



PAPER ON

LEVERAGING THE POTENTIAL OF USOF TO

ROLL OUT TO RURAL AREAS

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PATTAYA, THAILAND

MARCH 10, 2008

1. UNIVERSAL SERVICE OBLIGATION FUND

- a. The provision of affordable telecom services is essential for a country's development towards universal access to communications. It is also a well accepted fact that improved rural penetration is a key priority area for most developing countries. Most developing economies besides being faced with a very low tele density vis-à-vis developed / mature telecom regimes also face the problem of an increasing rural urban divide and the issue of reachability in rural and remote areas.
- b. The concept of 'Universal Service Obligations' (USO) is based on the premise that telecommunication services play such a fundamental role in economic and social development that everyone should have access to a basic level of telecommunications facilities and services, if they are to participate fully in modern society. Communication networks help bring people together, allow them to be informed, get integrated and be better citizens in a democracy. Universal access is the goal adopted by many countries to provide convenient and affordable access to communications, at least on a community basis, through a combination of private and public access facilities such as payphones and telecentres.
- c. In developing countries, the focus of USOF continues to be on basic voice services especially to the rural and uncovered areas. On the other hand, in developed countries USO not only includes access to Public Switched Telephone Network (PSTN), but a host of value added services such as directory services, selective outgoing call barring to premium service, emergency services and internet access to public schools and libraries at discounted prices, etc.

2. GROWTH OF MOBILE SERVICES IN RURAL AREAS – MOBILE IS THE MISSING LINK

- a. It is well established that one of the quickest and most cost effective ways to address the issue of 'digital divide is through wireless telecommunications. Mobile infrastructure has demonstrated itself to be the most conducive medium to rapidly deliver the benefits of connectivity to the rural areas. Mobile services are now very affordable and are also very easily accessible. With the growing emphasis on/proliferation of low cost handsets, there is a considerable lowering of the entry barriers for mobile services, as a result of which mobile is increasingly becoming a service for the masses. To leverage this opportunity, many innovative schemes have also been launched by mobile operators for rural communities. One such scheme is the option of micro prepaid. In India, micro prepaid options include, recharge coupons of as low as 20 US cents. Another innovative scheme by Indian operators is of Lifetime Validity Packages All these products are targeted at encouraging connectivity amongst the low end and marginal users, both in urban as well as rural areas.
- b. Because Mobile networks are most cost effective and expeditious to deploy, they represent the maximum growth opportunity as a result of which growth of mobile networks has overtaken fixed line networks in many countries, including India. Consumers are also increasingly showing preference towards wireless because of prompt availability, portability, personalization and flexibility of use offered by wireless technology with respect to both voice and data communication. The fixed mobile cross over has taken place in many countries and growth trends clearly demonstrate that mobile service are fast becoming the overwhelmingly dominant and preferred option in most countries. Going forward, as the mobile service providers expanding coverage at a rapid pace and are increasingly reaching out to the rural areas, this trend is likely to continue and maybe even pick up further.

3. INCENTIVES VERSUS SUBSIDIES – NEED FOR A FRESH APPROACH

- a. It has generally been seen that universal access policies in most countries are based on the assumption that it is more expensive and hence unprofitable to provide telecom service in rural and remote locations. Thus, the focus of most policies to bridge the digital divide has been to provide / extend subsidy to telecom operators to reach out to rural areas.
- b. In India, too, this is the approach that is being followed till date. Operators are paying 5% of their (Adjusted Gross) Revenues as a universal access levy which goes into the USO Fund which is then to be utilized for subsidizing rollout of telecom infrastructure in rural areas. Historically, the USOF has been utilized for subsidizing wireline services although some years back the law was amended to include provision of subsidy for wireless services.
- c. However, it has been noticed that despite the subsidy and support for new rural household lines through USO, the number of wire-line connections in rural areas are decreasing. Till date in India, there are around 12 million rural wireline subscribers, which number has been declining steadily for the past 3 years. On the other hand in a little over 10 years of the introduction of mobile / wireless telephony, the rural wireless subscriber base has reached 44 million and the monthly additions are taking place at the rate of around 2 million every month. It is also important to note that this growth has been taking place without any subsidy support whatsoever. The market led growth in mobile services vis-à-vis the stagnation in the fixed line growth despite subsidy support makes one question the relevance of subsidies for achieving rural telecom objectives and review the factors that encourage rural penetration.
- d. One of the key factors, at least in the Indian market appears to be the high level of competition in the segment. The Indian cellular market is perhaps the most competitive market in the world with the presence of 6-7 operators in each service area. (Further, the Government has recently issued Letters of Intent to at least five more pan India players, leading to concerns of excessive competition) The active participation of so many players in the market leads to faster saturation of urban centres and quicker focus on smaller cities and towns as all operators vie with each other to reach the rural consumer. Thus clearly competition plays a much bigger role in bridging the digital divide than subsidies.

4. POTENTIAL OF THE RURAL MARKET – FORTUNE AT THE BOTTOM OF THE PYRAMID

- a. The bidding pattern exhibited by the Indian operators in the USO subsidy scheme project shows an underlying understanding / expectation of the untapped potential of the rural market. This has also been recognized in several studies, which have shown that there is substantial purchasing power in the rural areas. This understanding is crucial while looking at the question of demand and provisioning of communication services in rural areas.
- b. According to a study by the World Bank, “wherever they are given the choice, poor communities often spend on communications as much as urban communities, in terms of percentage of available income” and if this expenditure is made on availabilities and affordable communication services, the rural growth will pick up substantially and in a short time frame and this, gives us a Universal Service Opportunity, both for the operators and subscribers.
- c. According to the renowned Indian business / management guru, CK Prahalad as well, the world’s most exciting, fastest growing market is where you least expect it: at the bottom of the pyramid as collectively, the world’s billions of poor people have immense entrepreneurial capabilities as also buying power and that there is a huge untapped opportunity for the private sector to serve an important public purpose whilst maintaining or even enhancing their bottom line.

- d. However, the main hurdle is to reach this bottom of the pyramid. To reach to this level and tap the potential involves huge amount of costs. Knowing the tremendous potential that exists in rural and remote areas, we need to find cost effective ways to reach to them. This is where resource sharing will play an important role as it will help in reaching these areas in the most cost efficient manner.

5. RESOURCE SHARING

- a. Infrastructure sharing is becoming increasing popular in the telecom industry as it helps effect more expeditious and cost effective rollout. In India at least, infrastructure has been limited till now to only sharing of passive infrastructure. The private GSM industry has come together in a voluntary initiative to start Project “MOST” – Mobile Operators Shared Infrastructure. The project was started in Delhi and is now slowly rolling out in other major cities. In fact, now most mobile service providers are hiving of their tower businesses into separate companies.
- b. Further, recently the Indian Licensor, DoT has also accepted the Regulator’s recommendations for sharing of active infrastructure - antenna, feeder cable, Node B, Radio Access Network and transmission system, etc. This is expected to give a further fillip to infrastructure sharing and reduce costs of rollout further.
- c. Whilst the infrastructure sharing is presently limited to the metropolitan and urban centres, this concept is equally if not more important in the rural areas. A start has already been made with the Indian USO subsidy support scheme for shared wireless infrastructure. The key cost involved in setting up sites is of the passive infrastructure, which accounts for 70% of the total cost. The Indian Government initiated a unique and a landmark project where under it is being proposed to provide subsidy support from the USO Fund for setting up shared wireless infrastructure in rural areas. Under this project, the Government would provide subsidy for the passive infrastructure. The Government also took a fine step of modifying the legislation for enabling USO funding for mobile. The Government announced the USO tenders in yearly 2007 and the operators actively participated in the bidding process where nil subsidy and even reverse subsidy bids were made.
- d. Availability of continuous power is crucial for operation of any wireless/telecom network. Non-availability of power substantially increases the cost of delivery of service. This is all the more relevant for rural and remote areas where power supply is extremely erratic and non-availability of stable and continuous power supply could actually negate all other investments and efforts made to provide connectivity in rural areas. Thus, it is imperative to promote use of non-conventional sources of energy like solar-cell, bio-fuels etc.

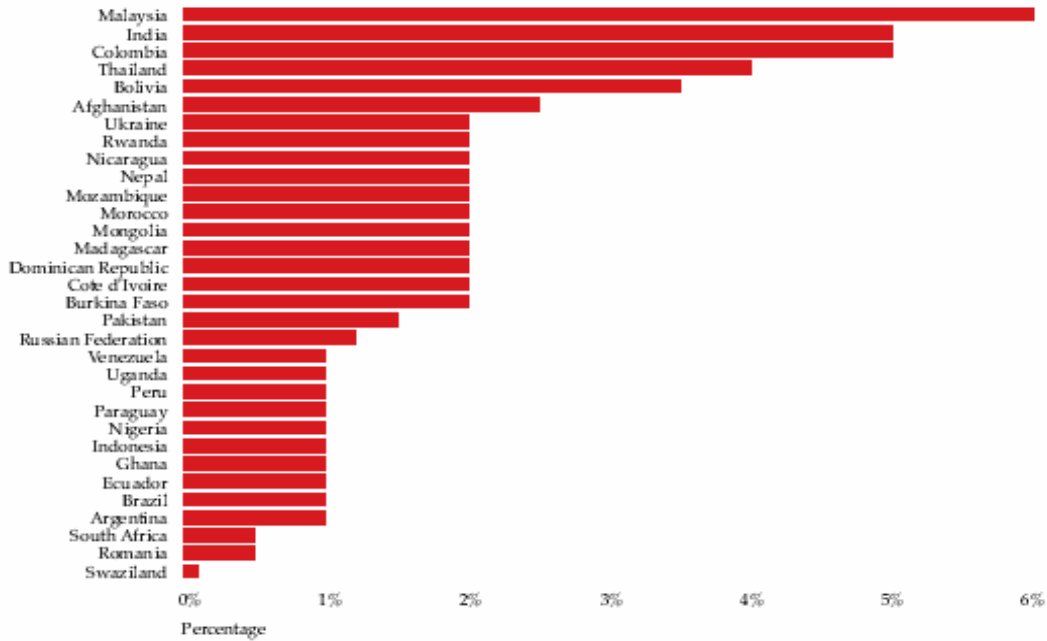
6. BRIDGING THE INFO DIVIDE – THROUGH MOBILE BROADBAND

- a. Connectivity is not an end in itself, it is the means to an end tool; it is tool to improve access, to enhance business productivity, improved safety, health, access to learning, education, etc. Access to communication facilities can helps bridge not only the digital divide but also the information divide.
- b. One of the ways of bridging this info divide is Mobile banking, which is providing millions of people with access to benefits of financial services for the first time. In the Philippines SMART and Globe lead in providing mobile banking along with over-the-air remittances from Filipino workers abroad. Rural and low income citizens who were previously excluded from the banking sector can now benefit from financial services; MTN Banking launched last year and Safricom has developed M-PESA.

- c. Another such initiative is the GSM Association Mobile Money Transfer (MMT) program, which will be a simple, easy, expeditious and cost effective way to remit money back home. A large proportion of the expatriate community who go abroad in search of higher salaries and to improve their financial situation, send money back to their families which reside in the small villages in rural areas which are quite often deprived of a traditional banking infrastructure that will facilitate the easy remittances of funds. This initiative is also very relevant for domestic money transfers as many people from small towns or villages are working in metros and other big cities. In such circumstances, remitting funds back home to their families in the villages becomes a complex and long drawn out process. It is in such cases that the MMT program will be particularly useful, as it will overcome the lacunae or absence of traditional retail banking infrastructure and will actually transfer money through a simple SMS.
- d. Mobile phone can also be used as a platform to deliver various applications useful to the local population. These can be used to deliver not only tele-education and tele-health, but can virtually revitalize/transform the rural economy by creating rural micro enterprises. These micro enterprises could be in the areas of agriculture, food processing industry, animal husbandry, fisheries, sericulture, handicrafts, etc.
- e. Along with the micro enterprises, it is also important to remove the literacy and linguist barriers in rural/semi-urban areas. Content in local languages will have to be developed by Service providers so that the rural communities can extract the maximum benefits provided by the mobile services or the broadband services.
- f. Whilst nobody is dismissing /discounting the potential of the rural markets, there is also no doubt that in many countries, including India, the urban rural divide is increasing. To bridge this growing gap between telecom services in the urban and rural areas, it is necessary that a win-win situation is created for the user and the operator. Operators need to be able to reach out and tap the potential at the bottom of the pyramid in a commercially viable manner. The difference in the rural market is that while the rural subscriber may have a substantial requirement of data based value added services besides voice services, the relatively larger investment required to cover large number of rural subscribers due to poor density, requires policy and regulatory intervention to make the cost-benefit ratio attractive for the user while allowing the operators to make reasonable profits.
- g. The best way to provide such applications to rural community is through early introduction of mobile broadband services, as it has been proven beyond doubt that the benefits of broadband in rural areas can be delivered more efficiently and at a much faster rate through the wireless technology as compared to wireline technology. Also, cost of delivery of broadband through wireless is much lower than wireline technology. Under these circumstances, early introduction of 3G services can play a crucial role in spread of broadband in developing countries.
- h. Widespread adoption of broadband in rural areas will have an all round beneficial impact over the long-term. It will help businesses to be maintained in rural areas, it will enhance employment opportunities and will improve the quality of life in rural areas with services such as health-care, banking, etc.

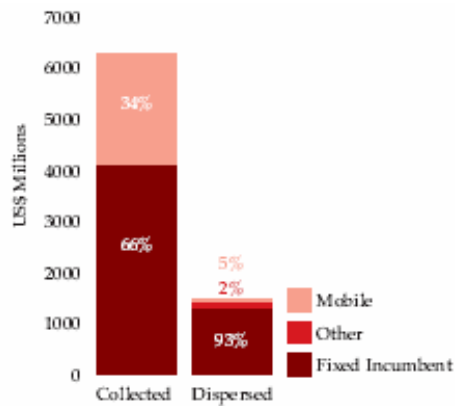
7. UTILIZATION OF USOF – TO IMPROVE ALLIED INFRASTRUCTURE

- a. The resources for implementation of USO objectives are raised through a Universal Service Levy (USL). The contribution by the service providers are generally in the form of a revenue share, and the amount varies with the country. The scope of USO objectives determines the size of levy.



Source: GSMA Report on Universal Access, 2006

- b. In India, presently this has been fixed at 5% of the Adjusted Gross Revenue (AGR) of all Telecom Service Providers. It is observed that till 2006-07 against a total collection of approximately USD 3.75 billion, the disbursement has been only about USD 1.25 billion, which means that funds to the tune of around USD 2.5 billion are still lying unutilized in the USOF in India. The situation is similar in many other countries as the actual disbursement of USOF is much less than the amount collected from the service providers.



Source: GSMA Report on Universal Access, 2006

- c. Under these circumstances, there arises a need to review the entire concept of USO – the objective of the fund, its effective utilization, the quantum of levy, etc. As mentioned, in India there is USD 2.5 billion lying unutilized. The bidding for the USO schemes has resulted in many bidders submitting nil or negative bids. Whilst no doubt some portion of the fund will be utilized to subsidize the shared wireless infrastructure, there will still be significant quantum available with the USOF Administrator. These funds must be used productively – to set up allied infrastructure such as shared backhaul, setting up of Public Telecom Information centres, promoting use of non conventional energy sources such as solar power, wind power, bio gas fuels, etc.

- d. In India, the USOF Administration is fully alive to these possibilities. The USOF has recently invited applications from the eligible companies to undertake Pilot Projects for demonstrating their products/services in the field of Rural Broadband, Rural Telephony (Fixed, Wireless in Local Loop, Mobile), Transmission Media in Rural Areas, General Telecom Infrastructure in Rural Areas like Tower, Batteries, Power Plant etc., Hybrid power, other solutions for meeting power requirement of rural telecom installation, Customer Premises Equipment etc. Pilot projects to establish new technological developments in the telecom sector, which can be deployed in the rural and remote area, may be supported with the approval of the Central Government.
- e. Whilst efforts are no doubt being made to effectively utilize the USO Fund, it may also perhaps be appropriate to review the rate at which the USO levy is being collected. Evidently the Governments is not able to utilize the resources at the rate at which they are being collected. Is there a need for a reduction in the percentage levy as the revenues of the telecom sector increase? Would it be better if the USO Fund and objectives are reviewed periodically, say on an annual basis, where the Government /Regulator determines of quantum of funds required for USO objectives and also decides upon an appropriate levy to recover the same.

SUGGESTED ISSUES FOR DISCUSSION

1. Should subsidy be service/ technology specific or neutral?
2. Instead of subsidizing the final product, should the subsidy be given on inputs like Bandwidth and spectrum charges?
3. Which is a better option to reach to rural areas: incentives or subsidies?
4. Is there a requirement for USOF subsidy in this competitive environment?
5. What kind of financial and economic incentives be given to Service Providers to reach out to rural areas?
6. Should USOF also be utilized for development of local content to cater to the local population so that they can extract maximum benefits?
7. Should USOF only be utilized only for telecom or also for allied infrastructure?
8. How relevant is early introduction of 3G/ Mobile Broadband for developing countries?
9. Should USO levy be a % of revenue share or a fixed amount?
10. Is there a need for a reduction in the percentage levy as the revenues of the telecom sector increase?
11. Would it be better if the USO Fund and objectives are reviewed periodically, say on an annual basis?
12. Should the USO subsidy model be sustained for long term or should there be a sunset date?
13. How can USOF be used to provide incentives for use of non-conventional sources of energy in rural areas?