yes. The solution of heavy users seems to be different from non heavy users.

How does this affect the decision making process for your team?

Survey: Users of Portable Electronic Devices

Preparation

Why did you decide to meet this person or group of people?

The subject of this survey is SDM09 members. The reason of having a survey is, in our previous research we've conducted many interviews on PED, so having a lot of diverged response at the same time might give us more ideas on our PDD project.

How did you get connected with them?

The subjects are fellows of the team members.

How much time and what did you do to prepare for interaction?

To reach more specific user need about battery life, I've prepared the following questions.

- 1. What kind of portable electronic devices do you always carry around with you?
- 2. What are the most annoying things when using portable electronic devices?
- 3. What do you wish the portable electronic devices to have?

Interaction

Who did you meet? Where did you meet? When did you meet? How long was the meeting? What was the nature of the meeting?

The survey was done 11:00am-6:00pm on February 22nd, 2009.

Response

What is the takeaway message from this interaction?

- If there are too many chargers and accessories for PEDs, then always forget some of them to bring
- Wires and plugs get lost.
- Chargers are not accompanied with PEDs.

Are you planning to meet with them again? Explain.

No.

Were there any unexpected findings from this interaction?

Will be shared and discussed within the team later.

How does this affect the decision making process for your team?

Appendix B: Survey result on battery life

What devices do you carry?	What are the most annoying things when using portable electronic devices?	What do you wish the portable electronic devices to have?
Cell Phone, MP3 player in my backpack	Chargers that have to accompany them. Forgetting to turn my cell phone ringer off for class.	Better cell phone reception. Not a hard core electronics junkie so can't think of anything.
Cell phone	Battery life	Dunno
cell phone	wires, e.g. ear plugs; when they get lost.	handfree set, voice-command, some way for me to find it if it gets lost it would be kind of cool to have a foldable keyboard and monitor that would increase the phone to the size to a small netbook when you are doing more extensive reading or emailing. It is almost powerful enough to do the majority of your emailing web surfing, it just needs a bigger interface. However, I wouldn't
Iphone	the keyboard is small, the display is small, there is no wireless on the T, not very good cell service in boston	want to change the size or add a physical keyboard when i am using it as a phone, it would ruin it.
Cell phone	Too many different devices	A PDA, phone, and quality camera in one device
cell phone	size MP3 player - cheaply made to keep cost down - difficult navigation on screen	better antenna for reception
MP3 player and regular cell phone	Cell phone - service planno easy way to hook up to cpu, e.g. to get pictures/address book off it	Standardized interfaces - power supply, cpu hookup (USB), etc
Smart phone (blackberry)	doesn't fit easily in front pocket, short battery life	blackberry: better reception, improved internet interface, smaller (thinner) form
cell phone	not connecting when I need to connect quickly; dropping calls	no comment b/c I don't have an iPhone yet smartphone - lower cost voice+data plans without yearly contract (pay as you go) - phone number doesn't go
cell phone	cell - battery life	with you when you move from one carrier to another
cell phone	the sound isn't very good sometimes, and I find myself shouting	I wish that my phone (Nokia) could play music.

iPhone, watch	getting them out of my pocket turning off the ringer when in my pocket	iPhone is almost perfectdon't need a physical keyboardcould have a longer lasting battery and bluetooth synch. B
laptop, cell phone	waiting for laptop to startup; lack of wi-fi everywhere; difficulty texting on traditional cell phone Wires Battery Life	
Mobile IPOD	When I am listening on IPOD and phone rigs, I have to manually pause IPOD and then accept call. I hate that.	
cellular phone	i forgot where i put it.	
cell phone	cell phone - poor signal	
cell phone	costs	one device for everything
iphone	the iphone is not easily breakable, but what's annoying about it is the latency in the interface it's a little laggy.	voice recognition for email/text dictation, instantaneous response, longer battery life. I would like the iphone GPS feater to work more like a car GPS such that it
iphone, gps On travel: MacBook Pro BlackBerry 8830 Ipod classic	forget the recharging cords, earphones (iphone); Car GPS (bulky)	could be attached to the windshield and used as a GPS while driving and would have the speaker feature.
·	MacBook Pro power cable and flexible mouse for travel, lack of good internet connectivity while in the travel process. BB 8830 - no keyboard and need for a separate power cable for travel	correction of items noted above for the devices cited longer life battery for MacBook Pro
cell phone, laptop	cell phone- poor reception in places laptop- too heavy	iPhone- wish it wasn't tied to one provider (ATT?) I need the combination of 3G CDMA and 3G GSM that is on the Storm, since I travel frequently to Asia (Japan, in
cell phone, laptop, iPOD, GPS	Blackberry Storm- touch keyboard takes a lot of getting used to	particular, where 3G GSM is a must), but would actually prefer the regular Blackberry keyboard.
Iphone	Iphone - Easily breakable Iphone - Easily loseable Iphone - Susceptible to water damage	Iphone - Longer battery
iPhone laptop	Battery	Long battery life
	•	•

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PDA phone	delay between key presses and resulting action on phone; poor UI; managing multiple chargers	Blackberry - a waterproof (or resistant) planform to make it more robust.
Blackberry	Battery life Fragility (water damage in particular) No place to put them except pocket or belt	- a built in sync. plug so that you don't need a cable.
cell phone & blackberry	clip Multiple phone numbers, personal cell phone and work phone/blackberry.	