



A STUDY INTO THE USAGE PATTERN OF SMARTPHONE OWNERS AMONG STUDENTS AND SERVICE CLASS

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ABSTRACT

The purpose of this exploratory study is to better understand the current dynamics of the Indian market for smartphone and the usage behaviors of consumers. This paper presents the result of a survey on the trend of smartphone from the perspective of end consumers. The data was collected from 530 respondents across major cities in India out of which 272 qualified for our research. This study has looked into the familiarity of users towards smartphone, choices of smartphone brand and service providers, and most importantly the determinants that influence their purchasing decision. Furthermore, consumer's usage behaviors such as using smartphone for email, web browsing, gaming, and document reading were examined. The statistics presented provides fundamental information regarding the trends in the smartphone market and usage behaviors in India. Such information are useful for academics for the development of future works in the field, whereas for smartphone manufacturers, application developers and other stakeholders, they are able to plan their direction in the Indian smartphone market.

KEYWORDS: Smartphone, Usage, Multitasking.

INTRODUCTION

Although mobile phones have become a fundamental part of personal communication across the globe during the past ten years, consumer research has devoted little specific attention to motives and choice underlying the mobile phone buying decision process. There are numerous complex factors that need to be taken into account when exploring mobile phone buying decision process, including both macro and microeconomic conditions that affect the evolution of mobile phone market in general and individual consumer's motives and decision making in particular. Moreover, it is important to distinguish between buying behavior referring to the choice between different mobile phone models and brands and change aspects referring to reasons that affect change. As the mobile phone market is a typical technology push driven market where products are created ahead of the recognition of existing recognized consumer needs (e.g., Gerstheimer and Lupp, 2004), mobile phone development is based on consumers' possible future needs and thus companies that best hunch the technologies and services of future will be the leaders in the discipline (for discussion of technology push see, e.g., Brown, 1991; Hamel and Prahalad, 1991; Kumar, 1997; Nagel, 2003).

The telecommunications sector has been struggling over the past years, not only due to high prices companies paid for UMTS licenses but also due to the global economic downturn. Although the mobile phone handset market is growing five to ten percent per year and operator subscriber bases are growing, average revenue per user (ARPU) is falling and price competition is heating up (Hansen, 2003). We are currently experiencing a shift from the second generation (2G) to the third generation (3G) mobile phones, which is expected to change the way people use their mobile phones. The rise of the 3G network and its consumer acceptance is said to be one of

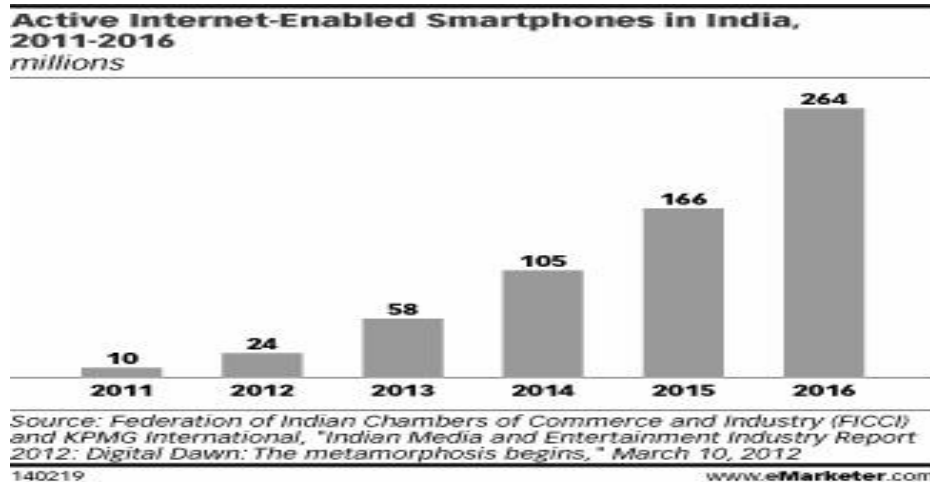
the toughest marketing challenges in recent history (Benady, 2002). In general terms, the success of 3G primarily depends on how the real benefits of the technology are marketed to consumers on one hand and on pricing policy of the services on the other (e.g., Benady, 2002). If we look beyond the hype around 3G it is obvious that we are not experiencing a revolution in mobile phone markets, rather an evolution where consumers are able to do the same things they could with 2G and 2.5G (e.g., GPRS and EDGE technology), but only better and faster in terms of download times (cf. Drucker, 2004; Sehovic, 2004). The mobile phone industry is currently using many standards (e.g., Japanese PDC, European GSM, American CDMA), which has made it difficult for users traveling to utilize their phones extensively. The evolution of 3G is expected to simplify this as only two standards are competing, the WCDMA (Wide-Code Division Multiple Access) that will become the European UMTS (Universal Mobile Telecommunications System), CDMA2000 (Code Division Multiple Access), and the Chinese TD-SCDMA (Time Division-Synchronous Code Division Multiple Access). The WCDMA standard is said to dominate the global market for the next five years (Sehovic, 2003). Consumer shift from 2G to 3G means that in order to be able to use the services offered by the faster network consumers need to acquire new mobile handsets equipped with Internet access and new features such as possibility to receive and send multimedia messages. Although recent news indicates a strong demand for new mobile phones equipped with color displays and built-in camera, there still is plenty of skepticism in the media, as well as in the market itself, towards the technological development. The development of mobile phones is leading the market into a situation where the basic need, communication, is actually broadened to new means of interaction and personal digital assistance. In fact, mobile phone evolution will

eventually lead to the convergence of mobile phones and digital personal assistants (PDAs). Thus, communication is not the only need mobile phones fulfill. Beyond voice, three main trends shaping the so-called mobile culture have been identified: (1) communication services such as voice, text and pictures, (2) wireless Internet services such as browsing, corporate access and e-mail, and (3) different media services such as motion pictures, games and music (Hansen, 2003).

For example, telecommunications companies promote new services such as multimedia messaging service (MMS) as a new way of enhancing one-to-one and one-to-many communicating. According to a fresh study conducted in the UK, close to 40 percent of the youth market is using MMS (Enpocket, 2004). The research also found that MMS are used more and more in connection to television programs. However, the diffusion of MMS technology has been slow, mostly due to technical constraints and pricing policies.

The number of smartphones will grow more than tenfold between 2012 and 2016

India is on the cusp of a full-fledged digital revolution, but substantial obstacles remain, according to a new eMarketer report, "India Online: Defining the New 'Digital Class.'" Right now the country can best be described as a place of vast, untapped potential. Internet penetration in India remains quite low, at just under 9% of the population, but due to the country's massive population, it trails only the US and China in terms of total internet users. To drive that rural uptake—and continued urban uptake—mobile devices will supplant PCs as the primary means of accessing the internet. Smartphone ownership will make significant inroads over the coming years. The Federation of Indian Chambers of Commerce and Industry (FICCI) and KPMG International in March 2012 estimated that the number of internet-enabled smartphones in India would reach 24 million in 2012, more than double the level of 2011. Rapid growth is projected to continue through 2016.



LITERATURE REVIEW

Riquelme (2001) examined how much self knowledge consumers have when choosing between different mobile phone brands. The study was built upon six key attributes (telephone features, connection fee, access cost, mobile-to-mobile phone rates, call rates and free calls) related to mobile phone purchasing respondents had to importance rate. The research showed that consumers with prior experience about a product can predict their choices relatively well, although respondents tended to overestimate the importance of features, call rates and free calls and underestimate the importance of a monthly access fee, mobile-to-mobile phones rates and the connection fee.

Mobile phone choice and use has also been found to be related to prior consumption styles. According to a fresh survey of Finnish young people aged 16-20, it was found that mobile phone choice and especially usage is consistent with respondents' general consumption styles (Wilska, 2003). The research showed that addictive use was common among females and was related to trendy and impulsive consumption styles. Instead, males were found to have more technology enthusiasm and trend-consciousness. These attributes were then linked to

impulsive consumption. The study concluded that genders are becoming more alike in mobile phone choice.

Consumers value in smart phones features that enhance their personal time planning (e.g., Jones, 2002). These high-rated features include calendar and e-mail services. It is interesting to note that according to Jones the so-called killer services such as gaming, gambling and music downloads are not seen that important in the diffusion of smart phones. However, there is little support to this argument. However, while synchronization of calendar and e-mail services to PCs has become easy and fast, the importance of time planning in mobile phones becomes more and more important.

Another important aspect that has risen from different studies is that consumers purchase new phones due to the fact that their existing one's capacity is not appropriate referring to the idea that new technology features such as built-in cameras, better memory, radio, more developed messaging services, and color displays are influencing consumer decisions to acquire new models (In-Stat/MDR, 2002; Liu, 2002; O'Keefe, 2004). Thus it can be expected that new features will influence the intention to acquire new mobile phones

RESEARCH METHODOLOGY

As traditional news organizations struggle to retain audiences and emerging news entities try to attract more users, it is essential that they adapt to the latest technologies to keep people interested in news. This most certainly is the case for younger people, whose media behavior today is an indicator of what the news industry must learn to accommodate now and into the future.

In order to gain a better understanding of the smartphone user, a survey was administered to 530 mobile users in India. From this group, 272 respondents (53%) owned a smartphone and 242 (47%) owned a feature phone. Those that did not have a smartphone did not finish the survey after the first five questions since questions were mainly about how each person used his or her smartphone.

Sampling. A survey questionnaire was used and was filled using personal interaction as well as was sent through email with an invitation to participate in the survey. A convenience sample was chosen and to increase participation, a snowball technique was used, allowing the selected respondents to forward the e-mail to invite their friends and relatives to take the survey. This was done to increase the sample size. The survey, containing 10 questions, respondents from different streams of life took the survey. The three top majors participating in the survey included service (79%), students (27%).

Survey Process and Questions.

Questions were explicitly asked about how the respondent used their smartphones and the types of content and mobile services that they prefer and/or regularly view or use. Apart from the demographic, each of the questions used a 4-point Likert scale, with 1 meaning "often" and 5 indicating "never."

Demographics: The demographics of the sample reveal that of the students who have smartphones, 46% of the participants were male (n=126), and 54% were female (n=146). Of the 272 respondents who owned smartphones, 8% have completed high school (n=22); 62% have completed Graduation (n=169); 30% have completed a master's degree (n=71). Of the respondents 79% are from the service class (n=215) and 21% were from the student community (n= 57).

A general observation in the markets of purchase behavior of mobiles will confirm that the majority of the people in the society rely on their mobile phones. A closer observation will reveal that smartphones are gaining ground over older feature phones, as is mirrored in the larger marketplace. This survey of campus mobile-phone users found that 53% owned a smartphone, as compared to 47% that owned a feature phone.

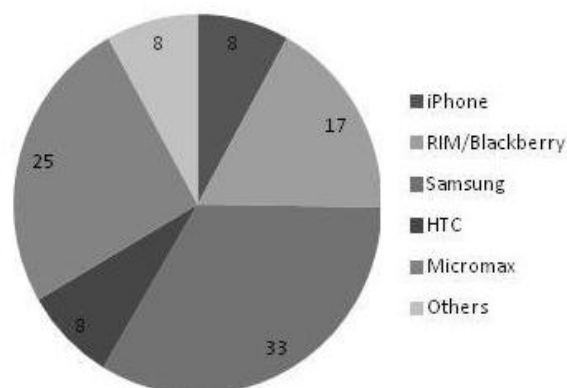
This research was chosen to survey people with the motive to learn more about behavior and preferences in using smartphones, as an indicator of future mainstream consumer mobile behavior and to offer guidance for news providers hoping to attract young adults today.

RESEARCH FINDING

What brand of smartphone do you use?

Through this question we were able to find the particular brand they are using, sure thing we did find that there is no particular dominating brand in use. The Samsung brand was the most popular with 33% of those who reported

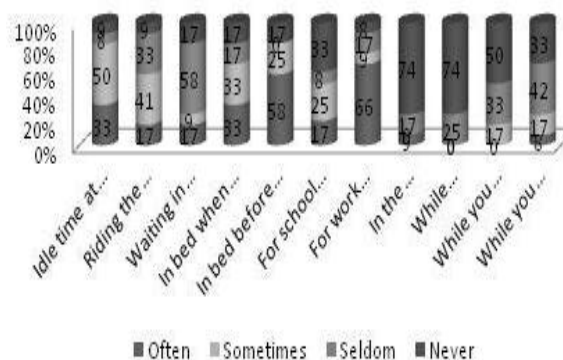
owning a smartphone using one of the Samsung models (n=90). Other types of smartphones used include Micromax with 25% (n=68); RIM Blackberry phones with 17% (n=45); Iphones, HTC and others constituting the lot with 8% (n=23) respectively.



EXCLUDING VOICE CALLS,

how often do you use your smartphone in these situations?

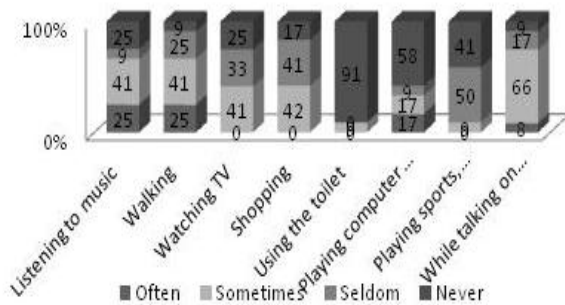
Respondents use their smartphones in many situations. On a regular basis, 58% (n=158) of the respondents use their smartphones while riding in a bus, train, or car; 83% (n=227) use it during idle time at work or school; 25% (n=68) use it while waiting in line (grocery store, coffee shop checkout, etc.); 41% (n=112) use it for school-related tasks and 75% (N= 204) use their smartphone for work related tasks; and 66% (n= 180) use it when they first wake up in the morning, while 83% (n=226) use it before they go to sleep.



MULTITASKING:

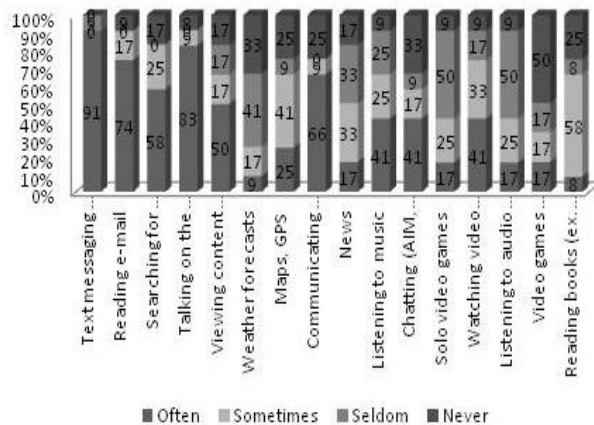
Excluding voice calls, how often do you use your smartphone while simultaneously doing other activities?

Students use smartphones while multitasking and doing another task such as watching TV, listening to music, shopping, or walking. Students were asked how often they use their smartphone, excluding voice calls, while simultaneously doing other activities, like 66% (n=180) use their smartphone regularly while listening to music. Similar trends were seen with walking, 66% (n=180). Using smartphone while talking over the phone has seen 74% (N=203) as an indulgent activity.



How often are you consuming different types of information on your smartphone?

When looking at the types of information consumed on a smartphone, the most popular uses among smart phone users are text messaging, with 91% (n=247) doing this on a regular basis, and e-mail with 91% (n=247) using their phones for sending and viewing e-mail regularly. The respondents are using their smartphones routinely to search for specific information, with 83% (n=227) using their phone for that purpose on a regular basis. In addition, 50% (n=136) consume news on their smartphone regularly. Using programs like Skype, AIM, or GoogleTalk are popular, with 58% (n=158) using these on a regular basis. Listening to audio podcasts is not popular, with 59% of respondents rarely, if ever, using this mobile media format. Watching video as addition, 74% (n=203) watch videos on their phones. Reading books is also popular with 66% (n=181) using their smartphones for this.

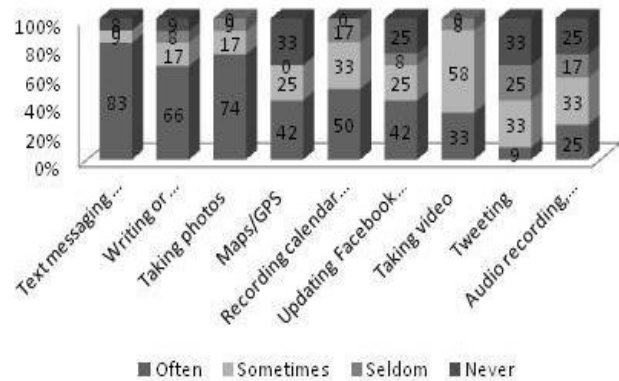


ANALYSIS

The smartphone, despite its many sophisticated features and ability to pull in information from seemingly anywhere, is still a phone, and phones are about communicating with other people. It should come as no surprise, then, that the most popular types of information consumed on a smartphone are not new: e-mail and text messages. Neither is it surprising that using smartphones to search for information is almost as popular. News providers can take comfort in the 50% of our respondents who regularly consume news on their smartphones.

How often do you create different types of content on your smartphone?

When looking at the types of contents created on a smartphone, the most popular uses among smart phone users are text messaging, with 92% (n=250) doing this on a regular basis, emailing 83% (N= 226), taking photographs with 91% (n=247) regularly. The respondents are using their smartphones for GPS, with 67% (n=188) using their phone for that purpose on a regular basis. Though it is a surprising factor that 42 % (N=114) of the respondents are using their handsets for tweeting, an international craze.



CONCLUSION

The objective of this article was to examine consumer buying behavior of mobile phones and to investigate the reasons underlying mobile phone change. The study found strong evidence that although mobile phones are developing at a rapid pace closer to personal digital assistants (PDAs), many consumers tend to be unaware of the properties and services the new models in the market contain. From a theoretical viewpoint, this article contributed to the understanding of usage decision making process for mobile phones by looking at consumer motives.

Despite this piece of research provides some insights into the factors that influence the choice of a mobile phone model, the work is still at an early stage and certain limitations concerning the research setting should be noted in order to guide future research of this phenomenon. More research is needed to leverage the findings and provide better and more in-depth implications for both theory and practice.

BIBLIOGRAPHY

- Alba, J.W., and Hutchinson, J.W. (2000). Knowledge calibration: What consumers know and what they think they know. *Journal of Consumer Research*, 27 (September), 123-156.
- Assael, H. (1995). *Consumer Behavior and Marketing Action*. 5th ed. Cincinnati, Ohio: ITP, South-Western College Publishing.
- Batra, R. and Ahtola, O.T. (1990). Measuring the hedonic and utilitarian sources of consumer attitudes. *Marketing Letters*, 2 (2), 159-170.
- Beatty, S.E. and Smith, S.M. (1987). External search effort: An investigation across several product categories. *Journal of Consumer Research*, 14 (1), 83-95.

Benady, D. (2002). As simple as one-two-3G. *Marketing Week*, 26-29.

Bockenholt, U. and Dillon, W.R. (2000). Inferring latent brand dependencies. *Journal of Marketing Research*, 37 (1), 72-87.

Bristol, T., and Edward, F. (1996). Exploring the atmosphere created by focus group interviews: Comparing consumers' feelings across qualitative techniques. *Journal of the Market Research Society*, 38 (2), 185-195.

Brown, J.S. (1991). Research that reinvents the corporation. *Harvard Business Review*, 69 (January/February), 102-111.

Chernev, A. (2003). When more is less and less is more: The role of ideal point availability and assortment in consumer choice. *Journal of Consumer Research*, 30 (2), 170-183.

Chintagunta, P.K. (1999). Variety seeking, purchase timing, and the "lightning bolt" brand choice model. *Management Science*, 45 (4), 486-498.

Coupey, E., Irwin, J.R. and Payne, J.W. (1998). Product category familiarity and preference construction. *Journal of Consumer Research*, 24 (4), 459-468.

Dhar, R. and Wertenbroch, K. (2000). Consumer choice between hedonic and utilitarian goods. *Journal of Marketing Research*, 37 (1), 60-71.

Dhar, R., Nowlis, S.M. and Sherman, S.J. (2000). Trying hard or hardly trying: An analysis of context effects in choice. *Journal of Consumer Psychology*, 9 (4), 189-200.

Dorsch, M.J., Grove, S.J. and Darden, W.R. (2000). Consumer intentions to use a service category. *Journal of Services Marketing*, 14 (2), 92-117.

Drucker, E. (2004). Perceived speed key to 3G success. 3G's commercial success depends on carriers' ability to deliver coverage and account for channel loading. *Wireless Week*, (February), available at: <http://www.wirelessweek.com/article/CA381643>

Enpocket (2004). Enpocket mobile media monitor (UK). *Research Report*, (February).

Fitzsimons, G.J., Hutchinson, J.W., Williams, P., Alba, J.W., Chartrand, T.L., Huber,

Gartner Dataquest (2004). Mobile phone sales expected to reach 560 million in 2004.

<http://www.emarketer.com/Article/Smartphones-Speed-Digital-Revolution-India/1009551>: Last visited 21/Feb/2013

In-Stat/MDR (2002). The worldwide PDA market: The next generation of mobile computing. *Research Report*, (September).

J., Kardes, F.R., Menon, G., Raghubir, P., Russo, J.E., Shiv, B. and Tavassoli, N.T. (2002). Non-conscious influences on consumer choice. *Marketing Letters*, 13 (3), 269-279.

Jones, S. (2002). 3G launch strategies, early adopters, why & how to make them yours. *Tarifica Report*, (October).

Liu, C.M. (2002). The effects of promotional activities on brand decision in the cellular telephone industry. *The Journal of Product & Brand Management*, 11 (1), 42-51.

Nagel, A. (2003). Beyond Knut Holt's Fusion model, balancing market pull and technology push. *International Journal of Technology Management*, 25 (6-7), 614-622.

O'Keefe, M. (2004). 2004 worldwide camera phone and photo messaging forecast. *InfoTrends Research Group, Inc. Research Report*.

Riquelme, H. (2001). Do consumers know what they want? *Journal of Consumer Marketing*, 18 (5), 437-448.

Sheth, J.N., Newman, B.I., Gross, B.L. "Consumption Values and Market Choices: Theory

Wilska, T-A. (2003). Mobile phone use as part of young people's consumption styles. *Journal of Consumer Policy*, 26 (4), 441-463.

Annexure

1. Questionnaire

Question	Please Tick in the Appropriate Box
1. What is your Gender	
Female	
Male	
2. What is your age?	
18- 24	
25-34	
35-44	
45-54	
55-64	
65-74	
75 or older	
3. What is the highest level of education you have completed?	
Did not attend School	
High School	
Graduate	
Post Graduate	

Usage pattern of smartphone owners

Others				
4. What is your Current Primary Occupation				
Student				
Business				
Service				
Others				
5. Do you use or own a smartphone as your primary mobile phone? (If "No" then please exit the survey. Thank you)				
Yes				
No				
6. What brand of smartphone do you use? (select your primary mobile phone if you have more than one)				
iPhone				
RIM/Blackberry				
Samsung				
HTC				
Micromax				
Others (Please mention):				
7. EXCLUDING VOICE CALLS, how often do you use your smartphone in these situations?	Often	Sometimes	Seldom	Never
Idle time at work or school (during breaks, lunch, boring meetings/classes, etc.)				
Riding the bus, train, or in car as passenger (commute)				
Waiting in line (examples: coffee shop, grocery store, for movie to start, picking up kids, etc.)				
In bed when you wake up (weekend leisure time, before you get out of bed for work, etc.)				
In bed before you go to sleep				
For school related tasks				
For work related tasks				
In the bathroom				
While exercising (running, cycling, skiing, at the gym...)				
While you are driving, waiting for light to turn green (not moving)				
While you are driving (wheels moving)				
8. Multitasking: EXCLUDING VOICE CALLS, how often do you use your smartphone while simultaneously doing these activities?	Often	Sometimes	Seldom	Never
Listening to music				
Walking				
Watching TV				
Shopping				
Using the toilet				
Playing computer games				
Playing sports, exercising				
While talking on the phone (i.e., using apps, advanced features)				
9. How often are you consuming different types of information on your smartphone?	Often	Sometimes	Seldom	Never
Text messaging (SMS)				
Reading e-mail				
Searching for specific information				
Talking on the phone				
Viewing content on social networks				
Weather forecasts				
Maps, GPS				
Communicating with friends on social networks				
News				
Listening to music				
Chatting (AIM, GoogleTalk, Skype Chat, etc.)				
Solo video games				
Watching video (ex. video podcasts, Youtube, etc.)				
Listening to audio podcasts				
Video games across networks with multiple players				
Reading books (ex. Kindle Reader app; B&N Reader app, etc.)				
10. How often do you create different types of content on your smartphone?	Often	Sometimes	Seldom	Never
Text messaging (SMS)				
Writing or responding to e-mail				
Taking photos				
Maps/GPS				
Recording calendar events				
Updating Facebook status				
Taking video				
Tweeting				
Audio recording, creating podcasts				