

Mobile Telephony Forum Week I Overview

Over 145 people from 52 nations posted more than 400 messages in the first week of forum discussions. Participants from all over the world shared their experiences – the "more active" countries being Bangladesh, the Philippines, the UK, the USA and India. Community members from Africa and South America have been particularly active. People from all backgrounds are participating in the forum including farmers; NGO representatives; private sector; researchers, scientists and academics; governmental representatives; and UN staff. Almost all participants provided an introduction, and welcome message on the platform.

The first week of the forum was divided into three questions, with highlights of each discussion given below. (Please see the forum in order to benefit from the wealth of concepts and experiences shared by all participants. This overview can only reflect them in part.)

Question 1: **Describe the characteristics and success factors of applications of mobile telephony in rural areas. Tell us about the people/actors involved, how they use telephony, what information is exchanged, and the processes that occur?**

From the Philippines, **Sheryl Fernando** started the discussion off noting that mobile telephones have been useful in communicating market price information for various crops, which in turn helps the farmers get a complete price at markets. She also noted the linkages made between Benguet State University's radio program and mobile phones to allow the exchange of questions and answers about farming techniques. This was the first of several exchanges regarding the potential of linking rural radio to mobile telephony to improve information exchange.

What information is being exchanged?

Jimmy L. Calata further added that mobile telephony can be used for many forms of information exchange, including monitoring data related to agricultural production and inputs, allowing consultations with experts, and in particular with newer phones (e.g. 3G) facilitating diagnosis and appropriate action for pests and diseases.

To this list, information in e-learning courses was added by **Pam**.

Increasingly the need to maintain information related to traceability has advanced the usefulness of mobile phones in the field to manage the necessary information said **Amots Hetzroni**. An interesting point was also made about the fact that in areas where mobile phones are very common, it was not necessary to supply the units, just inform the process in order to facilitate development.

Josh Underwood noted that the presence of mobile telephony and related services in a rural community is not sufficient evidence for success. Further we were reminded by **Sapna A Narula** and **Shahid Uddin Akbar** that the information needs of rural people go beyond agriculture, and that to be sustainable mobile telephony should

truly address livelihoods needs including information related to health, education services, directories, etc.

Jayaveer Rao Sankinani noted his seed company uses mobile telephony for “*monitoring the crop performance and for suggesting/ delivering instant solutions to the farmer.*”

What processes exist?

Information services should not simply attempt to replicate the services of kiosks and telecentres, said **Harsha de Silva**, but also seek to greatly simplify the processes to access and comprehend the information.

Bruce Girard noted that they have been looking at use of mobile telephones in conjunction with rural and community radio for some time now, and a log is kept with ideas and examples at <http://comunica.org/radio2.0/>

Syed Md. Zainul Abedin noted the importance of not seeing mobile telephony as a tool in isolation, but to be combined with other ICT tools. He feels this particularly important for the transfer of agricultural technologies. The potential for combining mobile telephony with the more established radio deserves greater attention according to **Mark Leclair**, especially considering that in many rural areas there are still limitations to the application of new technologies.

The importance of defining the circumstances in which mobile telephony is applied is necessary for others to benefit from our experience noted **Paolo Barattini**. He also noted the importance of recognizing that mobile phones support communities by facilitating the building of connections and closer relationships.

What factors are important?

Pam and others emphasized the value added by being able to access information in the field when using mobile phones.

Based on project experience in Uganda, **Helene Martin** detailed principles believed to contribute to successful applications of mobile phones in the ICT4D area:

- Learning specific user’s needs
- Creating strong partnerships
- Building off existing technology
- Providing local content in local languages
- Providing ample training and marketing

She also stated that “*AppLab has chosen to distribute information over pure SMS (no fancy frontend or anything at all). The magic is on the backend which has both relevant content (as determined by the local communities) and highly effective search abilities. Systems like LifeLines, aAqua or DigitalGreen all demonstrate that fairly simple, readily available technology is sufficient if the right content is being provided.*”

Jawahar Kanjilal also noted that the newly launched Nokia Life Tools package only requires basic SMS to deliver information to the user interface.

Ehud Gelb brought up the issue of literacy and asked if it was a prerequisite to the successful use of mobile phones? **Sylvester D. Baguma** noted that in his Uganda experience different functions of the mobile phone and different types of training are provided to users given their literacy level.

Kris Dev, Dr N. Anandaraja and others added that voice messaging, and the ability to text and voice message in local languages was key to having the greatest impact. Paolo Barattini and Nigel Scott noted the importance of recognizing a local culture's preference for face-to-face communication.

Grace Muwanga noted that the immediacy of mobile telephony can improve the efficiency and impact of agricultural services, such as for travelling veterinarians. **Mark Varner** asked about the limitations put on content dissemination by the capacity of mobile phones (e.g. one SMS is only a few hundred characters while a recommendation regarding a problem might be many times longer).

Harsha de Silva presented a detailed comment based on LIRNEasia about how there are many good projects, especially at the pilot level, but few large, sustained programs. Over time with increasing experience and decreasing costs this will change. In particular he believes the use of mobile telephony will help reduce the transaction costs of information search by farmers.

Experience from other ICT related projects, including community information centres provide lessons learned that can be applied to improve the application of mobile telephony, including awareness of issues such as "*information overloading, passing off of mis-information and prevent the vulnerable rural communities from exploitation from service providers*" according to **Monjul Islam** based on experiences in Northeast India.

A reminder of the critical role of cost, especially when new applications or technologies are launched was put forth by **Leisa Armstrong**.

Many resources on the matters being discussed in the forum were contributed by the participants including link to information from the World Bank from **Worlali Senyo** and Mobile Active from **Pete Cranston**. Detailed information about the TradeNet service in Ghana was provided by **Laura Drewett**, further supporting the experience based discussions in this forum.

Question 2 : **Tell us what is innovative about the application of mobile telephony? What kind of impact has it had?**

Alexander G. Flor starts the discussion and writes, "*Today's mobile phone is not only a communication device. It can very well be a handheld computer, an entertainment medium, a documentation (video-audio capture) tool, a mobile learning platform, a portable play station and a combination of any or all of the above depending on the model or services provided.*" Yet, he adds, "*The synergies produced by such a gadget tend to disrupt social systems.*" This synergy issue would

be discussed later in the talks of the week, and one that we expect to be discussed further in the second week of the forum.

Ryhan Ebad feels that the mobile phone is unique, in that, *“there is no invention that has provided more distinct opportunities in innovation for development than the mobile phone. The mobile phone has traditionally offered voice and data transfer tool to connect people. With improving capabilities and cheaper rates, it is a domain that provides a powerful space for innovation and, as it is subject to lower financial and educational barriers, provides a potentially wider sphere of influence than the internet has to date.”*

Sapna A Narula explains that there are many innovative applications of mobile phones to farmers, giving a particular example, *“through smart Krishi initiative, multimedia phones are being used to guide farmers regarding crop/disease attack, he writes, “They send the crop pictures to the scientists sitting far away and get prescriptions regarding use of pesticides/ other practices.”*

AHM Sultanur Reza points out that innovation in this sector is dependent on the increase of its usage, *“The more people used it (in Bangladesh, for example) the more demand was created. Sector specific demands were created and thus innovation took place. ... These mobile applications have created opportunities for the rural people to do business with Mobile phone other than normal voice use.”*

He asks, *“Now, we have challenges also, how to provide VAS for illiterates those who can not write a SMS or send MMS? Text to Speech or Voice Message may be a solution I believe. Especially, the farmers would be benefited through this. To stimulate all this what I feel is more important is to aware the rural people on the technology usage - how a mobile can be helpful for the farmers or rural mass in general?”* **Shaid Uddin Akbar** responds to this, by saying that , in the case of agriculture and rural development, development agencies, government, and others (including private sector) have to be more “practical & realistic.” He continues, *“They have to be pro-active to promote mobile based services targeting these segments, mainly farmers & rural businesses.”* He then asks, *“The key question is why a farmer will use mobile phone or what services are available for a farmer through mobile phone?”* He felt that the answer is not satisfactory, as there really are no such services available to address the issues of farmers. **AHM Sultanur Reza** concludes this portion of the discussion, noting that farmers *“ need some service/content to be delivered through mobiles to see that a Public Private Partnership can make this possible. “*

Hélène Martin of the Grameen Foundation touched on another innovative aspect of mobile phones – opening up broadcasting to the masses. She writes, *“It’s not only a platform with a lot of reach in developing regions, it also allows for virtually anyone to participate in broadcasting. Radio has incredible reach, but becoming a radio station is no easy task. On the other hand, virtually anyone can build a simple mobile application to reach many people. I can't think of any other two-way communication modes with anywhere near the reach.”*

What about impact?

With all the positive responses to the innovations in mobile telephony, there still is little known regarding how effective it actually is, especially in rural areas. **Ryhan Ebad** writes, *“As the fact of the matter is, too little is known about the impact of the mobile telephone on the people. Mobile phones increase the ability to coordinate activities, especially across remote sites.”* **Josh Underwood** states that this can be affected by a number of factors, including where you live, what kind of access you have, and what income you have. He states, *“In poorer contexts, with less infrastructure my feeling is that the innovation has largely been that mobile phones have begun to enable voice communication amongst widely distributed groups that previously had no access to this kind of communication and that this has enabled information networks that can support improved business opportunities (as with the fisherman example that is frequently cited) and access to otherwise inaccessible information (e.g. health).”* He continues, *“The other truly interesting innovation in these contexts is the ability to transfer money as airtime. This combined with the increased ability to form extended communities of interest/information networks supported by voice communication may lead to more interesting innovations.”*

Christian Kreutz writes, *“I believe the biggest mobile innovations are coming from countries in Africa and not from Europe.”* He cites some examples from the EPROM project, and points to innovative applications that have developed with old low cost mobile phones mostly only using SMS. <http://eprom.mit.edu/entrepreneurship.html>

Dr. N. Anandaraja directly addresses the farming community, and its innovative application. He states, *“Regarding to the farming community, most of the farmers, traders, vendors are using as means of communication devise. It has vast scope and ample opportunity to introduce lot more services based on the regional specific felt needs to improve the socio-dynamic-economic condition of the farmers.”* He is quick to point out; however, the financial view of this application, stating, and *“There is a general feeling from the users that by using mobile phone, they are paying for each and every message and call. It is draining the resources.”*

The limitations – or are they?

The issue of high spec handsets and develop was one that was addressed, and noted by **Josh Underwood**, *“I do believe today's high-end handset will allow all kinds of new opportunities e.g. delivery of audio-visual training information, local language audio-visual pest identification and treatment encyclopaedias on the phone memory without having to pay per query, etc...,”* he states, *“so, the question (is) just can we assume such handsets will be affordable one day? If so how far in to the future? How long ago would it have seemed that the handsets currently in use in rural Kenya for example would never have been affordable?”*

Sapna Narula reponds, saying that many agri-input companies have taken assistance from SMS to deliver information regarding their new product launches, brand promotion, farmers' meetings. Sapna writes, *“What is important is that with new kind of mobile handsets available, where we have facility for information delivery in regional languages, it has been very useful, in a country like India where we have regional diversity. This method of advertisement is cheap as well as effective”*

Question 3: **How have mobile telephones enhanced rural livelihoods socially and economically?**

The discussion starts with **Krishna Mishra** reporting about projects in India which appears to produce benefits using the new tools.

One of the questions which come out of the discussion is that a real evaluation is difficult to do because of the lack of data and indicators to allow quantitative analysis. As **Giacomo Zanello** wrote *"the data is difficult to get and the economic models must consider several variables that can be influenced by the use of ICTs"*.

Referring to Jenny Aker's paper ["Does Digital Provide or Divide? The Impact of Cell Phones on Grain Markets in Niger"](#) **Hélène Martin** reaffirms how there are plenty of anecdotes but no data to confirm hypothesis about benefits of the adoption of this technology.

Are there negative examples to show the contrary asks **Michael Riggs**?

Participants cannot propose material evidence in general but some examples demonstrates good results, like those described by **Jimmy L. Calata** in the Philippines where wholesalers are being overcome by producers who are able to get in touch with the market and sell their products. There are better connections, good trade, higher prices for producers and no waste of resources.

Still people manifest a big uncertainty on the balance between pros and counts. Probably, as **Christian Kreuz** affirms, today both happens and it is up to the single user to make the first higher than the second. Anyhow, there is no way to consider mobile telephony a cure-all tool against all the problems.

Laura Drewett also can propose many anecdotes but no studies. She reflects on the fact that, if people are willing to pay to use the service than some benefits are probably guaranteed. Still, it is difficult to know how the info is being used. That's the reason why "monitoring and evaluation" is consider fundamental to guarantee a positive evolution of the system: *"we plan to put a more structured monitoring and evaluation program in place with our paying group customers to not only capture these stories, but demonstrate clear economic improvement over years"*.

Jawahar Kanjilal reports more examples of paid service in India which probably can show the benefits of those services: *"The real proof according to me is when a consumer pays for a service"*.

Aside economic aspects, the discussion is interested also on the social impact of this new technology. **Anna Maria Walter** would like to *"consider the social impacts created by the use of mobile phones. Technology is not neutral per se because it is already strongly linked with good or bad attributes in our mind depending on one's perspective. Everything that has an impact on your life becomes a subject automatically and can't stay neutral"*.

Giacomo Zanello complements adding *"that the uses of ICTs are not always predictable ex-ante"*.

In a provocative way, **Nigel Scott** intervenes asking: what if there would not be economic benefits?

Jawahar Kanjilal sustains that if the service is good and well prepared than the market will underline its efficacy taking in consideration: "*relevant local content, timely delivery of the info when you need it, accuracy and credibility of the information, in vernacular language and some more*".

One of the most proven benefits generally recognized seems to be the possibility to avoid unnecessary movements from the business locations while trying to sell the products. "*Unnecessary commuting to urban centers has been tremendously reduced*" affirms **Collins**.

Mobile telephony also substitutes older technologies which did not maintained the promises. It is a new technology which makes easier to get in touch with people. Helping saving time and transportation is the key difference. Still **Shahid Uddin Akbar**, reporting on his experience in Bangladesh, states that if "*it is obvious that the foundation is already made, now we need to build on it*".

Collins proposes to evaluate a better connection to the Internet to complete the scenario as "*mobile phones alone are not providing the optimal solution to the communication problem in the rural areas, there is need to encourage Internet connectivity and building of data networks for information storage, sharing and dissemination*".