

Public Private Partnership for Rural ICT Services

-From Obligation to Opportunity

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The absence or inadequacy of infrastructure is typically a pervasive causal influence on the general deprivation that goes by the name poverty.

-Dr Amartya Sen

The Importance of Universal Telecom Connectivity

The linkage between infrastructure provision and the poverty reduction goals of a nation is commonly acknowledged. While on one hand infrastructure contributes to growth promotion per se, on the other hand, the availability of reliable and affordable infrastructure also contributes directly to poverty reduction through provision of, or support in, the delivery of key public services. An important element of such infrastructure is the telecom connectivity infrastructure of a nation.

The spread of telephony to rural and backward areas achieves results that go far beyond mere poverty reduction. In fact, bridging the digital divide is absolutely essential in order to ensure uniform, rapid and inclusive socio-economic growth of a country. Universal Access to the ICT has the following potential benefits:

1. Access to telecommunication and information services, provides crucial knowledge inputs into productive activities of rural and poor households: makes regional, national and even global enterprises/markets accessible to small enterprises. This is critical to ensure inclusive economic growth and the mainstreaming of the agricultural/handicraft based rural economy.
2. Connectivity fosters social development, including education, health and increased citizen participation in national affairs.
3. Access to ICT stems urban migration by generating greater income and employment potential in rural areas and bringing the market to the people rather than forcing them to leave in search of markets.
4. ICT connectivity increases the reach and delivery of government and social services to rural population. It would create the much needed two-way communication channel by way of creation of awareness about government schemes amongst the target beneficiaries on one hand and enabling them to provide valuable feedback on the grass root level implementation of the same on the other. This is a precious benefit of rural ICT access. It helps government agencies to transcend the roadblocks of time, distance and resources and ensure effective delivery of public services.
5. Access to ICT gives the rural population a voice, with which they can influence the decisions of policy makers, and allows them to participate in the decision making process and decreases the sense of isolation.

Robust Privatization, Liberalization And Yet the Persistent Urban Rural Telecom Divide

The Telecom Sector in our country has made tremendous progress as a result of reforms and introduction of competition. In fact India has undergone an out-and-out telecom revolution since the mid nineties with the introduction of privatization and liberalization and has achieved an overall teledensity of 16.60 as on November 2006¹. At the end of November 2006, total fixed lines were 40.51 million and wireless subscribers were 143.02 million, taking the total of telephone subscribers in country to 183.53 million. When compared with the situation as on March 1991, where there were only 5 million telephone subscribers in the country, this is impressive progress indeed. However our urban-rural telecommunication access gap has remained vast, in spite of telecom reforms. India at present is a stark example of digital divide with urban teledensity being as high as 40.65% and rural teledensity being as low as 1.87%. Gaps in Connectivity as seen in India are not uncommon and world over such gaps continues to persist between urban and rural areas (to a lesser or greater extent) even under efficient market conditions. They exist due to the fact that a proportion of the population (relatively large in developing countries), cannot afford the market prices at which these services are normally offered. Rural areas demand greater investment, but offer less returns, due to lower household income levels, greater geographical dispersion, and lower call traffic generation. Thus in India, in spite of the presence of a booming mobile telecom industry which is growing at 90% per annum, one is confronted with the startling statistics that the penetration level of mobile telephones in rural areas is less than 1% and overall private operator share in rural telephony is 0.01%. Clearly private sector will not venture into un-remunerative markets on its own. The question is, can the public sector incumbent achieve rural connectivity by itself. The Planning Commission's estimate (revised norms) of the investment required for full telecom coverage of rural areas (rural teledensity of 4.20) was Rs 92,690 crores at 2002-03 prices. In contrast BSNL's average annual budget over the decade of the nineties has been a meager Rs.3000 crores². A comparison of the two figures suggests that reliance on government investment alone will not achieve full coverage in the future. Various measures have been adopted by the government in the past to encourage the spread of telecom connectivity to rural and other non remunerative areas. These include:

A. Compensating The Incumbent Public Sector Telecom Operator For Its Role In Provision Of Services To Non Remunerative Areas

- **Cross subsidization** between or within services provided by incumbent operators is one such method. ILD and NLD services, for example, have traditionally been priced well above cost. Surplus revenues from these high priced services were intended to subsidise higher cost or lower margin services, particularly residential local access lines. This had been done by BSNL in India until the relatively recent rationalisation and lowering of ILD and NLD tariffs. World over cross subsidies between services are increasingly being viewed as impractical and anti competitive. Further, with the opening up of markets to competition and falling international and long distance rates, this is no longer a viable source of funding universal access. Cross subsidies in any case are

¹ TRAI Press release No 123/2006 dated 13.12.06

² India Rural Infrastructure Report, NCAER

criticized as they promote inefficiency and depress demand for services. They also constitute a hidden form of taxation which can be regressive. For example, poor migrant workers having to pay high long distance rates. They have also not been found to be an effective tool to promote universality. They only subsidise all existing users, in areas with phones (urban) whether they can or cannot afford to pay full economic price and areas without telephones such as rural areas do not directly benefit from this form of subsidy.

- **Access Deficit Charges (ADC)** These are paid by telecommunication operators to subsidise the access deficit of incumbents. An ADC is like a traditional cross subsidization regime, but modified to fit a competitive market. In an ADC regime, other operators pay subsidies (earlier on per minute of call basis in India) to finance the total cost of access deficit incurred by the incumbent (BSNL in India) in providing local services that are priced below cost. (Fixed line rental and call charges). ADCs too have been criticized for being inefficient and potentially anti competitive. In India ADCs are paid by mobile and unified access operators to fixed line operators and have been rationalized and reduced over a period of time. From March 2006 all licensees of unified access service, cellular mobile telephone service, national and international long distance service (NLD and ILD) pay 1.5% of their aggregate gross revenue (AGR) as ADC to BSNL. For estimating ADC as a percentage of AGR of access providers the revenue from rural subscribers shall be subtracted. ADC on ILD calls continues to be on per call basis, but has been reduced by 50-65%. The result has been a substantial fall in NLD and ILD tariffs. Telecom Regulatory Authority of India (TRAI) is working towards phasing out ADC after 2008.

B. Measures Attempting To Involve Private Sector in Rural Telephony

- **Mandatory Service Obligations.** These are imposed by license conditions or other regulatory measures. This was tried in India with very little success. Under the National Telecom Policy 1994, the government had made it mandatory for all private basic service operators to provide 10 per cent of all new lines in rural areas. A weight age of 15 per cent was given at the time of bid selection for service provision in rural areas. A penalty on a per day basis for each telephone not installed sought to prevent companies from delaying the meeting of rural targets. At the same time, the government encouraged new emerging technologies including local loop wireless, cellular telephony, and satellite-based communication systems that could help develop rural telecom in a cost-effective manner. Shockingly, against the targeted 10 per cent coverage in rural areas, as per the TRAI report dated 3rd July 2000, fixed service providers had provided only twelve village phones! They preferred to pay the penalty rather than engage in rural roll out and were able to get away from this onerous obligation very lightly³. Even operators who eventually fulfilled the statutory requirement of 10% rural network did so by technically covering the area on the outskirts of the city, where villagers could seek a telephone by paying heavily for service charges. On the whole compliance was circumvented in various ways⁴.

³ Jain Rekha, Review of the Indian Telecom Sector, chapter 8, India Infrastructure Report 2001

⁴ Prasad RRN, Singh S, Borgohain.B & MP Ram Mohan., USO in telecommunications sector in India: effectiveness, regulatory and funding issues.

Public Private Partnership to Bridge the Digital Divide

While connecting non remunerative areas is undoubtedly critical in order to achieve sustainable and inclusive socio-economic growth for the nation, the preceding paragraphs underline the futility of the public sector trying to achieve this effort on its own as well as of government trying to *force* the private sector into the provisioning of services in non remunerative rural areas. The answer then lies in providing the private sector with incentives to reach the under served poor. Narrowing the existing gaps in access and quality requires substantial capital investment and maintenance expenditure. In India, with reform, liberalization and effective regulation well in place, the enabling environment for private sector investment in telecom sector has improved drastically since the 1990s. What is needed now is the harnessing of the tremendous potential of the private sector to bring about the desired ICT investment in hitherto neglected population segments and regions. This can be achieved through the incentivisation of the Private Sector inherent in Public Private Partnership (PPP) models whereby governments enters into partnership with private sector; Risks, responsibility and rewards are shared. This has already been initiated by adopting the (PPP) model by way of USOF Agreements which are already in progress since 2002-03 and the Common Service Centre Program which is one of the mission mode projects under National E Government Action Plan (NEGAP). While the former involves public as well as private funding with private service delivery and private management the latter involves a combination of public as well as private funding with public-private service delivery and public-private joint management.

These two programs are classic examples of PPP whereby the services are delivered by the private sector while the service regulation, coordination and monitoring responsibility w.r.t services delivered rests with the government. As envisaged in PPP models, both programs have the following potential benefits over pure public sector delivery or pure privatization:

- Cost-effectiveness- since selection of the developer/ service provider depends on competition or some benchmarking, the project is generally more cost effective than before in the scenario where the incumbent public sector unit was providing services.
- Higher Productivity- by linking payments to performance, productivity gains may be expected within the programme/project.
- Accelerated Delivery – since the contracts generally are time bound and have incentive and penalty clauses vis-à-vis implementation of capital projects/programmes this leads to accelerated delivery of projects.
- Clear Customer Focus - the shift in focus from service inputs to outputs create the scope for innovation in service delivery and enhances customer satisfaction.
- Recovery of User Charges- Innovative decisions can be taken with greater flexibility on account of decentralization. Wherever possibilities of recovering user charges exist, these can be imposed in harmony with local conditions⁵.

USO Funding of Telecom Connectivity as an Incentive for Private Sector Investment

Under the method of Universal Service Obligation Funds, revenue to fund universal access is collected from a variety of sources such as government revenues, charges on interconnection services and levies on

⁵ Report of the PPP Sub-Group on Social Sector Public Private Partnership, Government of India Planning Commission November 2004

telecommunication services providers. These funds efficiently provide a small subsidy (covering part of capital and/or operating expenses) to motivate private operators to expand their services to otherwise uneconomic areas⁶. Generally (and in India) to determine subsidy requirement a competitive bidding approach is used. However, the financial cost model is also used in addition to determine the “benchmark” maximum subsidy amount to be available for each project.⁷ In contrast to the methods such as Cross Subsidization, ADC and Mandatory Service Obligations, USO funds are used to finance specific and targeted high cost areas and or low income subscribers. The Indian Government adopted the Universal Service Support Policy based on the recommendations of the TRAI.

Universal Service Obligation Policy in India

The Universal Service Support Policy of India came into effect from 1st April 2002. It is funded by way of contributions from service providers. The Universal Service Levy is at present 5% of the Adjusted Gross Revenue (AGR) earned by all telecom operators except those providing purely value added services like internet service providers, voice mail etc. The entire budgetary provision of Rs 1814.5 Crores allocated for the financial years 2002-03, 2003-04 and 2004-05 were fully utilized. For 2006-07 as on 31.10.06 Rs 600.62 crores had been disbursed so far against an allocation of Rs1500 crores. For implementation of Universal Service Support Policy there is an Administrator USO fund which is an attached Office of the DOT. State level monitoring of USO activities and disbursement of Subsidy under USO is performed by Controller of Communication Accounts Offices of DOT. Further, India has one of the most comprehensive mandates of operational USO funds.

Scope and coverage of USO Funded Program

It covers not only existing and new public access facilities in rural areas but also existing and new individual household phones providing for both capital and operating cost of new facilities. It also endeavours to implement universal public access to broadband through installation of Public Tele-information Centres (PTICs) & High speed Public Tele-information Centres (HPTICs) in villages with more than 2000 population and at Block headquarters. It is planned to set up 5000 HPTICs initially in the first phase. Data applications including fax, email, tele-education and telemedicine, besides voice telephony will be covered through these HPTICs. It also covers provision of Village Public Telephones (VPTs) in all 6.07 lakh census revenue villages and provision of additional Rural community Phones (RCPs) in nearly 46,000 villages with a population of more than 2000. Replacement of VPTs earlier provided on Multi Access Radio Relay (MARR) technology installed prior to 1.4.02 with phones on landline/CDMA technology is also included in its scope. The total number of such phones to be replaced is 1.86 lakhs.

⁶ The low level of rural per capita income implies that in most rural areas pricing of infrastructure services cannot always be structured so as to recover the entire capital and operating and maintenance cost over the lifetime of the capital asset. Irrespective of whether the service is provided by the government or the community or the private sector, there is a clear need for provision of a subsidy to the consumer of rural infrastructure services. The extent of subsidy needs to take into account the consumer's ability and willingness to pay for the concerned service

⁷ Financial cost models calculate the difference between the capital and operating costs of providing the designated mandatory services in a specific geographical area and the projected revenues from the designated mandatory services.

Implementation Status⁸

A. Public access:

- Nearly 5.20 lakh VPTs are already receiving support towards operation and maintenance covering more than 90% of villages with VPTs.
- For 66,822 uncovered villages including 14,185 remote and far flung villages which can be covered only by satellite phones, agreements have been signed for provision of VPTs with BSNL. These villages are to be covered by 2007 in a phased manner. By 31.10.06, 36,014 villages had already been covered.
- Out of 1.86 lakh VPTs on MARR technology 1.63 lakhs have already been replaced with phones on reliable media.
- BSNL and Reliance Infocomm have signed USO Agreements with DOT to provide additional public access facilities by way of RCPs in 46,253 villages with more than 2000 population and no PCO. By end of October 2006, 33,239 RCPs had been provided.

B. Individual Access

- USO funded support has been extended to nearly 91 lakh rural household telephones installed before 1.4.02 towards the differential between TRAI prescribed rental and the lower rental charged by the service provider. This support is for a limited period of 1.4.02 to 31.3.04
- BSNL, Reliance Infocomm, Tata Teleservices and Tata Teleservices Maharashtra have entered into agreements with DOT for USOF supported provision of new rural household telephones in 1685 net cost positive short distance charging areas of the country from 1.4.05 to 31.3.07. By 31.10.06, 11.13 lakh such rural household telephones had been provided under these agreements. (4.92 lakhs by BSNL, 2.38 lakhs by RIL and 3.82 lakhs by TTS)
- Subsidy from USO fund is also being extended to BSNL and Reliance Infocomm for rural household telephones which they have installed between 1.4.02 and 31.3.05.

C. Broadband Enabled Services

For data access facilities, namely PTICs and HPTICs, initially a pilot project covering 2000 villages is under consideration.

A Fresh Look at Universal Service Policy to Accelerate Rural Connectivity

Thus we can see that through the Universal Service Obligation Fund a tremendous effort is going on with both public and private sector participation, to connect entire rural India with reliable media. The process of monitoring and implementation of activities under this scheme has thrown up a number of challenges as may be expected from any government subsidy programme. Some of these are:

- Lack of awareness about USO schemes amongst target beneficiaries and unsuitable and insufficient rural marketing by private operators leading to the erroneous perception of lack of rural demand by private operators.

⁸ Information from the DOT website at www.dot.gov.in

- The problem of misappropriation of public access telephone services by influential rural people.
- Lack of interconnectivity with BSNL leading to poor quality of private connections
- Lack of power in the rural areas impacting utility of rural ICT services⁹

These are being tackled vigorously. Interestingly, tackling these issues has led to a finer appreciation of the dynamics, needs and special features of rural telecom scenario for both the private operators and the government agencies involved. Some of the more significant outcomes are mentioned below:

- Some of the private sector companies have in the process of USO implementation wisely gauged the massive untapped potential of the rural telecom market and have made full use of the time bound subsidy available under these schemes to make massive and impressive inroads into rural areas.
- For the first time the incumbent BSNL is feeling the heat of competition in rural areas, compelling it to hasten the process of clearance of hitherto long pending rural waiting lists and to concentrate on improving the quality of its service in rural areas. This market had so far been taken for granted by it, as a captive one due to lack of competition.
- Innovative solutions to marketing, recovery of consumer charges, connectivity, technology and power issues are being developed by private sector and taken cognizance of by the government sector too.(The recent move to provide USOF support for rural mobile infrastructure and introduction of infrastructure sharing for the same, being a case in point)
- Government agencies involved in monitoring USO schemes and subsidy disbursement have become wise to the need to make the rural public aware of USO schemes so that they themselves can assist in enforcement of field level implementation and derive full benefits from these facilities.

These results are exactly the kind of win-win outcome which a PPP model hopes to achieve and to that extent the USOF implementation model has been a resounding success. USO funded rural telephony has heralded the onset of an era of vigorous competition leading to drastically lower rural tariffs, efficient technology choices (economical wireless as opposed to expensive and fault prone wire line), appropriate revenue collection models (innovative prepaid schemes as compared to postpaid option which burdened BSNL with hefty outstanding revenue figures) etc to the mutual benefit of the telecom operators and the rural population. As far as policy goes, it is obvious that the Government cannot be expected to hit upon the perfect policy and implementation mix in the first shot. Implementation, feedback, modification and back to implementation are ongoing processes which will ultimately bear fruit as long as the will to achieve the desired result is strong. Monitoring the implementation of USO agreements is also being strengthened to ensure that the desired quantity and quality of service is provided.

Even so, more needs to be done because rural teledensity continues to lag at a level below 2% in spite of the overall telecom boom and above mentioned efforts. The Government has a grand plan of 50 crore phones by 2010. The current subscriber base is 15 crore. By 2010 the population is expected to reach 122.23 crore with

⁹ For more details of the USO implementation experiences see .Gulati.A.G, The Quest for Rural Telephony-Universal Service- Challenges & Choices, The Indian Journal of Public Administration, July-September 2006, Vol II, No3.

36.38 crores in urban areas and 85.85 crores in rural areas. Assuming a teledensity of 80 in urban areas, by 2010 the number of telephones in urban areas will be 29.10 crores and the balance 20.90 crores has to be rolled out in rural India, taking the rural teledensity to 24.35. The aim for rural areas is that by 2010 one in two rural household should have a phone. To achieve such an ambitious target, augmentation of the existing USO policy by introducing fresh measures is warranted. Some promising alternatives are:

- **Infrastructure Support For Cellular Mobile Services and Sharing of Soft And Hard Infrastructure**

There has been a phenomenal growth in mobile services in India. Today call charges have come down to Rs 1 per call which is the lowest in the world. The entry charges (including handset) being as low as \$35. The low tariffs have resulted in a huge unmet mobile demand in rural areas which the incumbent BSNL alone cannot meet fast enough. The present coverage of mobile networks in rural areas both by area and by population is negligible¹⁰. Cellular mobile services have an edge over the wire line or fixed wireless terminals based wire less services because of faster roll-out and lower per line cost. (Cost of wireless connectivity is up to 50% less than the cost of setting up wire line connections.) Thus, it was realized that mobile services, which have brought about a revolution in the urban areas, can be effectively used to quickly provide telecom services to people in the rural and remote areas also at affordable and reasonable prices. Accordingly, the inclusion of mobile services in the roll-out of rural household lines had been under the consideration of the Government for some time. Earlier the USO Fund did not support telephone connections on mobile wireless technologies. To enable such support, the Indian Telegraph Act 1885 has been amended in October 2006. Under the ongoing USO tender for setting up & managing infrastructure sites and provision of mobile services in specified rural and remote areas, only those rural and remote areas will be covered where fixed wireless or mobile services are not being provided currently. It is rightly contemplated that providing financial support for setting up infrastructure will enable a faster roll out of mobile services in the rural areas. Thus USO funding will function as the much needed push to enable private sector to tap the vast opportunity presented by the virtually untapped rural mobile market. It has also been understood that keeping in view the fact that the area to be covered is very large: that the ultimate objective is to provide telecom services at affordable prices and also that the infrastructure is capital intensive, overall expenditure can be kept at a low level through sharing of the infrastructure.

Between 8000 to 10000 towers are likely to be set up which would ensure almost 85% of the area of the country was covered by wireless signal after completion of the project¹¹. The USO administration has proposed a two part bidding with telecom service providers and short listed infrastructure providers being entitled to bid for passive infrastructure (land, tower, electric supply etc-Part A) and only telecom service providers being allowed to bid for active parts BTS including antenna and feeder cables-Part B). While initially the infrastructure created will be used primarily for voice telephony, the same infrastructure can also be used to provide broadband services. It shall be the responsibility of the successful bidders for Part-A and Part-B to set up, operate, maintain and manage

¹⁰ Statistics from TRAI presentation on Chinese Growth: Chinese Numbers, 17.1.06

¹¹ "Mobile infrastructure sharing to be extended to rural areas", The Hindu dated 7.7.06

the respective infrastructure required for effective provision of mobile services, in the specified rural and remote areas for which bids are submitted. Support from USO Fund shall be provided to the successful bidder(s) on the Representative Rate arrived through a multi stage bidding process. This Representative Rate shall be provided each year on quarterly basis in arrears for a period of five years.

- **Another Potential Private Partner-The Niche Operators**

The concept of niche operators was introduced for the first time in the unified licensing draft recommendations of TRAI. These purely rural private telecom operators would be subject to nil entry charges. They would pay 6% (contribution to USF plus administrative costs) of their AGR as license fees and may be given support by USOF. The possibility of zero spectrum charges for them is also being considered. Response to this concept from telecom industry associations such as COAI and AUSPI has been cautious. They have expressed concerns about complications in “level playing field” especially as they would operate in their licensed areas. Some parties have opined that the niche operator package should first be offered to existing access providers in their licensed areas. The author feels that given the tardy pace at which private USPs are reaching really backward rural areas in spite of subsidies, these arguments do not hold water. In fact as TRAI has correctly pointed out the entry of niche operators would act as a stimulus to other service providers to improve coverage in such areas in order to retain market with them.¹² Niche operators should be allowed to offer other communication services such as cable T.V and internet ATMs etc. This would make the business model more sustainable than provision of pure voice telephony in backward areas. The USA is probably the only country having telecom service providers exclusively for rural areas and most of them are very successful in spite of their small subscriber base. Many use their network to provide other services such as satellite T.V. Recognizing their interrelationship, they have come together to form cooperatives. The National Rural Telecommunications Cooperative that brings under its umbrella a few hundreds of telecom and power utilities needs special mention. These cooperatives typically benefit from lower taxes, cheaper manpower, lower staff turnover and a loyal customer base. However they roll out whole networks i.e. exchanges, junctions and local loops and interconnect to the AT&T network for long distance communications¹³.

- **Bridging The Digital Divide In One Giant Stride**

In the digital age, the definition of universal access to telecom services becomes more complicated. Simple telephony no longer seems adequate as a goal, since access to the internet is increasingly viewed as fundamental to economic and societal development. TRAI studies reveal that India is the only country where the cable TV connections (61 million in 2003) exceed fixed line phones (47 million same years). This indicates a huge demand for entertainment and multi sourced news and information services, suggesting that triple play networks would be hugely successful in rural India.¹⁴ Given the problems of low literacy levels, multiple languages, limited entertainment, poor access to government services and health, education etc, such an option is the ideal medium to provide a basket of services to rural areas (including internet, multi media services, video conferencing etc), thereby

¹² TRAI consultation papers No 16/2004.

¹³ Prasad RRN, Singh S, Bhaskorjeet Borgohain & MP Ram Mohan, USO in telecommunications sector in India: effectiveness, regulatory and funding issues.”

¹⁴ TRAI presentation on Chinese Growth: Chinese Numbers, 17.1.06.

effectively bridging the digital divide in a single giant stride. Rather counter intuitively, poor people need more sophisticated technologies.¹⁵ India should take advantage of being a late comer in the field, skip the traditional stepping stones and go straight to the finish line. It has been conclusively proved in countries like South Korea that economic development is closely linked to the spread of broadband in rural areas. Their government pursued this objective vigorously till it achieved 80% household broadband penetration resulting in a 2% increase year to year, in GDP. China too has realized this linkage and today, China's population of internet users, already the world's second biggest after USA, has jumped nearly by 20% over the last year, to 123 million. (Two thirds of their online population is using broadband). For India too, planning for broad band enabled telecentres/e-kiosks to provide a basket of telecom services for e-government, e-markets, e-banking, distance learning, medical services and entertainment etc, through OFC or possibly through Wi Max/Satellite for rural areas is extremely important¹⁶. (The total number of broadband connections in India was only 2 million at end of November 2006) The Indian Government recognizes that broad band services contribute significantly in growth of GDP and enhancement in quality of life through societal applications including telemedicine, tele-education, e-governance, employment generation and entertainment. Broad Band Policy announced in October 2004 had a vision of covering 20 million broad band subscribers by the end of 2010 .The CSC program aims at public access to broad band services.

- **Common Service Centres-Another Example of PPP**

Indian Governments Common Service Centre Program which is on of the mission mode projects under NEGAP envisages setting up of 1,00,000 CSCs by March 2008. The objective of the CSC Scheme is to integrate the commercial goals of private sector with the larger development goals of the State as well as the Nation The project is proposed to be implemented by the Department of Information Technology through a Public Private Partnership. The one lakh CSCs, are expected to give a boost to development by helping to bridge the digital divide. The project is expected to substantially extend the reach of digital services and economic opportunities into the rural and remote areas of the country. They are to be set up at a total cost of Rs. 5742 crore. Of this, the Government of India's outlay would be Rs. 856 crore, and the State Governments' share Rs 793 crore. The balance amount of Rs 4093 crore is expected to come from the private sector. The Scheme is aimed at making all government services accessible to the common man in his locality. CSC is one of the three infrastructure pillars of e-governance which the government is committed to building, to ensure "anytime anywhere" web enabled delivery of government services. The other two pillars are the State Wide Area Network Connectivity (SWAN), which has already been approved by the Government at a total cost of Rs.3,334 crores, and State Data Centres. The CSC which will be linked to the SWAN node at block level will be the front-end for delivering a range of government services, including those enabled through the 27 Mission-Mode Projects (MMPs) under the NeGAP.

Under the project, the CSCs in one-lakh villages will be broadband Internet enabled and would offer a basket of Government-to-Citizen (G2C) and Business-to-Customer (B2C) services. The Government is putting in place necessary arrangements to provide reliable broadband connectivity (256 Kbps) up to the CSC level. The one lakh CSCs will cater to six lakh villages in the country i.e. at **least**

¹⁵ Uppal.M, Wireless- key to rural connectivity, Economic Times dated 19.12.06

¹⁶ For more details on importance of village e-knowledge centres, see Archana.G.Gulati,, "Empowering Rural India. From Pipe Dreams to Reality, Kurukshetra, Vol 54.

one CSC in a cluster of six villages. The CSCs would provide high quality and cost-effective video, voice and data content and services, in the areas of e-governance, education, health, telemedicine, entertainment as well as other private services. A highlight of the CSCs is that it will offer web-enabled e-governance services in rural areas, including application forms, certificates, and utility payments such as electricity, telephone and water bills. Other significant public and private services that can be accessed through these centers would be remote consulting for healthcare, e-enabled vocational training, market and supply chain linkages, rural BPO, agricultural price and weather information etc. The CSCs are thus envisaged to act as change agents in accelerating integration of the rural masses into the economic mainstream of the country. While the project is a Central Scheme aimed at covering the whole nation, its implementation is decentralized enabling entrepreneurship to flourish locally. The Scheme creates a conducive environment for the private sector and NGOs to play an active role in implementation of the CSC Scheme, thereby becoming a partner of the government in the development of rural India . The PPP model of the CSC scheme envisages a three-tier structure for the States. At the first (CSC) level would be the local Village Level Entrepreneur (VLE - loosely analogous to a franchisee). At the second/middle level would be an entity termed the Service Centre Agency (SCA – loosely analogous to a franchiser that will be responsible for a block of 200-500 CSCs). At the third level would be the agency designated by the State to facilitate implementation of the Scheme within the State. The CSCs are expected to create one lakh direct jobs and 2-3 lakh additional indirect jobs. The scheme, when fully operational, will help people enjoy higher disposable income achieved by reducing time and costs in obtaining the government and private services, and through enhanced employment opportunities available digitally

- **Urgent Need For A Rural Telecentre Boom along Commercial Lines-Still More PPP needed:**

Even though 1,00,000 Common Service Centres (CSCs) are being set up under National e-Government Action Plan, the plan to set up USO funded Telecentres (PTICs and HPTICs) must carry on albeit with required modifications to avoid needless duplication of effort. The newspapers tell us that amongst the host of initiatives to spur and support the growth of the burgeoning IT industry in India, promotion of IT readiness in satellite towns and small towns through necessary physical and social infrastructure is next on the anvil. The cities are already under infrastructural strain and their manpower supply is insufficient to fuel IT industry's demand. It is reasonable then that we must hurry to train and equip rural areas as the next logical stop for feeding the ever hungry Indian IT Industry with required inputs. This future trend has already become reality in the Khizanur village in Tamil Nadu where a dedicated unit is processing data for a Chennai based BPO. It employs many local young people who would have otherwise migrated to cities.¹⁷ One lakh CSCs alone cannot take care of this aspect. The implementation of these rural telecentres should be along the lines of the successful STD PCOs initiative of the Government¹⁸. These multiple rural telecentres should be commercial ventures for provision of all types of services such as ATM, internet, fax and telephone. Internet must be a gateway not only to e-government services but also to e-markets, e-banking, e-education, farming and

¹⁷Chambers, An Emerging Interactions Economy, The Economic Times, 18.9.06

¹⁸Not only BSNL but RIL, TTS and Idea have franchised rural PCOs which have proved to be a very successful business model for rural entrepreneurs.

meteorological information, health, entertainment and computer training. Private initiative in this field must be encouraged through USO funding.

Private Hardware, Software and Entrepreneurship: To the extent possible rural entrepreneurs should be encouraged to set up telecentres. There is ample scope to factor in gender and socially backward class aspects in this rural entrepreneurship model. The USO Fund could support both broad scale projects intended to develop various telecentres under one organization as well as individual projects requiring assistance for one community. Another good option is USO funding for rural co-operatives/NGOs interested in taking up this activity.¹⁹ Not many of us are aware that there are over five lakh cooperative societies in India with an overall membership exceeding 22 crores. Funding of rural telecom cooperatives for telecentres has been successfully carried out in USA for a long time. In India NGOs such as N logue are already providing e-service centres. Dairy/agricultural cooperatives such as Amul too are providing such services in some parts of the country. Agro based industries have a high stake in reaching out and forming long term partnerships with rural suppliers. Thus, if telecentres were to be established it would be reasonable to expect that all sectors/organizations which can deliver services through such a telecentre would participate in making the necessary investment for establishing such kiosks and developing content²⁰. An excellent example is ITC's e-Choupal aimed at reaching out to farmers and rural markets through various e-enabled programs. Many private companies have successfully developed and supplied rural centric software solutions in one or more state and are advertising their solutions as available on demand e.g. the Jaikisan.org group, Viramati Software and Telecommunications Ltd etc. With USF funding available, rural entrepreneurs could utilize the available expertise of these agencies to set up rural telecentres. Government agencies and financial institutions are already working steadily towards e-enabled services. Thus the required content is already being developed at a rapid pace. IT giants such as Wipro and Microsoft have shown interest in reducing hardware and software costs for rural broadband and connectivity projects. The software and hardware solution providing organizations which meet the criteria laid down by USF administrator can be empanelled with DOT. (Criteria could include tie up with a minimum number of banks, insurance companies, marketing agencies etc). Proposals could then be submitted by Cooperatives/NGOs/rural entrepreneurs to create local telecentres under a franchisee model, with part USO funding. Once e-kiosks/ telecentres come up and gain popularity more and more players would enter the fray to provide marketing and entertainment content suited to rural needs which in turn would lead the telecentres towards self sustenance.

One possible configuration is as depicted in the figure below whereby the 5/6th remaining villages in the block (un served by the 1,00,000 CSCs)²¹ would be connected by the USOF supported telecom operator to the CSC and this Universal Service Provider (USP) would provide broadband connectivity to all franchisee telecentres as well as to rural schools, health centres, libraries

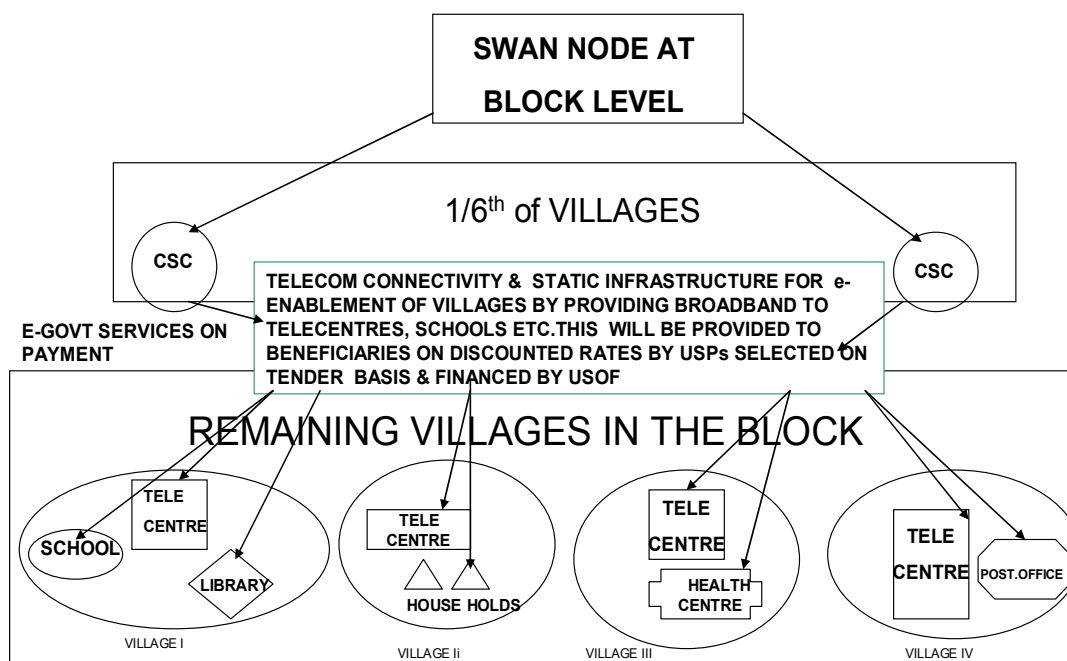
¹⁹ An excellent example of such PPP is seen in West Bengal where Grameen Sanchar Society an NGO, in association with Bharat Sanchar Nigam Ltd (BSNL) has launched the GRASSO, a Wireless in Local Loop (WLL)-based PCO project in Rural Areas. The Rural CDMA PCO Phone is to be used to usher in vital connectivity in terms of both voice & data access to the people in hitherto telephone dark areas. The objectives GRASSO is to usher in a business process reengineering in the lives & livelihoods of Rural Bengal, which was producing agri products without getting remunerative prices. (www.grassoportal.com)

²⁰ Bhatnagar S, Enhancing Telecom Access in Rural India: Some Options, Paper presented at India Telecom Conference, Stanford University, November 2000.

²¹ Under the CSC program one lakh CSCs at present will cater to six lakh villages in the country i.e. at least one CSC in a cluster of six villages.

and rural households. There would be no adverse impact on the viability CSC program as all e-Government services would be sourced through the VLE /CSC on payment basis. In fact it would create a win-win situation whereby even more people would be able to access e-Government services conveniently and revenue generation for CSC would increase manifold.

USO FUNDING FOR TELECENTRES



For broadband connectivity of telecentres in rural and remote areas, tapping into the telecom infrastructure of Power Grid Corporation of India Ltd and Rail Tel is also an option to be seriously explored. These are bodies already in the process of implementing impressive rural infrastructure roll outs. It was recently reported in ‘The Hindu’ that the global power specialist Schneider Electric has launched a pilot project to provide high speed internet access over power lines. This technology could bring down the cost of broadband connectivity by 40-50% and would also facilitate internet access to hard to reach rural areas, with their vast untapped market. Connectivity providers would be directly subsidized by the USO Fund to establish and maintain the network and they in turn would provide discounted services to the rural entrepreneurs/NGOs/cooperatives to connect telecentres.

Micro Credit and Power: In case of e-kiosks/telecentres rural micro credit institutions would have a crucial role to play in providing part of the initial capital to rural entrepreneurs (preferably women and youth)/cooperatives). In this regard, it is heartening to note that the NABARD sponsored Self Help Group (SHG)-bank linkage programme in India has overtaken even the internationally better known Grameen Bank in terms of successful micro financing of rural SHGs²². Entrepreneurs setting up multipurpose Telecentres could be eligible for financing from National Rural Employment Guarantee Scheme, Sampoorna Grameen Rozgar Yojna etc. The aspect of powering telecentres in electricity

²² Ghate P, “Importance of Bookish Knowledge” Economic Times, July 2006

starved villages would be best solved by providing a subsidized renewable energy source of power such as solar power. This could easily be arranged by DOT in collaboration with Ministry of Non Conventional Energy Sources.

Conclusion

Telecom Sector reform by way of privatisation and liberalisation has created an explosion of teledensity in urban areas, but with 70% of the country's population residing in its 6.07 lakh villages, we cannot expect to realize significant gains from ICT as long as rural teledensity lags at a level of below 2%. It is a proven fact that teledensity and economic growth are closely and positively correlated. To sustain and exceed an 8.5 % growth rate and to ensure inclusive growth, expediting rural connectivity with its tremendous positive pay offs is absolutely imperative. Realizing that the incumbent PSU alone cannot close the access gap, the government introduced USO funding to provide public access through VPTs and RCPs by way of PPP. Similarly the Government has effectively involved BSNL and Private Operators in providing individual rural household telephones too. This has given a much needed boost to rural telephony. There has definitely been an increase in focus of telecom operators on rural areas. Implementation of USOF agreements has resulted in a keener understanding of the dynamics of rural telecom markets for both the government agencies as well as the telecom service providers, involved in the process. Private Telecom Operators are becoming wise to the tremendous latent *opportunities* presented by rural markets. This enhanced insight along with the awareness that we are still far from our targeted minimum rural teledensity of 10% by 2010, has led to the realization of a need to not only intensify existing efforts, but also to explore alternative means of accelerating rural connectivity. The aim of bridging the digital divide effectively by focusing on broadband enabled access to information and knowledge for the rural population has led to yet another PPP initiative, the CSC Programme. In addition the Government should consider facilitation of a boom in broadband enabled rural telecentres through an STD PCO type of private initiative model, with help of USO funding. This entrepreneurship model promises tremendous pay offs in terms of socio economic empowerment of the rural population.

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