



## Introduction

In the India country report for GISWatch 2007, we provided an overview of the Indian information and communications technology (ICT) sector, covering areas such as telecommunications, telecentres, community radio and the Indian information technology (IT) industry. This year's report looks at the theme of access, focusing on physical access to technology and the legal and regulatory framework, with special reference to community radio and ICTs in education policies.

In terms of physical access, this report will look at the increase in mobile telephony that has propelled India to second place globally in terms of mobile connectivity. Rural teledensity has registered an impressive growth rate. These developments have mostly been due to low talk-time tariffs, the availability of low-cost handsets and proactive measures by the government to boost rural connectivity.

The roll-out of the government-promoted Common Service Centre (CSC) telecentres has crossed the 50% mark. While it is too early to comment on how these centres will eventually turn out, we present the case study of another state-run e-government telecentre model (E-Gram), which appears to be a good instance of balancing social and economic goals.

In the section which addresses the legal and regulatory framework, we consider community radio. A year and a half after the enactment of the Community Radio Act, licences are just about to be issued. We examine the reasons for this delay, and offer points that need to be considered by the government and community radio sector to properly promote community radio.

A National Policy on ICT in School Education (NPISE) is being formulated, a process which highlights certain complexities relating to policy-making in the fields of ICTs and development. Development actors are often unwilling to engage with ICTs, believing that they undermine developmental principles and processes, while governments are under pressure to frame policy to regulate the use of ICTs. There is also a new set of actors – ICT for development or ICT4D organisations – who are eager to push for the use of ICTs in different sectors such as health and education. Policy-making tends to be distorted due to the different levels of participation by these actors. In the case of NPISE, technology companies who would gain from specific policy choices are part of the policy-making structures, themselves coordinated by ICT4D practitioners, while a large group of well-known education activists in India are conspicuous by their absence.

## Physical access to technology

### Mobile telephony

India has the world's second-largest wireless network with 261.09 million connections. This figure dwarfs fixed-line connections, which stand at 39.42 million (Prabhudesai, 2008).

#### Proactive government measures to boost rural connectivity

Over the past year, national teledensity has registered an impressive growth rate and stood at 26.22% at the end of March 2008 (TRAI, 2008). The boom in mobile telephony, aided by government intervention to improve rural connectivity, low talk-time tariffs, and the availability of low-cost handsets, has helped to boost rural teledensity from 2% in 2007 to 8% in 2008 – an increase of 300% within the span of one year (iGovernment Bureau, 2008). The government has set a target of around 25%, which seems possible to achieve given recent governmental measures to boost rural connectivity. Amongst other things:

- The rules surrounding the use of universal service obligation (USO) funds for promoting rural teledensity have been liberalised. The government has promised to use USO money to fund innovations which will boost rural connectivity, and has called on technology innovators to demonstrate their technologies in pilot projects. The government will fund the commercial roll-out of successful projects (Philip, 2007).
- The government is actively thinking of bringing in “niche operators” to cater for rural connectivity.<sup>1</sup> It has proposed that these operators should be allowed to set up services in rural areas that have less than 1% teledensity, and that they be spared paying spectrum fees (Thomas, 2008).
- The approval by the government to allow private telecom operators to share infrastructure with a view to bring down costs and boost telecom investment in rural areas is bearing fruit. This can be gauged from the recent tie-up between Bharati, Idea and Vodafone, to create a company which aims to set up 70,000 towers in two years, accessible to all operators (Borpujari, 2007).

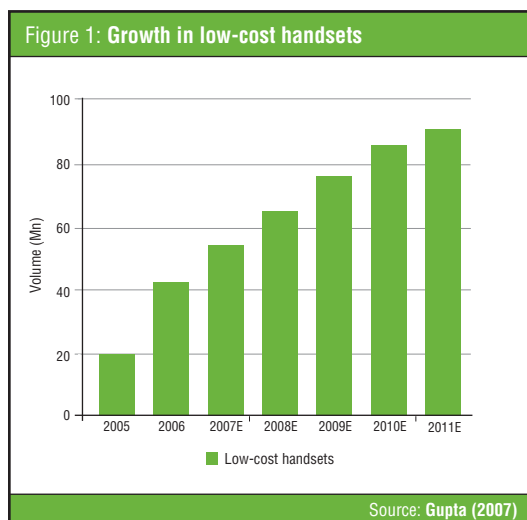
#### Cheap talk-time tariffs and low-cost handsets

In 2006, companies like Bharat Sanchar Nigam Limited (BSNL) and Bharati-Airtel launched schemes such as the

1 Niche operators essentially operate in small areas such as a district, and offer mobile and broadband services.

One India plan, which allowed customers to make calls anywhere in India for just one rupee (INR 1)<sup>2</sup> per minute. Over the past few months there have been a series of price cuts in talk-time tariffs (popularly referred to as airtime in countries like the United States) by all major telecom players, which puts affordable mobile telephony in the hands of consumers. And it is the state-run telecom player BSNL which has not only matched the competition but bettered it. In addition to cutting subscriber trunk dialling (STD)<sup>3</sup> charges on mobile and fixed-line phones by up to 50%, BSNL has reduced STD rates for rural customers to 80 paise<sup>4</sup> per minute, and has brought down the entry-level cost of its flagship Super One India Plan from INR 799 (USD 20) to INR 499 (USD 13), which should bring in further customers (Business Standard, 2008). It has also announced that it is doing away with monthly rental charges in rural areas to boost rural connectivity.<sup>5</sup>

Cellular service providers have also been bundling low-cost handsets along with their mobile connections. Reliance Communications was the first to offer handsets in the range of INR 777 to INR 888 (USD 19 to USD 23) (Prabhudesai, 2007) while Spice Telecom is offering handsets for INR 599 (USD 15). The trend of bundling low-cost tariffs with low-cost handsets is a low-margin/high-volume business. It is expected that by 2010 the number of mobile users in rural India will be as high as 167 million users, and this business model will go some way in helping reach this figure. Figure 1 shows the projected growth rate of low-cost handsets in India (Gupta, 2007).



2 1 USD = approximately INR 40, so one rupee is USD 0.025 or 2.5 cents.  
 3 Subscriber trunk dialling refers to a system allowing subscribers to dial trunk (long distance) calls without operator assistance. For more information, see [en.wikipedia.org/wiki/Subscriber\\_trunk\\_dialling](http://en.wikipedia.org/wiki/Subscriber_trunk_dialling)  
 4 1 rupee = 100 paise.  
 5 BSNL: [www.bsnl.in/newsdetailed.php?news\\_id=419](http://www.bsnl.in/newsdetailed.php?news_id=419)

The net effect of all these measures is that it has brought down the prices of mobile connectivity and allows even poor people to get connected.

### Common Service Centres

The CSCs form an integral part of India's National e-Governance Plan, and are the delivery points to access government services. This programme aims to provide internet connectivity through 100,000 centres to the 600,000 villages of India and is quite ambitious in its goals. As per the latest statistics given by the Ministry of Communications and Information Technology (MCIT), over 61,000 centres have been rolled out, and the rest (40,000) will be rolled out by the end of the year (MCIT, 2008). In quite a few cases, contracts for these centres have been bagged by private enterprises, such as Reliance Communications in West Bengal (EFY News, 2007), and UTL and Orion e-Gov Services Consortium in Jharkhand.<sup>6</sup>

While it is too early to comment on how these centres will turn out, one challenge would be balancing the delivery of government services and social services with limited revenue possibilities through commercial services. IT for Change (ITfC) had an opportunity to study a relatively new e-government telecentre project initiated by the state government of Gujarat.<sup>7</sup> The project, called E-Gram (or E-Village), aims to digitise the state's Gram Panchayats – local government bodies at the village level – and provide services to rural citizens.

### The E-Gram initiative in Gujarat

The E-Gram telecentre initiative is a relatively new one, first piloted in 2001 in one district, but now extended to all districts of Gujarat. The project aims to digitise all the Gram Panchayats in the state. An E-Gram centre is located in a public space, usually a Panchayat office. Each centre has a computer with an internet connection.

While the aim of E-Gram was to digitise Panchayats, the centres that we visited had achieved that and much more, which makes it worthy of mention.

How E-Gram is making a difference:<sup>8</sup>

- E-Gram is one of those few e-government initiatives which links key development sectors to digital technologies, while other similar projects tend to be driven by IT departments independent of a developmental frame of reference. This project works in close proximity to line departments in order to collate and digitise information in the health, education, and social services sectors, amongst others.

6 Government of Jharkhand, Ministry of Information Technology, Common Services Centre Scheme: [www.jharkhand.gov.in/depts/infor/infor\\_csc.asp](http://www.jharkhand.gov.in/depts/infor/infor_csc.asp)  
 7 The case study on E-Gram draws from an ongoing study by ITfC, funded by the Social Science Research Council, New York.  
 8 For a more detailed account of the E-Gram operations and the results of our visits, see [www.indiatogether.org/2008/may/gov-telectr.htm](http://www.indiatogether.org/2008/may/gov-telectr.htm)

- The second promising feature of this project is that while its operations are outsourced, the government retains control over operations. As a result, the profit goals of the private operators are reasonably balanced with social objectives.

Measures for success of the project, as defined by the project itself, include close linkages between development priorities and technology, a good public-private partnership mix, and decentralised governance. These appear to have been achieved to a reasonably satisfactory level by the project, which sets a good example for others to follow.

## Legal and regulatory framework

### *Community radio*

Experiences in India and in other parts of the world suggest that community radio stations give communities an opportunity to voice issues that are of importance to them. They can also be used to mobilise communities on various social issues. Some of the community radio stations in operation in India are Namma Dhwani run by Myrada and Voices<sup>9</sup> (in the state of Karnataka), Ujhas Radio run by Kutch Mahila Vikas Sangathan (Gujarat), and Sangam Radio run by Deccan Development Society (Andhra Pradesh). Many community radio stations have been operated by state-run institutions, such as universities or broadcasting agencies.

The government of India enacted its Community Radio Policy in 2006 to enable community-based institutions to apply for radio licences. Since the enactment of the policy, over 150 institutions have applied for community radio licences, of which 76 have been granted letters of intent, which is a preliminary step towards securing broadcast rights (Ministry of Information and Broadcasting, 2008). However, to date just a single community radio licence has been issued (Iyer, 2008).

Community radio activist Sajjan Veniyoor points out some of the reasons for the delay.<sup>10</sup> He says that while campus radio station<sup>11</sup> applications are processed through a single clearance system, approval of community radio station applications have to go through four ministries, each of which have their own requirements. Even after these clearances come through, there are separate applications for obtaining spectrum and wireless frequency (Ministry of Information and Broadcasting, 2006).

Veniyoor points out that these complexities have led to a situation where a licence which should have been procured within a year is not anywhere close to being approved.

### *National policy on ICTs in education*

Early this year, the Ministry of Human Resource Development (MHRD) initiated a process of formulating a National Policy on ICT in School Education (NPISE). Given the huge potential and (pedagogical) complexities in using ICTs in education, such policy guidelines are quite necessary. However, for meaningful policy formulation, it is essential that the process be driven by education experts who are familiar with the education contexts, challenges and priorities in the country, and who can visualise how ICTs can assist in meaningful academic transactions.

In the case of the NPISE, the policy-facilitating process has been outsourced to private ICT4D<sup>12</sup> organisations which do not appear to have the requisite experience in Indian education. Moreover, the policy-drafting group is dominated by technology vendors, and has very few educationists, even though India has a strong and active education community. Perhaps as a consequence of these structural lapses, the policy draft conspicuously lacks linkages to accepted education philosophies and perspectives,<sup>13</sup> as well as critical challenges being faced today in Indian education.<sup>14</sup> Also missing in the draft policy are possibilities such as the One Laptop per Child (OLPC) scheme (an alternative to the Intel PC, produced specially for use by schools, with features such as robustness, a user interface configured for children, and wire mesh internet access possibilities which makes connectivity easier), open source applications (though at least two states in India have already announced their preference for open source), and open access/open content.

ICT in school education is really a curricular decision, and ICT in education policy is education policy rather than IT policy.<sup>15</sup> What is needed is for education experts to engage with technological possibilities, rather than have technologists with little understanding of education driving this policy.

The issue points to a central principle of policy-making – that public policy needs to be driven by accepted public principles, rather than private or commercial interests, and that the role of public institutions in this process is important. Especially in the context of policies relating to use of ICTs,<sup>16</sup> this has often been ignored and needs correction.

12 Those with a technology or generic “technology in development” background, rather than any expertise in development or education.

13 The National Curriculum Framework, 2005, is one such landmark document in the Indian education scene. It includes a position paper on education technology which has been ignored in the policy draft. Available at: [www.ncert.nic.in/sites/publication/schoolcurriculum/NCFR%202005/contents2.htm](http://www.ncert.nic.in/sites/publication/schoolcurriculum/NCFR%202005/contents2.htm)

14 Such as the dismal state of teacher education or the highly centralised nature of the public school system, which curtails autonomy and local curriculum development. The use of ICTs in education needs to address these challenges.

15 The complete details of the policy-making process and a full set of events can be obtained on the ITFC website: [www.itforchange.net/index.php?option=com\\_content&task=view&id=204&Itemid=1](http://www.itforchange.net/index.php?option=com_content&task=view&id=204&Itemid=1)

16 For instance, in many states, e-government road maps are being made by IT consultants who may not have much familiarity with governance and political processes and structures. These roadmaps often diverge from stated constitutional and governance goals, especially those relating to equity and social justice.

9 Namma Dhwani Community Media Centre: [portal.unesco.org/ci/en/ev.php-URL\\_ID=14615&URL\\_DO=DO\\_TOPIC&URL\\_SECTION=201.html](http://portal.unesco.org/ci/en/ev.php-URL_ID=14615&URL_DO=DO_TOPIC&URL_SECTION=201.html)

10 Interview by email with Sajjan Veniyoor conducted on 11 June 2008.

11 Campus radio stations can be set up by recognised universities and pre-date the current community radio policy.

## Action steps

The one point which stands out in this year's report is the phenomenal increase in rural teledensity, which has gone up from 2% to 8% over the period of a year. Considering the fact that for the last few years the figure of rural teledensity was stagnant at a little over 1%, the present growth rate is nothing less than remarkable. Clearly, proactive measures taken by the government and the availability of low-cost handsets, coupled with cheap talk-time tariffs, are working in connecting rural India. It is too early to comment on the roll-out of CSCs, though undoubtedly it is a programme unique in its scale and ambition.

On the regulatory front, the policy planning and implementation process could be strengthened for the NPISE and community radio policy, respectively, by involving sectoral partners and experts and making the process more consultative.

Specifically, for community radio:

- At this stage, what is probably required is expediting the process of issuing licences as a priority. The single clearance process currently available to campus radio applications could be extended to all community radio applicants.
- Funding seems to be another challenge. The costs associated with setting up a radio station are high, and there are calls for the government to set up community radio support funds which would provide assistance to those licence holders who need it the most. The Namma Banuli scheme enacted by the Karnataka government, which subsidises the cost of starting community radio stations and provides training, is a step in this direction (Radio Duniya, 2008).
- For its part, civil society is doing whatever it can to bring together the community radio sector and address the issue. The formation of the Community Radio Forum, an organisation that promotes community radio by addressing policy issues, and provides training to community radio station operators on practical aspects of programming, editing and broadcasting, is one initiative. But there is room for other interventions.
- Other challenges – such as lifting a ban on broadcast news and current affairs, as well as restrictions on foreign funding – need to be faced down the road. But for the present it would suffice to say that the real challenge lies in ensuring that licences are issued, and the entire process of policy-making becomes more clear and transparent. ■

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