



USABILITY OF MOBILE PHONES AS MEDIA IN INDIA

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Mobile telephones are easily transported, need a power supply for only an hour or so every few days for basic use, combine a range of communication and media tools, avoid basic literacy issues via simple graphical interfaces, and are usually operated within easily understood micro-payment systems. Their use in India has skyrocketed, with mobile users in India outnumbering fixed line users. The relative low cost of mobile phone technology has drastically increases usability of mobile phone as a media for citizens in developing countries like India for variety of services. Mobile devices are also easier to learn and to use by the elderly and blue-collars. There is a very wide range of potential government services which can be delivered via mobile phone, including services relating to health, education, employment, police, tax, judicial and legal systems, etc. Payments and financial services are also possible through mobile phones, which drastically expands the opportunities to incorporate m-services into the everyday lives of citizens. Mobile phone technology can also considerably expand the scope of e-democracy and e-participation, engaging citizens in democratic decision-making through various polls, m-voting, and other forms of communication between citizens and the government. The mobile telephone is suddenly no longer simply about voice or text communication; the latest models are a portable digital media production and delivery system in their own right. This paper describes the diffusion of mobile phones around the world, and focuses on applications of mobile phones being used as media across the globe, which can also be incorporated in Indian context for usability of mobiles as media.

Key words: Mobile Phones as Media, Growth of Indian Telecommunications network

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The Indian Telecommunications network with over 250 million connections today is third largest in the world and the second largest among the emerging economies of Asia. The telecommunication sector continues to register significant growth and has emerged as one of the key sectors responsible for India's resurgent economic growth. The current addition of about eight million lines per month puts the telecommunications sector on a strong footing to achieve the target of 1 billion connections by 2010. Figure-01 exhibits the total number of telephones has reached 562.21 million as on December31, 2009 with a tele - density of 47.88 % (Figure-02).

The growth of Mobile phone services has been phenomenal, with mobile phone subscribers growing at a compound annual growth rate (CAGR) of 87.7% per annum since 2003. Today, the mobile phone subscribers are not only much more than land line subscribers in the country but also increasing at much faster pace. The share of mobile phone subscribers has increased from 24.3% in March 2003 to 85.62% in December 2007. Improved affordability of mobile phone has made universal access objective more feasible.

The basic need is that of communication, which mobile telephony met with voice and text services. However, the average mobile telephone today could potentially come equipped with still and video camera capabilities, multimedia file swapping, global positioning satellite receivers, music players, access to radio and television content, email and Web browsers, databases, address books, clocks, games and many other upgradeable software applications. The computing power contained in the circuitry of the average mobile phone today is greater

than that of the on-board systems that took Apollo 11 to the moon and back in 1969.

Table - 01, Showing Trends of Mobile Subscribers growth in India

Year	Landlines (in millions)	Mobile subscribers (in millions)	% share of mobile subscriber
1997	14.54	0.34	2.338376891
1998	17.8	0.88	4.943820225
1999	21.61	1.2	5.552984729
2000	26.65	1.88	7.054409006
2001	32.71	3.58	10.94466524
2002	38.29	6.68	17.44580831
2003	41.33	13.3	32.18001452
2004	40.92	35.61	87.02346041
2005	41.42	56.59	136.6248189
2006	40.23	101.86	253.1941337
2007	40.77	165.09	404.9300956
2008	39.41	261.08	662.4714539
2009	37.06	525.15	1417.026443

Mobile telephones are easily transported, need a power supply for only an hour or so every few days for basic use, combine a range of communication and media tools, avoid basic literacy issues via simple graphical interfaces, and are usually operated within easily understood micro-payment systems. Their use in India has skyrocketed, with mobile users in India outnumbering fixed line users.

In a relatively short period of time, the mobile phone has become not just a vital tool for staying in touch while on the move, but a media reception and production platform that is more closely integrated into our lives than any other

form. It has reached out globally in a way that other rapidly changing digital technologies, still largely reliant on wired infrastructure, wealthy populations and high literacy levels cannot. That the mobile phone has become a media form in its own right so rapidly, and with so little fanfare, makes mobile media and their social impact an increasingly interesting and important area of study for those working in media, communication and journalism. As it is technology that has been taken up readily by younger users, ensuring the continued development of the technology as new social uses emerge.

The development of mobile communication technology has created a new avenue for information exchange capable of reaching out to a much greater number of

people than traditional wired methods. This technology has high potential to increase access to public services in areas where infrastructure constraints exist. The penetration of mobile phone technology compared to internet technology in the developing world – 32.4% for mobile phones vs. 10.2% for internet access – reveals a strong opportunity for governments to provide services to citizens without Internet access. Mobile phones have the unique advantage of being able to reach areas where the infrastructure necessary for internet service or wired phone service is not a viable option, and the rapidly increasing number of mobile phone users in developing countries reflects the demand for connectivity in these areas.



Source: www.dot.gov.in

The relative low cost of mobile phone technology versus internet technology has drastically lowered the entry barriers for citizens in developing countries to use mobile phones for variety of services. Mobile phones allow citizens to get access to government services virtually in any place covered by a mobile network. Mobile devices are also easier to learn and to use by the elderly and blue-collars. There is a very wide range of potential government services which can be delivered via mobile phone, including services relating to health, education, employment, police, tax, judicial and legal systems, etc. Payments and financial services are also possible through mobile phones, which drastically expands the opportunities to incorporate m-services into the everyday lives of citizens. Mobile phone technology can also considerably expand the scope of e-democracy and e-participation, engaging citizens in democratic decision-making through various polls, m-voting, and other forms of communication between citizens and the government.

The rise of the mobile telephone from voice telephony device to portable, personal media player and production system has been rapid but compared to other digital communication technologies such as the personal computer and the internet. One of the reasons the rapid expansion of mobile telephony as a media platform has caught many people by surprise is their compatibility with existing digital technologies, such as image, audio and video formats and data transfer standards, allowing easy movement of content between consumer devices. Video content has normally been the last content service added to the consumer markets for these devices, due primarily to its technical demands on the devices and delivery bandwidth. With mobile telephones, the pre-existence of technology to produce and deliver compressed video formats on PCs and the internet has meant relatively rapid development of both the handheld devices capable of both delivering and capturing content, and the deployment of new infrastructure and standards to meet expected demand

for such content, such as the so-called Third Generation (3G) wireless telephony system.

The low charges for text messages initially offered by most service providers quickly turned SMS into an integral signature feature of mobile telephony, and a regular part of our daily interpersonal contacts. In response, the SMS technology developers explored enhanced features such as better integration with contact lists and file management systems, predictive text, spell-checking & dictionaries and ultimately multimedia messaging capabilities. Mobile phones have an accepted and successful micro-payment system, and on-demand content is often just an SMS away. We can customize our ringtones, screensavers, wallpapers and the physical cases themselves to the point where the phone is an aural and visual extension of our identity, as well as the tool by which we maintain our personal relationships.

Several factors are fueling the demand for mobile services, including:

- 1) The penetration of mobile technology and the relative low cost of entry into mobile connectivity,
- 2) The convergence of wired internet and telecommunication networks, allowing information once only available on a computer to be received through mobile phones, and 3) the shift towards higher data transfer rates and 3G services which promises to make more information available at faster speeds.

According to an estimate by R. Chandrashekar, Additional Secretary (e-Gov), Government of India, approximately 50 to 60% of government services in India can be delivered via mobile channel. This emerging trend in public service delivery has been called "Mobile Government" (M-Government) and is part of a broader phenomenon of mobile-enabled development (m-development) or leveraging the mobile revolution to enable development impact.

Examples of mobile phone uses as media services are in place in both developed and developing countries around the world:

- Perhaps the best-known example of bringing telephones to the poor is GrameenPhone, the Grameen Bank's rapidly growing cellular phone business in Bangladesh. A little more than three years old, the venture has already put mobile phones in the hands of women in more than 1,200 Bangladeshi villages. At the same time, GrameenPhone has secured more than 50 percent of the national, primarily urban, mobile phone market in Bangladesh, thus helping to assure both its financial ability to serve rural areas and its technical ability to create a reliable urban network with which to link the rural population. In the villages, GrameenPhone works on the same principle as the Grameen Bank's microloan program, giving rural women from landless household's access to credit. A woman who has already established good credit with the Bank, whose house is located in a fairly central part of the village, and whose family has one member familiar with the English letters and numbers on a phone, can borrow the roughly \$350 needed to purchase a solar-powered mobile phone. After a day's training, the woman is set to provide phone service to other villagers for a price. This access to technology not only generates substantial income for the "telephone woman," who on

average earns \$450 a year after expenses, but also provides villagers with access to information and services that would otherwise remain far outside their reach. The villagers, for example, can contact medical help immediately; get prevailing market prices for the crops they grow, thus avoiding underpayment by opportunistic traders; engage in commercial activities that require quick or frequent access to timetables, regulations, or other market-related information; and easily keep in touch with family members living in the cities or abroad. The arrival of the cell phone has also, for once, turned the social pecking order on its head as the relatively wealthy rely on the poor to keep in touch with the outside world.

Applications of M-Banking

1. Transfer of credit via mobile phone/SMS
2. Deposits, savings, loans, payroll, remittance payments, purchases (in participating retail outlets), bill payments
3. Globe Telecom – G-Cash as a microfinance service delivery platform being piloted (texting payments, deposits)

Following benefits would be derived through Partnership among mobile operator, financial institution; financial regulator for providing services

To consumers

- § Reduces travel time and costs (to travel to Bank branch). In Papua New Guinea, teachers may travel 2-3 days by rough road or boat to withdraw salaries
- § Reduced transaction costs for remittances (1% cash-out for G-cash in the Philippines, compared to higher rates from Western Union)
- § Reduced opportunities for fraud, counterfeit and theft by providing a secure electronic mode for transferring funds (as opposed to, for example, travelling long distances to transfer cash);

To service providers:

- Reduced direct costs for delivering savings and credit products;
- Reduced errors and increased transparency in the transfer and recording of loan disbursements and payments and savings deposits;
- Easier record keeping on each client through computerization of transactions through mobile phones, thus making it easier for financial institutions to tailor products and services for segments within their large pool of small customers.

The following examples of mobile phone uses can be incorporated in Usability dimension of mobile phones for media services in India:

- Citizens in the Philippines are able to send text messages to police to report crimes, anonymously report inappropriate police activities and corruption, and to request emergency services.
- UAE provides a wide range of m-services, allowing citizens to pay traffic fines, request airline flight information, inquire about trade license status, etc.
- Singapore has over 150 m-services, including passport renewal, tax services, statistical information (GDP

- predictions, Consumer Price Index, etc.), work permit applications, information on upcoming sittings of parliament, information on trials and hearings.
- In Malta, m-education services have been implemented allowing students to receive test scores via SMS messaging. Besides, citizens and business can use their mobile devices to file complaints about government agencies' actions (or inactions), receive notifications about sittings of the court, alerts on incoming pension and social payments, updates on license prolongations from government agencies.
 - In the Estonian city of Tartu, 50% of parking payments are made through mobile devices, visitors can get tourist information through their cell phones, teachers can send messages to students and parents, all citizens can send sms or call regarding utility issues, such as non-working street lamps, broken park benches, etc.
 - In Austria, train e-tickets can be purchased by the passengers before boarding the train.
 - In Amsterdam, the Netherlands and London, UK, the hearing-impaired people can receive vibro-sms alerts in emergency situations, while in California sms alerts are sent out in the case of electricity outages.

CONCLUSION

Mobile telephones are no longer simply about voice communication. They come with a toolkit of features such as text and multimedia message capability, still and video cameras, GPS locators, radio and TV receivers, and a range of software applications from games to personal organisers. The user interface can be customized to various degrees with downloadable and swappable screensavers, desktop images and ring tones. The telephone hardware itself is often personalisable through custom covers or slip-on photograph sleeves.

In the absence of other viable media and communication tools, it is possible that the mobile phone will become a grassroots media production and dissemination device. Whether it is as a simple voting tool for TV talent quests, for judgments of TV reality show participants or the tool of original media content production, mobile phones are a significant contributor to the emergence of a new level of media usage based on the audience as both producer and consumer of content.

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