

## Country reports



# Introduction

Alan Finlay

The contrast between the countries covered by the 22 reports included here is striking. No fewer than four regions are represented: Africa, Asia, Latin America and Eastern Europe, with one report from a Western European country. The countries are diverse linguistically (only six have English as an official language; five of these reports were translated from Spanish, and one from Portuguese), geographically (Brazil's gargantuan 8.5 million square km compared to Bosnia Herzegovina's 51,000 square km) and demographically (Pakistan's population of 160 million versus South Africa's 47 million). While countries like India can boast a rapidly developing information and communication technology (ICT) infrastructure, post-war countries such as the Democratic Republic of the Congo (DRC) or Bosnia and Herzegovina begin from a very low infrastructural base. As OneWorld South East Europe (Bosnia and Herzegovina) says, this "[affects] ordinary life."

But these reports show that despite these differences, when it comes to ICTs for development, there are some striking similarities between the countries. Most immediately, and putting Spain aside, they are "developing" countries, each showing obvious evidence of the "digital divide" which impacts on the majority of the people negatively. In India only parts of the country are benefiting from the perhaps unprecedented growth in the country's ICT sector. And, as RITS puts it, the absence of a people-orientated policy framework in Brazil runs the risk of "condemn[ing]" the vast majority of people to "eternal disconnection."

What all of these countries also have in common is their rapid emergence into a global information society that is driven by myriad, interconnected, and often competing factors. As Alternatives (DRC) shows, even war-ravaged countries are potential markets for multinational corporations. Brazil, among other Latin American countries, suggests that markets that are opened up to international competition (the "policy factor") are not necessarily acting in the best interests of the country. Liberalisation, some of these reports contend, can come at a cost; it is not simply a *prima facie* good.

The reports suggest several other commonalities between the countries represented here that can perhaps be taken as typical of the ICT policy-development environment in many developing countries.

## The lack of a clear ICT vision

Many of the countries lack a clear ICT vision for their future. This can play havoc with any attempt to forge a cogent approach to infrastructural development (such as building a broadband backbone in a country) or developing a coherent regulatory framework to govern markets effectively.

The absence of a clear vision impacts immediately on ICT issues that are often perceived as the "soft" ICT issues – such as language, gender, local content, citizens' rights, and support for differently abled people. These are issues that are, as Pangea (Spain) suggests, "difficult to measure," but that should form an integral part of any long-

term ICT strategy in a country right from the start. For RITS, this does not happen by accident, but begins with accepting that "public policy expenditures in leveraging ICTs for human development are not costs, but *essential investments*."

## A lack of capacity, skills and awareness in government and civil society

One contributing factor to this lack of vision is a lack of institutional capacity in a country (whether in civil society, the government or even the private sector). While Nodo TAU (Argentina) finds that civil society organisations have far greater awareness and know-how and a more sophisticated perspective on ICTs than the government, they lack the coordination necessary to have a meaningful impact on policy development. For Bytes for All, Pakistan shows a "serious lack of capacity" in a range of fields that needs to be attended to in order to impact on inequalities in access to ICTs. Alternatives found that the recent (mis)management of ICANN requirements in the DRC shows a clear lack of capacity in the government and the national operator to cope effectively with important national ICT resources.

For some countries, such as South Africa, civil society participation in the World Summit on the Information Society (WSIS) was erratic, often attributed to a lack of awareness among social advocates of the importance of ICTs, and the ICT policy environment, to their work. WOUNET found that although the political will existed in Uganda, there is also a lack of awareness of the advantages of ICTs, coupled with a low level of skills. With the lack of skills, awareness and capacity, the ability to act is hamstrung.

## An unsettled legislative and regulatory environment

The lack of a coherent ICT vision for a country inevitably means a haphazard ICT policy environment. The reports show that the development of the legislative and policy environment can be steadied by regional agreements. While some suggest that the WSIS acted as a catalyst for a fresh interest in ICT policy development at the national level (and spurred new interest from civil society), other regional agreements, such as the Regional Action Plan for an Information Society in Latin America and the Caribbean (eLAC2007), have also had a positive impact on policy development.

However, the impact of these regional processes depends on the level of buy-in from affected countries. While there is a sense that some of the binding force behind the WSIS was the "moral" momentum behind the Summit (governments that were not part of it joined the process, those that did not initially include civil society came to recognise the value in a multi-stakeholder approach, etc.), it can also be said that a regional plan such as the New Partnership for Africa's Development (NEPAD) *lacks* the comparable presence to guide and direct ICT development in Africa. Certainly, in countries like Uganda, civil society actors appear to have rallied behind the WSIS Action Plan, and not behind NEPAD's vision for ICT roll-out.

Conversely, for Romania, Croatia and Bulgaria, EU accession requirements have been significantly more important than any commitments made at the WSIS.

A policy vacuum means fragmented implementation. Despite the burgeoning ICT sector in the country, India has no independent agency to address all areas of ICT policy. In Colombia there is little cooperation between the ICT programmes in government departments, despite attempts by the government to synergise its implementation efforts. The Kenyan government has lacked political will and leadership in the past, a status quo reflected in the absence of a national ICT policy (until recently) and in the ineffective coordination between government departments.

When a policy framework has been developed, it often lacks a developmental perspective. Colombia, for instance, lacks a telecommunications law that ensures access to the information society for all citizens. Ecuador's *White Paper on the Information Society* holds great hope for civil society activists in that country. It has been, according to the Association for Progressive Communications' LAC Policy Monitor, developed in an inclusive, democratic and transparent way, reflecting the diverse approaches in the different sectors in that country. Despite this, a "common strategic development perspective" is still lacking, as are mechanisms to ensure that engagement happens under "equal conditions."

For LaNeta, ICT policies in Mexico offer a leg up for business – and even help to strengthen monopolies – at the expense of the needs of the country's citizens. Instead of a people-centred approach, the state "auctioned off the nation's wealth without taking communities into account."

Brazil's privatisation process did not take into account global shifts in the ICT landscape, and may have increased monopolistic practices in the country. Even ICTs directly related to national security are dependent on commercial satellite connections operated by multinationals.

These reports suggest that achieving universal access is a deliberate step that needs to be taken: it can rarely be left to market forces alone. According to IT for Change, the ICT industry in India has not improved the poor distribution of ICT resources across different social and linguistic groups, geographic regions and classes. The failure to develop policy which responds to these concerns has resulted in a situation where some enjoy "first-world" ICT services, while most "subsist" with little or no ICT access to speak of. Access for women and differently abled people remains a problem.

The reports show that a change in government, while providing an advocacy opportunity for some, can often contribute to a fragmented policy space. ZaMirNet (Croatia) puts it bluntly: "National strategies are not well coordinated and strategic documents often get tossed in the garbage bin with a change of government."

Developing and sustaining a clear people-focused vision is not always easy. While South Africa has a history of vibrant civil society engagement in politics and social development, it is frequently chided for its lack of policy coherence. As the Link Centre suggests, the closest it comes to an overall national ICT policy framework is a now ten-year-old document, the 1996 *White Paper on Telecommunications Policy*.

### **An immature relationship between civil society, business and the state**

Pangea notes that a necessary condition for citizens to feel a part of the "construction" of the information society is their "participation as subjects" and not "merely as objects of development measures." The irony of launching an e-government initiative in order to bring the people closer to the administration of the day, while not creating

mechanisms for proper civil society (or private sector) participation in policy development or infrastructural roll-out, should not be lost.

While KICTANet (Kenya) shows an active and constructive relationship between government, civil society and the private sector is possible, in many instances the relationship is imbalanced, or immature. In both Romania and India, the lack of civil society participation means that a technocratic or industry-driven policy perspective prevails. This comes at a price. StrawberryNet (Romania) has found that issues such as gender rights and free and open source software (FOSS) are absent from public discourse on ICTs. And as ZaMirNet has found: "Most citizens are reduced to mere consumers of telecommunication services."

Colnodo (Colombia) suggests that a fragmented strategic vision for ICTs, which leads to a "disconnect" between government departments, makes civil society engagement with the state difficult. At the same time, transparency is lacking in a post-conflict country such as Bosnia and Herzegovina. Although it participated in the WSIS, the outcomes remained "invisible" to the general population.

While the LAC Policy Monitor feels that the WSIS has played a significant role in convincing the government in Ecuador of the potential of multi-stakeholder participation in the policy environment, this has not been true for all countries. Civil society and private sector participation was absent in Pakistan's participation in the WSIS, and the results show: the country is described as a "graveyard of many failed and unsuccessful projects" which the government "seems committed to implementing... on its own."

ArabDev says Egypt lacks public consultation forums and mechanisms that ensure public participation in ICT policy development. Ways to contest regulatory decisions are unclear. While "important spaces" have been opened up in Peru, these have yet to become inclusive, and continue to relegate citizens to the role of "spectators and not protagonists." Nigeria is described as "deprived... of much-needed robust consultation and discussions." Only recently has civil society begun to make its presence felt.

Alternative civil society spaces are being formed out of necessity. In Bangladesh, "CSOs are networking and re-grouping among themselves to project a single voice to the decision-makers." In Brazil it is rare for civil society to be invited to participate in policy processes. However, its National Digital Inclusion Workshop, held annually since 2002, is a forum where "human-centred" ICT policy can be articulated.

### **The responsibility of civil society**

"We cannot content ourselves with the limitations of underdeveloped countries," writes RITS. "While we have different levels of resources available to us compared to developed countries, our ability to do much better is indisputable."

Civil society, as the Foundation for Media Alternatives (FMA, Philippines) reminds us, is opportunistic in the best sense of the word. The WSIS has impacted positively on that country's policy "ecosystem", and civil society organisations "took advantage" of the Summit's processes, "advancing multi-stakeholder approaches locally."

These reports show that key areas of concern for civil society include FOSS and open standards, gender issues, rural access, intellectual property, localisation, local content, and community access to ICTs and media, among others. Each of these requires specific knowledge, expertise and strategies for engagement, often with regional implications. Experiences in Argentina and Kenya, among other countries, show that civil society needs clear goals and specific strategies to impact on the policy process and, as Nodo TAU puts it, to "promote breakthrough legislation."

Even when this breakthrough legislation is achieved, Colnodo finds that important issues, such as promoting a gender perspective, remain elusive. Colombia's three ICT programmes do not have affirmative action policies that favour vulnerable groups, such as women, youth, the elderly or the country's ethnic populations. These are specific areas of intervention for civil society.

The LAC Policy Monitor feels that civil society can take on a regional monitoring role, while improving its capacity for direct engagement. It needs to advocate for policies independent of the government of the day. These policies, as RITS puts it, should be "future proof".

TIC.pe (Peru) poses several questions for non-governmental actors: What, it asks, is our responsibility? And how can we move from reflection to direct action? The information society is a global resource. It calls for a "deepening political dialogue" so that it can be safeguarded for future generations.

### **A tool for leveraging change**

The 22 contributors to this year's Global Information Society Watch (GISW) report were encouraged to develop their reports in line with their own advocacy work. While they were given guidelines, their approaches were often different. Bytes for All (Bangladesh), for exam-

ple, has created a "living and collaborative document", even publishing it as a wiki. IT for Change interviewed key civil society stakeholders in order to offer a civil society "voice". Pangea has elected to interrogate the WSIS stocktaking database, and to ask: Does it say anything useful? For the FMA, its report reflects the perspective of "advocates-in-action".

For some contributors this was the first opportunity they have had to develop an overview of the ICT environment in their country – and to articulate ways in which civil society can engage this environment. The process of writing the report opened new vistas for them. For others, ICT policy advocacy has formed the mainstay of their civil society activism.

Most contributions were informed by the awareness that the GISW report will be an annual publication. Future reports will build on and clarify what has been developed here.

These reports occur in the wake of important global processes such as the WSIS, and the advent of others, such as the Internet Governance Forum. We hope that they offer a perspective that many working in the local, regional and global ICT policy arenas can begin to call home, a way of deepening understanding and a tool for leveraging change. ■

# ARGENTINA

## Nodo TAU<sup>1</sup>

Daniilo Lujambio, María Florencia Roveri, Flavia Fascendini, María Victoria Escobar, Milena Romano and Laura Moya



## Introduction

The concept of the information society is frequently included in the initiatives of different Argentine government agencies. Nevertheless, in Argentina there is no consistent and coherent public policy for the development of the information society.

The national government has participated in both meetings of the World Summit on the Information Society (WSIS). The delegation to the first summit was led by the Ministry of Foreign Affairs, which attempted to bring together a working group that was to include civil society organisations (CSOs). This group was short-lived. In the second phase the representation of the country fell to the Ministry of Education.

Argentina is currently participating actively in the process of coordinating the Regional Action Plan for an Information Society in Latin America and the Caribbean (eLAC2007), and is responsible for three working groups – Creative Industries, Telework, and Financing – with different areas of the government attending to each.<sup>2</sup>

## Research methodology

In writing this report we prioritised certain aspects of the wide field of policies related to information and communication technologies (ICTs). We begin with an analysis of statistical information regarding existing infrastructure, an initial factor in the widening or closing of the digital gap. Then we analyse the educational policies of the national government. Finally, in addressing the involvement and participation of civil society, we describe official e-government initiatives, as well as strategies developed by social organisations in relation to access to public information and the passing of a new broadcasting law.

Our primary sources of information have been the websites of government institutions. For our analysis of these sources we have identified indicators legitimated by the scientific community<sup>3</sup> and also relied on research and articles by journalists which enrich the analysis of statistical and documentary sources. Information regarding actions promoted by civil society is based on submissions by those same organisations as well as media releases.

## Country situation

### National infrastructure

Statistics from the National Communications Commission reveal that teledensity (the number of landlines per 100 inhabitants) did not vary between 1999 and 2004 (SECOM, 2007). According to a 2005 report by the International Telecommunication Union (ITU), this indicates coverage of 22.8% of the population of Argentina (ITU, 2005a).

In contrast, mobile phone density has grown at a very rapid pace. Looking at a similar timeframe, in March 1999 there were 2.8 million mobile phones, and in March 2006, there were approximately 23.9 million, an increase of 854%. In the last year alone another 12 million mobile phones were added to the national totals. These statistics place Argentina, in March 2005, as the country with the third highest mobile phone density in Latin America after Brazil and Chile (CNC, 2005).

The World Economic Forum tries to measure ICT development more broadly, using the Networked Readiness Index (NRI), which attempts to measure how prepared a country is to benefit from better use of ICTs. According to this indicator, in 2005 (latest available data), Argentina was ranked 71st globally and 9th within Latin America. If this index is disaggregated and we look specifically at infrastructure, our country ranks 53rd globally (WEF, 2006).

Data regarding access to the internet is not available as far back as 1999, but from the end of 2001 to the end of 2005, residential access increased by 143.9%, for a figure of 2.2 million residences with access in December 2005 (INDEC, 2006).

Nevertheless, it is important to remember that Argentina is a vast country, incorporating very different realities. Table 1 reflects current disparities, and was developed based on official data from the Secretariat of Communications and the National Statistics and Census Institute (INDEC). Provinces with less teledensity generally correspond to those with a larger proportion of the population living in poverty and extreme poverty. It is also relevant to note the huge difference in lines per square kilometre reflected in the table.

Some consultants indicate that there are 2,250 towns with only one telephone line that provides semi-public long-distance service, and at least 500 towns or areas without a single telephone line (Simonetti, 2006). The development of communications network infrastructure by the two large telephone companies in the country, Telecom and Telefónica, is based on the criteria of developing only profitable areas.

The situation in poorer areas would be more serious were it not for telephone cooperatives which operate in small localities, and which have developed networks to connect areas using criteria other than mere profitability. In Argentina there are approximately 350 of these cooperatives, which provide 10% of existing landline capacity. The role of cooperatives is very important, because their presence guarantees the employment of workers from the localities in which they operate and the development of national industries associated with them.

It is worth highlighting that the absence of fixed networks in poor areas has meant that today a great many mobile phones are in the hands of poor or extremely poor Argentines, as this is the only means of communication available to them.

### Government actions

In 2000, Decree 764 established the country's "universal service" goals. One of these is that the "inhabitants of the Republic of Argentina throughout the national territory are able to access telecommunications services, especially those who live in areas where access is difficult, or who have physical limitations or special social needs" (CNC, 2000).

1 <www.tau.org.ar>.

2 The coordinator of the Argentine delegation to eLAC2007 is Olga Cavalli, adviser to the Office of Technology Policies of the Ministry of Foreign Affairs. Cavalli is also coordinating the working group on Financing, while the Creative Industries group is being coordinated by Pablo Recasens, the president's press secretary, and the Telework group by Viviana Laura Díaz of the Ministry of Labour.

3 European Statistics Laboratory (<esl.jrc.ec.europa.eu>), World Economic Forum (<www.weforum.org>), ITU (<www.itu.int>).

**Table 1: Teledensity by province**

Province	Teledensity	Inhabitants	Area (sq. km)	Lines/sq. km
Buenos Aires – Metropolitan area	37.00%	11,800,000	3,833	1,139.06
Tierra del Fuego	26.00%	100,960	21,263	1.23
Neuquén	23.00%	474,155	94,078	1.16
Santa Cruz	23.00%	196,958	243,943	0.19
Santa Fe	22.00%	3,000,701	133,007	4.96
La Pampa	22.00%	299,294	14,344	4.59
Córdoba	22.00%	3,066,801	165,321	4.08
Chubut	21.00%	413,237	224,686	0.39
Buenos Aires w/o Metropolitan area	21.00%	830,404	303,668	0.57
Río Negro	18.00%	552,822	203,013	0.49
Mendoza	17.00%	1,579,651	148,827	1.80
San Luis	16.00%	367,933	76,748	0.77
Entre Ríos	14.00%	1,158,147	78,781	2.06
San Juan	12.00%	620,023	89,651	0.83
Tucumán	11.00%	1,338,523	22,524	6.54
La Rioja	11.00%	289,983	89,680	0.36
Jujuy	11.00%	611,888	53,219	1.26
Catamarca	10.00%	332,390	102,602	0.32
Corrientes	9.00%	930,991	88,199	0.95
Salta	9.00%	1,079,051	155,488	0.62
Misiones	9.00%	965,522	29,801	2.92
Chaco	8.00%	984,446	99,633	0.79
Formosa	7.00%	486,559	72,066	0.47
Santiago del Estero	6.00%	804,457	136,351	0.35

Source: INDEC and the Secretariat of Communications (CNC).

The mechanism for the implementation of this goal was very interesting. Telephone operators were to establish a fiduciary fund to which they would contribute 1% of their turnover. This fund would be used to develop the network in areas that were not profitable. If businesses did not want to contribute to the fund, they could opt to build the necessary networks themselves. An audit would estimate the value of the investment made and would consider it as a contribution to the fund. Not only did the telephone companies not comply with this commitment, but they also passed the costs on to their customers by tacking on a 1% charge to support a fund which was never created.

Beginning in March 2006, the current government forced companies to refund customers the 1% that they were spuriously charged. Many mobile telephone companies that incorporated the 1% into their billing were unable to return the full amount to their customers due to the mobility of portfolios and changes of ownership that characterise these companies.

On 14 August 2006, the national ombudsman filed a legal suit asking the government to bring the fund into compliance (Clarín, 2006). This is an excellent example of a development instrument that was misappropriated through collusion between government actors and private communications enterprises.

In 2004 an intention to foster the creation of a new telephone company, with the support of the government, was announced. The idea was to create an Argentine firm that could compete freely with foreign private companies. The core of this business was to come from an agreement between the two federations of cooperatives: FECOTEL and FECOSUR.

This was not to be a state-owned enterprise: the capital was to be private but of national origin, in keeping with the creation of a new national middle class. Although the government was not to invest capital, it promised to provide bandwidth that was vacant on the spectrum, which is necessary for mobile telephone services. This was a

key strategic move that gave the new enterprise a clear tool for economic development, given the difference in coverage rates between landlines and mobile phones in our country.

The advantage of having a new private operator in the game was that it would take power from the two international operators – it was to be an operator financed with national capital and of cooperative origins, which would align itself in better harmony with the communications policy that the government wanted to pursue.

According to various experts, this idea died in October 2004 when Telefónica informed the government that it would move ahead with its plans to invest EUR 800 million (over USD 1.03 billion). The cooperatives continue to wait for the promised part of the spectrum to be awarded to them, but the government has now floated the proposal that they will give that portion of the spectrum to FECOTEL and FECOSUR separately, and other portions to other actors who want to offer the service. Obviously, the cooperatives were not favoured in this move.

Looming much closer is the movement that appears imminent on two issues crucial to telecommunications: the supposed annulment of the suit against the Argentine government by Telefónica before the International Centre for Settlement of Investment Disputes (ICSID), and the merger of the two large cable operators in the country.

Using the 2001 Argentine economic crisis that ended the fixed 1-to-1 Argentine peso-US dollar parity as an excuse, Telefónica and Telecom filed suits against the government in the ICSID courts. The Telefónica suit is better known because it is for a larger amount: USD 2.384 billion. The annulment of the suit received media coverage on several occasions but has never actually been put into effect.

In April 2006 a public hearing was held which resulted in a memorandum of understanding between the Argentine government and Telefónica that contained, for example, a reduction in hours for reduced-price calling and the tripling of the cost of incoming international calls. Both measures meant an increase in prices and, as was denounced in the national House of Representatives, the memo did not mention the collection of fines levied against the company nor the commitments undertaken in relation to infrastructure development (ARI, 2006).

The merger between Cablevisión and Multicanal – the two largest cable television operators, which now monopolise the sector – was officially announced on 28 September 2006. Together they make up a network of broadband services with a strong competitive edge. On that same day, the president of Telefónica International met with the president of Argentina and, according to several media reports, again emphasised the effort that Telefónica was making to suspend its suit before the ICSID, and the company's interest in the passing of a new communications law that would allow telephone operators to offer audiovisual services, thereby competing with cable television companies (Premici, 2006).

### Community Technology Centres

In 1999 the government put forward a digital inclusion programme called "Argentin@Internet.todos" [Argentin@Internet.everyone] which consisted of 1,350 Community Technology Centres (CTCs) in social, educational or governmental organisations in less privileged areas of Argentina.<sup>4</sup> These organisations "hosted" the CTCs, and committed to assigning coordinators, providing training, offering community services and carrying out tasks which would facilitate

the appropriation of these tools. The CTCs were each equipped with five networked computers, printers, a webcam, a digital camera and software (licensed Windows and Microsoft learning tools) as well as the necessary furniture. The programme also provided one-off training to the technical and training coordinators.

After the change in presidential administration in 2000, the initiative was renamed the Programme for an Information Society<sup>5</sup> and the original guidelines were dropped. In many cases connectivity was not provided, and the cost of this service had to be paid for by the organisations, along with the salaries of personnel and other costs.

Seven years later, not much is heard about the CTCs. Many were converted into computer areas for internal use by the host organisation, others were returned due to the impossibility of sustaining them, or were relocated with no better results.

In 2006 a group of approximately 50 coordinators from around the country formed the National Network of CTCs, with two inaugural meetings. The latter of these was funded by the Argentine government with the first economic support it had provided since the installation of the centres. The gathering was held in October in Nono, Córdoba, where the process of legally registering the network was begun.

### Educational policy

The fact that the Argentine delegation to the Tunis phase of WSIS was led by Minister of Education Daniel Filmus is no small thing. Neither is it insignificant that the person responsible for articulating the Argentine position was Tulio del Bono, the secretary of science, technology and innovative production from the same ministry. Also present as noteworthy governmental authorities were the secretary of state for communications, the chief of cabinet of the Ministry of Foreign Affairs, and the Argentine ambassador to Tunisia.

"We are convinced that technology should be a tool for sustainable development, employability and social and economic inclusion" was how the secretary of science began his speech, which also mentioned the Ministry of Education's National Campaign for Digital Literacy and the One Laptop Per Child (OLPC) programme, which Argentina had recently signed up to, as the most significant initiatives in this field. He also alluded to the "creation of a Forum for Competitiveness in Software and IT Services which will give rise to various programmes that will stimulate national production, as will the passing of a national law for the promotion of the software industry, offering financial and tax advantages for businesses in the sector" (ITU, 2005b).

Statements like these demonstrate that political actors in the educational sector approach the field of ICTs as an aspect of training, oriented towards a productive model that aims to develop employment skills in the field of computing. We now turn to a description of the most significant policies of this ministry.

### Infrastructure in education

The Ministry of Education's ICT-related efforts have focused primarily on the National Campaign for Digital Literacy (undertaken during 2004 to 2006) (MECT, 2006a) The campaign is part of the Comprehensive Programme for Educational Equality.<sup>6</sup>

The campaign consisted of two phases. In the first, which was carried out in 2004, 10,200 computers were delivered to 706 schools, 300 technical education centres and 200 teacher-training institutes. In the second phase, which began in May 2005, 20,394 computers

5 <www.psi.gov.ar>.

6 <www.me.gov.ar/piie/>.

4 <www.ctc.gov.ar>.

were distributed to 2,171 educational establishments and connectivity was provided to 5,000 establishments.<sup>7</sup> The proposal did not include the necessary technical support, which led, on occasions, to machines lying unused (PIIE, 2004).

Although the ministry gathers statistics on numbers of schools and teachers nationally and by province, it does not include information regarding technological infrastructure in each school, which makes a statistical analysis difficult. INDEC also lacks up-to-date measurements of these indicators.

Another aspect that has been questioned concerns the agreements and ever closer relationship between the ministry and Microsoft. CSOs that promote free and open source software have followed these developments carefully and denounced negotiations on educational initiatives that have private actors as protagonists (Busaniche, 2004).

### Content and training

One action line that has united all other initiatives of the Ministry of Education since the beginning of its current administration is the strengthening of the educ.ar web portal,<sup>8</sup> created during the presidency of Fernando de la Rúa (1999-2001) with a donation of USD 11.2 million from the Varsavsky Foundation. At that time the project gave rise to questioning due to poor implementation and the speculative movement of funds.

The portal was created with the aim of introducing the internet into schools and using the web as a tool for teacher training and the development of content at different educational levels. Much of its structure is based on blogs where content is developed with high levels of participation.

The programme includes the production of multimedia content, which is accessed through the portal or through thirteen CDs which the ministry produces and distributes free of charge to teachers who request them. There is no data as to the reach of this policy. There is, however, wide recognition of the quality of materials developed on a diversity of topics, such as an introduction to digital literacy, the inclusion of bilingual cultures in the classroom, free and open source software in education, talking about AIDS in schools, etc.

For teacher training, the programme offers training sessions through agreements with national universities. According to information on the site, 600 courses have been offered, providing training to 15,000 teachers from schools that had received computers. The content covered includes the use of new technologies in the classroom, basic PC concepts, internet and email, and educational resources on the web.<sup>9</sup> Another proposal for training is an “e-learning platform”<sup>10</sup> that includes four courses: basic PC applications; the internet as a resource for innovative teaching; communication, society and education; and WebQuest and the management of information. This proposal relies on the teachers’ own connectivity and computer resources, as well as the time and finances they have available, since the Ministry of Education does not count the time devoted to these activities as training hours.

7 <[www.educ.ar/educar/alfabetizacion\\_digital/equipamiento/nuevo.jsp](http://www.educ.ar/educar/alfabetizacion_digital/equipamiento/nuevo.jsp)>.

8 <[www.educ.ar](http://www.educ.ar)>.

9 <[www.educ.ar/educar/alfabetizacion\\_digital/capacitacion](http://www.educ.ar/educar/alfabetizacion_digital/capacitacion)>.

10 Distance learning platform at educ.ar Available at: <[www.educ.ar/educar/plataforma-elearning/index.jsp](http://www.educ.ar/educar/plataforma-elearning/index.jsp)>.

### New national education law

The national education law is currently under discussion. The ministry issued a draft bill which was discussed by involved actors (directors, teachers, unions, civil society) in educational institutions and on a ministry web platform (MECT, 2006b). The teachers’ unions and social coalitions question the purported openness of discussion, given that the time periods for the debate turned out to be impossible to meet.<sup>11</sup>

Conceptually, the inclusion of the phrase “equity and educational inclusion” stands out in the text of the draft legislation, as does the elimination of the reference to education as a “service”, as it was viewed in the previous law. As for the “policies for the promotion of educational equality”, the legislation establishes that “the state shall provide pedagogical, cultural, material, technological and economic resources to students, families and schools in need of such,” widening its objectives from what they were under the previous law (MECT, 2006b, art. 85).

In relation to ICTs, the draft bill mentions the access to and spread of new technologies as one of the objectives of national educational policy (art. 13), in primary (chap. III, art. 27), secondary (chap. IV, art. 31) and rural education (chap. X, art. 55). In defining the “quality of education” (chap. II, art. 93) it establishes that “the access to and mastery of information and communication technologies shall form part of the curriculum content essential for inclusion in the knowledge society.” The legislation recognises the educ.ar site and proposes the creation of an educational channel called “Encuentro” [Encounter], for the production and broadcast of educational television and multimedia materials (MECT, 2006b).

### One Laptop Per Child

Argentina is one of the countries that has been invited to participate in the OLPC pilot project<sup>12</sup> of the Massachusetts Institute of Technology (MIT) along with Brazil, India, China, Nigeria, Thailand and Egypt. The programme consists of the purchase by governments of “a machine specially designed for children: the size of a book, with a colour screen, that does not break if it falls, uses domestic electricity, and can connect to the internet via wireless where there is no telephone service. It has a system that allows the machines to connect to each other even when there is no internet connection”.

Once governments decide to join the project, the machines will be manufactured with donations from companies like Google, AMD, Quanta, Red Hat and Nortel. According to official announcements each one will cost USD 100 (although the latest estimates are that they will cost USD 130).

Argentina will take in a million laptops, which is to say that it will make a USD 100 million investment. The project is managed by educ.ar, which will conduct technical evaluations of the prototype, including hardware, software, connectivity, the educational resources to be used, and the legal-economic framework that the contract implies (Mancini, 2006).

The project has generated controversy from the moment it was announced, with regard to such issues as the investment involved, classroom implementation, methodological strategies to be used, and how teachers will be trained. Another argument centres on the measure’s reach. In Argentina there are 10 million children in the school system. The purchase of the laptops will only cover 10% of them,

11 Forum for debate of the new education law. Available at: <[debate-educacion.educ.ar/ley/foro](http://debate-educacion.educ.ar/ley/foro)>.

12 <[www.laptop.org](http://www.laptop.org)>.



meaning that the project would have to be repeated annually for 10 years to be able to reach all of them, without taking into account the 850,000 who enter the educational system each year. The criteria for distribution of the laptops are also a point of controversy.

Although the government looks upon it favourably and expert voices applaud the initiative, nearly a year after the programme was announced officials are proceeding very cautiously. At the end of 2006 it was announced that 500 machines were arriving in the country.

## Participation

An analysis of the information society stakeholders in Argentina leads to the following general findings:

- An information society is not yet an established topic on the public agenda.
- The CSOs that specifically address topics related to ICT policies are ahead of the government in dealing with these topics. Nevertheless, they have very rarely managed to coordinate the petitions and demands that they put forward to the government.
- There is evidence of a more fluid relationship between government and business than between government and citizens and CSOs.
- The mass media, despite being relevant actors according to this analysis, give the topic only superficial treatment.
- The academic and scientific fields are active in the development of an analysis regarding the information society, though they have little visibility in the community.

In Argentina there are a great number of social organisations, associations and coalitions that acquired greater visibility after what is called the “crisis of 2001”,<sup>13</sup> in the face of the resulting economic recession, social crisis and absence of political leadership. This reality is not alien to the ICT policy arena, for it is these organisations that began to bring visibility to the right to communication and access to information technologies. Many of these organisations have closely followed the WSIS process, and have even participated in it.

## E-government

The evaluation of e-government policies takes on particular dimensions in Latin American countries, due to the insufficient access to technology and competencies necessary for its use, on the one hand, and on the other, the bureaucratic and complex modes by which the government relates to citizens. Advances can be seen along three tracks: national decrees and programmes that declare the importance of the development of an information society; legislation that regulates administrative aspects of the interaction between the administration and citizens; and particular initiatives by provincial and municipal governments which offer services and are acquiring greater technical complexity and use.

Up until 2004 the lack of outreach was pointed to as a drawback to these policies, given that these services were accessible only to those who were already ICT users (Finquelievi, 2004). Currently, however, there is wide outreach being carried out by government agencies addressing the digitisation of their administration, although there

continues to be a lack of promotion of the competencies necessary for citizens to appropriate them. The discourse that accompanies these initiatives, which are often no more than showpieces, centres around the themes of access to public information as a right of citizenship, transparency in management, and the streamlining of procedures through the digitisation of information.

## National Plan

E-government, for the Argentine government, means the use of ICTs to “redefine the relationship of government with citizens, improving management and services, guaranteeing transparency and participation, facilitating access to public information, and supporting the integration and development of different sectors” (Government of Argentina, 2007).

On 27 April 2005, through Decree 378, the National Plan for Electronic Government was approved for the intensive use of ICTs in public administration agencies (Government of Argentina, 2005). The National Office for Information Technologies (ONTI) is the decision-making body in this area, and functions under the Subsecretariat of Public Management of the Chief of the Cabinet of Ministers. The ONTI’s role is to “formulate policies for the implementation of processes for technological development and innovation for the transformation and modernisation of the State” and to “foster the integration of new technologies in the public sector, their compatibility, interoperability, and the promotion of technological standardisation” (Government of Argentina, 2007).

Specific projects include digital signature infrastructure, information security, and technological standards for public administration. The ONTI was also charged with developing the National Government Portal,<sup>14</sup> which organises all of the sectors of the state into a complex structure. It is a body of information that is of interest to citizens, though of little practical value in interacting with the government.

## Legislation

Several regulatory proposals for e-government are circulating in both of the legislative chambers of Argentina. This is the case with digital signature legislation, regulated by Law 25.506 and modified by presidential decree, which defines who is licensed to emit certificates. The legislation defines the relationship between administrations and between the administration and citizens. The private sector is demanding norms that include businesses in the regulation of the use of this tool. There are also proposals to define the legal validity of digital documents, and even the certification of the date and time of documents sent by internet (Government of Argentina, 2001).

Other aspects being considered include the protection of data and private information, an issue which is only regulated in three Argentine provinces (Neuquén, Misiones and Mendoza) and the city of Buenos Aires. Recently the House of Representatives approved a modification to the Criminal Code establishing sentencing guidelines for computer crimes, such as the violation of email, the theft of data or the circulation of child pornography over the internet.

## Participation and lobbying by civil society

There have been occasions when different CSOs have worked in coordination around aspects of legislation that were under question or non-existent. We include in this report two noteworthy cases that have

<sup>13</sup> A period of political instability, with large-scale outbreaks of corruption in government and a severe economic crisis. Looting, strikes and popular protests erupted throughout the country at the end of December 2001. President De la Rúa responded by establishing a state of siege and fierce repression.

<sup>14</sup> <[www.argentina.gov.ar](http://www.argentina.gov.ar)>.

brought together a wide range of organisations connected to the demand for public policies regarding ICTs. Both initiatives have achieved influence to varying degrees and have attained visibility in society.

#### Access to public information

The right to information is included in the “freedom of every individual to seek, receive and impart information,” according to article 19 of the Universal Declaration of Human Rights,<sup>15</sup> and is guaranteed in Argentina by article 75, section 22 of the National Constitution, which gives constitutional hierarchy to international treaties.

Argentina does not yet have a national law which regulates the exercise of the right to public information. Presidential Decree 1172 for the “Improvement of the Quality of Democracy and its Institutions”, passed in 2003, “guarantees and regulates the right of all persons to request, consult and receive information from the national executive branch,” and is based on the premises of “the elaboration of a solid foundation, simplicity and conceptual clarity, and respect for international standards on the subject.” The government has concentrated its outreach efforts for this initiative on the “Mejor democracia” [Better democracy] portal<sup>16</sup> (Government of Argentina, 2003).

The decree establishes mechanisms such as public hearings, publication of meetings held with interested parties, participatory design of norms, access to public information, open meetings with regulators of public services and open and free internet access to the daily edition of the Official Bulletin. Nevertheless, it has been criticised because its scope is restricted to the executive branch and it carries no obligation for the legislative and judicial branches.

Parallel to this, some provincial administrations have adopted specific legislation and a number of municipalities have passed by-laws. In some cases there are laws in effect, in others legislation is pending, while in others discussion of the issue has not yet begun. The website [accesoalainformacion.org](http://accesoalainformacion.org) [[accesstoinformation.org](http://accesstoinformation.org)] has a map which illustrates this legal panorama and provides access to all regulations and pending legislation.<sup>17</sup>

In 2001 the Anti-Corruption Office, which falls under the Ministry of Justice and Human Rights, brought together businesspeople, academics, journalists, government officials, and members of non-governmental organisations (NGOs) in a process called “participatory norms design” to discuss a preliminary proposal to regulate the right to access to public information.

In 2002 the executive branch sent to the House of Representatives a proposal on which consensus had been reached, and which was respectful of international standards and principles. The House approved it in May 2003 and sent it to the Senate in December 2004, but with a great number of amendments that altered the consensus and principles agreed upon.

At that time a group of organisations published a document which critiqued the amendments, arguing that they “do not guarantee that any citizen has access to public information, they facilitate discretionality and strip the law of its meaning, given that the definition of public information is ambiguous, vague and confusing.” In February 2006 the legislation lost parliamentary status (INFOCIVICA, 2006).

15 Universal Declaration of Human Rights. Available from: <[www.unhcr.ch/udhr/lang/eng.htm](http://www.unhcr.ch/udhr/lang/eng.htm)>.

16 <[www.mejordemocracia.gov.ar](http://www.mejordemocracia.gov.ar)>.

17 Dynamic map of the situation in each province and existing laws or proposed legislation. Available from: <[www.accesoalainformacion.org/mapa.php](http://www.accesoalainformacion.org/mapa.php)>.

These organisations issued an outline of the minimum requirements for any law regarding access to public information,<sup>18</sup> and are also working to mobilise civil society to take up the demand for this right. In 2006, for the second year in a row, they promoted the celebration of 28 September as global Right to Know Day, a strategy which reached the mass media and which has opened up an opportunity to foster these discussions.

#### Broadcasting law

Television and radio in Argentina are regulated by Law 22.285, passed in 1980 during the last military dictatorship (Government of Argentina, 1980). The law is based on the National Security Doctrine, which concentrated media ownership into a few hands, and has given rise to practices associated with the commercialisation of information.

In 2003, 21 years after the return of democracy, a wide range of organisations<sup>19</sup> joined together to form the Coalition for Democratic Broadcasting<sup>20</sup> for the creation of norms to regulate the exercise of communication in Argentina as a public good. In August 2004 the coalition launched the Citizens’ Initiative for a Broadcasting Law for Democracy, which put forward a proposal entitled “21 Basic Points for the Right to Communication”. In summary, this proposal proclaims the right to broadcast information and opinions by radio and television and revindicates communication as a human right rather than a commercial undertaking. It also stresses the need to promote pluralism and diversity, guarantee local productions, and regulate the allocation of government advertising (Mancini, 2004).

An important achievement was gained in 2005, when the Supreme Court ruled that article 45 of Law 22.285 was unconstitutional, which led to its modification through the issuance of Law 26.053. The new law recognises non-commercial and non-profit entities as eligible for being licensed for broadcasting, thereby eliminating the restriction which limited this right to commercial entities (COMFER, 2005). In May 2006 the Federal Broadcasting Committee issued resolution 753/2006 whereby 126 community radios in the country were recognised and given legal title (COMFER, 2006).

There are currently several legislative proposals pending for a new law to replace the current one which would, among other things, treat advertising transmitted on cable and broadcast television comparably, guarantee a minimum of national, local and cultural content, guarantee the incorporation of cooperatives, unions and associations in the media arena, and bring up to date the regulation of technologies such as high definition radio, digital radio, and broadcast, satellite and digital television.

## Conclusions

Based on the statistics reviewed, we can conclude that in Argentina there has been growth in infrastructure without a corresponding level of planning by the government. Although there appears, in speeches

18 Document by a group of social organisations regarding the minimum requirements for a law on access to public information. See: <[www.adc.org.ar/home.php?DOCUMENTO=466&TIPODOCUMENTO=1&iCAMPOACCION=>](http://www.adc.org.ar/home.php?DOCUMENTO=466&TIPODOCUMENTO=1&iCAMPOACCION=>)>.

19 Among them, the Argentine Community Radios Forum (FARCO), World Association for Christian Communication (WACC), Argentine Labour Federation (CTA), Federation of Communication Workers (FETRACOM), Centre for Legal and Social Studies (CELS), Chamber of Cooperative Radio Stations, Union of Journalists of Rosario and Institute for the Promotion of Cooperative Funds, as well as persons who participated as individuals, such as Adolfo Pérez Esquivel, a Nobel Peace Prize winner, and Anibal Ford, a recognised Argentine communications intellectual.

20 <[www.coalicion.org.ar](http://www.coalicion.org.ar)>.

and stated intentions, to be a concern with promoting universal access, the population generally remains at the mercy of a business mentality in an unregulated market that is basically an oligopoly.

In the first objective of the Regional Action Plan for an Information Society in Latin America and the Caribbean (eLAC2007), point 1.3 proposes "fostering the creation of sustainable frameworks and models for the penetration of ICT into the different countries in the region, as well as the creation of local associations aimed at creating better connectivity conditions, particularly in less privileged areas" (ECLAC, 2007a). This topic was not discussed in the teleconference for regional follow-through on eLAC2007, which was held in Ecuador in June 2006 (ECLAC, 2007b). It is worth noting that Argentina argued for working on Objective 1 of the plan, but with an orientation towards the development of regional infrastructure (as per points 1.1 and 1.2 of the objective), postponing consideration of the conditions for connectivity at the national level.

Argentina also presided over the 16th Meeting of the Permanent Executive Committee of the Inter-American Telecommunication Commission (CITEL), where the 2006-2010 strategic plan was approved. Objective 8 of the plan promotes the development of connectivity in rural and less privileged areas.

For the time being, good intentions in the international arena seem to fade before the pressure of the large communications operators who, as we have said, only understand the development of infrastructure tied to profitability.

Bringing ICTs into the classroom has become a key concern in educational policy in our country, leading the Ministry of Education to launch the National Campaign for Digital Literacy and various teaching and methodology proposals for teachers. Nevertheless, the ministry's policies leave essential variables up to chance, particularly as these relate to economically and culturally excluded sectors. Although there is a concern for the distribution of infrastructure in relation to the socioeconomic conditions of the sectors which benefit, this intention continues to show evidence of discrimination in favour of those closest to large urban centres. The same malaise afflicts the concern for teachers, as it does not address the issue in its full socioeconomic and organisational complexity, nor take into account work regimes and hours, or the general working conditions of education workers.

As to e-government, there are several initiatives which are consistent with the principles of increasing public access. Nevertheless, in general terms they lack ambitious objectives and few actions become reality. It should be highlighted that, between speeches and actions, some steps have been taken that have also helped to raise the awareness of civil society as to these possibilities.

Civil society's experiences of coordination around and participation in ICT policies described in this report refer to legislative processes that included instances of participation by social organisations, but which suffered from legislative delays and amendments and executive twists and turns which modified the original spirit of the proposals, or ignored the demands of civil society. What these examples make clear is that in these processes, those CSOs that came together around clear goals and with specific strategies have managed to have an impact, and promote breakthrough legislation which respects the right to communication, access to information, and digital inclusion. ■

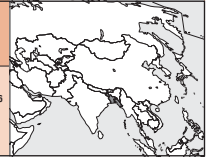
## References

- ARI (Alternativa por una República de Iguales) (2006). *Fundamentos del rechazo de la diputada María América González a la Carta de Entendimiento celebrada por la UNIREN con la empresa Telefónica de Argentina S.A.* [online]. Press Release, 8 May 2006. Available from: <[www.diputados.ari.org.ar/prensa/gacetillas/2006/06-05-08.html](http://www.diputados.ari.org.ar/prensa/gacetillas/2006/06-05-08.html)>.
- Busaniche, B. (2004). "En confidencialidad, el Ministerio de Educación Argentino firmó su alianza con Microsoft". *Educator. El Portal Educativo del Gobierno Argentino* [online], 16 July 2004. Available from: <[weblog.educ.ar/sociedad-informacion/archives/002119.php](http://weblog.educ.ar/sociedad-informacion/archives/002119.php)>.
- Candelaresi, C. (2004). "Con las cooperativas". *Diario Página12* [online], 31 October 2004. Available from: <[www.pagina12.com.ar/diario/economia/2-42992-2004-10-31.html](http://www.pagina12.com.ar/diario/economia/2-42992-2004-10-31.html)>.
- Clarín (2006). "Reclaman judicialmente al Estado que ponga en marcha el plan para llevar telefonía a zonas no rentables". *Diario Clarín* [online], 14 August 2006. Available from: <[www.clarin.com/diario/2006/08/14/um-m-01252400.htm](http://www.clarin.com/diario/2006/08/14/um-m-01252400.htm)>.
- CNC (Comisión Nacional de Comunicaciones) (2000). *Desregulación de los servicios. Apruébanse los Reglamentos de Licencias para Servicios de Telecomunicaciones, Nacional de Interconexión, General del Servicio Universal y sobre Administración, Gestión y Control de Espectro Radioeléctrico* [online]. Available from: <[www.cnc.gov.ar/OtrosServicios/TextoNorma.asp?ID=107](http://www.cnc.gov.ar/OtrosServicios/TextoNorma.asp?ID=107)>.
- CNC (2005). *Teledensidad de terminales móviles a marzo de 2005* [online]. Available from: <[www.cnc.gov.ar/indicadores/archivos/CI\\_TM\\_REGULATEL.pdf](http://www.cnc.gov.ar/indicadores/archivos/CI_TM_REGULATEL.pdf)>.
- COMFER (Comité Federal de Radiodifusión) (2005). *Ley 26.053 - Sustitúyese el artículo 45 de la Ley Nº 22.285* [online]. Available from: <[www.comfer.gov.ar/ley26053.php](http://www.comfer.gov.ar/ley26053.php)>.
- COMFER (2006). *Resolución 753/2006* [online]. Available from: <[www.tau.org.ar/upload/dafe66c6982f0fcd9842fdd59eacff/Resolucion\\_753.pdf](http://www.tau.org.ar/upload/dafe66c6982f0fcd9842fdd59eacff/Resolucion_753.pdf)>.
- ECLAC (Economic Commission for Latin America and the Caribbean) (2007a). *eLAC 2007 Action Plan* [online]. Available from: <[www.cepal.org/socinfo/elac](http://www.cepal.org/socinfo/elac)>.
- ECLAC (2007b). *Comunicado No. 2 del Mecanismo Regional de Seguimiento eLAC2007, julio 2006* [online]. Available from: <[www.eclac.cl/socinfo/noticias/noticias/4/26424/2ndo%20Comunicado%20%20eLAC2007%20Julio%202006.pdf](http://www.eclac.cl/socinfo/noticias/noticias/4/26424/2ndo%20Comunicado%20%20eLAC2007%20Julio%202006.pdf)>.
- Finkelievich, S. (2004). "Mercosur.gov: e-gobierno en Argentina, Uruguay y Brasil". In Rodrigo Araya Dujisin and Miguel Porrúa Vigón (Eds.), *América Latina Puntogob. Casos y tendencias en Gobierno Electrónico* [online] (pp. 111-124). Chile: FLACSO/IACD/OAS. Available from: <[hasp.axesnet.com/contenido/documentos/Am%20Latina%20Puntogob%20final.pdf](http://hasp.axesnet.com/contenido/documentos/Am%20Latina%20Puntogob%20final.pdf)>.
- Government of Argentina (1980). *Ley Nacional de Radiodifusión* [online]. Available from: <[www.revistalgn.com.ar/Leyes/Ley%2022285.doc](http://www.revistalgn.com.ar/Leyes/Ley%2022285.doc)>.
- Government of Argentina (2001). *Ley de Firma Digital Argentina* [online]. Available from: <[www.virusprot.com/Archivos/Ley25506firmadigital.doc](http://www.virusprot.com/Archivos/Ley25506firmadigital.doc)>.
- Government of Argentina (2003). *Decreto 1172/2003. Mejora de la calidad de la democracia y de sus instituciones* [online]. Available from: <[www.mejordemocracia.gov.ar/TextoDecreto1172-2003.php](http://www.mejordemocracia.gov.ar/TextoDecreto1172-2003.php)>.
- Government of Argentina (2005). *Decreto 378/2005* [online]. Available from: <[www.safjp.gov.ar/digesto\\_2/index/normas/DECRETOS/decreto\\_378\\_05.htm](http://www.safjp.gov.ar/digesto_2/index/normas/DECRETOS/decreto_378_05.htm)>.

- Government of Argentina (2007). *Gobierno electrónico en Argentina* [online]. Available from: <www.argentina.gov.ar/argentina/portal/paginas.dhtml?pagina=583>.
- INDEC (Instituto Nacional de Estadística y Censos) (2006). *Accesos a internet. Diciembre 2005* [online]. Available from: <www.cnc.gov.ar/indicadores/archivos/INDEC\_internet\_03\_06.pdf>.
- INFOCIVICA (2006). "Un año más sin ley". *Inforum Patagonia*, 28 September 2006. Available from: <www.inforumpatagonia.net/notas.php?idnota=1720>.
- ITU (International Telecommunication Union) (2005a). *World Telecommunication Indicators* [online]. Available from: <www.itu.int/ITU-D/icteye/Indicators/Indicators.aspx>.
- ITU (2005b). *Declaración del Ingeniero Tulio del Bono, secretario de ciencia y tecnología. Argentina* [online]. Available from: <www.itu.int/wsis/tunis/statements/docs/g-argentina/1-es.html>.
- Mancini, P. (2004). "Iniciativa Ciudadana por una ley de Radiodifusión para la Democracia". *Educar. El Portal Educativo del Gobierno Argentino* [online], 13 September 2004. Available from: <weblog.educ.ar/sociedad-informacion/archives/002509.php>.
- Mancini, P. (2006). "Audio completo de la charla abierta sobre el proyecto OLPC". *Educar. El Portal Educativo del Gobierno Argentino* [online], 21 July 2006. Available from: <weblog.educ.ar/olpc/archives/007749.php>.
- Mangiapane, F. (2006). "El presidente de OLPC visita la Argentina". *CyTA-Instituto Leloir* [online], 26 July 2006. Available from: <www.leloir.org.ar/Espanol/Paginas/Agencia%20CyTA/Julio/260706/Proyecto.htm>.
- MECT (Ministerio de Educación, Ciencia y Tecnología) (2006a). *Campaña Nacional de Alfabetización Digital 2004-2006* [online]. Available from: <imagenes.educ.ar/imagenes/nuevahome/institucional/brief.pdf>.
- MECT (2006b). *Anteproyecto de Ley de Educación Nacional* [online]. Available from: <debate-educacion.educ.ar/ley/anteproyecto/anteproyecto\_de\_ley.php>.
- Programa Integral para la Igualdad Educativa (PIIE) (2004). *Adquisición de equipamiento informático* [online]. Available from: <imagenes.educ.ar/imagenes/nuevahome/institucional/aei.pdf>.
- Premici, S. (2006). "La batalla que se verá por el mismo cable". *Canal-ar* [online], 29 September 2006. Available from: <www.canal-ar.com.ar/Noticias/NoticiaMuestra.asp?id=3677>.
- SECOM (Secretaría de Comunicaciones) (2007). *Evolución del Servicio de Telecomunicaciones (1981-2004)* [online]. Available from: <www.secom.gov.ar/documentos/estadisticas/serviciotelco2.htm>.
- Simonetti, F. (2006). "Tirá una línea". *Diario Página/12* [online], 9 April 2006. Available from: <www.pagina12.com.ar/diario/suplementos/cash/17-2371-2006-04-09.html>.
- WEF (World Economic Forum) (2006). *The Networked Readiness Index Rankings 2005* [online]. Available from: <www.weforum.org/pdf/Global\_Competitiveness\_Reports/Reports/gitr\_2006/rankings.pdf>.

# BANGLADESH

Development Research Network (D-Net)<sup>1</sup>; Bytes for All<sup>2</sup>; Sustainable Development Networking Programme (SDNP) Bangladesh<sup>3</sup>; Bangladesh Open Source Network (BdOSN)<sup>4</sup>; Bangla Wikipedia<sup>5</sup>; Bangladesh NGOs Network for Radio and Communication (BNNRC)<sup>6</sup>  
Ananya Raihan and Suporna Roy; Hakikur Rahman; Munir Hasan and Ragib Hasan; AHM Bazlur Rahman and Golam Nabi Jewel;  
Partha Pratim Sarker; Monjur Mahmud



## Introduction

This report is an attempt to monitor information and communications technology (ICT) development in different sectors of Bangladesh and to compile civil society views and understandings of policy intervention in those areas. We consulted different organisations to identify issues of importance, to check the status of policy intervention and to map the challenges and opportunities. Areas that we tried to cover are: infrastructure and access; community radio; localisation; and open content development. The aim of the report is to focus on areas that are relevant and pertinent to the ICT for development community, and in which a large number of civil society organisations (CSOs) are involved.

The report has been developed by conducting desk research and through conversations with relevant organisations, along with interviews and field-level data collection. This is a living and collaborative document. Different chapters are written by different organisations that are actively involved in the areas we cover. As lead organisation, Bytes for All's methodology has been to communicate with these organisations, to facilitate the collaborative process and to compile the findings into a report. We also published the report as a wiki and invited feedback, additional information and corrections.

Thanks to Ananya Raihan and Suporna Roy of the Development Research Network (D-Net); Hakikur Rahman of the Sustainable Development Networking Programme (SDNP) Bangladesh; Munir Hasan and Ragib Hasan of the Bangladesh Open Source Network (BdOSN) and Bangla Wikipedia; and AHM Bazlur Rahman and Golam Nabi Jewel of the Bangladesh NGOs Network for Radio and Communication (BNNRC) for writing different chapters of this report and initiating a collective discussion on the topics.

## Country situation

### Access and infrastructure

Bangladesh remains at the bottom in South Asia in the UN's ICT Diffusion Index, with a rank of 164 in 1997 and 171 in 2001 and 2004 (UN, 2006). Nevertheless, the enactment of the National Telecommunications Policy in March 1998 (UNPAN, 1998) and the Bangladesh Telecommunications Act in 2001 (ITU, 2001); the establishment of the Bangladesh Telecommunication Regulatory Commission in January 2002; the introduction of the National ICT Policy in October 2002 (MSICT, 2002) and the ICT Act in 2003; and the very recent legalisation of voice over internet protocol (VoIP) telephony, are several milestones the country can be proud of.

The country is progressing in terms of ICT penetration – especially as far as cellular penetration is concerned. Currently, five cellular phone operators have covered 61 districts out of 64 and over 90% of the population, comprising a subscriber platform of more than 15 million.<sup>7</sup>

The Bangladesh Telephone and Telegraph Board (BTTB), the lone government-owned telecom provider, has provided conventional public switched telephone network (PSTN) access to all 64 districts and to 465 *upazilas* (sub-districts); internet service provider (ISP) services to all 64 district headquarters and 165 *upazilas*; and digital data network (DDN) access to 41 districts through its own infrastructure. Over 150 ISPs have obtained licences from the Bangladesh Telecom Regulatory Commission (of which more than 80% are located in Dhaka and Chittagong); 1,800 km of fibre under the Bangladesh Railway is being utilised by private mobile telephone operators; and 468,000 MIU km<sup>8</sup> of submarine cable has been linked to the landing station at Cox's Bazar as part of the South East Asia-Middle East-Western Europe (SEA-ME-WE4) submarine cable consortium project (with 64 STM-1 or 10 Gbps capacity).

Table 1 shows the country's basic ICT indicators, while Table 2 shows the figures for main telephone lines in Bangladesh. Table 3 shows cellular subscriber growth in the country between 2002 and 2005, and Table 4 shows the information technology parameters between 2002 and 2004.

### Community access points

The idea of common access points allowing rural communities to access technology emerged from research conducted by the Development Research Network (D-Net) in 2001, when D-Net was established. The initial findings of its research showed that access to information was an important dimension of access. While a lack of access to information contributed to poverty, it was missing from current discourse on poverty.

The Dhaka Ahsania Mission (DAM) launched the first community learning centre, locally known as *Gonokendra*, in 1987. Now there are more than 100 *Gonokendras* across the country. Each centre functions as a community-based information centre, which includes local government or non-governmental organisation (NGO) extension departments. Primarily print media is distributed: DAM supports these centres by supplying books, newspapers, newsletters, magazines, booklets, posters, etc. However, five also offer access to ICTs.

D-Net conceived of the idea of *Pallitathya* (rural information) in 2001. As there was no tailor-made digital content for rural people, D-Net started developing content in nine areas dealing with life skills and livelihood. This content is now more than 30,000 pages long and, packaged on CD as *Jeeon-IKB*, serves as an information and knowledge base for the rural communities.

1 <[www.dnet-bangladesh.org](http://www.dnet-bangladesh.org)>.

2 <[www.bytesforall.org](http://www.bytesforall.org)>.

3 <[www.sdnbd.org](http://www.sdnbd.org)>.

4 <[www.bdosi.org](http://www.bdosi.org)>.

5 <[bn.wikipedia.org](http://bn.wikipedia.org)>.

6 <[www.bnnrc.net](http://www.bnnrc.net)>.

7 For more information on the five operators see: <[www.grameenphone.com](http://www.grameenphone.com)>, <[www.banglalinkgsm.com](http://www.banglalinkgsm.com)>, <[www.citycell.com](http://www.citycell.com)>, <[www.aktel.com](http://www.aktel.com)>, and <[www.teletalk.com.bd](http://www.teletalk.com.bd)>.

8 Minimum investment unit, which is equivalent to one STM-1 (synchronous transfer mode at 155 Mbit/s).

**Table 1: Basic ICT indicator**

Year	Population density (per sq. km)	GDP per capita (USD)	Total telephone subscribers (per 100 inhabitants)
2002	925	346	1.26
2003	938	354	1.56
2004	952	382	2.63
2005	985	-	2.63

Source: International Telecommunication Union (ITU)

**Table 2: Main telephone lines**

Year	Main telephone lines (000s)	CAGR <sup>9</sup> (%)	Main telephone lines (per 100 inhabitants)	CAGR (%)
2002	605.9	10.5 (1997-2002)	0.46	8.9 (1997-2002)
2003	742.0	12.5 (1998-2003)	0.55	10.8 (1998-2003)
2004	831.0	13.9 (1999-2004)	0.61	12.3 (1999-2004)
2005	831.0	14.0 (2000-2005)	0.61	12.4 (2000-2005)

Source: ITU

**Table 3: Cellular subscribers**

Year	Cellular mobile subscribers			
	(000s)	CAGR (%)	Per 100 inhabitants	As % of total telephone subscribers
2002	1,075.0	110.5 (1997-2002)	0.81	64.0
2003	1,365.0	78.7 (1998-2003)	1.01	64.8
2004	2,781.6	79.6 (1999-2004)	2.03	77.0
2005	9,000.0	100.3 (2000-2005)	6.35	91.5

Source: ITU

**Table 4: Information technology parameters**

Year	Internet		PC per 100 inhabitants
	Hosts	Users per 100 inhabitants	
2002	-	0.15	0.34
2003	-	0.18	0.78
2004	13	0.22	1.20

Source: ITU

D-Net established four *Pallitithya Kendra* (Rural Information Centres) as pilot projects in 2005 in remote villages of Bangladesh: Nilphamari, Netrokona, Noakhali and Bagerhat. Each of the *Pallitithya Kendras* has three computers, two to three mobile phones, a digital camera, soil test kits, a nebuliser that local doctors can rent, and a weighing machine. A copy of *Jeeon-IKB* is also provided. The centres are connected to the internet through Grameen Phone (the largest telecom operator in Bangladesh) and EDGE technology.<sup>10</sup> The cost of establishing the centres ranges from BDT 77,000 to BDT 180,000 (USD 1,000 to USD 2,500). The earnings from the centre cover more than 50% of operating costs. Already more than 10,000 villagers have visited the *Pallitithya Kendras*.

9 Compound annual growth rate, computed by the formula:  $[(Pv/P0) (1/n)] - 1$  where Pv= Present value, P0= Beginning value and n= Number of periods.

10 Enhanced data rates for GSM evolution (EDGE) service is provided in Bangladesh by Grameen Phone. It offers general packet radio service (GPRS) roaming connectivity services that hook a user into the internet from remote locations.

Relief International's Schools Online division initiated its Internet Learning Centres (ILCs) programme in 2003. The programme was launched in 2005. Currently 27 ILCs are in operation across Bangladesh, with the majority (sixteen) located in Chittagong.<sup>11</sup> Each ILC is equipped with five to ten computers, one scanner and one digital camera. Connectivity varies from location to location. In some places ILCs are equipped with broadband internet connectivity and others have dial-up connectivity. The ILCs are located in *upazila* headquarters.

Young Power in Social Action (YPSA) launched a Community Multimedia Centre in the Sitakund *upazila* of Chittagong district in 2005. The centre is well equipped with computers with CD-ROM, a pocket PC, digital video camera, audio recorder, cassette player, cable TV, cable radio and DVD players. It is connected to the internet via

11 There are four ILCs in Dhaka, three in Comilla, two in Jessore, and one each in Khulna and Rajshahi.

dial-up. Innovatively, it uses loudspeakers to disseminate useful information to the community.

Rural ICT Centres (RICs) are run by the Digital Equity Network (DEN) with support from KATALYST, a multi-donor consortium working in Bangladesh. An RIC is a physical infrastructure with basic ICT facilities (each RIC is equipped with four computers, one colour printer, one scanner and three digital cameras). Three RICs, located in Kahalu, Panchbibi and Shibganj in Bogra district, were launched in 2006. All three centres are located in *upazila* headquarters. RICs disseminate business information for local businesses in selected sectors that are dominant in the localities (e.g. information for fisheries, for potato or poultry farmers, etc.). The centre also provides information on a range of topics such as health and education, and offers government information as well.

The Community Information Centre (CIC) model has been initiated by Grameen Phone. The first sixteen CICs were launched as a pilot project in different parts of the country in February 2006. Of these, four were set up in each of the Sylhet, Rajshahi and Khulna divisions,<sup>12</sup> and two in each of the Dhaka and Chittagong divisions. In May 2006, another ten CICs were established: seven in the division of Chittagong, two in the division of Dhaka and one in the Rajshahi division. The CICs are equipped with at least one computer, a printer, a scanner, a web cam and an EDGE-enabled modem to access the internet using EDGE connectivity. The CICs are fully owned by local entrepreneurs with a minimum investment of BDT 80,000 (USD 1,100). The CICs are run as a franchise of Grameen Phone.

The Amader Gram Learning Centre (AGLC) project established a pilot of its version of a rural information centre in Bagerhat in April 2001. What amounts to a communication, information and learning centre was designed to develop participatory monitoring and learning systems at the village level. Under the project's roll-out, five centres have been equipped with computers, printers and telephones, among other tools. One of the centres, at Khulna City, has been set up for overall coordination and monitoring. Ten group leaders (all women) have been trained to act as information coordinators, disseminating information on health, sanitation, education and livelihood opportunities.

### Community radio

The proposed draft of the Broadcasting Act 2003 aims “[t]o provide for the regulation of broadcasting services, including terrestrial, satellite and cable broadcasting, and to make provision for the establishment of an independent Authority for the purpose of overseeing broadcasting regulation, with a view to promoting independent, pluralistic broadcasting in the public interest” (MI, 2003). While the National Parliament has not yet approved the Act, it has called for an independent body – the Bangladesh Broadcasting Authority (BBA) – to be created. The BBA would be answerable to the parliament.

The BBA will be responsible for:

- Developing and implementing a broadcasting frequency plan to ensure orderly and optimal use of the broadcasting frequency spectrum.
- Issuing licences for the provision of broadcasting services to the public and ensuring that licence conditions are respected.
- Overseeing the development of an advertising and programme code for content and the implementation of these codes.

The BBA will issue various types of broadcasting licences to interested parties. These are classified by tier (public, private and community), type (radio, TV, terrestrial, satellite or cable), and scope (national, regional or local, or number of subscribers). It is also mentioned in the draft Broadcasting Act that “community broadcaster” means a “broadcaster which is controlled by a non-profit entity and operates on a non-profit basis, carries programming serving a particular community including by reflecting the special interests and needs of that community, and is managed and operated primarily by members of that community” (MI, 2003). By enacting the Broadcasting Act, community broadcasting can formally come into existence using radio, television or the internet.

The National Media Survey (NMS) 2005 is the fourth national survey of its kind undertaken in Bangladesh. The first media survey was conducted in 1995 and the second and third national surveys were conducted in 1998 and 2002 respectively. Some of the findings of this survey are:

- The ownership and reach of radio seems to be declining. Only 32% of people own radios. Among these, only 27.3% of the radios are in working order. This was perhaps because of the rapid increase in the opportunity to watch TV and the failure of public radio to attract listeners.
- 22.5% of people listen to radio. Radio listenership has declined significantly in urban areas. As in the past, radio reach remains higher among males (30%) compared to females (16%).
- Dhaka is the most popular radio station in the country, and has a 31.3% listenership.

There are at least four commercial FM radio stations now operating in Bangladesh, beside the government-owned Bangladesh Betar. The BBC and Voice of America also operate FM stations. In regulatory terms, Bangladesh Television (BTV) and Bangladesh Betar are part of the Ministry of Information, from whom they get their direction and funding, ensuring firm government control over their operations.

There have been a number of experiments in community radio in Bangladesh. The Centre for Development Communication (CDC), and later, the Mass-Line Media Centre (MMC), have both established community radio stations. The Bangladesh NGOs Network for Radio and Communication (BNNRC) is a national coordinating organisation dedicated to promoting community radio and citizens' band (CB) radio<sup>13</sup> as a means of holistic development. The YPSA, a BNNRC member, built a cable radio station<sup>14</sup> in Sitakund, an *upazila* in the Chittagong district. At present, they do not have a licence to operate a community radio station, so they produce local content and “broadcast” it over the cable network. SPEED Trust from Barisal, DUS from Noakhali, COAST from Bhola, and Sankalpa from Barguna also produce local content, but upload it onto the internet.

### Localisation

Bangla is the primary language for the 130 million people of Bangladesh. However, organised efforts in software and content localisation are not very visible in the country. It is obvious that before any

<sup>13</sup> A system of short-distance radio communication between individuals. See: <en.wikipedia.org/wiki/Citizens'\_band\_radio>.

<sup>14</sup> Where radio programmes are broadcast via cable network.

<sup>12</sup> Bangladesh is divided into six administrative divisions.

content can be generated or any application developed, some basic standards for encoding the language must be developed.<sup>15</sup>

The first attempt at localisation was made in the early 1980s with Bangla font development in the Windows environment. These efforts were led by commercial vendors. But an absence of planning made the localisation process cumbersome, and the results were not good. Many fonts were developed in a haphazard way resulting in gross inoperability. In the late 1990s Unicode<sup>16</sup> shed new light on the issue, and the process of localisation began to take a new shape in the country.

The open source movement has had the most significant impact on localisation. In 1998, Tanim Ahmed, a software developer in Bangladesh, first solved the locale issue<sup>17</sup> (bn.BD) and started a process of localising Linux.<sup>18</sup> Since then the major initiatives have been run by volunteers, while institutional initiatives have recently started to emerge on the scene. Government localisation initiatives have, however, been absent (even while Bangla has been included on its official websites).

In the late 1990s, the voluntary group Ankur<sup>19</sup> started localising open source software like Linux, OpenOffice.org, Gaim, etc. Another voluntary organisation, Ekushey, started developing open source Unicode fonts and a Bangla input system (i.e. determining how Bangla fonts can be arranged using the existing keyboard). In 2004, the Bangladesh Computer Council (BCC), a government body, took the initiative from the government side and came up with a national keyboard mapping and a collation sequence.

Around this time, the country's sole centre for localisation, the Centre for Research on Bangla Language Processing (CRBLP) at BRAC University, started conducting research projects that dealt with Bangla-language processing. At present the research team is working on Bangla information retrieval (e.g. Bangla spell-checking and a Bangla search engine), morphological analysis,<sup>20</sup> developing a digital lexicon and an online dictionary, optical character recognition and Bangla speech processing, among other tasks. The centre is supported in part by a grant from the PAN Localisation Project of the International Development Research Centre (IDRC).

In 2005, the Bangladesh Open Source Network (BdOSN) was formed with local open source volunteers. BdOSN, again a voluntary organisation, took Bangla localisation as one of its main issues. Open source localisation has started to thrive as a result. Ankur (together with volunteers) has already localised various open source software programmes. These included Linux distributions like Fedora, Mandriva, SUSE and Ubuntu; desktop environments like Gnome and KDE; and applications like OpenOffice.org, Gaim, Firefox and Thunderbird. While

there still remains work to be done to achieve complete localisation in these programmes, Ankur and BdOSN have also completed Bangla's first glossary of computer terms.

### *Open content development*

The main open content project in Bangladesh has been the development of the Bangla Wikipedia. Its development has been organised by BdOSN and its sister organisation, Bangla Wiki. The project aims to develop a free, open access encyclopaedia in the Bangla language. Besides the Bangla Wikipedia,<sup>21</sup> recent initiatives have focused on open content in science, especially in mathematics.

Since its launch in late March 2006, the Bangla Wikipedia project has been extremely successful. The project has been able to attract a large number of editors. As of October 2006, the total registered editor count was 865. The number of articles has grown from its initial rate of 800 articles per month, with occasional bursts of activity. The Bangla Wikipedia crossed the 10,000 article mark in September 2006, becoming the 50th Wikipedia, and the second language from South Asia, to achieve this. It is ranked 44th among more than 200 Wikipedias in different languages. Besides articles, Bangla Wiki has also focused on creating a free repository of images and other multimedia content. As of October 2006, more than 400 images on various topics had been uploaded to Wikimedia Commons under Creative Commons or GNU Free Documentation licences.

### **Participation**

CSOs have attempted to influence policy in a number of ways, both direct and indirect.

### *Access and infrastructure*

ICTs have been recognised as a key sector through the formation of a high-powered National ICT Task Force, with the prime minister as its chairperson. However, many of the World Summit on the Information Society (WSIS) and World Summit on Sustainable Development (WSSD) commitments have not reached the grassroots. Government agencies like the BTTB and the BCC, including relevant ministries, such as the Ministry of Posts and Telecommunications and the Ministry of Science and Technology, are not working with sufficient momentum. Private entrepreneurs like the ISP Association of Bangladesh and the recently-evolved Bangladesh Cable Internet Operators Association are working in unison in many areas of the Dhaka metropolis to provide door-to-door internet access. Civil society is doing what it can. Efforts are being made to promote community internet access at the grassroots level by Amader Gram, the YPSA and the Society for Economic and Basic Advancement (SEBA) in the south, by KATALYST in the north, by Relief International's Schools Online in a number of locations, and by the SDNP in several strategic places.<sup>22</sup> However, there is little coordination between them. Much has to be discussed to unify these unique and novel efforts.

In August 2006 D-Net, together with the BNNRC and YPSA, held a successful international workshop in Rangpur called Building a Telecentre Family in Bangladesh: A Workshop for Social Entrepreneurs and Practitioners. The international telecentre organisation telecentre.org (an initiative by IDRC and Microsoft) and UNDP Bangladesh supported the workshop. It brought 57 organisations under the same roof for the first time. They shared experiences, were introduced to hands-on

15 These include character set encoding (ASCII/UNICODE), keyboard layout, keypad layout (e.g. for mobile telephones), collation sequences (to enable applications like databases), terminology translation and locale definition (to enable computer interface in the local language).

16 Unicode is an industry standard designed to allow text and symbols from all of the writing systems of the world to be consistently represented and manipulated by computers. See: <en.wikipedia.org/wiki/Unicode>.

17 Locale refers to the collection of information associated with a country or region. This includes the language spoken in the region, date format, number format, currency format, measurement units, scripts and local names for time zones. Users can configure their system to pick up a locale that suits them.

18 <Banglalinux.org>.

19 <www.ankurbangla.org>.

20 Morphological analysis is a technique for exploring all the possible solutions to a multi-dimensional, non-quantified problem complex. See: <en.wikipedia.org/wiki/Morphological\_analysis>.

21 <bn.wikipedia.org>.

22 The authors may have excluded other reputable efforts in this sector, but unwillingly.



ideas about why and how to build telecentres, and talked about Mission 2011 – the goal of building a telecentre in every village by the 40th anniversary of Bangladesh's independence.

A formal consultation, Towards Mission 2011: Building a Telecentre Family in Bangladesh, was held in Dhaka in January 2007. A total of 20 organisations, including research institutions, NGOs, private sector enterprises and other development partners, participated in the meeting, and have now formed the Bangladesh Telecentre Network (BTN).

### Community radio

There are a number of problems with the existing community broadcasting situation. For instance, there is no participatory system through which licensing conditions can be developed or applied. This means that licensing processes are not transparent, and there are no clear conditions for granting a licence.

All decisions in this area are made by the Ministry of Information rather than an autonomous body. Licensing has been *ad hoc*, often with licences being allocated on political grounds. This goes against international standards, and threatens issues such as freedom of expression. It also deprives the decision-makers of an opportunity for developing a regulatory regime in the best interests of the public.

In many countries, one of the criteria for assessing applications is the contribution the proposed service would make in promoting local content production and diversity. However, there is no clear way of promoting these goals in the current regulatory environment in Bangladesh.

There is also no system for regulating content and, in particular, for ensuring that it meets certain minimum standards in relation to both regular programming and advertisements. There have already been complaints of excessively sexual material on TV, as well as material that degrades disabled people.

In March 2006, a roundtable on community radio was organised jointly by the BNNRC, Voices for Interactive Choice and Empowerment (VOICE), the MMC, FOCUS and the YPSA in association with UNESCO, the UNDP and UNICEF, in Dhaka. Policy recommendations included:

- Greater awareness of the educational and developmental potential of community radio among policy-makers, regulators, non-government and community service organisations is needed.
- Legislative reform should take account of the specific characteristics of community radio and provide for its support within the policy and regulatory framework.
- Assistance is needed to enable existing community radio stations to adapt to new digital production technologies and to increase their access to the internet.
- Strategic links should be encouraged between community radio and telecentres (or any other community access initiative) to cluster community media resources.
- Online and technology-based learning centres should incorporate creative production facilities and access to local radio distribution as well as the internet.
- Support for community radio development should be provided through intermediary bodies at the national and regional level through training, guidance and mentoring.

### Localisation

The success of the localisation movement in Bangladesh is largely due to it being volunteer-driven and spearheaded by the country's open source movement. The BdOSN and Ankur have arranged localisation

boot camps throughout the country since June 2006. These camps have helped volunteer programmers get to know each other, and have strengthened collaboration.<sup>23</sup> These initiatives have attracted the attention of universities and the government. More researchers at universities are now showing interest in localisation (as mentioned above, BRAC University now hosts the country's main localisation centre) and the government has decided to post Bangla content on its websites.

### Open content development

The Bangla Wikipedia project is loosely organised using internet-based mailing lists. Most of the participants in the Bangla Wikipedia are students in Bangladesh and West Bengal, or expatriates living in North America, Europe and Japan. Bangla Wiki has conducted several workshops to familiarise new users with techniques and skills related to the project. To promote public awareness, it organised rallies during the Bangla New Year, and also observed August as "Bangla Wiki Month". Bangla Wiki has set up an office in conjunction with the BdOSN for people with limited internet connectivity. Here interested editors can access the internet and contribute to the Wikipedia. In addition, people from other regions of the country can send articles via postal mail, which are later added to Bangla Wikipedia by Bangla Wiki volunteers.

### Conclusions

This report aimed to provide an update on the ICT development situation in Bangladesh and to help civil society identify areas of policy intervention. We identified only a number of areas, and policy interventions in these areas are an ongoing process. In some cases, CSOs are networking and re-grouping among themselves to project a single voice to the decision-makers; in others they are already in consultation with the government. The greatest challenge is to get their policy recommendations approved and implemented by the government so that grassroots communities can benefit. The national parliamentary election in Bangladesh will be taking place soon. Change is therefore unlikely in the short term. CSOs working in these areas are preparing themselves for a fresh journey with renewed capacity and commitment. ■

### References

- ITU (International Telecommunication Union) (2001). *The Bangladesh Telecommunication Act, 2001* [online]. Available from: <[www.itu.int/ITU-D/treg/Documentation/Bangladesh/BTRC-TelecomLaw2001.pdf](http://www.itu.int/ITU-D/treg/Documentation/Bangladesh/BTRC-TelecomLaw2001.pdf)>.
- MI (Ministry of Information) (2003). *Bangladesh Broadcasting Act (draft)*.
- MSICT (Ministry of Science and Information & Communication Technology) (2002). *National Information and Communication Technology (ICT) Policy* [online]. Available from: <[www.bccbd.org/html/itpolicy.htm](http://www.bccbd.org/html/itpolicy.htm)>.
- UN (United Nations) (2006). *The Digital Divide Report: ICT Diffusion Index 2005* [online]. New York, USA and Geneva, Switzerland: UN. Available from: <[www.unctad.org/en/docs/iteipc20065\\_en.pdf](http://www.unctad.org/en/docs/iteipc20065_en.pdf)>.
- UNPAN (United Nations Online Network in Public Administration and Finance) (1998). *National Telecommunications Policy of Bangladesh (1998)* [online]. Available from: <[unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN003203.pdf](http://unpan1.un.org/intradoc/groups/public/documents/APCITY/UNPAN003203.pdf)>.

<sup>23</sup> Four boot camps were arranged and more than 10,000 strings of OpenOffice.org were translated in these camps. The CRBLP developed an open source, cross-platform Unicode rich text editor capable of editing Bangla (BanglaPad), a Bangla phonetic spelling checker and a Java interface for PC-Kimmo, a command line morphological analyser.

# BOSNIA and HERZEGOVINA

OneWorld Platform for Southeast Europe (OWPSEE)<sup>1</sup>

Valentina Pellizzer



## Introduction

The war and the post-war environment left Bosnia and Herzegovina far behind other countries in the Balkans. Damaged infrastructure and a “knowledge and digital divide” are affecting ordinary life, as well as the ability to compete in regional and global markets.

This report offers an overview of the current status of information and communications technology (ICT) development in the country. It highlights two areas of concern which are essential when speaking about policy-making and the strategic development of ICTs.

On the one hand, two bodies are currently deadlocked in the complex political environment of Bosnia and Herzegovina: the Agency for Information Society (AIS) and the Bosnia and Herzegovina Academy and Research Network (BIHARNET). Both are relevant in the development of a legislative framework and strategic plan for channeling resources and monitoring the implementation of ICTs.

The second important issue is that of access. This report focuses on primary and secondary schools and the status of broadband provision. This is directly linked to the existing urban-rural “digital divide” within the country, the divide between Bosnia and Herzegovina and its neighbouring countries in South East Europe (SEE), and the gap between the reality in the country and EU standards.

This report also provides an overview of participation in policy processes. A list of key players in the ICT arena is provided. Despite Bosnia and Herzegovina’s participation in the World Summit on the Information Society (WSIS), the outcomes of the Summit have remained largely invisible. While international organisations and the Bosnia and Herzegovina government have promoted public-private partnerships, public participation in the policy development process has not been significant.

The methodology has included a review of relevant documentation and interviews with individuals in relevant associations, institutions or organisations. ICT policy actors were identified through online research using available public information.

## Country situation

The second half of the 1990s had seen a general effort to cope with and overcome the humanitarian disaster caused by the Bosnian War (1992-1995). While the first phase focused on the reconstruction of infrastructure, the return of displaced persons and the implementation of the Dayton Peace Agreement,<sup>2</sup> 2000 saw a new phase where development approaches and issues, as well as their implementation, became more visible and coherent. It is in this second phase that ICTs were recognised as a cross-cutting and strategic issue for social and economic development.

According to analysts, a key catalyst to the mainstreaming of ICTs was a programme undertaken by the United Nations Development Programme (UNDP) in Bosnia and Herzegovina which aimed to develop the capacity of government and civil society. The UNDP aligned

its work with the country’s Poverty Reduction Strategy Paper (PRSP), emphasising the importance of ICTs and a strategic approach to the ICT sector. Key areas included governance reform, the delivery of basic social services and education (Bakarsic *et al*, 2004, p. 43).

To help understand the way in which decision-making and consensus are built in the country and the challenges that any relevant process encounters, it is necessary to provide a short overview of how the government is structured. The country of Bosnia and Herzegovina encompasses two entities with their own governments and parliaments: the Federation of Bosnia and Herzegovina and the Republika Srpska. There is also one internationally supervised district, the Brcko District. This system of government was established by the Dayton Agreement to guarantee the representation of the country’s three major groups (Muslim, Serb and Croat), with each having a veto on anything that goes against what is defined as “the vital interest of the constituent people”.<sup>3</sup>

The country or federal level of government comprises a tripartite presidency, the Council of Ministers and the Parliamentary Assembly. The Federation of Bosnia and Herzegovina and the Republika Srpska both have their own sets of ministries. In the Federation there is an additional administrative level of ten cantons, while the municipal level exists in both entities. Another peculiarity is the fact that a country with less than four million people has four “official” cities.<sup>4</sup>

The presence of so many levels of government, which respond more to the post-war situation and political interests than to administrative functionality, is specifically relevant whenever there is an attempt to create state-independent and efficient bodies.

## National strategies for information society development

At the beginning of 2002, the UNDP office in Bosnia and Herzegovina launched the ICT Forum. The initiative lasted eighteen months, with forum meetings held in Banja Luka, Mostar and Sarajevo. In the same year the eSouthEastEurope (eSEE) Initiative<sup>5</sup> under the Stability Pact for South Eastern Europe<sup>6</sup> umbrella was signed by all governments of the SEE region. A secretariat was established in Sarajevo at the UNDP office. These two factors played a crucial role in keeping the

1 <[www.oneworldsee.org](http://www.oneworldsee.org)>.

2 The Dayton Peace Agreement was signed in December 1995 and implemented in 2000.

3 More than 95% of the population of Bosnia and Herzegovina belongs to one of its three constitutive ethnic groups: Bosniaks, Serbs and Croats. The term ‘constitutive’ refers to the fact that these three ethnic groups are explicitly mentioned in the constitution, and that none of them can be considered a minority or immigrant. See: <[en.wikipedia.org/wiki/Constitutive\\_nations\\_of\\_Bosnia\\_and\\_Herzegovina](http://en.wikipedia.org/wiki/Constitutive_nations_of_Bosnia_and_Herzegovina)> and <[www.oefre.unibe.ch/law/icl/bk00t\\_\\_\\_html](http://www.oefre.unibe.ch/law/icl/bk00t___html)>.

4 Sarajevo is the capital of Bosnia and Herzegovina. “Official” cities represent the entity and ethnic levels.

5 See: <[www.eseeinitiative.org](http://www.eseeinitiative.org)>.

6 The Stability Pact for South Eastern Europe was adopted at a special meeting of foreign ministers and representatives of international organisations, institutions and regional initiatives in Cologne on 10 June 1999. The Pact establishes a political commitment to a comprehensive coordinated and strategic approach to the region. It is a forum for its members to identify measures and projects that can contribute to the stability and development of the region. See: <[www.seerecon.org/region/sp/index.html](http://www.seerecon.org/region/sp/index.html)>.

ICT issue on the government's agenda, and supported the efforts of high-ranking officials in developing a strategic approach and securing federal government-level commitment.

While the eSEE Agenda lent credence to the policy process, with support from the UNDP, an information society policy, strategy and action plan were finalised in 2004. These three documents involved expert teams from government ministries, the private sector and academia. This momentum was maintained with a conference in February 2005 on the information society, which also emphasised the regional and eSEE dimensions (Ó Siochrú and Nath, 2005, annex 1, p. 3).

#### The Agency for Information Society (AIS)

The establishment of the AIS, a cabinet-level body, was expected to be the most important outcome of the government's strategic approach to key development processes, and a concrete expression of the political will to speed up transformation and extend benefits to all citizens.

The information society policy and action plan envisaged an independent agency that would report to the Council of Ministers on a regular basis about its activities, and would be overseen by the Ministry of Communications and Transportation, except for activities related to protected documents (ID cards, driver licences, passports, etc.). In the latter instances, the agency would report to the Ministry of Civil Affairs.

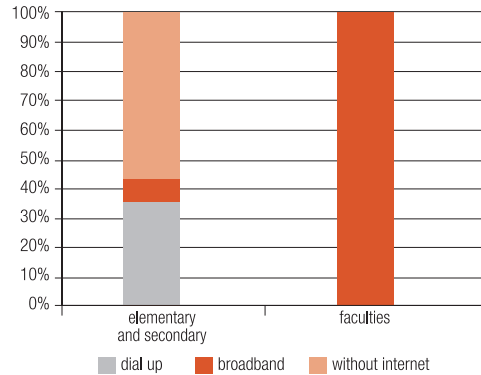
However, the establishment of the AIS has been delayed. Most recently, the Traffic and Communications Commission was supposed to provide a final draft law for its establishment by the middle of September 2006, fifteen days before the general parliamentary election. With the new government established at the beginning of February 2007, four months after the general elections, the draft law could finally start its parliamentary process again and be put before parliament for discussion, amendment and approval.

In light of the internal dynamics of Bosnia and Herzegovina, the reason behind the delay could be understood as an attempt to avoid the creation of an agency as a body independent from the state. There is also strong opposition to centralised functions at the federal or country level. The Traffic and Communications Commission received a series of amendments to the draft law from the Republika Srpska government. It maintains that the AIS, the brainchild of the Ministry of Telecommunications, contravenes the constitutions of both Bosnia and Herzegovina and the Republika Srpska. It states that jurisdictions are assigned to the joint institution that do not belong to it, but are administrated at the level of the two entities, specifically in the fields of administration, education and health. It also wants to keep the current directorate for the implementation of the electronic database of the Citizens Identification and Protection System (CIPS) – a project which has developed a citizens registry available online from all 139 municipalities – within the Ministry of Civil Affairs, instead of merging it with AIS responsibilities (CSS, 2006).

The information society in Bosnia and Herzegovina is uncertain. While the action plan identifies 109 projects to be promoted, supported and financed, and has been approved by the Council of Ministers, it is entangled in a complex political and administrative web, involving all levels of government, from federal and entity ministries to cantonal ministries and agencies.

There is also a risk that instead of the independent agency envisaged in the AIS, we will be faced with further delays or a diminished agency, dependent on approval and permission. An even worse scenario would entail the establishment of two complementary information society agencies, which could put at risk the harmonised and

Graph 1: Percentage of schools with internet access



Source: eReadiness Assessment Report (2005)

efficient development of the ICT sector in the country as a whole. Already in 2005 the Republika Srpska tried to launch its own agency, but postponed the move because of a lack of financial resources.

An indirect negative indicator of the situation can be found by comparing the Global Information Technology Report published by the World Economic Forum in the years 2005 and 2006. While Bosnia and Herzegovina was ranked 89th out of 104 countries in the first, one year later it had dropped to the 97th place out of 115. This clearly shows the effect of the political stalemate which has paralysed key processes crucial to the development of all sectors of the economy and society.<sup>7</sup>

#### Education: primary and secondary school access to the internet

According to data provided by the World Bank, Bosnia and Herzegovina spends about 2.7% of its GDP on basic education and 1.4% on secondary education. Almost 90% of this budget is spent on salaries for teachers, which means that very few or no resources are available for investing in development.

Throughout the entire territory of Bosnia and Herzegovina there are 596 primary and secondary schools in the Federation of Bosnia and Herzegovina and 195 primary and secondary schools in the Republika Srpska. These provide education to nearly half a million pupils. There are also six universities in total.

Each entity has its own ministry of education (there is no education ministry at the country level). The Federation of Bosnia and Herzegovina also has ten cantonal ministries in charge of funds for primary and secondary schools.

The country is undergoing a systemic change in its efforts to harmonise with EU standards. While its current set of educational laws include little related to ICTs, curricula in most primary and secondary schools are also not geared towards promoting the information society.

The country's eReadiness Assessment Report for 2005 (UNDP, 2006) shows that there is one computer for every 57 pupils in primary and secondary schools, and only one computer per 27 students at the university level (the European average is one computer per 15 students). And while 64% of primary and secondary schools have a

7 See: <[www.weforum.org/gitr](http://www.weforum.org/gitr)>.

computer lab, access to these labs has not been properly measured. In primary and secondary schools, only 43% have internet access, and the vast majority of schools are connected via dial-up.

### *Bosnia and Herzegovina Academic and Research Network (BIHARNET)*

BIHARNET was established by the University of Banja Luka, the University of Sarajevo, the University of Tuzla, Dzemal Bijedic University in Mostar, and the University of Mostar. The Universities of East Sarajevo and Bosnia and Herzegovina are also members. While the network became a legal body in 1998, money promised by the Ministry of Education of the Republic of Slovenia and the ministers of education and science of both entities for running the network did not materialise. As a result, the network exists primarily as a legal entity, with some investment by the universities, or through joint projects with other institutions.

### Participation

The WSIS Declaration of Principles states: "Governments, as well as private sector, civil society and the United Nations and other international organizations have an important role and responsibility in the development of the Information Society and, as appropriate, in decision-making processes. Building a people-centred Information Society is a joint effort which requires cooperation and partnership among all stakeholders" (ITU, 2003).

While the information society has received attention from high-ranking officials at the country and entity government levels – largely due to the UNDP – much of the momentum seen in 2004 has been lost. Participation also did not involve all stakeholders equally.

The approach chosen by the UNDP focuses on public-private partnerships. This envisages the involvement of civil society later on in the process – and mainly in the role of support and dissemination of ICTs. While academia was active in the ICT Forum and participated in defining core policy documents, civil society organisations (CSOs) working in the fields of local governance, transparency, advocacy, human rights, environment and gender were notably absent during the first round of the Forum held in 2003. Only eight non-governmental organisations had been included in the consultations and surveys – and two of them were international agencies.

One of the reasons for this low degree of civil society participation is that many CSOs still do not see ICTs as being an important and urgent issue. However, the situation is likely to change. Since 2006 a number of organisations have started to address the issue of access for primary and secondary schools.

During 2006, the Foundation for Creative Development, a community educator working in the field of ICTs and multimedia, and the Youth Information Agency, an independent institute in the field of youth policy development, ran local and national campaigns calling for the issue of ICTs to become an organic part of youth policy, and for financial resources to be made available for ICT development.

The National Gender Action Plan (GAP)<sup>8</sup> included a chapter entitled "Information and Communication Technologies" which specifically addresses the issue of ICTs in connection with gender equality. This could be used in the further development of the national ICT policy processes.

If we break down the main actors at different levels that have contributed or are willing to contribute to shaping the ICT policy landscape, we find at the international level: the ICT4D (ICT for Development) department at the UNDP; the eSEE Secretariat; the Organisation for Security and Cooperation in Europe (OSCE); the Norwegian Agency for Development Cooperation (Norad); the Austrian Development Department; K-education; the Canadian International Development Agency (CIDA); the United States Agency for International Development (USAID); Cisco Systems; Oracle; and Hewlett Packard.

At the national level, key institutions that are important for information society development and legislation enforcement are: the Council of Ministers (country level); the entity governments themselves; the Ministry of Transport and Communications (at the country level and entity level); the Directorate for European Integration; the Ministry of Civil Affairs; the Ministries of Internal Affairs; the Ministries of Finance; the Ministries of Law; the Central Bank; the Institute for Standards and Patents; and the Agency for Gender Equality in Bosnia and Herzegovina, among others.

In the local private sector, key role players are: the Bosnia-Herzegovina Association for Information Technologies (BAIT)<sup>9</sup> which has more than 50 IT companies as members, and the country's internet service providers (ISPs). There are currently more than 48 ISPs in the country, some represented by the Bosnian ISP Association (BaISPa).

Key civil society players include: the Youth Development Agency; the Management and Information Technologies Centre, a unit of the Faculty of Economics at the University of Sarajevo; the Linux Users Group of Bosnia and Herzegovina (<[www.linux.org.ba](http://www.linux.org.ba)>); the International Association of Interactive and Open Schools (<[www.ioskole.net](http://www.ioskole.net)>); the Brcko District portal for primary and secondary schools (<[www.skole.bdcentral.net](http://www.skole.bdcentral.net)>); the International Forum Bosnia (<[www.ifbosna.org.ba](http://www.ifbosna.org.ba)>); the Foundation for Creative Development (<[www.fkr.edu.ba](http://www.fkr.edu.ba)>); owpsee (<[www.oneworldsee.org](http://www.oneworldsee.org)> and <[www.ict-policy.ba](http://www.ict-policy.ba)>); and the Sarajevo office of World University Service (WUS) Austria (<[www.wus-austria.org/sarajevo](http://www.wus-austria.org/sarajevo)>).

The University Teleinformatic Centre (UTIC) deserves a special mention. It was the first ISP provider in Bosnia and Herzegovina and is responsible for the .ba country code top-level domain (ccTLD). It also partnered with the OSCE in creating websites for primary and secondary schools (151 schools now have their own websites).

### Conclusions

While the ICT landscape in Bosnia and Herzegovina is more dynamic than a few years ago, there is a sense that the country is deadlocked, and unable to act according to its declared plans and signed public documents. While the AIS has yet to be properly established, BIHARNET lacks the necessary power and independence. The fact that the body is set up at the country level, while the ministries that should provide finances are at the entity level, raises concerns about its sustainability (the exception is the government of the Republika Srpska, which has set up the network at the entity level).

In order to break the current trend, there is a need for two complementary actions: pressure at the regional level from eSEE through the eSEE Agenda+, as well as through its broadband taskforce bSEE.<sup>10</sup>

8 The Gender Equality Agency has, in cooperation with each entity's gender centre, started constructing the Bosnia Herzegovina Gender Action Plan, the single most important strategic document for the direct integration of gender equality in all spheres of public and private life.

9 <[www.bait.org.ba](http://www.bait.org.ba)>.

10 Established by the eSEE governments together with Greece and Romania in March 2006.

While the bSEE parties are expected to establish or update their national broadband strategies to include clear targets for connectivity in education, health institutions and public administration (Government of Serbia, 2006), the eSEE Agenda+ makes clear reference to national policy that must include broadband targets as well as goals to address gender imbalances. The eSEE Agenda+ can offer a wider political framework to support advocacy and policy action coming from CSOs.

Due to the status quo regarding the AIS, a specific role should be created for the Communication Regulatory Agency (CRA).<sup>11</sup> Part of the mission of the CRA is to promote the development of an information society in Bosnia and Herzegovina. It must also encourage the development of a market-oriented and competitive communications sector for the benefit of all citizens of the country, and protect the interests of users and operators of telecommunication services in terms of non-discriminatory access, quality and prices of services. Even though the regulatory role of the CRA has had a significant impact, it seems it could do much more within its mandate.

The local ICT business sector is growing and is willing to engage through its association. A conference organised in November 2006 called for a more integrated and coherent approach towards local companies that feel neglected or not supported enough in comparison to multinationals (such as Cisco Systems and Microsoft).

Given the political environment, it is clear that the process will require a long-term national strategy, as well as a regional strategy at the institutional and civil society level – one of the few ways of diminishing the power of political veto too often played between the federal and entity level.

At the national level there is an evident need for CSOs to develop a joint strategy identifying common goals with local ICT companies who, together with ISPs, are natural allies. It is good news that CSOs have started to recognise the cross-cutting relevance of ICTs in relation to their core missions. Specifically, the partnership between the Foundation for Creative Development and the Youth Development Agency is an encouraging sign.

Two key events could further stimulate civil society's role at the policy advocacy level: the launch of the e-governance project, which will channel the attention of CSOs active in the field of transparency, access to information and active citizenship; and the National Gender Action Plan, which can be effectively used by women organisations that are working in the field of employment and life-long learning, among other developmental concerns. ■

## References

- Bakaržic, K., Burke, A., Cepaite, Z., Constantin, M., Daltikovitch, K., Domaszewicz, Z., Fortier, F., Gadjiev, S., Gurbanniyazova, N., Hadzialic, H., Korneev, Y., Martin, S., Meirik, P., Mikosz, D., Mukhatzhanova, G., Nurshaiikova, G., Paereli, V., Reimer, M., Rohozinski, R., Sarkissian, H., Strazimiri, G., Takenov, Z., Talibdjanov, N., Tavgen, I., Venancio, M., Wolanskyi, L., Writh, J., Zaimovic, T., Zhakenova, S. (2004). "Bosnia and Herzegovina". In Mahan, A. (Ed.), *How to Build Open Information Societies. A Collection of Best Practices and Know-How*, pp. 39-46. Bratislava: UNDP.
- CSS (Centre for Security Studies) (2006). *Softening of the visa regime for citizens of Bosnia and Herzegovina: What are the requirements that the Government of Bosnia and Herzegovina needs to fulfil in order to ease the transfer of Bosnia and Herzegovina from the "Black List" to the "White List" of the visa Schengen Agreement?* [online]. Available from: <[www.css.ba/docs/LiberalizationOfTheVisaRegime.pdf](http://www.css.ba/docs/LiberalizationOfTheVisaRegime.pdf)>.
- Cullen International (2005). *Report 1. Country Comparative Report, Supply of services in monitoring of South East Europe – telecommunications services sector and related aspects* [online]. Available from: <[www.cullen-international.com/documents/cullen/cipublic/studies/balkan/report2comparative.pdf](http://www.cullen-international.com/documents/cullen/cipublic/studies/balkan/report2comparative.pdf)>.
- Cullen International (2006) *Report 2. Country Comparative Report, Supply of services in monitoring of South East Europe – telecommunications services sector and related aspects* [online]. Available from: <[www.cullen-international.com/documents/cullen/cipublic/studies/balkan/report1comparative.pdf](http://www.cullen-international.com/documents/cullen/cipublic/studies/balkan/report1comparative.pdf)>.
- Government of Serbia (2006). *Terms of Reference for 'Bsee' – Broadband South Eastern Europe Taskforce* [online]. Available from: <[www.arrii.sr.gov.yu/?eSEE-Refepis%20projektnog%20zadatka%20za%20bSEE%20Radnu%20grupu.pdf](http://www.arrii.sr.gov.yu/?eSEE-Refepis%20projektnog%20zadatka%20za%20bSEE%20Radnu%20grupu.pdf)>.
- Hadžialić, H. (2003). *Information & Communication Technologies Forum, Final recommendation and conclusion*. Sarajevo: UNDP.
- ITU (International Telecommunication Union) (2003). *Declaration of Principles. Building the Information Society: a global challenge in the new Millennium* [online]. Available from: <[www.itu.int/wsis/docs/geneva/official/dop.html](http://www.itu.int/wsis/docs/geneva/official/dop.html)>.
- Ó Siochrú, S., Nath, V. (2005). *The eSEE Initiative: Review of the eSEE Agenda's Policy Impact in the area of Information Society in South Eastern Europe* [online]. Bratislava: UNDP. Available from: <[www.mdi.gov.md/img/word/ElectronicSouthEastern\\_en.doc](http://www.mdi.gov.md/img/word/ElectronicSouthEastern_en.doc)>.
- UNDP (United Nations Development Programme) (2004a). *Policy for Development of the Information Society of Bosnia and Herzegovina* [online]. Available from: <[www.is.gov.ba/documents/publications/Policy\\_for\\_IS\\_Development\\_in\\_BH.pdf](http://www.is.gov.ba/documents/publications/Policy_for_IS_Development_in_BH.pdf)>.
- UNDP (2004b). *Strategy for Development of the Information Society in Bosnia and Herzegovina* [online]. Available from: <[www.is.gov.ba/documents/publications/Strategy\\_for\\_IS\\_Development\\_in\\_BH.pdf](http://www.is.gov.ba/documents/publications/Strategy_for_IS_Development_in_BH.pdf)>.
- UNDP (2004c) *Action Plan for Development of the information society in Bosnia and Herzegovina* [online]. Available from: <[www.is.gov.ba/documents/publications/Action\\_Plan\\_for\\_IS\\_Development\\_in\\_BH.pdf](http://www.is.gov.ba/documents/publications/Action_Plan_for_IS_Development_in_BH.pdf)>.
- UNDP (2004d). *eSEE Europe Regional Information and Communication Technologies Sector. Status and Usage Report: Building an Information Society for All* [online]. Sarajevo: UNDP. Available from: <[www.is.gov.ba/documents/publications/ICT\\_Sector\\_Status\\_Report\\_for\\_South-Eastern\\_Europe%20Web.pdf](http://www.is.gov.ba/documents/publications/ICT_Sector_Status_Report_for_South-Eastern_Europe%20Web.pdf)>.
- UNDP (2006). *Information Society Development. eReadiness assessment report for 2005* [online]. Available from: <[www.is.gov.ba/documents/publications/e-Readiness%20assessment%20report%202005%20-%20no%20cover.pdf](http://www.is.gov.ba/documents/publications/e-Readiness%20assessment%20report%202005%20-%20no%20cover.pdf)>.

11 <[www.cra.ba](http://www.cra.ba)>.

# BRAZIL

Rede de Informações para o Terceiro Sector (RITS) - Núcleo de Pesquisas, Estudos e Formação (NUPEF)<sup>1</sup>

Carlos Afonso<sup>2</sup>



## Introduction

One of the goals of the RITS Centre for Research, Study and Education (NUPEF) is to help formulate public policy proposals on leveraging information and communications technologies (ICTs) for human development in Brazil. RITS is active in lobbying the federal government on these policies, and has been active in the international scenario as well, as a Southern participant of the World Summit on the Information Society (WSIS), including the Working Group on Internet Governance (WGIG), and, more recently, the Internet Governance Forum (IGF).

This report is an initial effort to highlight several issues involved in the complex Brazilian context. It contains a quick historical overview of recent processes (from the 1990s until today) which led to the current situation in telecommunications, media and internet-related policies. A summarised review of governmental initiatives related to digital inclusion is then offered. The report then tries to establish the current shortcomings in the development of a national ICT policy focused on human development. Finally, it proposes priority objectives for an ICT policy framework.

## Country situation

### Recent history of infrastructure

#### Privatisation of the Telebrás system

Brazil has a fairly advanced (but poorly distributed) ICT infrastructure, largely a result of the telecommunications privatisation process begun in 1998. Until privatisation, the sector's authority was centred in the Ministry of Communications,<sup>3</sup> the controlling agency of Telebrás (a state "holding company" for all the telecommunications companies – telephony and data transmission) and of the State Postal Company (EBCT).

In the last years of the Telebrás monopoly, the "holding company" became known not for its formal mission (extending public telecommunications services to all Brazilians), but for its practical activity: repressing demand.

One of the significant changes in the regulatory framework was the creation in October 1997 of the National Telecommunications Agency (ANATEL),<sup>4</sup> the federal telecommunications regulatory body modelled on the Federal Communications Commission (FCC) of the US.

The deterioration of services, especially telephony services, combined with the practical impossibility of improving services through legal action by consumers – there was only one company providing services, and it doubled up as the regulator – favoured pro-privatisation arguments in a context of an immense demand.<sup>5</sup>

ANATEL was established with the mission of enabling a new model for Brazilian telecommunications, starting with the privatisation of the Telebrás system. With privatisation, the main role of ANATEL became that of regulation, concession and supervision of telecommunications services in the country.

The privatisation process took place under the government of Fernando Henrique Cardoso (1995-2003), as part of the neoliberal policy in which the touchstone was the withdrawal of the state from any productive activity that might interest national or international investors. The total estimated value of the privatisation of the sector was USD 19.5 billion. However, payments were made in the local currency, the *real*. Most of these payments were made after a major devaluation of the *real* in relation to the dollar – a gift from the federal government to the companies that were granted licences.

The original declared objective of privatisation was to ensure competition in all markets, but the policy seriously failed on this point. In practice, large consortia acquired Telebrás' existing fixed telephony structures in each of the three regions of coverage and became monopolies in those regions.

The possibility of having to face competition in regional markets (reserved for a limited time), as well as the universal service obligations of the concession contracts, made the dominant companies invest heavily in digital technology and in the construction of their own backbones. While fixed telephony was effectively increased, the goals of universal service embedded in the licence conditions, particularly regarding poor areas, were not reached.

Privatised cellular telephony began with much more competition (cellular telephony companies competing side by side in each region) and services were extended in such a way that Brazil today has 100 million cellular telephones in operation (55% penetration in the total population). However, concession contracts for cellular telephony do not contain universal service clauses – another serious error in the privatisation policy. Today more than 2,400 Brazilian municipalities (43% of the total) have no local cellular telephone service (there are no cellular network radio base stations in these municipalities). This disparity particularly affects the poorer regions in the country (North-East and North), but exists in all Brazilian states. For example, 29% of municipalities in Rio Grande do Sul, one of the most economically advanced states in the country, do not have the service.

Neither did the privatisation policy take into account the global consolidation of telephony operators, together with the rapid rate of technological convergence. There are four major cellular telephone operators in Brazil, and two of them may merge as a result of agreements between their global owners.<sup>6</sup>

#### Data transmission infrastructure

The development of the Brazilian fibre optic infrastructure began in 1993, with a link between Rio de Janeiro and São Paulo. The Embratel network exceeded 20,000 km of inter-urban fibre circuits by the end

1 <www.nupez.org.br>.

2 With contributions from NUPEF researcher Sonia Aguiar.

3 <www.mc.gov.br>.

4 <www.anatel.gov.br>.

5 In a certain way, this was a repeat of the situation that occurred when telephony was in the hands of foreign operators or small private companies – only on a much larger scale. Some of the arguments that were used for nationalisation from 1962 onwards were now used for the re-privatisation of services.

6 Vivo is owned by Telefónica de España, and Oi by Telemar. Mexican capital controls Claro and the main operator of the country's backbones and satellite services, Embratel. TIM is controlled by Telecom Italia.

of 1998. Today, there are fibre optic networks in the main cities, operated by various private companies, and even by local governments (Niterói, Porto Alegre), as well as fibre circuits between these cities.

All telephone companies build their own fibre networks, and the new regulations allow companies from other sectors, such as electricity providers, to make use of their own infrastructure and build fibre networks too. An example is Eletronet's fibre network, with 16,000 km interconnecting the main cities of eighteen Brazilian states, mounted on electricity transmission pylons. When Eletronet hit financial difficulties, the federal government considered nationalising the company, and using its fibre network to service government needs and possibly for digital inclusion projects. However, this did not happen.

Brazil has various international fibre connections with the US and Europe (and also with Uruguay and Argentina), all operated by companies controlled by foreign capital. The privatisation of telecommunications in Brazil often emphasises a single objective: to get rid of productive, profitable state-owned companies to the detriment of other considerations. As a consequence, the privatisation of Embratel resulted in the sale to foreigners of the main satellite service provider in the country. Even communications services directly related to national security (government data traffic, including that of the armed forces) currently use commercial satellite connections operated by foreign companies. The entire Amazon protection network (known as SIVAM) is interconnected via these commercial circuits. Today, Brazil (in contrast to countries of a similar size, such as Russia and India) does not have a single communications satellite operated by its own department of defence.

Despite having a sophisticated infrastructure with various data transmission backbones and internet exchange/peering points in the main cities, the distribution of PoPs (points-of-presence or points of high-speed direct connection to a backbone) is extremely precarious. Municipalities that have no local cellular telephone service in general also have no local internet access services. The distribution of broadband access (via ADSL, cable TV or digital radio network) reaches a small percentage of urban areas. Even in the two main cities of the country (São Paulo and Rio de Janeiro) there are entire districts – including middle-class districts – with no access to this service.

According to prevailing legislation, recommended by the Brazilian Internet Management Committee (CGI)<sup>7</sup> and regulated by ANATEL, a cable TV licensee or telephone operator that offers ADSL may connect its users to the internet, but access authentication must be done by an internet service provider (ISP). This is a result of legislation adopted in the country that separates the physical and logistical infrastructure (data transmission methods) from the service layers, and prevents monopolies from developing.

In practice, however, with the consolidation of companies and the convergence of technology, this rule has been systematically broken by cable TV operators and companies. Telefônica claims to operate ADSL services in over 900 municipalities in São Paulo, and is the owner of the service and content provider Internet Terra Networks; the cable TV quasi-monopoly Net Serviços, belonging to Organizações Globo and Telmex, offers internet services and content via its subsidiary Globo.com. It is not mandatory to take out a contract for connection and services from the same company, but it is obvious that these companies have many advantages when it comes to attracting users towards a single contract that encompasses all services (connection, email, access to information, etc.). This process has led to a consoli-

ation in the provision of services and content, with the rapid disappearance of small-scale service providers.

#### Brazilian Digital TV System (SBTVD)

Digital TV has been legislated by Decree 4901/03. The objective is to contribute to digital inclusion. However, in the current context it should only be thought of as a complementary, though important, means for digital inclusion: the cost of a set-top box, as well as the subscription to an access network, are major limiting factors for most of the population.

The SBTVD incorporates open standard middleware, developed in Brazil, known as GINGA. This is used in set-top boxes. In June 2006, Brazil officially opted for the Japanese ISDB-T standard<sup>8</sup> – an option viewed by sectors of civil society as being inclined to favour the existing large TV companies, in particular the dominant company (Organizações Globo). Another criticism made by these sectors is that the decision-making process was not pluralistic, and the allocation of the radio frequency spectrum favours concentration of broadcasting in the hands of the current multimedia oligopoly.

However, specialists working in SBTVD development consider this to have been the best choice. The Japanese standard is the only one ready for transmission to portable receivers (such as car receivers) and mobile receivers (such as cellular telephones).

From the time of the establishment of digital TV, broadcasters will have ten years to adapt. During this time, programmes may be transmitted simultaneously via digital and analogue signals. After ten years, however, the concession for the analogue channel will be suspended, and transmission will become exclusively digital.

#### *ICTs for human development – government policies and digital inclusion initiatives*

##### Fund for the Universalisation of Telecommunications Services

After taking three years to be passed by Congress, Law 9998 was approved in August 2000, establishing the Fund for the Universalisation of Telecommunications Services (FUST), regulated by Decree 3624 of October of the same year (Senado Federal, 2000). In summary, the fund is made up of 1% of the gross operating revenue of fixed-line telephone operators (equivalent to approximately USD 400 million annually). Collection began in 2001, and by the beginning of 2007 the FUST had accumulated approximately USD 2.8 billion.

The initial proposal for the use of FUST resources, developed in 2001, stipulated that 45% should be used to connect public schools, 35% to connect health units, and 20% for other purposes. However, regulatory difficulties, and the fact that the contributions are held by the Federal Treasury, have hindered the proper use of the funds up to now.

Even if used, FUST is hostage to regulations that prioritise the acquisition of connectivity services from the telecommunications operators who actually contribute towards the fund.

##### The GESAC programme

The Electronic Government – Citizens' Support Service (GESAC) Programme was created under the Cardoso government to maintain individual points of access to e-government services via the internet (connected by satellite). Under the Lula<sup>9</sup> government, the programme moved on to connecting schools, telecentres and security services. Today, GESAC has approximately 3,200 PoPs (VSAT stations with re-

8 See: *Decreto 5.820*, 29 June 2006. Available from: <[www.indecs.org.br/index.php?option=com\\_content&task=view&id=85&Itemid=46](http://www.indecs.org.br/index.php?option=com_content&task=view&id=85&Itemid=46)>.

9 President Luiz Inácio Lula da Silva.

7 <[www.cgi.br](http://www.cgi.br)>.

ception bandwidth of up to 2 mbps), active in approximately 37% of Brazilian municipalities in all states. Approximately 400 PoPs connect Ministry of Defence services.

GESAC's choice of locations for the installation of PoPs must comply with the following criteria: localities with a low Municipal Human Development Index (MHDI); localities where telecommunications networks do not offer internet access; and communities that have already developed cultural community activities that are supported (or could be supported) by ICTs. However, the MHDI criterion was not applied in a systematic manner.

Public primary and secondary schools – including those in indigenous villages and rural settlements – make up 72% of the 3,240 PoPs installed as of September 2006. This totals 2,355 schools, of which 1,800 were selected by the Ministry of Education on the condition that they already had a computer laboratory with at least five computers in a local network, but without internet access. The other 555 schools were selected by the Ministry of Communications, the Ministry of Social Development<sup>10</sup> and the Fight Against Hunger and state education secretariats. However, the criteria for choosing PoPs in education were also partly spoilt by political patronage.

Twelve indigenous communities received PoPs from the programme in September 2006. Only two *quilombola* communities (made up of African descendents from the period of slavery) were beneficiaries: one in São Paulo, and the other in Rio Grande do Norte. Rural and fishing communities were major GESAC beneficiaries, thanks to the organisation of rural workers (e.g. through unions) and small agricultural producers, on the one hand, and on the other, the Maré project of the Special Secretariat of Aquaculture and Fisheries (SEAP).

GESAC has been used for voice over internet protocol (VoIP) telephony in an attempt to provide telecommunications services to poorer areas, which the fixed telephone companies should serve as part of their licensing conditions. At the beginning of November 2006, the programme announced that voice transmission via the internet using PoP terminals increased from 2,131 to 66,865 minutes between December 2005 and October 2006, which is more than a thirty-fold increase. However, the service is still limited (at least officially) to a little less than 500 PoPs.

From the perspective of democratisation of broadband access, GESAC has serious limitations. Firstly, it is a relatively expensive broadband technology. Secondly, connections via satellite are more expensive than surface connections and will not be able to beat fibre optic technology, unless there is an enormous leap in on-board energy and digital radio transmission technology. Technically, the fibre technology is "future-proof" – the transmission capacity of already-installed fibre depends only on updating the transceivers at their endpoints. Technological leaps have been promising, multiplying many times over the transmission capacity of recent years (from gigabits per second to terabits per second in a single fibre).

#### Access to equipment

*One computer per student?* Brazilian public schools have approximately 33 million children in primary schools and 10 million in secondary schools, in a total of about 160,000 schools. On this scale, it is surprising that the government is considering approving projects such as the One Laptop Per Child (OLPC) project. Without considering all the support costs, as well as those related to increasing the capacity of the network and its adaptation (the project involves connecting computers

to the internet), and supposing that the NegroPonte<sup>11</sup> "gadget" costs at least USD 100, the gross cost for Brazil would be over USD 3.3 billion. It is clear that this would be an impossible and impractical expense: there are no available budget lines for this, and the same amount of money would make it possible to carry out alternative digital inclusion projects in schools with much wider reach and impact. It is also clear that it does not make sense to implement the programme for only 3-4% of Brazilian children. It is an expensive game for a country that is far from attaining the required digital inclusion levels.

*Computers For All:*<sup>12</sup> This is a programme of the Presidency of the Republic, together with the Ministry of Development,<sup>13</sup> the Ministry of Science and Technology<sup>14</sup> and the federal data processing company, Serpro. Those who will benefit are low-income families above the poverty line. It consists of subsidising lines of credit for the purchase of computers with a minimum specification, at a value of up to BRL 1,400 (USD 650). Repayments may be made in 24 instalments of BRL 70 (USD 33) each. For computers of up to BRL 2,500 (USD 1,160), there are some tax exemptions. Up to May 2006, the Ministry of Science and Technology registered 23 manufacturing companies interested in selling equipment within the programme. Since its launch, a single company has marketed 77,000 machines as part of the project.

*Computer refurbishment:* This is a project of the federal government (Ministries of Planning, Education and Labour) that seeks to establish refurbishment centres for second-hand computers donated by public and private entities. The computers will be refurbished by low-income youths who will be trained to do the work. They will then be distributed to telecentres, schools and libraries. The project was inspired by a similar initiative by the Canadian government, which today refurbishes over 100,000 computers a year in 50 centres, supplying 25% of the computer needs in the country's public education network. The first centre in Brazil is a pilot centre, in operation in Porto Alegre since April 2006.

#### Telecentres and kiosks

*Citizens' kiosks:*<sup>15</sup> This involves a Ministry of National Integration project to establish access points for e-government services. It started as an experiment in municipal public libraries in poor communities around the country's capital in 2003. By October 2006 the project had already extended to various low Human Development Index (HDI) municipalities of the states of Goiás, Minas Gerais, Mato Grosso do Sul and Mato Grosso.

*Digital Station Programme:*<sup>16</sup> This is an initiative of the Banco do Brasil Foundation (Fundação Banco do Brasil), with the support of local partners. It seeks to bring computers closer to the lives of students, housewives and workers, "saving time and money, creating new perspectives and improving the quality of life of the population."<sup>17</sup> Since 2004, 166 units have been established throughout Brazil, approximately 90% of them in the north-eastern and central-western states. These have a capacity to serve 500 to 1,000 persons a month.

10 <[www.mds.gov.br](http://www.mds.gov.br)>.

11 Nicholas NegroPonte is founder and chairman of the One Laptop Per Child non-profit association.

12 <[www.computadorparatodos.gov.br](http://www.computadorparatodos.gov.br)>.

13 <[www.desenvolvimento.gov.br](http://www.desenvolvimento.gov.br)>.

14 <[www.mct.gov.br](http://www.mct.gov.br)>.

15 <[www.integracao.gov.br](http://www.integracao.gov.br)>.

16 <[www.fundacaobancodobrasil.org.br/estacaodigital](http://www.fundacaobancodobrasil.org.br/estacaodigital)>.

17 See: *Portal Inclusão Digital*. <[www.inclusaodigital.gov.br](http://www.inclusaodigital.gov.br)>.



*Information and Business Telecentres:*<sup>18</sup> This is a programme of the Ministries of Industry and Trade and Social Development. It involves establishing telecentres focused on the digital inclusion of the small entrepreneur, with the aim of expanding business and work opportunities that will lead to economic growth and employment. The telecentres are established in business associations, mayor's offices and non-governmental organisations (NGOs). Besides facilitating hardware donations to the telecentres, the programme offers content oriented towards entrepreneurs by means of a web portal. However, telecentre hosts must sort out the installation of equipment, as well as the management and administration of the telecentre on their own. The network has 1,616 units installed across all Brazilian states.

*Banco do Brasil Telecentres:*<sup>19</sup> This is a digital inclusion programme that is part of the corporate social responsibility policy of the Banco do Brasil. The initiative resulted from the modernisation of the bank's technological network. Old equipment was donated to poor communities so that community telecentres could be established. The programme looks to train the telecentre monitors and develop partnerships to support the telecentres. The Banco do Brasil says over 1,600 telecentres and computer rooms have been established (consisting of 17,000 computers and attracting four million users).

*Digital Inclusion Telecentres:* This is a project that integrates the Petrobras Zero Hunger Programme, developed in partnership with the National Information Technology Institute (ITI) and RITS. To date, the project has established 50 units in low HDI areas. Approximately 1,000 people a day use the telecentres. Among the more than 15,000 persons registered to participate in the project, women are in the majority (55.48%), and 70% of users are under 30 years of age.

*Chief of Staff's Office – Casa Brasil:*<sup>20</sup> The National Coordination of the Casa Brasil programme was established by presidential decree on 11 March 2005. The programme looks to establish cultural centres in poor communities with facilities for internet use and multimedia production (audio and video). It is being developed with the participation of various ministries, secretariats and federal government companies. In August 2006, 44 units were in operation, serving an average of 50,000 people, and another 89 units were in the implementation phase in low HDI communities in the larger cities of the five regions of Brazil.

*Culture Points:*<sup>21</sup> This is a project of the Living Culture Programme of the Ministry of Culture, the objective of which is to support local cultural initiatives, called Culture Points, through funding of up to BRL 185,000 (USD 88,500). It has resources for training local agents in the production and exchange of digital multimedia (video, audio, digital photography) with the use of free and open source software (FOSS). The Culture Points are connected to the internet via satellite (GESAC). As of June 2006, 485 Culture Points had been set up by the programme, and another 80 are awaiting approval.

*Serpro Citizens Space:*<sup>22</sup> This is a digital inclusion programme by Serpro, which aims to support the installation of community telecentres and promote the digital inclusion of communities neighbouring the company's regional offices. The programme also supports the Open School Programme, in partnership with the Ministry of Education.

*Technological Vocational Centres (CVTs):*<sup>23</sup> This is a project by the Ministry of Science and Technology. CVTs are oriented towards the technological empowerment of the population. They offer training, a location for scientific experimentation, contextual enquiry, and the provision of specialised services, taking into account the vocation of the local region and encouraging the improvement of processes. The project began in 2003 and by the end of 2006 153 CVTs had been created.

*Maré Fisheries Telecentres:*<sup>24</sup> This is a programme by the Special Secretariat of Aquiculture and Fisheries of the Presidency of the Republic (SEAP). It looks to establish telecentres in fishing communities. The objectives are to offer access to computer resources and the internet; strengthen participative citizenship; and build capacity. By the end of 2006, five telecentres had been established, and another fifteen are under implementation. The Banco do Brasil supplied the computers, and the GESAC programme is providing satellite connections.

*Ministry of Communications Telecentres:* In another initiative, the federal government decided at the end of 2006 to provide a telecentre to each municipality – a total of 5,400 telecentres. The Ministry of Communications, in partnership with the Ministry of Social Development, carried out a tender process to acquire 54,000 computers (10 per telecentre) and 5,400 servers (one for each telecentre). The purchase also includes printers and UPSs (voltage regulators), as well as televisions, projectors and DVD players for each telecentre.

*Community Telecentres in São Paulo:* Covering an area of 1,522 km<sup>2</sup>, the city of São Paulo is the largest in the country and has almost 11 million inhabitants. The inauguration of the first of the 130 community telecentres in the city's poor areas took place on 18 June 2001, the result of a joint initiative between the city mayor's office, RITS, and local organisations. Using a thin-client architecture (each telecentre has a server and 20 workstations) running GNU/Linux, all of the telecentres represent a major localised national digital inclusion initiative. The majority of them use FOSS exclusively. By the end of the term of Mayor Marta Suplicy in 2004, the telecentres were serving approximately half a million people, and continued to function under the new municipal administration from 2005.

#### Public schools

Brazil has approximately 160,000 public schools, 16,570 of which are secondary schools. Of the primary schools, 89,000 are in rural areas and 25,000 have no electricity. Table 1 shows the current number of schools with at least one computer, irrespective of its connectivity status. In the short term, the federal government plans to distribute approximately 76,000 computers<sup>25</sup> by mid 2007 to secondary schools – an average of 10 computers per school. This will significantly scale up access in secondary education.

If percentages are low (only 15.64% of public schools have computers), the connectivity situation is much worse: fewer than 6% of public schools have a permanent internet connection, and most of them use GESAC. A study suggests that schools near to the PoPs of the National Network for Education and Research (RNP), which has a high-speed network present in all of the country's major cities,<sup>26</sup> may

18 <www.telecentros.desenvolvimento.gov.br>.

19 <www.bb.com.br/appbb/portal/bb/idx/index.jsp>.

20 <www.brasil.gov.br/casabrasil>.

21 <www.cultura.gov.br/programas\_e\_acoes>.

22 <www.serpro.gov.br/cidadao>.

23 <www.mct.gov.br/index.php/content/view/11471.html>.

24 <tuna.seap.gov.br/seap/telecentro>.

25 In many instances, refurbished computers are used.

26 RNP connects 250 university and research centres.

**Table 1: Computers in schools**

Schools	Total	%	With at least one computer	%
Primary	143,000	89.6	16,792	11.74
Secondary	16,570	10.4	8,172	49.32
Total	159,570	100.0	24,964	15.64

Source: Ministry of Education (January 2007)

be connected to it via wi-fi (or something similar) at a much lower cost than that of satellite. Schools outside of the large centres will have to wait for the roll-out of the backbones, or rely on connectivity via satellite.

The Ministry of Education expects to equip 12,000 rural schools by 2008 and another 45,000 rural schools by 2011. Only 1.2% of schools have computer laboratories in rural areas.

### Community networks

As is the case in various other countries, Brazilian cities are seeking alternatives to solutions offered by the market, so that network resources can be optimised and internet access democratised. Despite the fact that successful projects have been implemented in only a few cities to date, there is much interest on the part of many mayoral offices, and especially local civic entities, in seeking alternatives. Frequently cited examples are the cities of Pirai (in the state of Rio de Janeiro) and Sud Mennucci (in the state of São Paulo), which created their own municipal networks in partnership with the community. These had two central aims: to optimise network resources for the use of the public administration, and to extend the internet to poor communities (through telecentres), schools and public health centres.

Another project still in the pilot phase is the community network of the riverside communities of the Tapajós and Arapiuns Rivers. An initiative of the Health and Happiness Project (PSA) and RITS, the project intends to connect more than 140 communities (each with 50 to 150 families) over a stretch of more than 150 km, using a combination of fibre optic, wireless and satellite connections. Currently, it serves five communities with two GESAC satellite connections and a long-range wi-fi network.

### Participation

Government interventions in ICTs for human development in Brazil reveal a common thread: it is rare for civil society to be invited to participate in the formulation of public digital inclusion policies.

On the other hand, despite the federal government having created sectoral committees to handle a common national strategy, this has not been developed, and what is seen is a long list of parallel initiatives by ministries and state enterprises.

Cases in which there has been an opportunity for the effective participation of civic entities (such as the São Paulo Mayor's Office telecentre project, among others) have resulted in successful projects – which should motivate further partnerships between government and civil society. This is not happening, and the signs with regard to the Lula government's second term of office are not encouraging: budgetary allocations that directly relate to digital inclusion programmes were reduced between 2006 and 2007.

Civil society has sought to actively participate in policy proposals. One of the most relevant forums is that of the National Digital Inclusion Workshop, held annually since 2002. The 5th Workshop,

held in Porto Alegre, produced a document – The Declaration of Porto Alegre – listing the main points of a national ICT policy for human development (RITS, 2006).

### Conclusions

We start with the observation that Brazil is a big country, both geographically (8.5 million square km) and demographically (180 million inhabitants). We also start with the obvious hypothesis that public policy expenditures in leveraging ICTs for human development are not costs, but *essential investments*. We do not need to discuss how important ICT access is for economic and social (and also cultural) development, significantly contributing towards leaps in local development possibilities and participation in the whole national economy.

We also recall that there are many initiatives, originating from governments, NGOs, the private sector, and even from academia, that serve as examples of good practice for a comprehensive strategy. The following may be cited, among others: telecentres in the most needy communities; subsidised connectivity via satellite (GESAC) for schools, public services and telecentres; exemplary municipal digital initiatives (Sud Mennucci, Pirai and others); electrification programmes for rural schools;<sup>27</sup> consolidation of an extensive and advanced national education and research network (RNP); the implementation of a government policy that prioritises open standards and FOSS; e-government actions at federal and state level, including online services, standardisation and system interoperability (e-PING architecture); and a national internet governance system that is transparent and considered worldwide as a point of reference for efficiency and quality.

However, even though various national initiatives in the ICT field are among the best in the world, we are still lacking a unifying strategy that will deepen and democratise the benefits of new technologies. Some points that show the urgent need for a government strategy:

- More than 2,400 municipalities are being ignored by private telecommunications and internet service companies. These municipalities only have fixed telephone services (because universal service obligations demanded it). In these municipalities, with more than 22 million people, and representing over 44% of our 5,562 municipalities, there is no local cellular service, nor local access to the internet. These municipalities are precisely those that most require economic and social support. They are in all states, but especially in the north and north-east, and are condemned by telecommunications operators to eternal disconnection.
- Zero, or very unstable connectivity in nearly all of our rural areas. Whoever lacks the economic resources for a satellite connection is also condemned to eternal disconnection. Satellite connectivity is expensive, and not “future-proof”. We know that it is limited and, in the way that it is distributed (point to point), very expensive in relation to the bandwidth offered. At the same time the quality of service is susceptible to bad weather (especially in the Ku band).
- Thousands of districts in larger cities, where there is no broadband service, have also been abandoned by the operators for market reasons. In these districts, like in all other municipalities and in our poorest districts in Brazil, it is essential to establish community internet access centres, as there is no way to connect a local digital inclusion project except via satellite.

27 Using photovoltaic panels.

These districts (or satellite cities) are present in all Brazilian cities, including those that are the most advanced in terms of internet services, like Rio de Janeiro, Brasília and São Paulo.

- Brazil has over 33 million primary school children, and approximately 10 million in secondary schools, in about 160,000 public schools across the country. In nearly all of these schools, there is no internet access (or even the equipment to enable access when it does exist). It is ridiculous, especially for a country with over USD 3 billion accumulated in a universal access fund, to have connectivity in less than 6% of its public schools. At the other extreme, in South Korea over 65% of six-year-old children are on the internet, and practically all public schools have broadband connections.
- Approximately 53% of our families live on less than two minimum wages per month. Over 30% of our families are not in a position to acquire a computer, unless it is at a nominal price, or 100% subsidised. But, even so, the additional expenses (in access costs and power consumption) for a family owning a computer that will inevitably be connected to the internet means that the device can create more problems than solutions for the poorest households.

### *Topics for a comprehensive strategy*

We cannot content ourselves with the limitations of underdeveloped countries. While we have different levels of resources available to us compared to developed countries, our ability to do much better is indisputable. However, our strategic planning, at least in the area of ICTs, appears to be that of an impoverished country; especially when we see instances when the government operates in a closed manner, without dialogue with civil society, and is affected by internal disagreements.

The situation is aggravated by the fact that we have conflicting legal and institutional structures that hinder or impede the investment of public resources into concrete actions – frequently leading to the impossibility of trying to implement public policies without public resources. To give just one example: the FUST is in practice hamstrung by the General Telecommunications Law and other regulations.

A comprehensive and unifying strategy for leveraging ICTs for human development throughout the country must work with a set of central objectives determined by wide consensus. Below, I describe what I consider to be the priority objectives for this strategy.

- *Guarantee that, in each municipality, there is a national high-speed fibre optic PoP, or a direct extension of a PoP, adequate to ensure quality connectivity for the use of multimedia in all areas of the municipality.*

Municipal networks, developed by local initiatives and with the support of a unified national strategy, could offer connectivity to all areas or institutions in the municipality (urban districts, rural areas, health centres, hospitals, schools, telecentres, public libraries, government administration centres, etc.). They could also provide connectivity to individual users and legal entities. In this way, local community networks would be combined with a national high-speed network guaranteeing the best benefit/cost for each user, and uniform connection quality throughout the country.

To do this a national implementation programme that optimises the distribution of PoPs is essential. In many municipalities today there is still no justification for a fibre extension with high-speed equip-

ment. However, this technical project would define PoPs that are appropriately located, from which nearby municipalities will be covered by one or more high-speed digital radio link (200 mbps can be achieved in each link in current commercial digital radio standards) or even local fibre branches at initially lower speeds.

It is crucial to guarantee enough bandwidth for the use of various internet services, including the effective use of multimedia, in all municipalities, and not to simply adopt a standard today that will be obsolete tomorrow. A national “future-proof” programme is essential, and not only a “national broadband plan” whose range, efficacy and longevity are in doubt.

- *Prioritise support on the ground (at municipal level) for comprehensive digital inclusion initiatives that integrate separate initiatives and local needs in a common network, optimising connectivity costs and improving the quality of service of access.*

The national strategy will support the development of *digital municipalities* – comprehensive community networks connecting public services, schools, telecentres and health centres, in urban and rural areas. The networks will also be available for private use. These initiatives, benefiting from thousands of similar, already well-known experiences in the country and in the world, not only reduce connectivity and communication costs, but greatly improve the quality of service.

Owing to the major asymmetry in the distribution of connectivity resources in the country, special priority must be guaranteed in the national strategy to the more than 2,400 municipalities that currently have no access to a local backbone PoP.

Ideally, the strategic result of this plan would see the high-speed municipal networks forming the backbone of the country's internet infrastructure.

- *Guarantee at least shared access (via local community telecentre initiatives supported by a national policy) in all lower-resourced urban areas. Seek ways of extending the reach of community networks to the rural population.*

If this objective is achieved it could mean the installation of approximately 10,000 community telecentres, in partnership with local governments and communities. It should be noted that Bolivia's current digital inclusion plan stipulates the establishment of 2,000 telecentres for a population of around 11 million. If this scale was repeated in Brazil, we would be talking about more than 30,000 telecentres. This document reveals many government community telecentre initiatives – all of them operating in parallel, without a common strategy.

- *Avoid, with appropriate legislation, telecommunications cartels that satisfy only the market.*

Telecommunications cartels are today fighting for the market of those who are already connected and able to pay relatively high monthly fees (much more expensive than in Europe or the US) in order to have access to broadband connections.

In this scenario, all other users will be condemned by the market to eternal disconnection, and the country condemned to the accelerated deepening of the “digital divide”. There should be a guarantee that local or regional entrepreneurs offer connectivity proposals that support public roll-out policies (such as a municipal network).

- *Guarantee that in the shortest time possible, all public schools will be well (and permanently!) connected to the internet.*

This was one of the central priorities for FUST resources. But the policy ended up not being implemented. It is not enough to define a national plan of democratising high-speed access and the installation of community networks. It is also necessary to guarantee that Brazilian public schools will have access to the internet.

Our distance from countries such as South Korea is massive, and is rapidly increasing – but it is also increasing in relation to less developed countries.

- *Guarantee connectivity to all public health, security and municipal administration services.*

This was another of the central priorities for FUST resources that ended up being abandoned. As in the case of the schools, these services cannot expect the ideal network to arrive on their doorstep. Means of connecting them (even if only in a limited way) have to be found, until a more efficient alternative arrives.

- *Ensure the use of open systems and standards, in order to reduce the dependency on proprietary systems and software or software with interoperability problems.*

Brazil is already globally recognised as one of the countries to have made a widespread attempt to adopt FOSS and open standards in the public federal sphere. The reasons for this policy are valid for all spheres of government, and a national ICT policy could not ignore this priority. However, the initiative still requires more careful coordination, and there are still federal e-government services operating with proprietary systems in cases where a FOSS alternative clearly exists, of the same or better quality.

- *Expand e-government systems and services to all instances of public administration, taking into account the “digital divide”, interoperability criteria, open standards, transparency and efficiency.*

The federal government and some states (as well as some municipalities) have been recognised as examples of this policy. It is important that this practice, combined with the effective universalisation of internet access, be expanded with quality and efficiency.

- *Establish a national empowerment strategy so that, on all levels, individuals and institutions with access can use it efficiently.*

One of the mistakes frequently made in social and educational ICT programmes in the country is to start (and often end) a project with the acquisition and donation of equipment. Apart from access to connectivity and equipment, it is essential that there be a dissemination of skills to make better use of this access.

- *Promote changes to FUST laws and regulations in the short term, and create a multi-stakeholder governance mechanism for the fund.*

It is indisputable that Brazil, even taking its size into account, has already accumulated an exceptional amount of financial resources to promote and leverage ICTs for human development. However, legal support and a government attitude that relegates the relevance of digital inclusion to second place have hindered the use of these resources. It is essential that the decision-making process for the use of the fund be pluralistic, transparent and democratic. It is also fundamental that priority in the use of these resources be guaranteed to innovative projects originating from communities, or with community participation. The national ICT strategy must, finally, combine optimal use of fund resources with other resource sources. ■

## References

RITS (2006). *Carta de Porto Alegre. Por um compromisso com a inclusão digital no Brasil* [online]. Available from: <arruda.rits.org.br/notitia1/servlet/newstform.notitia.apresentacao.ServletDeSecao?codigoDaSecao=21&dataDoJornal=1149883578000>.

Senado Federal (2000). *Lei Nº 9.998, de 17 de agosto de 2000. Institui o Fundo de Universalização dos Serviços de Telecomunicações* [online]. Available from: <www6.senado.gov.br/sicon/ListaReferencias.action?codigoBase=2&codigoDocumento=230280>.

# BULGARIA

BlueLink Information Network<sup>1</sup>

Elina Racholova and Michael Boudreaux



## Introduction

This report focuses on access and internet penetration as prerequisites for information society advancement. It attempts to depict the national situation in information and communications technology (ICT) development in Bulgaria in 2006 and to sketch the context in which Bulgarian ICT policy is being made. It shows that ICT penetration in Bulgaria has improved, but that it still lags behind other EU member states. Policy development and legislative processes in Bulgaria have followed changes necessary for the country to fulfill its EU membership requirements, and have less to do with more general and voluntary agreements, such as commitments made at the World Summit on the Information Society (WSIS). Bridging the digital gap in under-served areas is often dependent on international donors. Civil society participation in decision-making processes has not been a formal stipulation. However, non-governmental organisations (NGOs) have paved their way to the policy process through a number of tactics, such as holding meetings with institutional working groups, drafting proposals for the attention of parliamentary commissions, and appealing decisions in court.

The report was compiled from public information sources (e.g. research studies, surveys, media publications, online resources), and interviews with a representative of the state institution responsible for ICT policy development and with civil society observers. It has been prepared by the BlueLink Information Network, with a significant contribution from Nelly Stoyanova from the Bulgarian State Agency for Information Technology and Communications, Dessislava Pefeva from Internet Society-Bulgaria, and Goritzza Belogusheva from ABC Design and Communications, co-author of the book *The First Ones in Bulgarian Internet* (Belogusheva and Toms, 2003).

A special mention needs to be made of the recently published annual report *e-Bulgaria 2006* (ARC Fund, 2006) developed by the Applied Research and Communications (ARC) Fund. It provided useful data on Bulgaria's progress in ICTs, and on ICT policy development. BlueLink's work on the Bulgarian ICT Policy Monitor – part of the Association for Progressive Communications (APC) members' network of policy sites – proved equally useful in compiling this report.

## Country situation

### Access and e-penetration

Bulgaria's communication infrastructure is improving, but is still insufficient to offer equal access to all. The ICT market is unregulated, but thriving. Despite a positive trend in ICT penetration in recent years and a rapid increase in investment, overall investment remains low. Bulgaria's research and development expenditures are feeble, and most new innovation is imported. Infrastructure development is hampered by a lack of funds in both the private and public sector.

The main constraints in the sector are a lack of development and infrastructure programmes; poor development of state administrative infrastructure; a low number of successful public-private part-

nerships; and a lack of sufficient public funding for national research. An absence of training in the use of ICTs and the low purchasing power of Bulgarian households are also impacting negatively on the sector.

Bulgaria has a high density of fixed telephone lines (73.4% according to the *e-Bulgaria 2006* report), but compared to the EU-25,<sup>2</sup> the country has a far lower density of digital fixed lines. According to the Bulgarian Telecommunications Company (BTC),<sup>3</sup> the level of digitalisation had reached 46% as of April 2006. Despite the fact that there has been a recent and dramatic increase in mobile phone density, access levels still lag behind the EU-25.

In general, internet penetration is progressing, but also lags behind the European community that Bulgaria recently joined. Internet use in Bulgarian households is considerably less than that of the EU-25. The share of internet users in the country reached 26% of the population aged fifteen and over in 2006. Projections suggest that as of 2007 some 34% of the population will be using the internet. A key challenge for policy-makers remains the "digital divide" among disadvantaged groups and ethnic minorities. The data suggests that internet penetration rates among ethnic groups are three to five times lower than the average figures for the country.

Broadband internet access improved in 2004 with the introduction of ADSL<sup>4</sup> services. In 2005, 4% of internet users had broadband compared to 10.6% for the EU-25 (although the BTC predicts this will rise to 14% by 2008).

The penetration of new ICTs in the business sector seems to be approaching a level of saturation. Around 27% of employees have access to the internet at their workplaces. In 2006, 90% of businesses had at least one computer, and 75% to 80% had access to the internet. Currently, 24% of enterprises have websites, and 11% of them allow online orders to be placed. The major barriers are technical infrastructure, technical skills and the price of access.

There is a significant effort underway to improve internet accessibility to under-served parts of Bulgaria. The Bulgarian State Agency for Information Technology and Communications (SAITC), working together with the United Nations Development Programme (UNDP), has made good progress in making internet connectivity available to schools, research institutions and the general public.

Their work attempts to address the following goals:

- Getting computers into schools and networking schools
- Establishing distance-learning platforms and standards
- Establishing a national network of public internet access points (telecentres, libraries etc.)
- The provision of high-speed national and international internet connectivity to universities and research institutes in Bulgaria

<sup>2</sup> The 25 member states of the European Union before the accession of Bulgaria and Romania on 1 January 2007 raised the total membership to 27.

<sup>3</sup> <www.btc.bg/en>.

<sup>4</sup> Asymmetric digital subscriber line (ADSL) allows data transmission over existing copper telephone lines.

<sup>1</sup> <www.bluelink.net>.

- The integration of the Bulgarian scientific research and development community into the European Research Area (ERA).<sup>5</sup>

In the last two years the Telecentres Project has built a network of about 95 public telecentres which provide internet services to users in small and economically underdeveloped areas. In addition to telecentres, the project has created technical training facilities and a training programme for instructors and civil servants. The SAITC and the UNDP are implementing the project in partnership with the Ministry of State Administration and Administrative Reform (MSAAR), and the Institute of Public Administration and European Integration (IPAEL).

While 1,000 schools have been connected to broadband internet, the process has not gone smoothly. The public procurement for the communication network was brought to court by a consortium that lost the bid. The result was a major delay in the project. Recently the SAITC announced that the dispute was resolved and that soon the number of schools with internet in Bulgaria will be 3,200.

If the solution succeeds, the Bulgarian government will carry out its WSIS promise. In a statement at the Summit, Bulgarian representatives declared that the country must emphasise ICTs in education by investing in computer and communication infrastructure in schools around the country, thus giving virtually all students access to computers and the internet.

Accessibility to institutional websites for visually impaired people is still receiving little attention, and has been criticised by organisations. Only the Ministry of Transport's website is adapted for disadvantaged groups, and it has already drawn a lot of interest. Currently 500 visually impaired people use Bulgarian language screen-reading software (SpeechLab), distributed by the Bulgarian Association for Computational Linguistics.

For 25.4% of internet users, language is also a barrier. A recent poll among users indicates that 87.2% use the internet mainly for information enquiries and 34.5% would like better Bulgarian language search engines.

### *ICT policy and legislation*

At international forums, such as the WSIS, the Bulgarian government has declared that its information society development activities are carried out in line with world trends, EU policies and specific national conditions. "Our main challenges are related to the full implementation of the EU electronic communications regulatory framework, the i2010 initiative<sup>6</sup> and, more specifically, the development of network and electronic services, adoption of ICT by businesses, strengthening competitiveness, and the inclusion and development of public electronic services," stated SAITC chairman Plamen Vatchkov (SAITC, 2005).

The most powerful influence that has shaped Bulgaria's ICT policy is the country's accession into the EU on 1 January 2007. The development of Bulgarian ICT legislation benefited significantly from its synchronisation with the respective regulatory acts in the EU. The annual monitoring reports of the European Commission were a primary incentive to ICT legislative progress in the country.

Bulgaria is now generally meeting the commitments and requirements arising from the accession negotiations. However, the European Commission noted several weak points regarding its legislative and administrative ICT tasks. For example, the Commission said that the national regulatory authority needed more capacity and independence, better coordination and proper resources. The new Electronic Communications Law also needed to be implemented.<sup>7</sup>

At home the information society was earmarked as a priority by the current incumbents during their electoral campaigning in 2005. But this priority was quickly forgotten and was neglected in the final National Development Plan (2007-2013). Information technology accounts for less than 1% of the overall budget for activities in the plan (AEAF, 2005).

Additional ICT policy documents were developed by the SAITC, such as the Operational Programme on the Information Society and the State Policy on Accelerated Development of the Information Society, but so far both have failed to win the approval of the Bulgarian Council of Ministers (ARC Fund, 2006).

The supreme document on ICT policy in Bulgaria – the Strategy on Information Society Development – was drafted in 1999<sup>8</sup> and updated two years later. In accordance with its stipulations, several regulatory acts were adopted, setting a framework for the development of the information society. These regulations include the Telecommunications Law, the Electronic Document and Electronic Signature Act (National Assembly, 2001), and an update to the Criminal Code regarding cybercrimes. However, other measures were not defined, resulting in a lack of uniform rules for the development of a common information and communication environment in state institutions, and a lack of a legislative basis for privacy and security issues, among other issues. In addition, the Law on Electronic Commerce was accepted by parliament despite public criticism of its flaws and its lack of compliance with existing legislation.

The newly forged ICT laws in Bulgaria transpose the provisions of the EU directives. In 2006, besides the Law on Electronic Commerce, the Law on Electronic Communications was also accepted by parliament and scheduled to enter into force on 1 January 2007. The draft Law for Electronic Governance is expected to be voted on by parliament in 2007.

### *E-government*

An e-government strategy in Bulgaria was implemented in 2001 with parliament accepting the Electronic Document and Electronic Signature Act. Over three years were necessary for the government to establish an administrative framework for the strategy, allowing ministries and related executive institutions to start working with electronic documents and provide services to citizens using e-signatures. In an attempt to evaluate the progress of the e-government initiative, the Institute for Market Economy conducted an empirical survey in 2006. The survey asked whether it was possible for citizens to exercise their right to access public information and government services electronically. Only one out of five Bulgarian ministries appeared to be capable of coping with simple administrative electronic services. E-signatures crippled access to state administration, instead of helping the process.

5 The ERA is a European Commission initiative. It seeks to increase pan-European cooperation and coordination of national research activities.

6 The "i2010 – A European Information Society for growth and employment" initiative was launched by the European Commission on 1 June 2005 as a framework for addressing the main challenges and developments in the information society and media sectors up to 2010. (EC, 2005).

7 The Electronic Communications Law aims at protecting the rights of consumers, including disadvantaged groups; encouraging competitiveness; stimulating investment in infrastructure and innovations; ensuring universal service; and assisting integration with the EU ICT market, among others.

8 See: <[www.bild.net/iscalenden.htm](http://www.bild.net/iscalenden.htm)>.

The ARC Fund (2006) asserts that e-government could boost information society development. Yet its *e-Bulgaria 2006* report shows weak political commitment to implementing e-government services, inefficiencies in public IT procurement and little horizontal coordination among the various government agencies.

Another challenge was the government's requirement that Microsoft software be used for the e-government gateway. The controversial step to use proprietary software appeared to be in conflict with the proclaimed vision at the WSIS for overcoming the "digital divide". It resulted in a heated debate in the Bulgarian administration, which started as the Bulgarian e-government gateway was launched (its effects were also felt at WSIS).<sup>9</sup>

However, the SAITC has confirmed that there are open source e-government projects underway – among them e-Government in Bulgaria<sup>10</sup> and the lengthily titled Support for e-Government Initiatives Based on the Use of Free and Open Source Software (FOSS) at the Local Level in Southeast Europe. Both projects are UNDP-sponsored initiatives.

### FOSS in Bulgaria

A major campaign issue for civil society organisations (CSOs) in Bulgaria is the introduction of FOSS in the administration and encouraging the use of open standards more generally. CSOs say software development using FOSS is a necessary state priority and acknowledge the need for more highly qualified ICT university graduates.

There are several initiatives that have paved the way for FOSS in the country.<sup>11</sup> The Support for e-Government Initiatives project assists in harnessing the potential of FOSS to increase the use of successful e-government tools in local governance practices. The UNDP and the Internet Society of Bulgaria (ISOC-Bulgaria) have launched the project to help municipal governments use the internet to better respond to citizens' needs. The project was deployed in nine municipalities from the Balkans region – Kardjali, Vratza, Mezdra, Peshtera, Belovo, Dryanovo – and Kostenetec (in Bulgaria), Gevgelija (in Macedonia), and Klina (in Kosovo).

The initiative may be considered a pilot project that lays down the groundwork for the wider implementation of FOSS at other levels, both in public administration (including the central and regional administrations) and in businesses. The project is unique in the sense that it uses the public-private partnership model to benefit local economies and to build local skills and capacities. The partnership between the UNDP and ISOC-Bulgaria was also seen to directly contribute to the achievement of Millennium Development Goals (MDGs),<sup>12</sup> which have been adapted to Bulgaria's transitional context.

Another project in this regard involves the development of a set of web-based FOSS applications that can be used to increase the effectiveness of local labour and social departments, and enhance their coordination with other departments and partnership initiatives, as well as with the labour bureau.

For its part, the "Yes to FOSS" project aims to stimulate the adoption of open source software and open standards in the Bulgarian administration, as well as other sectors. It also hopes to encourage the use of FOSS in the home. It is an informal initiative that has attracted the attention and participation of Linux experts in Bulgaria. The project follows EU requirements and reviews suitable open standards for the current status of the administration. The objective is to prepare the migration from current software platforms to recommended EU open source technologies. A free CD is already available and will be followed by a special beginner's migration guide.

NGO adoption of FOSS in Bulgaria became possible due to an Interspace Media Art Centre initiative which started the first FOSS project in the country. By assisting NGOs to switch to open source software, the project helped save the NGO sector funds that could be used for worthy causes, rather than buying commercial products. "After two years of work on supporting the migration of Bulgarian NGOs to FOSS, we can say that they are positive about using FOSS in their daily work. Moreover, they became independent from proprietary software and self-confident enough in their own resourcefulness to start their own FOSS projects," Interspace announced (i-Space, 2003).

More good news for civil society was the adaptation of the Creative Commons licences into the Bulgarian language in 2006, thanks to the efforts of ISOC-Bulgaria.<sup>13</sup>

### Participation

Until 2006, Bulgaria was characterised by insufficient institutional stability and poor coordination of the ICT policy implementation process. A significant number of administrative bodies did not have real governing power and financial security for implementing state policy in the ICT arena. Responsibilities were spread among the Ministry of State Administration; the Coordination Centre for Information Society Development and the Agency for ICT Development, both in the Ministry of Transport and Communications (MTC); and the Coordination Centre for ICT and Coordination Council for Information Society Development (CCIS), both in the Council of Ministers.

In 2006, to a large extent, the responsibility for the elaboration and implementation of ICT policy in Bulgaria rested with two state bodies – the newly established SAITC and the Ministry of State Administration and Administrative Reform (MSAAR). It is expected that the CCIS will also play a significant role in specifying roles and functions of governing bodies in order to minimise doubling-up on work and institutional confrontation.

The SAITC is in charge of state ICT policy and ensures that it is in line with the social and economic development goals of the country. The statutory and regulatory framework for information technologies is being drawn up as part of the activities of the CCIS, which is responsible for the operational coordination of state bodies, public organisations, institutions and the private sector. The MSAAR is responsible for e-government implementation in the country.

Another state actor in ICT policy implementation in Bulgaria is the Communication Regulation Commission (CRC). It is an independent regulatory body responsible for implementing sectoral policy and deals with issues such as the control and licensing of telecommunication services, radio frequencies management, and postal services regulation.

9 For instance, Veni Markovski, the head of the Bulgarian branch of the Internet Society, was quoted during WSIS by the *International Herald Tribune* saying that he had approached the UNDP for help and that he was shocked by the outcome of several government contracts involving Microsoft products (Schenker, 2003).

10 The project's particular goals include: the establishment of a Coordination Centre for ICT – a one-stop government focal point for the ICT sector; the development and implementation of a national e-government strategy and national strategy for the information society; and the design and implementation of e-government pilot projects.

11 See: <[www.foss.bg](http://www.foss.bg)>.

12 <[www.un.org/millenniumgoals](http://www.un.org/millenniumgoals)>.

13 <[www.cc.isoc.bg](http://www.cc.isoc.bg)>.

According to the SAITC, the decision-making process regarding ICT policies and strategies is transparent and involves the principal stakeholders from government institutions, industry and civil society. "ICT advocacy efforts by civil society and other relevant actors appear to be very effective in impacting on the decision-making process. Regular information on national priorities is being published on government websites and in specialised media," said Nelly Stoyanova from the SAITC (BlueLink, 2006a).

The Bulgarian government has stated that it supports the implementation of the WSIS Declaration of Principles and Plan of Action adopted at the first phase in Geneva, and shares the Tunis Commitment and the Tunis Agenda for the Information Society. "We look forward to the process of enhanced cooperation among governments, the private sector, civil society and the relevant international institutions, for effective implementation of the agenda set forth by the Tunis Summit," said an official statement (SAITC, 2005).

However, the scope of stakeholders' participation shows that some significant issues exist. For instance, despite civil society's impact, business associations seem to be more effective in advocating for their causes. The participation of representatives of Bulgarian businesses in the CCIS is formalised, with a Council decree to this effect in its founding document, while civil society is not mentioned at all.

Both stakeholder groups – business and CSOs – exercise their right to influence the legislative process by making proposals to parliamentary commissions. A recent example is a proposal by the Electronic Communications Association (ECA) for changes to the draft Law on Electronic Communications. According to the ECA, important changes should be made to the text to bring it in line with European norms. The changes relate to improving the liberalisation conditions of fixed telecommunications and the creation of a more effective regulator through the increased independence and visibility of the work of the CRC.

Government decisions can be appealed in court. A public scandal erupted in the summer of 2006 when the Bulgarian Association of Information Technologies (BAIT) accused the MSAAR of rigging the public bid for e-government implementation by manipulating the criteria in favour of a single company. Additionally, BAIT criticised the ministry's decision because a large portion of the budget (90%) is intended for hardware, leaving little for software.

The SAITC has actively participated in international forums since its establishment in 2005. Where possible, the government includes civil society members in the governmental delegations to those forums, including the WSIS.

## Conclusions

Despite the initiatives outlined in this report, Bulgaria still lags behind other EU member states in its ICT development. There are several ways in which the situation can be dramatically improved:

*Competitiveness:* According to the government, one of its main goals is to use ICTs as an opportunity for economic growth. Some possible ways of promoting ICT sector growth include:

- Establishing a venture capital fund targeted at small and medium enterprises (SMEs) with an ICT profile
- Developing regional, national and international ultra-high speed network infrastructure
- Improving the cooperation between academic institutions and the private sector
- Supporting public-private partnerships

- Supporting local FOSS development companies
- Encouraging research and development
- Supporting the innovative use of ICTs
- Developing human resources generally.

The rapid and complete implementation of the EU electronic communications regulatory framework, the effective use of the European Structural and Cohesion Funds in 2007 to 2013, as well as better coordination and cooperation between more and less-developed EU regions will also assist in increasing the competitiveness of the sector.

*FOSS and open content:* The Bulgarian government needs to develop a strong policy on the use of FOSS and open content. This means:

- Supporting the use of FOSS at all levels of the administration
- Stimulating the use of open standards
- Stimulating the production of local content
- Publishing the texts of legislation under open content licences.<sup>14</sup>

*School connectivity:* While the government has made great strides in this area, simply providing access to infrastructure is not enough. In its most recent *e-Bulgaria* report, the ARC Fund (2006) states: "The government's large-scale investment in ICTs in schools has dramatically levelled the digital divide, but other important issues remain unresolved – e.g. the need for training teachers in some regions of country."

*Research and development:* More funds need to be made available for local projects. This is one of the least developed ICT areas in Bulgaria, and it is a situation that needs to be improved.

*Participation:* The government needs to do more to publicise legislation, to formalise the participation of the NGO sector in decision-making, and to make processes more transparent in reality.

*Human resources:* The "brain drain" of Bulgarian ICT specialists who leave for lucrative positions abroad or join foreign companies with branches in Bulgaria has become a negative trend. So far the Bulgarian government has not taken any measures to prevent this. At the same time, the capacity and abilities of non-governmental actors working in the ICT field is still not appreciated by the government – both at the policy-development and implementation levels. Perhaps the biggest challenge facing the Bulgarian authorities in general, and those working in the field of ICTs in particular, is the lack of capacity to implement sustainable development principles at the policy level and in practice. Efforts should be made to apply a multi-sectoral and participatory approach in order to overcome this problem. The great knowledge that civil society has in the field of sustainable development should be drawn upon. ■

## References

- AEAF (Agency for Economic Analysis and Forecasting) (2005). *National Development Plan of the Republic of Bulgaria over the 2007-2013 period* [online]. Available from: <[www.aeaf.minfin.bg/ndp/documents/NDP\\_Jan06\\_en.pdf](http://www.aeaf.minfin.bg/ndp/documents/NDP_Jan06_en.pdf)>.
- ARC Fund (Applied Research and Communications Fund) (2006). *e-Bulgaria 2006 Report* [online]. Available from: <[www.arcfund.net/infocusShow.php?id=7916](http://www.arcfund.net/infocusShow.php?id=7916)>.

<sup>14</sup> There is no legislation database available. Private companies are profiting from this, because often the available texts are in copyrighted formats.



- Belogusheva, G., Toms, J. (2003). *The First in Bulgarian Internet*. Sofia: Siela.
- BlueLink (2006a). *Interview with Nelly Stoyanova, representative of the SAITC*.
- BlueLink (2006b). *Interview with Goritza Belogusheva, Co-author of the book "The First Ones in Bulgarian Internet"*.
- BlueLink (2007). *Bulgarian ICT Policy Monitor* [online]. Available from: <www.bluelink.net/wsis/>.
- Computerworld (2006a). *SAITC resolved the argument for the schools' Internet* [online]. Available from: <www.computerworld.bg/Index.php?call=USE-home; &page=paper&n=14019>.
- Computerworld (2006b). *Alternative telecoms insist on key legislation changes* [online]. Available from: <www.computerworld.bg/?call=USE-home; &page=paper&n=13540&sb#res>.
- EC (European Commission) (2005). *i2010 – A European Information Society for growth and employment* [online]. Available from: <ec.europa.eu/information\_society/eeurope/i2010/docs/communications/com\_229\_i2010\_310505\_fv\_en.pdf>.
- EC (2006a). *Monitoring report on the state of preparedness for EU membership of Bulgaria and Romania* [online]. Available from: <www.evropa.bg/showfile.php?file=report\_bg\_ro\_2006\_en.pdf>.
- EC (2006b). *Summaries of Legislation* [online]. Available from: <europa.eu/scadplus/leg/en/lvb/e21101.htm>.
- IT Forum (2006). *The e-government public bid threw into a brawl the business and the government* [online]. Available from: <sagabg.net/itforum/articles.php3?unit\_id=7&issue\_id=272>.
- i-Space (2003). *Project Free and Open Source Software for Bulgarian NGOs. The first FOSS project realized in Bulgaria* [online]. Available from: <www.i-space.org/index.php?page=15&id=106>.
- Kostadinova, S., Angelov, G., (2006). *How far are we from the E-Government* [online]. Available from: <www.ime.bg/pr\_bg/260-6.htm>.
- Iordanova, I. (2006). "Institutional sites inaccessible for visually impaired". *Telegraph Daily* [online], 14 November 2006. Available from: <www.pressboard.info/preview.aspx?articleid=80151>.
- National Assembly (2001). *Electronic Document and Electronic Signature Act* [online]. Available from: <xdata.gateway.bg/images/downloads/edesa.doc>.
- Schenker, J. (2003). "Rich vs. poor, Windows vs. sharing: Software rift surfaces at information summit". *Herald Tribune* [online], 12 December 2003. Available from: <www.iht.com/articles/2003/12/12/a16\_1.php>.
- SAITC (State Agency for Information Technology and Communications) (2005). *Statement by Mr. Plamen Vatchkov, chairman of SAITC of the Republic of Bulgaria* [online]. Available from: <www.itu.int/wsis/tunis/statements/docs/g-bulgaria/1.doc>.

# COLOMBIA

Colnodo<sup>1</sup>

Olga P. Paz Martínez<sup>2</sup>



## Introduction

Although the Colombian government has invested significant time and resources in social information and communications technology (ICT) programmes, Colombia continually ranks below world and regional averages if we look at ICT statistics, such as the number of internet users and indices for digital opportunities, e-readiness and ICT dissemination.

Even though topics such as the use of free and open source software (FOSS), alternative licensing methods (such as Creative Commons), and community telecentres have earned a place on the ICT agenda, both in the government and private sector, important issues like the inclusion of a gender perspective in ICT policies are still missing.

Analysing the possible scenarios for participation and the limits to achieving full dialogue between the government and its citizens on ICT policies, it is evident that, except for certain instances convened by the government within the last year, no formal mechanisms exist to facilitate this dialogue. Nor do citizens have strategies for monitoring ICT plans or for seeking ways to influence them.

This report is based on data obtained through background research and interviews. Official websites and research on ICTs in Colombia were reviewed, as well as the annual reports of international organisations.

## Country situation

Colombia's public policy on ICTs is implemented through three programmes: the Connectivity Agenda, Compartel and Computers for Education.

The Connectivity Agenda and Compartel were among the first e-strategies created in Latin America and have served as models for other countries. At the moment Compartel is formally advising some eight countries in the region, as is Computers for Education. These initiatives are now under Colombia's Ministry of Communications, although from February 2000 to June 2003 the Agenda operated as a presidential programme, independent of any ministry. Computers for Education is part of the Ministry of Education.

### Connectivity Agenda

The Connectivity Agenda<sup>3</sup> was created as a long-term policy programme through the National Council on Economic and Social Policy (CONPES). It is one of the strategies aimed at improving quality of life for Colombians, increasing competitiveness of production and modernising public institutions (MC, 2000).

The Agenda targets three groups: citizens, the business sector and public administration. For the public sector the goal is to modernise public administration, make it more efficient and transparent, and support the "policy of democratic security" (MDN, 2003). For the private sector, the programme seeks to increase productivity and competitiveness. For citizens, the goal is to increase community access to

ICTs, build bridges across the "digital divide" and facilitate the interaction between government and citizens.

The development and management of the Agenda as a programme has been influenced by each new government. We can identify three phases in its development. In the first phase, the "Leap to the Internet" (April 2001-August 2002), the use of ICTs to improve services was strengthened and a great deal of information was placed online by public institutions. In the second phase, "Towards a Knowledge Society" (August 2002-May 2003), the focus was on decentralising work through alliances with regional bodies and sectors outside government.

Phase three is the current one, which began in June 2003. Since then the Agenda has aligned its work with the government's online strategy.<sup>4</sup> The goal is to facilitate interaction between citizens, the business sector and government bodies.

The programme has benefited some 620 mayors' offices, which now have internet access, email and a webpage, which they use to share information about the municipality, public administration operations, the mayor's activities and contracting procedures. It is hoped that 1,051 municipalities will benefit by 2007.

### Compartel telecentres

The Compartel programme<sup>5</sup> was created to democratise access to telecommunications infrastructure through telecentres, community telephone systems and community internet access centres in isolated rural areas and municipal centres (MC, 2002).

In the first phase of the programme, 670 telecentres were installed in municipalities with less than 8,000 inhabitants. In the second phase, 270 telecentres were installed in municipalities with more than 10,000 inhabitants. In the third phase, 550 telecentres were installed in municipal centres not being served and areas with more than 1,700 inhabitants. As of February 2007 Compartel had installed 1,490 telecentres throughout the country, benefiting an estimated 5.2 million inhabitants (MC, 2007a). Between 2001 and 2002 Compartel implemented the Community Outreach Strategy so that telecentres could be used for local development projects.

In August 2006 Compartel began to evaluate the socioeconomic impact of the telecentres, including 249 telecentres set up by companies such as Colombia Telecomunicaciones, Orbitel and the Empresa de Teléfonos de Bogotá (ETB). The organisations and people who are developing community telecentres in Colombia hope that this evaluation will connect faces and stories to the Compartel telecentres, and that the initiative's achievements, success stories and lessons learned will be shared.

Besides the telecentres, 10,045 rural telephone points have been installed which benefit six million inhabitants in rural areas.

1 <[www.colnodo.apc.org](http://www.colnodo.apc.org)>.

2 Background research support: Paola Liévano and Patricia Romero.

3 <[www.agenda.gov.co](http://www.agenda.gov.co)>.

4 In 2000, Presidential Directive No. 02 was issued to set up three phases of online government strategy: i) to provide information; ii) to provide online services and iii) to provide online transactions and information that can encourage the development of viewpoints among the citizenry.

5 <[www.compartel.gov.co](http://www.compartel.gov.co)>.

It is important to point out that Compartel was a programme created to provide infrastructure, and that it is only in recent years, by government mandate, that it has begun to increase its impact through a strategy of capacity-building and content provision.

Linked to the Connectivity Agenda's online government project, Compartel has the potential to allow people in remote locations to be in contact with local and national governments without having to travel great distances. Because of the opportunities they provide, it is important to guarantee the sustainability of the telecentres. The survival of a telecentre depends on building alliances with local government and organisations, and on the involvement of the community. This is one of Compartel's major challenges, especially since the government plans to have 10,000 telecentres located in public schools by 2010.

### Computers for Education

The Computers for Education programme<sup>6</sup> has operated since 2000 with the goal of providing the country's public education institutions with access to ICTs and promoting their use in educational processes. The computers are donated by private companies and governmental entities and then reconditioned. This programme receives advisory services from the Canada-based Computers for Schools programme. As of 2006, a total of 71,474 computers had been distributed, potentially benefiting 2,048,908 students in some 6,545 schools around the country (MC, 2007b).

### Investment

Of the approximately 750 billion Colombian pesos (roughly USD 326 million) invested by the Ministry of Communications in social programmes from 2001 to October 2006, approximately 57% was assigned to Compartel, 12% to the Connectivity Agenda, and 5% to Computers for Education. The remainder went to regular postal services and other investments.

Like Compartel, Computers for Education has conducted an impact study. However, this study has not been made public. It would be important to know what contribution these programmes have made to digital inclusion as an engine of socioeconomic development, and, in particular, to analyse their part in fulfilling the country's development goals, including the Millennium Development Goals (MDGs).<sup>7</sup>

### Statistics

Table 1 shows the increase in internet access in Colombia since 1995.

Table 1: Internet access (1995-2006)		
Year	% of internet users	Total internet users
1995	0.1	37,635
2000	1.9	715,067
June 2003	6.1	2,295,741
December 2003	6.9	2,596,821
June 2004	7.9	2,973,172
December 2005	9.9	4,166,960
June 2006	13.2	5,555,946

Sources: Biannual reports of the Telecommunications Regulation Commission (CRT) and National Statistics Department (DANE)

6 <[www.computadoresparaeducar.gov.co](http://www.computadoresparaeducar.gov.co)>.

7 <[www.un.org/millenniumgoals](http://www.un.org/millenniumgoals)>.

According to the Telecommunications Regulation Commission (CRT), a significant percentage of internet users continue to be concentrated in the country's four major cities: Bogotá, Medellín, Cali and Barranquilla. However, Compartel maintains that the CRT's methodology does not include the total number of telecentre users, and that the impact of the programme is not properly reflected. Nevertheless, despite the increase in internet users, Colombia's ranking with respect to other countries in Latin America has not improved.

Internet World Stats<sup>8</sup> reports that Latin America and the Caribbean have 88,778,986 internet users. This number represents barely 8% of the total number of internet users in the world. South America, with 370,225,923 million inhabitants – 41.5% of the population of the Americas – has 16.5% of the Americas' internet users. According to this same source, Colombia has 5,475,000 internet users, which means 12.9% of the country's population. This number is well below countries such as Argentina (34%), Chile (42%), Costa Rica (22.2%), Mexico (19%) and Venezuela (16.5%).

In the UN Global E-Government Readiness Report 2005, Colombia had an index of 0.5221 in 2005, holding 54th place in the world and 6th in South and Central America. In 2004 Colombia was in 44th place. The government says the drop in Colombia's position is due to a drop in webpage statistics, as a result of e-government facilities being underutilised (MC, 2005). The Latin American countries that rank above Colombia are Chile (22nd), Mexico (31st), Brazil (33rd) and Argentina (34th). Below Colombia are found Venezuela (54th), Peru (56th) and Panama (64th) (UN, 2005).

In 2005, in the Economist Intelligence Unit's e-Readiness Index (EIU, 2005), Colombia occupied 48th place among 65 countries analysed. The index measures a country's level of e-preparedness, the environment for doing e-business and market opportunities related to internet use. Colombia dropped seven places compared to 2004, and was down eleven places from 2003. The government says this drop is due to changes in measurement methodologies and the incorporation of new indicators, among other factors.

According to the Digital Divide Report of the United Nations Conference on Trade and Development (UNCTAD), in 2004 Colombia held 85th place among 180 countries, with an ICT diffusion value of 0.328 (on a scale from 0 to 1). This can be broken down into a value of 0.531 for "access", a calculation based on the number of internet users, literacy and the cost of a local call, and 0.124 for "connectivity", based on the available physical infrastructure: internet, computers, fixed and mobile telephone systems. Colombia's position has also dropped notably over the years: from 73rd place in 1997 to 80th in 1999 and 85th in 2004 (UNCTAD, 2004).

The Digital Opportunity Index (DOI) published by the International Telecommunication Union (ITU) assigned Colombia a value of 0.38 (on a scale from 0 to 1) in 2005. The DOI measures three elements: opportunity, infrastructure and the use and quality of ICTs. Ranked in first place was Korea (0.79), followed by Japan and Denmark (0.71). In Latin America, Chile (0.52) and Argentina (0.47) hold the highest spots. Colombia ranks below Latin American countries such as the Dominican Republic (0.39), Peru (0.39) and Panama (0.39) and above Ecuador (0.36), Bolivia (0.30), Paraguay (0.30) and Guatemala (0.30) (ITU, 2005).

Despite the apparent negative trend in many of these indices, Colombia does stand out in the area of electronic government. The country's official electronic government website<sup>9</sup> has been recognised

8 <[www.internetworldstats.com/stats2.htm](http://www.internetworldstats.com/stats2.htm)>.

9 <[gobiernoenlinea.gov.co](http://gobiernoenlinea.gov.co)>.

as one of the best in the world, along with those of Belarus and Brazil. The e-Participation Index of the UN Global e-Government Readiness Report measures, on the one hand, a country's disposition to increase citizen participation through the use of electronic government and, on the other, the quality, usefulness and relevance of the information and services provided by the government. In the 2005 report, Colombia held 10<sup>th</sup> place worldwide in electronic participation, along with Chile, surpassing developed countries like Germany, Finland, Sweden and France.

### *Free and open source software (FOSS) and Creative Commons*

In the past, there have been attempts by non-governmental actors to promote FOSS legislation in Colombia. However, these were largely unsuccessful and did not reach the country's Congress. Today there is a growing critical mass, especially in the education sector, that uses FOSS. For example, Moodle is a virtual education platform built using open source that is now being used by several educational institutions. This includes the National Learning Service (SENA) and the "Colombia Learns" Portal,<sup>10</sup> an educational content strategy operating under the Ministry of Education.

One of the most important advances in licensing models has to do with the adaptation of Creative Commons to the Colombian context. Creative Commons establishes a legal model to facilitate the distribution and use of content in the public domain. In 2004, a group of lawyers at the Colombian University of Rosario decided to adapt this type of licence, already adapted to suit the legal environments of other countries, to Colombian legislation. As a result, the Creative Commons licence has been available in Colombia since 22 August 2006 and has been adopted by well-known institutions in the country, such as the newspaper *El Tiempo* (CC, 2004).

### *Media*

The government faces a number of challenges in developing the Colombian media sector. This includes coordinating departmental strategies where developmental programmes are in place. It is also necessary to link efforts in the area of regulation between the CRT, administrative supervision departments ("superintendencies") and ministries. This need was evident, for example, in the discussion on a standard for digital television, which placed the Ministry of Communications and the National Television Commission (CNTV) at odds.

There are interesting government initiatives in the area of community media. Recently a tender was issued for the installation of community radios that will benefit some 400 small localities. This process is part of the Ministry of Communication's National Technical Plan for Radio Broadcasting. The ministry has promoted the Community Radio Draft Law, which seeks to create public policies on community radio broadcasting. The Ministry of Culture, for its part, is supporting the development of media in rural communities by creating spaces on public radio where citizens can air their views. The project increases citizen participation, cultural diversity and democracy in the sense that it benefits populations far from large urban centres.

### **Participation**

Participation in ICT policies is not a priority for Colombia's social sectors. Participating in the information society seems to be a subject of lesser interest, and its relationship to the improvement of peoples' living conditions is not obvious.

ICT programmes in Colombia have been created by trial and error. When they were designed, few countries in Latin America had implemented e-strategies. This allowed for greater learning but also meant more time and effort in determining priorities and reaching goals.

While Colombia has been creative in capitalising on opportunities and changes in the field, as seen in its leadership on the issue of electronic government, there have been few opportunities for participation by non-governmental actors in defining policies, goals and approaches. In contrast, there is significant participation by the private sector in the development of plans prepared by the government, the execution of the projects, and the establishment of alliances with those programmes.

Although national ICT programmes have on several occasions looked to experiences outside government (as in the case of Compartel), the models established for the operation of these programmes do not allow for the active participation of actors with experience, nor for the possibility of making substantive changes in the models and development of the programmes.

One way for civil society to have an impact on public policy in a practical way is to offer the government the use of tools, methodologies and models developed by civil society organisations.

For example, one tool used in the online government strategy was developed within the framework of the Internet Accountability Project (IPRC),<sup>11</sup> which is being implemented by the Colombia Transparency Corporation and Colnodo, two Colombian non-governmental organisations (NGOs). This project, financed by the United States Agency for International Development (USAID) through Casals and Associates, seeks to strengthen transparency in mayoral offices and municipal finance departments through software that facilitates the publication of information on the internet. The project aims to increase accountability and foster the right and duty of citizens to inform themselves, express opinions and monitor the actions of government officials.

The Colombia Transparency Corporation and Colnodo donated the IPRC tool to the Colombian government after employing it in several municipalities around the country. In this way, a tool developed by two NGOs, with the active participation of municipalities, is placed at the disposal of the federal government. From there it is extended to the rest of the country, in a combined bottom-up/top-down model which, in addition to being very novel, offers many learning opportunities. So far, 628 websites have been installed using the IPRC tool and the plan is to reach approximately 1,000 municipalities during 2007.

A similar example is the Management and Exchange of Experiences between Community Telecentres and Compartel Telecentres in Colombia project, financed by the International Development Research Centre (IDRC) and coordinated by Colnodo in conjunction with the Universidad Autónoma de Occidente (UAO) and the Compartel Programme. This project seeks to share the experiences of organisations that have developed community telecentres with Compartel telecentres, in order to generate collective methodologies, resources and processes aimed at achieving the social appropriation of ICTs and a greater impact for the Compartel telecentres.

Outside of the public and private sectors, many diverse actors in Colombia (such as universities, unions, NGOs, research centres, etc.) promote the social use of ICTs. Some of these actors establish alliances among themselves in order to develop initiatives; however, few take a position on the government's ICT or telecommunications strategies.

10 <www.portalcolombiaprende.edu.co>.

11 <www.iprc.org.co>.

Beyond the CRIS (Communication Rights in the Information Society) Colombia initiative, which brought together a good number of groups around a common agenda, there have not been initiatives at the national level that link social organisations, unions and universities in a common strategy that critiques government ICT programmes, policies and plans.

Throughout the entire process of the World Summit on the Information Society (WSIS) there were only a few meetings called by the government prior to the Geneva and Tunis Summits. In the post-Tunis phase, some channels for dialogue were opened. The Ministry of Communications, for instance, tried to schedule an ICT Thematic Roundtable in November 2006, led by civil society, in order to provide input to the National Development Plan. Unfortunately, this roundtable was not held due to insufficient time to organise it before the deadlines for the definition and design of the Plan.

In January 2007, the president held the First Community Council on Telecommunications in which the president, the minister of communications and programme directors presented their e-strategies. The government showcased the development of its ICT programmes and the advances towards its WSIS commitments and the country's 2010 goals.

According to the presentations, the ICT sector is dynamic in Colombia and has a significant impact on the country's gross domestic product (GDP). The decrease in prices in telephony has contributed to the expansion of the sector without impacting on inflation. Even if Colombia is behind other countries in the region, there has been an important evolution in terms of internet connectivity from 2002 to 2006, particularly in public administration and educational centres.

At this first council, the government announced the creation of an advisory committee that would help develop a definition for a standard for digital television, based on international norms. The government also announced the reformulation of national e-strategies (such as the extension of the Compartel programme to cover rural telephony) and the establishment of discussion forums where various issues could be discussed and analysed, such as the consequences of renaming the Ministry of Communications the Ministry of Information and Communications Technologies.

Hundreds of people participated in this event, among them union representatives, universities, NGOs and other national organisations (including Colnodo).

In 2006 the Ministry of Culture promoted a broad, participatory process on citizen and community media, with the idea of designing a national plan. Many of the country's organisations had the opportunity to present their demands in this process. It goes without saying that the issue of ICT and development was raised and was included as an important focus of the plan.

However, these opportunities offered by the national government should be more open to dialogue and not consist solely of plans being presented without the ability to question them. It is in these settings that an alliance of various sectors could act with greater strength, and would have arguments and legitimacy to discuss the plans presented. Such an alliance could also monitor implementation. In practice, this does not yet exist.

Colombia stands out in the region for its level of e-participation, which would in theory indicate that the opinion of citizens is taken into account in decision-making, that citizens' concerns are taken care of, and that government-citizen feedback on public issues is encouraged. However, the truth is that this does not reflect reality.

The Colombian e-government initiative is still in a first phase of development in which the local and national governments are making preparations to provide information needed by their citizens. From there it should evolve into a model for the provision of services and transactions, and finally towards a model of deliberative electronic democracy, where citizens can use ICTs to demand accountability in public administration, participate in the design of government plans and programmes, and question government leaders. This, of course, requires strengthening the public sphere and broadening access to and use of ICTs.

## Conclusions

Colombia has invested a great deal of effort in its three major ICT programmes. However, there are still major challenges facing the country's ICT strategy. In particular:

- There is still no communications law that promotes the development of the ICT sector, the provision of services at a reasonable cost and, above all, access to telecommunications services and the information society for all citizens.
- The government's three ICT programmes do not currently include affirmative action policies that favour access to and use of ICTs by vulnerable groups. The current plan for 2010 includes accessibility to ICTs by persons with disabilities, but does not consider women, youth, the elderly, or ethnic populations, among others.
- Current statistics on national ICT trends can be misleading. For example, the CRT reports do not break down their internet user statistics to show the percentage of users who are peasants, indigenous people, women or youth. They also do not say if the users are based in rural areas, and what work they do. The impact of national ICT programmes is also not measured. Departments<sup>12</sup> in the Pacific region, such as Nariño and Chocó, have the highest levels of poverty in Colombia, and also experience the greatest "digital divide". However, this cannot be seen in the official statistics.
- There is little synergy between the ICT programmes in different government departments, despite attempts by the government to create cooperation and teamwork at an institutional level. In order for other social sectors to form alliances with the government, a minimal framework of cooperation between government departments would be necessary.
- In addition to the national programmes, there are departmental and municipal initiatives that seek to broaden the use of ICTs among the public,<sup>13</sup> but there is no coordination or joint efforts between these projects.
- The production of local content that reflects the country's cultural diversity should be strengthened.
- Technological convergence is important in Colombia, given that barely 13.5% of the population has access to the internet, but more than 50% has access to mobile telephones. In many remote rural areas, the population went from having no telephone service to having mobile phones. Although the Ministry of Communications has spoken a great deal in the last year about the

12 Colombia is divided into 32 *departamentos* (departments) and one capital district.

13 Such as the Infocentres programme and the "common point" centres in Medellín, among others.

importance of technological convergence, this convergence is also about services, knowledge, and content, and requires a stable regulatory framework. To prevent any communications law from becoming obsolete, it should be designed to allow for the entry of new services.

- In general, ICT support for micro enterprises, helping less-favoured sectors use ICTs, and the use of ICTs to promote urgent national issues such as human rights should be among the targets set to resolve the concrete needs of Colombians. ■

## References

- Casasbuenas, J. (2006). *Convergencias: Tecnológicas, Políticas y Cultural: Paper presented at "Encuentro Nacional de Medios Ciudadanos y Comunitarios"*. Bogotá, 11-14 July 2006.
- CC (Creative Commons) (2004). *Atribución 2.5 (Colombia)* [online]. Available from: <creativecommons.org/licenses/by/2.5/co/legalcode>.
- EIU (Economist Intelligence Unit) (2005). *The 2005 e-readiness rankings. A White Paper from the Economist Intelligence Unit* [online]. Available from: <graphics.eiu.com/files/ad\_pdfs/2005Ereadiness\_Ranking\_WP.pdf>.
- Guerra, M. (2006). *Conversatorio sobre los lineamientos del Plan de Gobierno 2006 – 2010* [online]. Available from: <mincomunicaciones.gov.co/mincom/src/user\_docs/Noticias/ConversatorioMinistra1109.pdf>.
- ITU (International Telecommunication Union) (2005). *Digital Opportunity Index* [online]. Available from: <www.itu.int/osg/spu/statistics/DOI/ranking2005.html>.
- MC (Ministerio de Comunicaciones) (2000). *Documento Conpes 3072. Agenda de Conectividad* [online]. Available from: <www.agenda.gov.co/documents/files/CONPES%203072.pdf>.
- MC (2002). *Documento Conpes 3171. Lineamientos de Política en Telecomunicaciones Sociales 2002 - 2003* [online]. Available from: <www.dnp.gov.co/archivos/documentos/Subdireccion\_Conpes/3171.pdf>.
- MC (2005). *Panorama internacional y nacional: Tablas de índice de tecnología* [online]. Available from: <www.agenda.gov.co/documents/files/TablaIndicadores2005web.pdf>.
- MC (2006). *Informe Día de Internet* [online]. Available from: <www.mincomunicaciones.gov.co/mincom/src/user\_docs/Noticias/InformeDiaInternet.pdf>.
- MC (2007a). *Seis millones de colombianos han accedido a la telefonía rural* [online]. Available from: <www.compartel.gov.co/noticias.asp?idnoticia=113>.
- MC (2007b). *CPE en cifras* [online]. Available from: <www.computadoresparaeducar.gov.co/cpe\_en\_cifras.html>.
- MDN (Ministerio de Defensa Nacional) (2003). *Política de Defensa y Seguridad Democrática* [online]. Available from: <alpha.mindefensa.gov.co/dayTemplates/images/seguridad\_democratica.pdf>.
- Paz, O. (2006). *Uso e Impacto de la herramienta Internet para la Rendición de Cuentas en el Municipio de Pasto, al suroccidente de Colombia. Case Study: Experiencias andinas de gobierno electrónico: la problemática de la participación ciudadana*. Quito: FLAGSO Ecuador.
- UN (United Nations) (2005). *Global E-Government Readiness Report 2005. From E-Government to E-Inclusion* [online]. New York: UN. Available from: <unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf>.
- UNCTAD (UN Conference on Trade and Development) (2004). *The Digital Divide: ICT Development Indices 2004* [online]. Geneva: UN. Available from: <www.unctad.org/en/docs/iteipc20054\_en.pdf>.

# CROATIA

ZaMirNET<sup>1</sup>  
Danijela Babic



## Introduction

According to Croatian Chamber of Commerce documents, the Stabilisation and Association Agreement between Croatia and the EU is the driving force for further developing the information society in the country. General objectives include preparing citizens for the digital age, attracting investment, and the delivery of e-services. In January 2002 the Croatian Parliament adopted a strategy entitled Information and Communication Technology – Croatia in the 21st Century, and endorsed the General Measures for the Development of the Information Society. The government's programme for the period 2003 to 2007 has included the e-Croatia 2007 Programme<sup>2</sup> among its priorities. This programme sets out measures for encouraging the development of science, technology, and information and communications technology (ICT) in particular. The government plans to finish networking the education system and to allow citizens easier communication with the public administration, focusing on health, justice and other services via the internet (CCE, 2003).

## Country situation

### Network infrastructure

The Croatian telecommunications network is almost 100% digital, which is not to be found in any other Central European country. The installed fixed network capacity for Deutsche Telecom's T-Com, previously the sole service provider, is sufficient for 2.33 million subscribers, with actual subscribers currently numbering 1.7 million.

The Croatian government followed a trend towards privatisation on the grounds that state ownership is no longer deemed necessary for the achievement of national communications objectives, and because such ownership may interfere with fair competition. Privatisation was also seen as a welcome source of revenue for the state.

Nevertheless, the sale of 35% of Croatian Telecom (HT) to T-Com in October 1999 (later a further 16% was sold)<sup>3</sup> did little to immediately liberalise the telecommunications environment. The HT monopoly was part of the conditions of sale, and an exclusivity period was extended for two years from 2003 to 2005. This was a significant impediment to the use and growth of ICTs in Croatia.

There is a general agreement that telecommunications policies should promote a fair and competitive environment, and that this can best be achieved by having a regulatory function that is separated from telecommunications operations. Unfortunately, the "independent" telecoms regulatory body, the Croatian Agency for Telecommunications,<sup>4</sup> is seen as an employer for former HT employees, thereby diminishing its objectivity and independence.

Croatia's regulatory framework is a hybrid, with elements from both the 1998 and 2003 *acquis communautaire*.<sup>5</sup> A recent bylaw sets

out procedures for market analysis according to the 2003 *acquis*. Until the market analysis is completed, the current balance of power in the telecommunications market will continue (Cullen International, 2006).

### Penetration rates

The penetration rates of the most important operators and companies active in fixed telephony show that T-Com is still the main access and service provider (68% of the market), followed by CARNet (21%), Iskon Internet (10%), and Globalnet and VIPonline, each controlling 2.5% of the market.<sup>6</sup>

The number of internet users per 100 people is 33.6 (Cullen International, 2006). According to the e-Communication Household Survey in Croatia, 31% of households in the country have internet access and 5% have broadband access. According to market research conducted by GfK,<sup>7</sup> 51% of internet users are male and 49% are female. GfK also says 48% of households have a PC. The main obstacles to increasing the number of internet users are falling living standards and the lack of English language skills (EC, 2006).

Under the Telecommunication Law of 1999, voice over internet protocol (VoIP) service was considered a part of internet services, so that no further legislation was needed. Under the Law of 2003, VoIP has been defined as a separate service requiring a licence. Moreover, the licensing fees for VoIP were initially kept unusually high: a EUR 33,000 (USD 43,500) once-off fee, plus an annual fee of 1% of revenue. The bylaw on payments of fees for provision of telecommunications services amended on 17 February 2005 lowered the once-off fee by a factor of 50 to EUR 670, and the annual fee was lowered tenfold to 0.1%.<sup>8</sup>

According to the e-Communication Household Survey, 71% of households have fixed telephone access and mobile telephone access, 19% have fixed telephone access but no mobile telephone access, 8% have mobile telephone access but no fixed telephone access, while 2% have neither fixed nor mobile telephone access. Only 6% have ISDN,<sup>9</sup> compared to 15% of EU households.

Croatia has local call tariffs that are moderately above the EU average, and international call tariffs that are around the EU average (Cullen International, 2006). Generally speaking, the average spending on telecommunications of around 4% of GDP in the South East Europe (SEE) countries is significantly higher than in the EU, where the average is around 2.7% when cable TV revenues are included. (Croatia's GDP per capita in 2005 was above EUR 6,000 (USD 7,900) which is the highest in SEE) (Cullen International, 2006).

1 <[www.zamirnet.hr](http://www.zamirnet.hr)>.

2 <[www.e-Croatia.hr](http://www.e-Croatia.hr)>.

3 The state currently owns 42% of HT, and the Fund for Homeland War Veterans the remaining 7%.

4 <[www.telekom.hr](http://www.telekom.hr)>.

5 Body of EU legislation.

6 T-Com recently bought Iskon Internet, strengthening its superior position in the market.

7 GfK - the Centre for Market Research Data, Gradjani i Internet 2006, (<[www.gfk.hr/press1/internet.htm](http://www.gfk.hr/press1/internet.htm)>).

8 *Ibid*.

9 Integrated services digital network, an international standard for switched, digital dial-up telephone service for voice and data.

## IT economy

A study conducted by the United States Agency for International Development (USAID) in 2000 concluded that Croatia has tremendous potential to create an IT<sup>10</sup> economy: it has an excellent fibre optic backbone network and the necessary intellectual capital (USAID, 2000). Yet the utilisation and deployment of ICTs remain quite low, largely due to the high cost and barriers to entry caused by the HT/T-com monopoly, and the lack of an ICT strategy in government.

During the 1990s the ICT sector in Croatia gradually lost its leading position among Central and East European transition economies, a position built on the country's previous openness (then within the former Yugoslavia) to Western influences. The war in the first half of the decade, badly managed privatisation, the government's lack of an industrial policy, a sluggish economy, and the limitations of a small market have caused the Croatian ICT industry to lag well behind those of Slovenia, Hungary, the Czech Republic, and even Slovakia. While the telecom sector and the IT sector stem from the same environment, they had different starting positions and have each performed differently (CEA, 2006). Surging demand for telecom services from households, enterprises and the public sector, and lucrative profit opportunities, fuelled the inflow of USD 2.5 billion in foreign direct investment into the country.

In 2002, small IT companies (with up to 10 employees) were dominant in the market (making up 86% of the total number of IT companies). Their share of employment was 49%, and their share of revenue was 35%. At the same time, the 93 largest companies (with 51 or more employees) accounted for 15.4% of all employees in the sector and for 10% of total revenue (CCE, 2003).

In 2004, ICT firms constituted 2.1% of the total number of enterprises in Croatia and contributed 5.7% to the country's total business revenue. ICT exports accounted for 2.4% of the country's total exports of goods and services, while ICT imports constituted 4.7% of total imports. Those employed in the ICT industry accounted for 2.9% of the total business workforce in Croatia (CEA, 2006).

From 1999 to 2005, the Croatian government invested HRK 730.46 million (USD 122.15 million) to procure IT and communications equipment and software programmes. Annual ICT capital expenditures declined in 2000 and again in 2004, both of which were election years. (It appears that central government ICT spending freezes during the change of administration. Insiders claim that one to two quarters before the elections, and two to three quarters after, the ICT activities of the administration slow down dramatically) (CEA, 2006).

Benchmarked against several other diverse countries (i.e. Slovenia, Austria, Ireland and the EU-25)<sup>11</sup> Croatia has the lowest share of ICT spending in its state budget. Particularly significant for the comparison is the case of Slovenia, whose ICT spending is approximately three times larger than Croatia's. In 2004, Croatia's ICT spending was only 36.4% of the average ICT spending of the EU-25.<sup>12</sup>

## National ICT strategy: e-Croatia

The country's ICT strategy was developed and adopted during the mandate of the centre-left Ivica Račan government (before 2003), while the subsequent implementation plans came from the centre-right Ivo

Sanader government, by definition more inclined towards new neoliberal public management practices. The first law passed by the new government dealt with changes in the structure of the government itself, and founded four new central state administrative offices, among them the Office for e-Croatia 2007. The e-Croatia 2007 project aims to enable citizens to communicate with public administration through the internet.

The Central Administrative Office for e-Croatia analysed different stages in the online availability of services. It states that significant improvements have been made since 2004. In December 2004 public services for businesses scored an average of 5.73%,<sup>13</sup> and public services for citizens 3.36%. In 2005 public services for business scored 29.77%, and public services for citizens 38.22% of availability.

However, the project has run into difficulties. While a lack of co-ordination between the ministries responsible for Croatia's overall ICT strategy has impacted on the project,<sup>14</sup> it has been difficult to properly evaluate the efficiency of e-Croatia 2007. The project's operational plan explicitly stated that it will publish quarterly progress reports on its website, but only one report per year has been published (Miosic-Lisjak, 2005).

Moreover, the change of government demonstrated a shift of focus away from e-democracy towards e-government, which is a worrying factor. It is quite possible to imagine a fully functioning and efficient e-government which lacks other aspects of good democratic governance, to the extent that it actually facilitates *undemocratic* governance in which governments use ICTs to control their citizens, rather than vice versa (Miosic-Lisjak, 2005).

## Open source software policy and interoperability

Restricting information systems to proprietary programme code that can be maintained by a single service provider only is considered one of the most important obstacles to attaining the goals outlined in the EU's new i2010 programme.<sup>15</sup> On 12 July 2006, the government adopted a free and open source software (FOSS) policy.<sup>16</sup> In doing so, Croatia has joined a group of countries, predominantly members of the EU, which have realised the importance of the use of open source software in the public sector.

According to the deputy state secretary for e-Croatia, interoperability is one of the key challenges for Croatia. The objective of the EU IDABC<sup>17</sup> programme is to establish a framework which will enable the harmonious delivery of pan-European e-public services among public administrations of member states. By participating in this programme, Croatia is getting involved in the process of developing an e-public administration programme in the EU and a European interoperability framework. In line with this, the country has begun to develop open technical specifications for electronic public tenders within the framework of implementing the European Commission Action Plan.<sup>18</sup>

13 The online availability of services is measured on a scale of 0 to 4. This is then converted to a percentage.

14 Absurdly, two portals have claimed to be the gateway to the country's "one-stop shop".

15 i2010 is a comprehensive strategy for modernising and deploying all EU policy instruments to encourage the development of the digital economy. See: <ec.europa.eu/information\_society/europe/i2010/introduction/index\_en.htm>.

16 Open Source Software Policy (<www.e-Croatia.hr>).

17 IDABC stands for Interoperable Delivery of European e-Government Services to Public Administrations, Businesses and Citizens (<europa.eu.int/idabc>).

18 <www.e-Croatia.hr>.

10 IT is used here to mean primarily hardware and software used in the office or home environment. ICTs includes telecommunications infrastructure.

11 The study was done by IDC, a market intelligence and advisory company. (<www.idc.com>).

12 *Ibid.*



## Participation

The participation of citizens in ICT policy development in Croatia is rather limited. The government and its relevant institutions have not encouraged an inclusive, multi-stakeholder environment.

While the Croatian Agency for Telecommunications (HAT) announces public online discussions on its website, participation is not properly facilitated. This particularly refers to a lack of technical and policy development knowledge needed for citizens to properly participate. However, some efforts have been taken by organised consumers. For example, the Croatian Association of Consumers (<[www.huzp.hr](http://www.huzp.hr)>) has reacted to the high prices and lack of some telecommunication services, while the Association of Consumers (<[www.potrosac.hr](http://www.potrosac.hr)>) has raised questions about ownership over distributive telephone channels (DTK).<sup>19</sup>

One of the most active associations seems to be Telemah, the Association of Dissatisfied Users of Telecommunication Services (<[www.mreza-telemah.info](http://www.mreza-telemah.info)>). Telemah monitors activities in the ICT sector – from public procurement of IT services and hardware to ICT policy. In 2006 the association organised a survey of the public's understanding of the telecommunications market, including the ownership of DTKs. According to the survey results, most citizens think that the DTKs are owned by the public.<sup>20</sup>

When it comes to the public procurement of telecommunication services, the situation is also worrying. According to Telemah, out of 21 tenders in January 2006, eight were concluded in direct negotiation (exclusive negotiations with a prospective provider or buyer without a prior competitive process), four were cancelled, and only nine were completed according to principles of good governance, allowing all telecommunications companies to compete. The total value of contracts concluded in direct negotiation processes in January 2007 was HRK 3.86 million (USD 690,000).

Engagement has often meant opposition. For example, T-Zombix<sup>21</sup> became a prominent blogger writing about all aspects of the telecommunications sector, including privatisation, monopolies, censorship, etc. He became known to a wider audience when the government ordered his website *Zatvorena vrata* (Closed Doors) to be shut down. *Zatvorena vrata* was a mock website, created as a parody of the government project *Otvorena vrata* (Open Doors), which aimed to increase transparency and improve communication with citizens. The government's move raised concerns about freedom of speech on the internet.

Another organisation, Multimedia Institute (mi2),<sup>22</sup> sprang up in 1999 as a spin-off of the internet programme of the Open Society Institute-Croatia. Entering locally uncharted territory between social and cultural action and new technological developments, mi2 brought together an emerging generation of civil activists, media practitioners, urban culture actors and social and media theorists.

Over the past years, mi2 has become increasingly involved in cooperative activities at the local, regional and international levels that look to strengthen the cultural scene and advocate on behalf of the public domain. It is working towards initiating structural changes in a

wide range of areas, including non-institutional culture, informal education, technology, intellectual property rights, and access to public resources.

In 2003 and 2004, mi2 implemented a project that aimed to localise Creative Commons licences. Four people, including two professional lawyers, worked on the translation and adaptation of the licences to the Croatian legal system. The Croatian versions of the licences were officially launched at the beginning of 2005.

Two organisations who have been working in the area of FOSS are equally relevant: HULK (<[www.linux.hr](http://www.linux.hr)>) and HrOpen (<[www.open.hr](http://www.open.hr)>). HULK stands for the Croatian Association of Linux Users. The Association promotes the use of Linux, and facilitates networking and information sharing. HrOpen is the Croatian Association for Open Systems and Internet. It promotes open systems and organises an annual conference of Linux users.

In this context, we should also mention a recently announced initiative in the business sector, lead by the Croatian Association of Employers, to establish a cluster of open source software producers. The cluster should improve services to end users, but also enable FOSS producers (primarily small businesses) to develop joint products and command bigger market shares.

## Conclusions

If one looks only at official statistics (such as internet penetration rates), the pace of information society development in Croatia might be considered satisfying. However, there is no data to assess the “digital divide” properly – including the “digital gender gap”. As a result, no effective strategy to improve in these areas can be developed.

National strategies are not well coordinated and strategic documents often get tossed in the garbage bin with a change of government. As a consequence, the institutional continuity necessary for a systematic approach to any development initiative is ruined. It also seems that the majority of government efforts are aimed at increasing its revenue through improved tax collection (or similar objectives) and supporting the business sector, while other citizen needs remain neglected. This particularly refers to using technology for inclusion (e.g., of elderly persons with special needs that are poorly addressed by national strategies and even more poorly by various implementation plans.)

The participation of citizens in decision-making that affects the development of the information society in Croatia is minimal. While HAT regularly holds public online discussions, they are not well advertised in the media. The process is also not developed in a way that allows for maximum participation of all stakeholders. Agencies rarely hold workshops and public hearings or convene advisory committees or roundtable sessions before issuing new proposed regulations.

Publicly expressed criticisms of some of HAT's decisions come from civil society, political parties and members of Parliament. However, these do not seem to have any effect on the regulator's leadership.

HAT often comes across as ineffective. Theoretically it is in charge of the DTKs, but the evidence suggests that it has no control over them. For example, T-Com was allowed to cut cabling belonging to a competitor without consequences.<sup>23</sup> HAT publicly condemned T-Com's move, but did not take any action to stop it.

19 Telecommunication cables that are laid underground in cities.

20 The survey was organised around discussions that caught significant media attention on whether or not the government sold the DTKs to T-Com when privatisation started in 1999. The result of the dispute between the government and T-Com about DTK ownership is still not clear.

21 T-Zombix is a pseudonym. See: <[www.t-zombix.net](http://www.t-zombix.net)>.

22 <[www.mi2.hr](http://www.mi2.hr)>.

23 The competitor assumed that the DTKs were public property and can be used by any operator who has a licence.

T-Com also launched several promotional campaigns for new services without informing the regulatory agency about the campaigns, as it is obliged to do. When HAT responded, the campaigns had already run in the media.

In line with the very few avenues for holding regulatory agencies accountable, the fact remains that the “public” that participates in the shaping of ICT policy is a narrow slice of the entire citizenry. Generally not many organisations and individuals (apart from business and public administration) are involved in national ICT policy. We believe this is mostly due to a lack of interest (or an inability to recognise what would be in their interest) and a lack of knowledge among the wider public, as well as a lack of appropriate channels (procedures and processes). Most citizens are reduced to mere consumers of telecommunication services.

Citizens who have engaged have done so using alternative channels and mainstream media. Yet if the goal is to improve the quality of public discussions, participation should be supported by training and educative content that is adjusted to the level of knowledge of “non-techie” citizens.

Steps should be taken to raise awareness among citizens and civil society organisations about ICT policy, and to search for allies in the business sector and opposition parliamentary parties. ■

## References

- CEA (Croatian Employers' Association) (2006). *Analysis of the Croatian ICT Industry, 1999-2004* [online]. Available from: <[www.apiu.hr/docs/apiuEN/documents/149/1.0/Original.pdf](http://www.apiu.hr/docs/apiuEN/documents/149/1.0/Original.pdf)>.
- CCE (Croatian Chamber of Economy) (2003). *Information System and Statistics Department. Croatian ICT Sector* [online]. Available from: <[www2.hgk.hr/en/depts/IT/hrv\\_ict\\_sektor.pdf](http://www2.hgk.hr/en/depts/IT/hrv_ict_sektor.pdf)>.
- Cullen International (2006). *Report 2. Country Comparative Report. Supply of services in monitoring of South East Europe – telecommunications services sector and related aspects* [online]. Available from: <[www.cullen-international.com/documents/cullen/cipublic/studies/balkan/report2comparative.pdf](http://www.cullen-international.com/documents/cullen/cipublic/studies/balkan/report2comparative.pdf)>.
- EC (European Commission) (2006). *e-Communication Household Survey* [online]. Available from: <[ec.europa.eu/public\\_opinion/archives/ebs/ebs\\_249\\_en.pdf](http://ec.europa.eu/public_opinion/archives/ebs/ebs_249_en.pdf)>.
- Miosic-Lisjak, N. (2005). *Searching for Godot. A study into good governance practices in Croatia's e-governance* [online]. Available from: <[www.map.hr/dokumenti/searching%20for%20godot.pdf](http://www.map.hr/dokumenti/searching%20for%20godot.pdf)>.
- USAID (United States Agency for International Development) (2000). *Croatia ICT Assessment* [online]. Available from: <[unpan1.un.org/intradoc/groups/public/documents/UNTC/UNPAN018420.pdf](http://unpan1.un.org/intradoc/groups/public/documents/UNTC/UNPAN018420.pdf)>.

# DEMOCRATIC REPUBLIC of the CONGO (DRC)

## Alternatives<sup>1</sup>

Lina Gjerstad



## Introduction

The Democratic Republic of the Congo (DRC) is in a post-conflict reconstruction period at the moment. Up until now, information and communications technologies (ICTs) have not been considered an inherent part of reconstruction and are not included in development schemes for the country.

The four main ICT challenges we have identified are a lack of infrastructure, the lack of a broad-based ICT vision for the country, the absence of properly defined institutional roles and responsibilities, and a lack of public funds and human resources.

Where possible, this report refers directly to official documentation. Given the scarcity of reliable resources (e.g. because of geographically partial studies) and the difficulty in accessing them (e.g. because of the absence of governmental websites), this report seeks to present the most up-to-date information available through interviews with key public and civil society representatives.

The report was produced by Alternatives, a Canadian social rights non-governmental organisation (NGO), which has been working in the DRC since 2002. Alternatives works on ICT advocacy and capacity-building projects by supporting local NGOs that share its objectives.

## National situation

In its recent history, the DRC has been through a 30-year dictatorship (1967-1997), followed by two short presidencies (Laurent Kabila and his son, Joseph Kabila). These were marred by two wars (1998 and 2002) involving, among others, Uganda and Rwanda and their proxies. Although the DRC has been relatively stable since the last quarter of 2002, there are still sporadic violent conflicts in the eastern part of the country. Following peace negotiations, a transitional government formed by representatives of different parties prepared the way between 2003 and 2006 for the inauguration of a democratic republic. The first elections in 46 years were held in 2006 and Joseph Kabila was elected president.

Quantitative data concerning ICTs are rare in the DRC. Studies conducted by civil society are available, but only cover the capital, Kinshasa. Private operators, reluctant to share information with the authorities because of a lack of confidence in them and a fear of widespread corruption, carefully keep their data to themselves. The Congolese Office of Post and Telecommunications (OCPT), the state-owned and only legitimate telecommunications operator, for example, does not know how many clients the country's internet service providers (ISPs) have or even the price they pay for broadband.

Set against this socio-political backdrop, which is exacerbated by rampant poverty, we have identified the main ICT issues for the DRC as being:

- A lack of ICT infrastructure
- The lack of a broad-based ICT vision
- A lack of definition of the roles and responsibilities of public institutions

- The inability of the state to fulfill its mandate concerning ICTs, given the lack of public funds and qualified human resources.

## Lack of infrastructure

The land-line telephone network in the DRC is now almost completely depleted due to years of negligence under the Mobutu<sup>2</sup> dictatorship and the subsequent destruction of infrastructure during the two wars. According to a survey conducted by the *Dynamique Multisectorielle pour les TIC* (DMTIC),<sup>3</sup> a civil society organisation dedicated to ICT advocacy and capacity-building projects, only 2.54% of respondents in Kinshasa say they own and use a fixed-line telephone (DMTIC, 2005). While the OCPT is responsible for the telecommunications network, it has yet to announce any plans to rehabilitate it.

There is no national fibre optic backbone in the country; and the absence of a broadband connection is the main infrastructural obstacle to the proliferation of ICTs. Out of 25 ISPs in the DRC, all use satellite and only one (Congo Korea Telecom) uses fibre optic to connect its offices to its clients in Kinshasa.<sup>4</sup>

There are currently three backbone projects that the private sector has proposed to the OCPT: Siemens has proposed to install a national telecommunications network; Ericsson has proposed to install a network in Kinshasa; and the West Africa Ffestoon submarine cable system (WAFS), managed by Telkom, has proposed to create an access point to the SAT3 cable.<sup>5</sup> So far, the government has not committed itself to any of these projects.

On 29 November 2006, the Ministry of Post and Telecommunications and the Post and Telecommunications Regulatory Authority (ARPTC) officially signed the broadband protocol for the New Partnership for Africa's Development (NEPAD), thereby including the DRC in the Eastern Africa Submarine Cable System (EASSy) project. As part of its commitment, the government must pay USD 2 million before March 2007.<sup>6</sup>

Of the new technologies, mobile phones have experienced the highest growth in the DRC over the past few years. Over 70% of people in Kinshasa now own at least one mobile phone (DMTIC, 2005). The four private operators in this sector are: Celtel, CCT, Tigo (formerly Oasis) and Vodacom. They share around 3.5 million subscribers nationally. Other companies that have tried to launch themselves in this arena are Sogetel, Cellco, and Afritel, but they have failed to do so for political or administrative reasons.

## The lack of a broad-based ICT vision

Given the DRC's recent history, the country is just beginning to lay the foundations for basic ICT policies and laws.

<sup>2</sup> Mobutu Sese Seko.

<sup>3</sup> <[www.societecivile.cd/node/2927](http://www.societecivile.cd/node/2927)>.

<sup>4</sup> Interview with Jacques Tembele, Director of the ICT Department, OCPT.

<sup>5</sup> *Ibid.*

<sup>6</sup> <[www.rdc-tic.cd/?q=node/41](http://www.rdc-tic.cd/?q=node/41)>.

<sup>1</sup> <[www.alternatives.ca](http://www.alternatives.ca)>.

The Growth and Poverty Reduction Strategy (DSCR) put forward by the transitional government provides a framework for the country's redevelopment. The third of the five pillars of this strategy, entitled "Improving access to social services and reducing vulnerability", calls for country-wide access to basic telecommunication and postal services. In particular, schools and universities should be connected to the internet (WB, 2006).

However, none of the documents guiding the current reconstruction of the country mention ICTs as a priority. This includes the Multi-Sectoral Programme for Rehabilitation and Reconstruction (PMURR), the Emergency Project in Support of Reunification (PUSPRES), and the Emergency Project in Support of Better Living Conditions (PUAACV). ICTs have therefore not been seen as a necessary focus area for the post-conflict development of the country.

The state recognised the importance of the private sector as an economic driver in its Telecommunications Law of 2002.<sup>7</sup> But the Telecommunications Law is not an expression of national policy on ICTs or a national strategy, given that it governs just one sector. It was also ill-fated. Under the Mobutu regime, the state awarded its first private licence for telephony in 1989. A second licence was granted in 1995 (MPT, 2006). According to interviews, this liberalisation was officially justified by the need to save a desperately neglected sector, but in reality, it was another occasion for government officials to receive bribes in a very corrupt system.

According to the only official document available on the process of creating a national ICT policy, the aim is to have a single policy framework that encompasses three sectors: telecommunications, information technology (IT) and media and communications. This means that new legislation will be created and the telecommunications law might be modified in order to assure uniformity.

The absence of a national ICT policy impedes the propagation of ICTs and awareness of ICT issues amongst the general population, and limits the potential for the person in the street to participate in the information society. There is a strong demand for ICTs, especially in urban areas, but very little knowledge of ICT issues and debates. The general population, for example, does not understand where the internet comes from, how the country would benefit from a national backbone or why the internet is so expensive. Poverty, of course, is the major obstacle to access to ICTs for the Congolese. Technology is still very expensive.

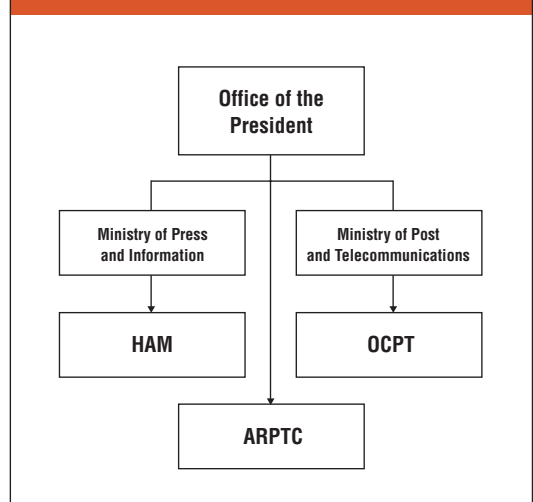
#### *A lack of clarification of institutional roles*

The four Congolese institutions responsible for ICTs are the Ministry of Post and Telecommunications, the Ministry of Press and Information, the High Authority on Media (HAM), and the ARPTC. They have often been in conflict or tangled in power struggles because legislation does not clearly express their respective responsibilities (Mwepu, 2005).

ICTs are under the mandate of the Ministry of Post and Telecommunications. The OCPT also falls under the authority of the Ministry. However, the regulating agency, the ARPTC, falls under the authority of the Office of the President (see Chart 1).

The Ministry of Press and Information is responsible for the services and institutions relating to the audiovisual sector. Under its jurisdiction is the public media regulator, HAM, which was created as an institution to strengthen democracy for the duration of the transitional government. It will be replaced by the Audiovisual and Communications High Council (CSAC) as stated in Article 212 of the country's Constitution.

Chart 1: ICT-related institutions



#### *A lack of public funds and human resources: consequences for ICT policies and management*

A lack of public funds and human resources within government agencies and ministries is hampering the policy-development process. An example of this was suggested by the management of the .cd country code top-level domain (ccTLD).

Over the past ten years, the management of the domain has been ad hoc, lacking in transparency – even chaotic. The main reasons for this are internal governmental power struggles, a lack of political will due to political instability, and a lack of public funds and adequate skills.

The management of the domain name was first given to a private citizen (it remains unclear by whom) by the name of Fred Grégoire. He created a company, *Internet au Zaïre pour Tous* (Internet in Zaïre For All, IZPT), for this specific task. In April 1997, as the post-Mobutu war began, the domain servers were moved from Kinshasa to Brussels for security reasons. It is not clear how the domain was managed during the war (1998-2002). In July 2002, a management contract between Congo Internet Management (CIM), another private firm, and the Congolese Ministry of Post and Telecommunications was signed. CIM then became the manager of the .cd domain.

In March 2005, the OCPT was named by ministerial decree as the agency in charge of the domain. This mandate was confirmed by the Internet Corporation for Assigned Names and Numbers (ICANN) in a letter dated March 2006.

ICANN placed some pressure on the OCPT, giving it a deadline of 20 October 2006 to present a dossier detailing a management and hosting plan for the domain. The domain servers needed to be hosted in the DRC; if the OCPT was unable to do so, ICANN said it would not authorise the state to manage it for a period of another 10 years. In that case, the management would probably keep its current form, through a private company. The OCPT submitted its dossier four days before the deadline, and it is now being considered. However, its solution was rushed and unconvincing, suggesting a lack of capacity in the agency.

The OCPT initiated the creation of a multisectoral management structure called "DOT.CD". This structure, part of the OCPT but operating, in theory, independently, is composed of observers from companies, organisations and associations that work with ICTs in all sectors of society: civil society, the private sector, the media and academia.

<sup>7</sup> Law No. 013/2002 of 16 October 2002, on Telecommunications of the DRC.

Seeking observers from the civil society sector, the OCPT approached the DMTIC in October 2006. The organisation was asked to rally other civil society organisations (CSOs) in the ICT sector. A meeting was held at the Alternatives office in Kinshasa. A list of signatures from members of CSOs agreeing to be observers in DOT.CD was handed over to the OCPT representatives. Since this meeting, the CSOs have not been contacted by the OCPT and there is no news on the status of the DOT.CD structure.

The second requirement of the mandate is that the OCPT host the domain servers. Neither the OCPT nor the Ministry of Post and Telecommunications has the infrastructure or the qualified personnel to host the domain servers on its own premises. As a result, they are hosted by an ISP, Afrinet, whose manager, Aubin Kashoba, is also a representative of the Internet Service Provider Association (ISPA) for the DRC.

The whole .cd saga was indicative of government processes generally, especially concerning information and communication issues. It was impossible to acquire a .cd address for several months in 2006: there was confusion about where to apply, and the domain appeared to be blocked. It was very difficult for anyone to get information. When a governmental or state agency initiates a process, such as the DOT.CD, it does so unprepared and under severe time constraints. The results are therefore often poor.

## Participation

### *WSIS: government and civil society participation*

In the DRC, civil society was, until very recently, the main driving force behind ICT policy initiatives on a national, regional and international level. The fact that there is no national ICT policy, among other things, created a climate where each stakeholder organised its advocacy work around its own interests. Civil society was the first stakeholder to participate in the World Summit on the Information Society (WSIS) and, importantly, the first to understand its importance for the socioeconomic development of the DRC.

Prior to the Geneva phase of the WSIS in 2003, the Congolese government had done very little to circulate information or promote the upcoming Summit to other stakeholders. According to Baudouin Schombe, national coordinator for the African Centre of Cultural Studies (CAFEC), civil society actors were informed about the WSIS by their international partners, who also helped them prepare for the Summit. He adds that since the government representatives spent most of their time "shopping in Geneva," the government was left leading a national process of which it had very little knowledge. It could not, therefore, mobilise the relevant actors (Mwepu, 2006). On the other hand, Josephine Ngalula, head of the women's organisation *Forum pour la Femme Ménagère* (FORFEM), explains this lack of leadership by pointing to the fact that the purpose of the transitional government was to concentrate on organising elections, putting on hold other "non-urgent" matters (Mwepu, 2006).

During 2004, CSOs that were present during this first phase of the WSIS started sharing information about key WSIS issues among CSOs more generally. The government, conscious of the growing interest in ICT policy issues among CSOs, started taking the initiative, such as forming a multi-stakeholder consultative committee; but these efforts never became concrete.

CSOs, on the other hand, showed little interest in matters they considered too far removed from the everyday realities of the Congolese population. For instance, Professor Jean-Pierre Manuana,

director of a documentation centre at the University of Kinshasa, feels that the information society is a utopia for rural regions and still a luxury for most Congolese (Mwepu, 2006).

Mostly due to the efforts of civil society and international pressure from the United Nations Economic Commission for Africa (UNECA), which demanded a list of participants beforehand, the government organised several meetings involving all stakeholders in preparation for the Tunis meeting in 2005.<sup>8</sup> As a result it did end up leading the way; but only following international pressure.

Since the Tunis Summit, and until very recently,<sup>9</sup> the government has done almost nothing to promote or initiate any ICT-related activities, whether they be capacity building or policy-related.

### *Obstacles for CSOs in dealing with ICT issues*

The obstacles encountered by civil society in dealing with ICT issues are political and economic. CSOs are influential among the general population and are viewed with suspicion by the authorities. Historically they were a driving force in the opposition to the Mobutu regime. Considering that the state is continually struggling to impose its authority, it is fearful that other sectors will take hold of the processes it is responsible for.

For their part, CSOs are limited in the scope of action they can undertake precisely because these issues are the responsibility of the government. For example, Alternatives and its local partner, the DMTIC, failed to get funding from the UNDP in 2005 for a national ICT policy consultation on the grounds that these matters concerned the state and the government. But as far as ICTs go, state institutions fail to act on their responsibilities out of ignorance and a lack of political will.

On the economic level, local CSOs are not supported in any way by state or governmental institutions. They rely on regional and international allies for funds, usually by submitting proposals for specific ICT projects or advocacy initiatives. There is no known Congolese CSO specialising in ICTs that has constant and stable funding. Moreover, individuals committed to these organisations are not employed on a full-time basis, since they have to work elsewhere to make a living. This financial uncertainty obviously affects the potential work and impact that they can have on society.

## Conclusions

Civil society in the DRC is a proactive stakeholder in information and communication issues in the country and at the international level. Through different platforms, it has promoted a multi-stakeholder approach to ICT issues. Unfortunately, the government, which should be the national leader in these issues, does not fulfill its role. New technologies are not part of any reconstruction or development plan for the country and the government typically does not organise or promote events, projects or activities relating to ICTs. Efforts at initiating a multi-stakeholder forum for the management of the .cd domain have not yet borne fruit. In the worst of cases, ICT activities launched by CSOs are sometimes taken over by the government. This discourages civil society from initiating such activities.

As the first elected government will take power in 2007, there is an advantage in starting afresh. People are hopeful that the government will become more transparent, as it has shown more openness

<sup>8</sup> Interview with Jean-Claude Mwepu, Alternatives-RDC Director and DMTIC member.

<sup>9</sup> Current initiatives such as DOT.CD are very recent and due to an increase in political stability, international pressure, and pressure from civil society.

very recently. The Ministry of Post and Telecommunications started a multi-stakeholder consultation for an ICT national policy in January 2007: a first for the DRC. Since almost all conflicts have ceased, the DRC will also be more politically stable. This gives the new leaders the chance to think about long-term development policies, as opposed to managing crisis after crisis.

In light of the current situation, it would be beneficial to:

- Push for ICTs to be included in short and long-term development strategies.
- At a national and international level, educate authorities on the importance of a national backbone and lobby for an Open Access model to be adopted.
- Encourage current multi-stakeholder platforms, including those created by CSOs, to improve communication and knowledge-sharing among all sectors, and to increase the level of trust between these sectors.
- Continue capacity-building projects and initiatives for civil society organisations. ■

## References

- DMTIC (Dynamique Multisectorielle pour les TIC) (2005). *Situation des TIC à Kinshasa*.
- MPT (Ministry of Post and Telecommunications) (2006). *Terms of Reference for the ICT National Policy in the DRC*.
- Mwepu, J. (2006). *Implication de la Société Civile de l'Afrique Centrale dans les politiques TIC : Cas de la République Démocratique du Congo*. The Panos Institute-West Africa.
- WB (The World Bank) (2006). *Document de la stratégie de croissance et de réduction de la pauvreté* [online]. Available from : [siteresources.worldbank.org/INTCONGODEMOCRATICINFRENCH/Resources/DSRP\\_RDC.pdf](http://siteresources.worldbank.org/INTCONGODEMOCRATICINFRENCH/Resources/DSRP_RDC.pdf).

# ECUADOR

APC Latin America and the Caribbean ICT Policy Monitor<sup>1</sup>  
Valeria Betancourt



## Introduction

This report outlines the way in which information and communications technology (ICT) policies are managed in Ecuador through an analysis and review of the process that led to the compilation of the *Libro Blanco sobre la Sociedad de la Información* (White Paper on the Information Society) (CONATEL, 2006a). The white paper serves as a multi-stakeholder framework for the development of a national ICT strategy.

This report covers the viewpoints of diverse actors. Interviews were conducted with key people in government, civil society organisations (CSOs), academia and the private sector. Official and unofficial documentation was also reviewed, including legislation, statistics, public policy proposals, articles written by civil society activists and academics, agreements, national position documents in regional and global processes, and the websites of the institutions involved.

The report concludes that the attention given by the government and different social actors to ICTs as a sector and as a tool supporting national development has increased significantly in the last few years. The country's involvement in the World Summit on the Information Society (WSIS) process led to the adoption of a new focus on the participation of all interested parties in the ICT public policy process. Nevertheless, challenges remain for the dialogue to truly be a multi-sectoral national exercise in pursuit of development objectives.

## Country situation

### Context

The telecommunications sector in Ecuador has grown rapidly in the last decade, notably since 2000, when the telecommunications market was liberalised through legal reforms that tended to increase competition. According to the Central Bank of Ecuador (BCE, 2006), the sector grew approximately 22.7% from 2004 to 2005. Although this statistic includes postal services, it gives a good sense of the dynamics of the sector, which grew 11.2% from 1999 to 2000 and in 1994 had a growth rate of only 0.1%.<sup>2</sup>

But the sector has evolved in a complex context which has not generated the conditions for a majority of the population to benefit from the transformative potential of ICTs. Despite liberalisation, an oligopolistic system predominates.

Ecuador is a country of socioeconomic inequalities and political instability. According to the results of the 2005-2006 survey of living conditions carried out by the National Statistics and Census Institute (INEC), 28.6% of the population lives in poverty and 9.9% lives in extreme poverty. These percentages are lower than they might be due to the massive emigration rate over the last five years. It is estimated that at least two and a half million people have left the country, and that they send remittances of nearly USD two billion back for their families (INEC, 2006).

In this context, the ICT policies put in place have been inspired by the euphoric idea that the expansion of telecommunications infrastructure and connectivity are a panacea for poverty and underdevelopment.

The history of ICT policies in the country shows a culture of planning and public management which has generally followed a hierarchical and centralised model, in which organised civil society does not participate. This has meant, on the one hand, that measures are implemented which favour specific economically and politically powerful groups in the area of telecommunications and, on the other hand, that only those who have the ability to pay for the services provided by state and private businesses benefit.

While it is likely that the new presidential administration, which began on 15 January 2007, will institute changes, the formulation and execution of policies, as well as the regulation and control of telecommunications and ICTs, falls to four agencies which issue sometimes contradictory directives: the National Telecommunications Council (CONATEL), the National Television and Radio Broadcasting Council (CONARTEL), the National Secretariat of Telecommunications (SNT) and the Telecommunications Superintendent's Office (SUPTTEL).

CONATEL is currently in charge of the regulation and administration of telecommunications. The SNT is responsible for the implementation of telecommunications policies. CONARTEL regulates and authorises radio and television broadcasting services, and SUPTTEL controls telecommunications services and the use of the airwaves.

The rapid growth of the telecommunications sector has occurred despite the fact that in Ecuador internet access costs and mobile phone charges are among the highest in the world.

Mobile phone use grew a staggering 9,970.39% from December 1996 to December 2005. According to SUPTTEL, in November 2006 there were 8,190,923 mobile phone users among the 13,520,430 inhabitants of the country. Access to the internet grew 12,548.13% between December 1998 and December 2005. According to CONATEL, 10.13% of the population is connected to the internet, although 80% of those connected are concentrated in the two major cities, Quito and Guayaquil. There are, however, no indicators that show how ICTs are being used and the impact they are having (SUPTTEL, 2006).

The country is not well equipped with networks (copper or fibre optic). In 2006, a 128/64 kbps DSL (broadband) connection cost USD 95 and a cable modem connection cost USD 75, according to CONATEL. The cost per kbps is USD 0.508. Many areas are neglected and some lines are duplicated. The line out to the backbone of the Americas through Miami is inefficient and expensive, and the costs of local telephone calls via both landline and mobile telephones are high (USD 0.028 and 0.50 a minute, respectively). The cost per minute for a local call in a public phone booth is USD 0.10 (CONATEL, 2006b).

The reasons that connection costs are high in Ecuador can be summarised as follows:

- There is no direct line out to the high capacity submarine cables, so a toll must be paid for the international connection.

1 <lac.derechos.apc.org>.

2 The growth of the sector is expressed in monetary terms, that is to say, in the wealth that it generates. The statistic expresses the growth of telecommunications and postal services jointly.

- There is no local information exchange network.
- There is low internet penetration.
- The costs for installing a network and equipment are high.
- There is a lack of training in the use of new technologies.

According to the UN e-government readiness index,<sup>3</sup> Ecuador has made great strides in the online presence of the public sector. From 2003 to 2004 the country's rank rose from 101 to 87. This has more to do with the availability of online public information and the provision of online services than with a substantial increase in online citizen participation and interaction with public officials. The situation is somewhat different among local governments, where e-government aims to deepen democracy by providing channels for interaction with citizens and open opportunities for citizen participation in decision-making processes. However, its actual impact has not yet been measured.

Communication activists working through the Ecuadorian Grass-roots Radio Network (CORAPE) began to push for reforms to radio and television legislation in 1996. In November 2002 they won a legal reform whereby community radios are recognised and allowed to be self-sustaining through the sale of advertising time. Nevertheless, the legislation does not establish mechanisms for community radios to access the concession of frequency licences in a more equitable manner. Community radios have to compete with commercial media in the frequency auction. In January 2007 allegations of illegal concessions of radio and television frequencies came to light.

An important legal precedent exists in the country: Article 23, No. 10 of the Constitution of the Republic recognises the right to communication, to establish social communication media, and to equal access to radio and television frequencies (ANC, 1998). CSOs, community media, development activists and citizens in general can use this legal instrument to advocate for reforms to the ICT legal framework. These should guarantee that the majority of the population benefits from the use of ICTs, that they are considered a common good, and that they are used for the improvement of living conditions.

### *ICT public policy management processes: the design and formulation of the White Paper on the Information Society*

In June 2005 CONATEL became regularly and actively involved in the global and regional WSIS processes. It began to take the first internal steps towards reconfiguring the national strategy for the information society by incorporating the involvement of various sectors. Participation became one of the criteria for the formulation of proposed ICT policies.

CONATEL called national actors together in May 2006 for a public discussion of a proposal for a national strategy, as well as to reflect on the focus, components, objectives and goals appropriate to national ICT needs and priorities. It also initiated the discussion for the design of the White Paper on the Information Society, in the light of new regional and global benchmarks offered by processes such as the WSIS and eLAC2007, a regional plan for an information society.

The new strategy was put forward as a replacement for the National Agenda for Connectivity and the National Connectivity Commission, which were proposed in 2001 as the government policy for the development of the information society. These involved the diffusion of ICTs in five areas: education, governance, infrastructure, e-commerce and health. The implementation of the Agenda for

Connectivity was extremely limited and many of its political, social, technical and financial objectives were not viable.

Based on new political and technical guidelines, CONATEL proposed to address the following overlapping issues: the existence of inefficient structures and institutions; the low levels of involvement of strategic sectors of the state; the absence of multi-sectoral and multi-disciplinary participation mechanisms that would allow for relevant and sustained work; the lack of knowledge among citizens, as well as authorities responsible for ICTs; the duplication of efforts by public institutions, CSOs and the private sector; the inefficient use of limited public resources; and the lack of leadership and coordination among organisations, among others. In short, CONATEL acknowledged the lack of a comprehensive state policy, and in doing so, it predefined a thematic agenda that sought to align efforts in the ICT sector with broad socioeconomic and developmental goals. Its principles included encouraging multi-stakeholder involvement and a transparent and democratic process. The next challenges are to put these principles into practice by implementing the white paper and to evaluate if it manages to establish an effective link with national development and poverty reduction strategies.

CONATEL's proposed methodology was to form 36 issue-based working groups along three axes: infrastructure, access and universal service; social appropriation and enabling environment; and local innovation, content and applications. The proposals that came out of 27 groups (after the merger of some) formed the main source material for the white paper.

The white paper was formally issued on 21 December 2006 at a public event organised by CONATEL, which committed to publicising and distributing it, and to presenting it as a contribution to the government administration beginning its term in January 2007.

The convening of different actors, especially CSOs, is a step forward in the creation of multi-sectoral interactions and public-private alliances. The adoption of participatory mechanisms and the incorporation of human rights and development perspectives in the construction of public policy are the fruit of the advocacy work carried out by CSOs, who began to push for dialogue with public officials in February 2003.

These organisations have played a fundamental role in achieving recognition of the need for legal and regulatory frameworks that ensure community access to ICTs. This recognition can open up opportunities for transforming the current system, which is marked by a technocentric and market-oriented discourse and practice, into juridical environments that enable the use and capitalisation of ICTs as public goods. It can also create the conditions for planning the comprehensive and coordinated use of ICTs in key national development areas.

The vision offered in the white paper is additional evidence of effective advocacy by CSOs. It states that public policy should aim to achieve "a country in which all of the population participates in and benefits from the potential of communication and knowledge, without barriers and in equal conditions, through the access, use, capitalisation and appropriation of information and communications technologies, to ensure comprehensive development and the improvement of living conditions" (CONATEL, 2006a).

However, some fundamental issues such as gender equity and the importance of free and open source software (FOSS) for knowledge creation were not addressed in the public agenda and the white paper. Although there were significant advances in the understanding of the role that ICTs can play in development, it is difficult to establish a wider and more comprehensive concept of access.

3 <[www.unpan.org/egovkb](http://www.unpan.org/egovkb)>.



Incorporating issues which aim to even out the imbalances and overcome the limitations that prevent the majority of the population from benefiting widely from the relevant and effective use of ICTs also turns out to be complicated. Crucial issues such as the renegotiation of telephone company contracts and the concession of operating licences were left out of discussions.

On the other hand, issues related to the improvement of competitive conditions and economic development through ICTs, the consolidation of the national and local ICT industry and the strengthening of state capacities to take advantage of ICTs in an effective and relevant way were dealt with in exhaustive detail.

Though the process was a constructive exercise in multi-stakeholder interaction, it is necessary to improve the process of reaching agreement on agendas and to balance the weight of certain interest groups who, because of their lobbying capacity and closeness to the public sector, participate more directly in the decision-making.

One important proposal is for the creation of a multi-sectoral commission for the information society. This will be mandated to formulate public ICT policies and guide their application, beginning with ensuring and overseeing the implementation of the white paper. But this will not come to pass unless the responsibilities and roles of actors are defined, resources are assigned, and the procedures for multi-sectoral interaction are spelled out.

The efforts to follow the guidelines that came out of the WSIS and eLAC2007 in the development of the white paper have been clear, as have been those that take on the commitments of the Millennium Development Goals (MDGs),<sup>4</sup> and consider the impact of technology convergence. However, the success of the country's national ICT strategy depends on political will.

A crucial challenge will be ensuring a connection to the country's development and poverty reduction strategies. This requires coordination with the Secretariat for the Millennium Development Goals (SODEM) and achieving a political commitment from the government. It also depends on the decentralisation of strategy processes, their transparency, the presence of citizen oversight mechanisms, outreach programmes and the community appropriation of ICTs, and proposals for the strategy's financial sustainability.

## Participation

As suggested, WSIS marked a sharp turning point in how the different actors began to participate in the national ICT policy process. However, the characteristics, motivations and expectations of the different players at the Summit were different.

CONATEL and the National Council for the Modernisation of the State (CONAM) positioned themselves as the lead public agencies in the configuration of the information society in the country, with renewed visions of the public management of ICTs and the role of the different actors. Nevertheless, this leadership is not systematically capitalising on the experience and input of local governments that have made extremely important advances in defining ICT strategies that respond to local needs and priorities. The response and political commitment of key institutions in charge of managing strategic national development areas were also extremely limited. A utilitarian and technical discourse around ICTs continues to predominate in the majority of public agencies, which do not go beyond computerising public institutions and, in the best of cases, adopting ICTs as tools for improving administration.

The private sector was represented through local businesses dedicated to the development and promotion of the software industry, and small and medium-sized ICT service providers. The involvement of these actors can be seen as being motivated by the desire to improve and strengthen market dynamics favourable to them. In this sense, it could be said that their participation is seen as an investment and an opportunity to do business and make alliances.

Delegates from universities and non-governmental organisations (NGOs) made up the civil society group. Expectations varied within this group, and their ability to intervene in the process depended on how consistently they participated, their ability to draft proposals, and the strength of their arguments.

For many in the civil society group it was particularly difficult to understand clearly the political dimensions and impact of some of the technical issues that emerged, such as the management of airwaves.

Parallel to the issue-based working groups established by CONATEL, some CSOs decided to meet on their own to critically analyse the process, agree on agendas and find the right balance for their participation. They sought to legitimise the process without endorsing that which did not meet their expectations or fit their vision, focus or objectives. This oversight role is something which different civil society actors want to advance through the creation of collective and common platforms. And this is likely to be their main contribution to the ICT policy process in Ecuador. They need to ensure that the intent of proposals is maintained, that the multi-sectoral mechanism is formalised, that topics which were left aside are integrated, and, ultimately, that the next steps correspond to what was approved. Few CSOs see themselves as actors in the implementation of the projects and initiatives of the white paper.

## Conclusions

The White Paper on the Information Society is an instrument which brings together the approaches of diverse sectors in the country. It can serve as a framework for ICT policy development in future government administrations, and help to implement a comprehensive national strategy for adopting ICTs for development.

Its democratic, transparent and multi-stakeholder approach represents an important leap in ICT policy development processes. However, there is still a long way to go for all of the sectors to be included under equal conditions, and under a common strategic development perspective.

Civil society needs to take on the challenge of monitoring the national ICT policy process and improving its capacity for direct involvement. It needs to advocate for the formalisation of inclusive and participatory mechanisms, contribute to widening the awareness of the importance and impact of ICT policies, and demand the sustainability of the process, independent of any particular government administration in power.

It is important that the country continues to build ties with regional and global ICT policy processes through its relevant public institutions. CSOs need to be allowed to play an active role at this level as legitimate representatives of the country, so that common interests in development can be advanced. ■

4 <[www.un.org/millenniumgoals](http://www.un.org/millenniumgoals)>.

## References

- ANC (Asamblea Nacional Constituyente) (1998). *Constitución Política de la República del Ecuador* [online]. Available from: <[www.ecuanex.net.ec/constitucion/titulo03.html#1](http://www.ecuanex.net.ec/constitucion/titulo03.html#1)>.
- BCE (Banco Central del Ecuador) (2006). *Cuentas Nacionales No. 20 1993-2005* [online]. Available at: <[www.bce.fin.ec/frame.php?CNT=ARB0000167](http://www.bce.fin.ec/frame.php?CNT=ARB0000167)>.
- CONATEL (Consejo Nacional de Telecomunicaciones) (2006a). *Libro Blanco. Estrategia para el desarrollo de la sociedad de la información en el Ecuador* [online]. Available from: <[www.conatel.gov.ec/website/conectividad/sociedad.php?cod\\_cont=280](http://www.conatel.gov.ec/website/conectividad/sociedad.php?cod_cont=280)>.
- CONATEL (2006b). *Indicadores de telecomunicaciones*. [online] Available from: <[www.conatel.gov.ec/website/estadisticas/estadisticas.php](http://www.conatel.gov.ec/website/estadisticas/estadisticas.php)>.
- INEC (Instituto Nacional de Estadísticas y Censos) (2006). *Encuesta de Condiciones de Vida, Quinta Ronda 2005–2006. Pobreza y Extrema Pobreza en el Ecuador. Período: noviembre 2005 – julio 2006* [online]. Available from: <[www.inec.gov.ec/pobreza/fpobre.htm](http://www.inec.gov.ec/pobreza/fpobre.htm)>.
- Infodesarrollo.ec (Red Ecuatoriana de Información y Comunicación para el Desarrollo) (2006). *¿Por qué el Ecuador tiene el acceso a Internet más caro del mundo?. In Foro "Calidad y costos de los servicios de internet en el Ecuador"* [online]. Quito: Infodesarrollo.ec, Redes Libres, Machángara Soft, FLACSO and UNESCO. Available from: <[www.infodesarrollo.ec/content/view/169/212/lang.es](http://www.infodesarrollo.ec/content/view/169/212/lang.es)>.
- Jurado Vargas, R. (2006). *Diagnóstico de las políticas de TIC en el Ecuador*. Quito: FLACSO - Ecuador, GDS, IICD, Infodesarrollo.Ec.
- Stern, P., Townsend, D. and Stephens, R. (2006). *New Models for Universal Access in Latin America. Lessons from the Past and Recommendations for a New Generation of Universal Access Programs for the 21st Century* [online]. Montreal/Boston/Madrid: Regulatel, World Bank and ECLAC. Available from: <[www.regulatel.org/miembros/publicaciones/ESTU%20DIOS/SERV%20UNIV/PPIAF/informe%20final/draft%20vt/Cover.v.1.pdf](http://www.regulatel.org/miembros/publicaciones/ESTU%20DIOS/SERV%20UNIV/PPIAF/informe%20final/draft%20vt/Cover.v.1.pdf)>.
- SUPTTEL (Superintendencia de Telecomunicaciones del Ecuador) (2006). *Evolución de los servicios de telecomunicaciones* [online]. Available from: <[www.supertel.gov.ec/crecimiento/crecimient.htm](http://www.supertel.gov.ec/crecimiento/crecimient.htm)>.

# EGYPT

ArabDev<sup>1</sup>

Leila Hassanin



## Introduction

The Egyptian government has made information and communications technologies (ICTs) a developmental priority and has modernised and upgraded the sector's infrastructure, services, regulations and human resource capacity. Egypt had an antiquated ICT infrastructure until the early 1990s. People waited sometimes for years to have fixed phone lines installed, and the old copper infrastructure made connections unstable. Phone lines outside major cities were failing. Mobile technology aided in the diffusion of phones, but the government also extended fibre optic connections throughout Egypt, upgraded the copper lines and data centres, improved the integration of applications<sup>2</sup> and in general provided more fixed-line connections. Now it only takes a few weeks to have a fixed line installed.

The liberalisation of Egypt's telecom sector is linked to the country's economic reform programme initiated in 1991 and has been set as a World Summit on the Information Society (WSIS) priority. Egypt has signed the World Trade Organisation's (WTO) Basic Telecommunications Agreement (BTA), which sets up a framework for the integration of its ICT industry with the global economy.<sup>3</sup>

The telecom sector has sustained good performance for nearly a decade, despite Egypt's economic slowdown during 2001 to 2004. The government sees the sector as a prerequisite for attracting foreign investment and supporting the local private and government sectors.

While liberalisation is progressing relatively smoothly, there are signs of the over-protection of the incumbent telecoms operator in the liberalisation process. Other challenges to completing liberalisation include the role of the minister as the final decision-maker for the regulator and for Telecom Egypt, a dual role that does not favour deregulation. At the same time, the lack of public participation opportunities in the ICT policy-making process makes liberalisation a technocratic process without adequate public checks and balances.

The average Egyptian is not the main beneficiary of the liberalisation process. It is driven by pressures from the global market and not by mass internal demand to make the price structure for certain services like international calls and broadband internet more competitive. The user base for high-level services in Egypt are the local and foreign business sectors and, at home, the upper-income strata. Egypt's ICT diffusion ranking between 1997 and 2004 hovered around 135 (ranging between 132 to 137 over various years). It is one of the countries with the least diffusion of ICTs, with Niger rating lowest at 180 (UNCTAD, 2006).

This report was completed through desk research, interviews with role players in the sector, and the author's own participation in the ICT for development sector in Egypt.

## Country situation

### Box 1: Overview of the liberalisation process

- 1854 - Establishment of the National Organisation for Telecommunications
- 1881 - Purchase of the Eastern Telephone Company and development of the Telephone and Telegraph Authority
- 1957 - Establishment of the Egyptian Telecommunication Organisation (ETO)
- 1982 - Creation of the Arab Republic of Egypt National Telecommunication Organisation (ARENTO)
- 1998 - Founding of Telecom Egypt and the Ministry of Communication and Information Technology (MCIT)
- 1998 - Establishment of the Telecommunication Regulatory Authority (TRA)
- 2003 - Creation of the National Telecommunications Regulatory Authority (NTRA)

The Ministry of Communication and Information Technology (MCIT)<sup>4</sup> was established in 1998 as an entity independent from the former ministry of transportation and telecommunication. MCIT has been responsible for developing ICT infrastructure, stimulating the knowledge economy, and forging an e-government strategy and a legal framework that is in line with international digital requirements. One of these requirements is deregulation.

To encourage sector privatisation, legislation turned Telecom Egypt, the state-owned incumbent operator, into a joint stock company in 1998.<sup>5</sup> Law 19/1998 and Presidential Decree 101/1998 separated operator and service provider from the regulatory functions. Accordingly, MCIT created an independent regulator, the Telecommunication Regulatory Authority (TRA) in line with Decree 10/1998.

Liberalisation was further regulated by Telecommunication Regulation Law 10/2003 and its presidential decree. The law rests on four main pillars: information disclosure, free competition, the provision of universal services and user protection.

A central aspect of the law is the establishment of the National Telecommunications Regulatory Authority (NTRA), which replaced the TRA in 2003 and was assigned all regulatory functions as an independent regulatory authority.<sup>6</sup> Another crucial aspect was the deregulation

1 <[www.arabdev.org](http://www.arabdev.org)>.

2 Such as ICT tools that are being used for the creation of the Egyptian Information Society Initiative (EISI). These include e-government, e-health, e-content and e-business applications.

3 Egypt has been a member of the International Telecommunication Union (ITU) since 1976.

4 <[www.mcit.gov.eg](http://www.mcit.gov.eg)>.

5 Telecom Egypt continued to be the sole fixed-line operator.

6 Law 10/2003 stipulates the NTRA's duties and functions. These are to: draw up telecommunication plans and programmes; prepare and publish telecom services statistics; set the general policies and regulations for non-economical telecom services; establish customer protection rules; provide state-of-the-art services with the best prices; ensure the quality of telecom services; set up and manage a customer

of Telecom Egypt's monopoly of domestic and international telephone service by January 2006. Accordingly, the NTRA will have completed the main elements of the first liberalisation phase by the end of 2006. The first phase of the liberalisation process runs from 2006 to 2008. During this phase licensees are allowed to run voice and data services over satellite earth stations and cable landing points operated by Telecom Egypt. Licences to establish independent landing station infrastructure are set for a future date (MCIT, 2006).

Law 10/2003 governs licence categories and related fees. The NTRA grants the licences. It awarded over 20 licences to operators who offer telecommunications services to the Egyptian market, including mobile, payphone, prepaid calling card, internet, data, and VSAT (satellite) services. The NTRA is also responsible for the advanced radio management and monitoring system and its rationalising the radio frequency spectrum to introduce new services. Licence fees are a main source of income for the NTRA. The authority's budget is further supplemented by government funds.

### *Consumer protection, negotiation and arbitration*

As regulator, the NTRA is the sector's consumer rights protector. The authority has offered a hotline for customer service since September 2002. The hotline responds to both technical and non-technical complaints and enquiries (e.g. the customer can report a failure in services but also pursue billing issues).<sup>7</sup>

The NTRA has established several committees to address consumer protection issues: the Consumer Rights Committee, the Consumer Awareness Committee, the Health Committee, the Service Quality Committee, the Pricing Committee and the Privacy Committee.<sup>8</sup>

The NTRA also manages interconnection agreements in accordance with the stipulations of Law 10/2003. As a result, the NTRA is the negotiator if two service providers have a dispute over an interconnection agreement. The dispute is only taken to court when the NTRA is unable to act as arbitrator.<sup>9</sup> Law 10/2003 gives exact instructions on offences and their financial penalties (in extreme cases there are prison penalties).

### *Liberalisation of main sector stakeholders*

To date there are ten licensed telecommunications service providers in Egypt:

- Telecom Egypt, the government operator, which provides traditional fixed landline services
- Three GSM (mobile) operators
- Two payphone operators
- Four low earth orbital systems operators.<sup>10</sup>

complaints system; regulate licence issuance procedures; create the National Numbering Plan; regulate equipment type approval processes; build and operate the Universal Services Fund (USF); and conduct research and development and training.

7 NTRA. Customer Service. See: <[www.tra.gov.eg/english/DPages\\_DPagesDetails.asp?ID=236&Menu=4](http://www.tra.gov.eg/english/DPages_DPagesDetails.asp?ID=236&Menu=4)>.

8 NTRA. Costumer Protection. See: <[www.tra.gov.eg/english/DPages\\_DPagesDetails.asp?ID=276&Menu=9](http://www.tra.gov.eg/english/DPages_DPagesDetails.asp?ID=276&Menu=9)>.

9 A possible scenario would be a lack of qualifications (technical or legal) to act as arbitrator between the affected parties.

10 VSAT Service, Globalstar, Al-Tharaya, and Alkan.

### *Telecom Egypt*

Telecom Egypt<sup>11</sup> replaced the Arab Republic of Egypt National Telecommunication Organisation (ARENTO) in 1998. It has been modernising the ICT sector through upgrading Egypt's ICT infrastructure, expanding and improving quality of services and, through deregulation, offering consumers more competitive prices. Some examples of the upgrades are the installation of fibre optic cables and digital microwave links throughout Egypt's 26 governorates, adding a third mobile carrier and, recently, liberalising the monopoly on international calls.

Telecom Egypt was the monopoly fixed-line call operator until the end of 2006. Domestic fixed-line calls are cheap by international standards (approximately USD 0.17/hour) because Telecom Egypt has subsidised them through high international call tariffs. The challenge that Telecom Egypt now faces is how to manage fees for local calls with the anticipated lower revenues due to liberalising international call tariffs (Hashem, 2006).

One solution is to try to increase demand for international calls, thereby expanding its user base. Telecom Egypt's chairperson, Akil Bashir, sees the liberalisation process in the short term as potentially raising prices for local fixed-line calls. He further emphasises the importance of creating more demand. Lower international tariffs should translate into offering the service to sectors of the economy that have not been using international telephony on a frequent basis. Here the assumption is that the price change will create demand (Hashem, 2006).

Before the liberalisation of the sector, Telecom Egypt's revenue from international calls was approximately EGP 2 billion (USD 35 million) per year. This amounted to 25% of its total returns. The subsidised local calls cost the operator a loss of revenue of EGP 0.5 billion (USD 8.7 million) per year until recently. Income from international telephony is also the only hard currency earner for the company (Hashem, 2006).

Law 10/2003 required Telecom Egypt to give up its monopoly on landline telephone services and open them up to at least two additional operators by early 2006. The telecoms law gives the government a free hand in selling a stake in Telecom Egypt, but stipulates that the state must retain more than 50% of the company. The law also decrees that 5% of the operator should be offered to employees in the event of any kind of sale proceeding.

Telecom Egypt has two liberalisation scenarios for international calls: either to offer two new public tenders or to offer an international licence to the three mobile carriers. It also plans to expand regionally to be able to earn hard currency.

Liberalisation is carefully managed, however. For example, Mobinil<sup>12</sup> and Vodafone will channel their calls through Telecom Egypt, thereby offsetting a drop in revenues. Telecom Egypt has also purchased Vodafone Egypt shares to secure a stake in the thriving mobile market.

The NTRA set up the Universal Service Fund (USF)<sup>13</sup> in 2005 to compensate sector stakeholders, one of the most prominent of them being Telecom Egypt, for expansion in low-density, low-profit areas

11 <[telecomegypt.com.eg](http://telecomegypt.com.eg)>.

12 Mobinil was the first mobile phone operator in Egypt, and is still a leading operator now, while two additional companies have been added: Vodafone and recently Etisalat. By channelling their networks through Telecom Egypt they are paying a fee to the latter. In this way Telecom Egypt is benefiting revenue-wise from the mobile sector, though it is not a mobile operator per se.

13 The USF's budget is made up from annual NTRA budget surpluses. The initial budget is LE 50 million (USD 8.7 million).

to meet set ICT access targets. The NTRA's main universal service goals were to guarantee access to telecommunications services at reasonable prices and make them accessible to all citizens; provide access to remote areas, schools and general libraries; guarantee free competition and discourage monopolistic tendencies; and help to consolidate national, political, economic and cultural interactions. The fund is financed by licensing fees, in addition to other funds from the state's budget.

The NTRA is very supportive of Telecom Egypt. The regulator is setting pricing formulas that take into consideration the transition the operator is going through due to deregulation. Telecom Egypt has also been advantaged in relation to other ICT service providers in that it was exempted from paying licence fees on services before 2006. It helps that both the NTRA and Telecom Egypt are under the auspices of the minister of the MCIT.

The operator also maintains a stronghold in the sector through its subsidiaries. It has investments in over 18 companies (e.g. Vodafone Egypt, Nile Online, Egyptnet, Middle East Radio Company, MenaTel and Nile Telecom), giving it a wide spread in the sector and varied revenue sources.

To increase its hard currency revenue, Telecom Egypt has begun bidding for regional and international contracts. It is in the process of establishing Orascom, a second fixed network in Algeria. Through its subsidiary TEData, it is offering in Palestine a "free internet"<sup>14</sup> model that it established in Egypt, and has opened a branch in Jordan (AmCham, 2003).

One example of Telecom Egypt's engineered liberalisation process is its recent acquisition of Vodafone Egypt shares. While Telecom Egypt's shares went public on the Egyptian stock market in December 2006, the cooperative partnership between Telecom Egypt and Vodafone has increased Telecom Egypt's stake in Vodafone to 45%. This partnership allows Vodafone Egypt to extend its services and products through Telecom Egypt's outlets. Through this partnership, Telecom Egypt could potentially work regionally on fixed and mobile operations. It will further maintain a sizable portion of international call revenues while maintaining its commitment to liberalisation (Vodafone, 2006).

### *Liberalisation examples from other sector participants*

#### Mobile service providers

Egypt has become the largest internet market and the third largest mobile market in Africa (after South Africa and Morocco). Telecom Egypt was the first mobile operator, beginning its services in 1996. The mobile sector was partially liberalised in 1998, when the MobiNil consortium began offering mobile services. MobiNil was comprised of four companies: Orascom Telecom; Al Ahram, a subsidiary of Motorola; Systel, controlled by Alcatel; and Raouf Abdel-Messih, a local partner.

The government sold a licence for a second network to a consortium led by Vodafone and Misrfone, which launched its services in November 1998 under the name Click GSM. In the same year, Menatel and Nile Telecom, both private companies, were licensed to provide payphone services. A third provider – Etsalat – was chosen by a lengthy tender in 2006, and is expected to be fully operational by mid-2007.

<sup>14</sup> Through Telecom Egypt, ISPs offer numbers (0777-0000 or 0707-0000) that can be dialled from any landline phone to access the internet without paying a monthly subscription fee to an ISP. A per-minute rate for online use is billed towards monthly phone use.

#### Internet service providers (ISPs)

Public data networking services were liberalised in 1999. The first ISPs were able to enter the market in this way; however, it was not until the following year that the market for internet infrastructure was opened to competition. The market for high-speed access services was liberalised in 2001, while the first virtual operators – mostly ISPs – were licensed in 2003.

Internet service licensing has been fully liberalised, and any organisation may apply for a licence. However, there are three licence classes of ISPs in Egypt: class A, B and C. Class A is an all-inclusive licence and is used by the leading ISPs (e.g. Link.net, Internet Egypt and GegaNet). These licensees can install networks throughout Egypt and can resell bandwidth to other ISPs. Class B licensees are not allowed to sell bandwidth to other ISPs. Class C ISPs have to lease or buy bandwidth from Class A licensees and can only provide internet services to their customers. Most ISPs work on a revenue-sharing model with the incumbent operator, which currently benefits both the ISP and incumbent. There is a danger, however, that failure on the part of the incumbent would disrupt services for many customers, as there is only a single point of failure.

#### Call centres

The liberalised regulatory environment supports the development of offshore services like call centres. These are becoming economically competitive due to the reduction in telecommunication costs. However, foreign language skills are not as strong in Egypt as they are in countries like India. At the same time, skilled ICT labour is in general a challenge in Egypt (Rasromani, 2006). Despite being a latecomer, Egypt is trying to position itself as a global and regional call centre destination.

Egypt is in the process of establishing the first transit telecommunications free zone. Located in Alexandria, the free zone will offer co-location services, managed services and application services via a "telecom hotel".<sup>15</sup>

#### E-commerce initiatives

There are limitations, at present, for widespread e-commerce services in the local market due to the relatively low diffusion of internet users and the minimal use of credit cards in financial transactions within Egypt. However, MCIT is planning to launch e-commerce capabilities in Egypt by 2007.

Law 15/2004 on e-signatures and the establishment of the Information Technology Industry Development Authority (ITIDA)<sup>16</sup> was passed on 22 April 2004. The Central Bank of Egypt has licensed 12 banks to provide e-banking services. The services include phone and mobile banking as well as internet banking services.

A full modernisation of the National Postal Authority is currently a key government project. The postal authority started to build a network to connect its 3,000 post offices throughout the country. Plans for transforming the authority into a joint stock company<sup>17</sup> are already under way. The opportunities exist for partnerships with the private sector to introduce electronic postal services and new applications in postal banking (CIT Egypt, 2002).

<sup>15</sup> A building that is constructed or rebuilt for data centres.

<sup>16</sup> <itida.gov.eg>.

<sup>17</sup> The formerly 100% public National Postal Authority will offer at least 49% of the shares to private Egyptian entities.

Table 1: Key statistics	
<b>Total population</b>	78,887,007 (July 2006 est.)
<b>GDP (USD)</b>	Purchasing power parity - 316.3 billion (2004 est.)
<b>GDP/capita (USD)</b>	Purchasing power parity - 3,960 (2004 est.)
<b>Independent regulator</b>	National Telecommunication Regulatory Authority (NTRA)
<b>Fixed telecom operators</b>	Telecom Egypt is a state-owned fixed network monopoly – privatisation process completed end 2006.
<b>Fixed network growth</b>	Fixed-line diffusion rate reached 14% June 2005.
<b>Fixed lines in service</b>	10 million (2005)
<b>Fixed line capacity</b>	Total number of subscribers reached 10 million (2005)
<b>Fixed lines/100 pop.</b>	13.5
<b>Main line waiting list</b>	100,000
<b>Main line waiting time</b>	Approx. one month
<b>Number of ICT employees</b>	50,000+ (2005)
<b>Telecommunications revenue (USD)</b>	2.9 billion (2000)
<b>Mobile subscriptions</b>	14 per 100 population (2005)
<b>Mobile diffusion</b>	14,045,134 (2005) – 3rd largest mobile market in Africa
<b>Internet dial-up subscribers</b>	NA - Subscription-free internet, based on a revenue-sharing system between Telecom Egypt and leading local ISPs. Offers internet at the price of a local long-distance call (USD 0.17). This system lifted monthly payment barriers and led to a significant leap in numbers of online users, reaching 4.2 million in mid-2005 from 0.65 million in 2000.
<b>Internet users</b>	5 million (2006), 4% of the population
<b>ISPs</b>	196 (2004)
<b>Internet bandwidth</b>	Dial-up and broadband approx. 32-40 Kbps
<b>Asymmetrical Digital Subscriber Lines (ADSL)</b>	EGP 150-200 (USD 26-35)/month
<b>WiFi - WiMAX</b>	WiFi predominantly used in Cairo and Alexandria, WiMAX has been tested for public application; NTRA is planning a 3.5 GHz spectrum auction in 2007-2008.
<b>Cities with dial-up IP POPs</b>	Universal access in cities and towns
<b>VSAT</b>	International VSAT gateways permitted for data communications. ISPs can get their own international bandwidth using VSAT if they are licensed international VSAT operators.
<b>Local loop</b>	CDMA WLL access system in the Nile River Delta area. The network will have a total capacity of 60,000 subscriber lines, extending Telecom Egypt's services into rural and remote areas where its existing copper network does not reach.
<b>Cybercafés</b>	Over 600
<b>VoIP</b>	VoIP PC-to-PC allowed, PC-to-phone not allowed. Government working on liberalising the latter; main stumbling block is decreased revenue from international calls for Telecom Egypt.
<b>Exchange rate</b>	EGP 1 = USD 0.173

Sources: NTRA, Telecom Egypt, Information and Decision Support Centre (IDSC), ITU, Economist Intelligence Unit (EIU), World Bank.

## Participation

Currently there are no public consultation forums for ICT policy formulation. While telecommunications law gives the NTRA clear rules and guidelines on regulating the market and protecting the consumer, as well as for imposing penalties on defaulters, public participation in law-making processes are not as clear. For example, the law does not establish a way to contest decisions adopted by the NTRA. It also does not require the NTRA to make its decision-making process public. In one instance this led to a heated debate by opposition groups regarding the transparency of the selection process of the third mobile carrier, Etisalat (although the process has been deemed transparent by the government and the international community).

According to Mustafa (2002), Egypt's liberalisation status compares favourably in the region. However, while Egypt has a relatively transparent regulatory framework, the analysis points out that the regulator is not fully independent due to the NTRA's ultimate subjugation to the sector's minister, and the lack of an open, public decision-making forum.

## Conclusions

Egypt has made strides in its liberalisation plan, progressing largely according to schedule. To date the NTRA is showing signs of a well-functioning regulator. While it is fairly independent, it ultimately is governed by the MCIT minister, who also governs Telecom Egypt. This lack of independence from the sector could potentially place it in a conflict of interest.

Telecom Egypt faces a challenge in maintaining and expanding its profit level after liberalisation. As a result, the liberalisation process is being carefully engineered to allow it to keep its advantageous edge over competition.

While Egypt's liberalisation process is running relatively smoothly, its publication and public participation processes leave a lot to be desired. There is, in effect, a dichotomous approach towards liberalisation in Egypt: liberalisation of services and technical applications, but limitations on the "liberalisation" of expression and on the inclusion of public involvement in the decision- and policy-making processes in the sector. ■

## References

- American Chamber of Commerce in Egypt (AmCham) (2003). "AmCham Tenders Alert Services (TAS)". *Business News* [online], 22 September 2003. Available from: <tinyurl.com/2cthqe>.
- CIT Egypt (2002). *Egypt Investment Climate* [online]. Available from: <www.citegypt.com/Egypt-Investment-Climate.asp>.
- Hashem, A. (2006). "Interview with Eng. Akil Bashir, TE Chairperson". *Al-Goumhureya Weekly*, 2 November 2006, p. 30.
- MCIT (Ministry of Communication and Information Technology) (2006). *Press Release: International Telecom Liberalization* [online], 5 February 2006. Available from: <www.mcit.gov.eg/PressreleaseDetails.aspx?id=XBVftMNYK4=>.
- Mustafa, M.A. (2002). "Benchmarking Regulators: Making Telecom Regulators More Effective in the Middle East". *The World Bank* [online], note #247, June 2002. Washington, D.C.: The World Bank. Available from: <rru.worldbank.org/Documents/PapersLinks/247Musta-062802.pdf>.
- Rasromani, W.K. (2006). "Inadequate Skills Challenging Service Liberalization". *The Daily Star Egypt* [online], 19 July 2006. Available from: <www.dailystaregypt.com/article.aspx?ArticleID=2322>.
- UNCTAD (UN Conference on Trade and Development) (2006). *The Digital Divide Report: ICT Diffusion Index 2005* [online]. Geneva: United Nations. Available from: <www.unctad.org/en/docs/iteipc20065\_en.pdf>.
- Vodafone Group (2006). "Vodafone and Telecom Egypt announce new strategic partnership". *Media Center* [online], 8 November 2006. Available from: <tinyurl.com/2y299d>.

# ETHIOPIA

Ethiopian Free and Open Source Software Network (EFOSSNet)<sup>1</sup>

Abebe Chekol



## Introduction

This report provides a brief overview of the information and communication technology (ICT) situation in Ethiopia and the key stakeholders' roles in the sector, together with a concluding remark on key areas that need to be addressed. The methodology for this report involved mainly desk research, complemented by interviews with individuals in the telecom sector.

The first section describes key areas of progress in the ICT sector in Ethiopia, while the *Participation* section presents the country's ICT policy-making bodies and implementers, including stakeholders that contribute to the development of the ICT sector.

The ICT sector in Ethiopia is still characterised by a low penetration of services, including fixed-line telephones and mobile and internet services. Reasons behind this include the monopoly of the telecommunications incumbent and far from effective regulation. Although governmental agencies have a key role in ICT development plans, private sector companies, donors and civil society organisations have been the main drivers behind ICT development in the country. The high tariffs that inhibit rapid growth in access remain a key challenge. There are signs, however, that ICTs have created an important opportunity for the socioeconomic empowerment of women.

## Country situation

Although there have been developments in liberalising and privatising the different sectors of the Ethiopian economy, the telecommunications industry remains under the monopoly of the government. The Ethiopian Telecommunications Corporation (ETC)<sup>2</sup> is the only provider of telecommunications services, including fixed-line and mobile telephony and internet service.

The number of fixed-line telephone subscribers more than doubled from 105,985 in 1987-1988 to 283,683 in 2000-2001, reaching 725,046 by June 2006. This means that 70.9% of all exchanges are in use (the capacity of the fixed-telephone exchange grew to 1,022,399 by the end of June 2006) (ETC, 2006a).

The effective teledensity reached 1.39% (including mobile phones), still a very low figure compared to the sub-Saharan Africa average of 2.68% (2003). Residential subscribers represent 71.2% of the total fixed-line subscribers, business 15.8%, government 7.2%, and other customers, including international organisations, 1.1%.

However, international, business and government customers contribute to the incumbent's revenue substantially. By the end of June 2006, the number of waiting subscribers for fixed telephone lines reached 56,023.

The mobile sector is growing fast. In June 2006, the number of subscribers reached 866,700, more than double the total of 410,630 in 2005. Out of the total number of subscribers, 358,052 were pre-paid subscribers. ETC offers value-added services such as international roaming, SMS, voicemail, general packet radio service (GPRS) and satellite mobile service. Ethiopia is registered as a GSM-user country.

The internet market is poorly developed compared to the potential demand and size of the population. This is mainly due to the incumbent's monopoly as the sole internet service provider (ISP). Although internet charges have been revised a number of times in the past to encourage more users, the number of subscribers remains low. Usage has, however, more than doubled in two years. ETC had 10,465 subscribers in 2003, of which the majority were business and non-profit organisations. This figure grew by 14% to 12,155 in 2004 – still a small number compared to the population size of over 70 million. In May 2006, the number of internet subscribers reached 26,642.

A major change occurred in 2001, with the start of the government's broadband roll-out project. This project introduced a dedicated digital data network (DDN) service that provides a broadband infrastructure with a frame relay connection of up to 2 Mbps (although the maximum speed that is available for subscription is 512 Kbps). Both internet and satellite broadband services are offered. In May 2006, subscribers to the DDN and its multimedia services reached 628 (ETC, 2006b).

In recent years, the government of Ethiopia has tried to take advantage of ICTs in a bid to accelerate the rate of economic growth. To this end, it is conducting multi-sectoral projects.<sup>3</sup> The objective of these projects is to deliver IP<sup>4</sup>-based services through the use of broadband terrestrial and VSAT<sup>5</sup> (satellite) infrastructure. In 2004 ETC made its infrastructure available to all *woreda* (district level administrations) and secondary schools. This connected the schools with eight-channel satellite television for educational purposes; some 550 secondary schools have been connected so far. The broadband roll-out also aims to provide access to rural communities, agricultural research institutions, corporate organisations and financial institutions. A total of 600 districts, around 5,000 rural communities (or *kebele*) and 34 agricultural research institutions have already been connected.

The number of local websites has increased over the past five years. However, many feel that government websites do not contain information that is useful to the general public or institutional customers, since no applications or enquiries can be submitted online. A few private companies have developed e-commerce websites, selling goods and services.

According to International Telecommunication Union (ITU) (2002, cited by Demeke and Biru, 2002) estimates, there were 75,000 computers in Ethiopia in 2001 and 367,000 TV sets in 2000. Only 2.8% of all households have access to TV sets. The distribution of TV sets is concentrated in the major urban centres, where more people can afford the cost and electricity is available. The national survey of 1999-2000 also showed that 18.4% of the population owns radios.

3 Among them, the SchoolNet and WoredaNet projects.

4 Internet protocol.

5 Very small aperture terminal, a ground station used in satellite communications of data, voice and video signals.

1 <[www.efossnet.org](http://www.efossnet.org)>.

2 <[www.telecom.net.et](http://www.telecom.net.et)>.



TV and radio stations in Ethiopia belong to the state. The government TV station used to have a single channel, Ethiopian TV, until the Addis Ababa Television channel was introduced three years ago. Addis Ababa Television is available only in Addis Ababa and its suburbs.

The federal government owns two radio stations, the most important being Radio Ethiopia, which has two channels. The second radio station, Education by Radio, covers most of the country and provides educational radio programming to primary schools and distance education to adults. The Ethiopian Broadcasting Agency recently issued an FM radio licence to a private company. The slow licensing process is not encouraging for the many who were initially enthusiastic about the potential new business opportunities that this would bring.

There is considerable interest in free and open source software (FOSS) in Ethiopia, and a network of over 300 ICT specialists promoting FOSS has been formed under the banner of the Ethiopian Free and Open Source Software Network (EFOSSNet). Apart from a few high-profile representatives, the government has been slow to wake up to the potential of FOSS. Little is also being done to promote FOSS in higher education.

Like many other developing countries, ICT skills in Ethiopia are in short supply in many sectors of the economy. However, there are several institutions offering tertiary training, run both by the private sector and the government. Currently there are more than 20 emerging higher education institutions that have started to train at a diploma and degree level. Studies also show that there are more than 150 private computer training centres in the country, although 82% of them are in the capital. These centres offer courses on Microsoft Office packages, database systems, various programming languages, and specialised software packages, among others.

## Participation

There has been increased involvement by all stakeholders in the development of the ICT sector in Ethiopia over the past five years. The Ethiopian government has embarked on a wide-ranging national ICT capacity-building programme aimed at accelerating development and reducing the level of poverty by improving public and private services in the health, agriculture and education sectors, among others. The vision for the programme is to “[d]evelop and exploit ICTs as an accelerator for the attainment of national development objectives and global competitiveness.”<sup>6</sup> The programme is embedded in a decentralisation policy entrusting regions and *woredas* with the task of responding to local needs.

It has four strategic aims:

- Establishing a national ICT policy, advocacy and coordination body to facilitate the mainstreaming of ICTs for socio-economic development
- Creating an enabling policy, regulatory and legal environment for the growth of ICTs and establishing locally adapted ICT industry standards
- Developing the necessary ICT human resources and infrastructure, facilitating rural access, and promoting diversified content
- Facilitating the use of appropriate technologies for the development of applications and content in various sectors to support rural development, good governance, and service delivery in priority sectors.

We have identified ten major ICT players in Ethiopia:

The **Digital Opportunity Trust (DOT)** (<[www.dotrust.org](http://www.dotrust.org)>) is a Canadian-based non-profit organisation that promotes locally driven social and economic development through the use of ICTs. Its flagship programme, Global NetCorps, is in operation in five countries: Jordan, Lebanon, Egypt, Kenya and Ethiopia.

The **Ethiopian Free and Open Source Software Network (EFOSSNet)** (<[www.efossnet.org](http://www.efossnet.org)>) is a non-governmental professional network established by a group of interested ICT professionals and individuals in February 2005. The vision of EFOSSNet is to see FOSS contribute to the development of Ethiopia. EFOSSNet is committed to research and development in the area of FOSS, and to awareness-raising through training and fostering partnerships with the private, non-profit and public sectors.

The **Ethiopian ICT Development Agency (EICTDA)** (<[www.eictda.gov.et](http://www.eictda.gov.et)>) is an autonomous federal government public office coordinating ICT-related development in Ethiopia and advising the government on ICT policy issues. EICTDA is also responsible for the development and implementation of ICT activities approved by the government. The agency is the main executing organ for the ICT-Assisted Development Project, which aims to help communities improve their livelihood through the use of appropriate ICTs that facilitate increased access to markets, development information and public services.<sup>7</sup>

The **Ethiopian Telecommunications Agency (ETA)** (<[www.eta.gov.et](http://www.eta.gov.et)>) is the country's telecommunications regulator.

The **Ethiopian Telecommunications Corporation (ETC)** is the state-owned monopoly provider of telecommunication services in Ethiopia. According to its website, ETC's vision is to see the entire country connected with state-of-the-art ICT infrastructure that provides high quality, reliable and secure communication service at affordable prices, while its mission is to introduce ICT infrastructure across the nation to support voice, data and video services.

The **Graduate School of Telecommunications and Information Technology (GSTIT)** (<[www.gstit.edu.et](http://www.gstit.edu.et)>) is sponsored by the ETC. GSTIT offers postgraduate programmes intended to fill the gap for high-level professionals demanded in the ICT sector, both in Ethiopia and in the region. GSTIT provides forums for sharing knowledge and exchanging information on new technologies and management tools and practices.

The **School of Information Studies in Africa (SISA)**, now called the **Faculty of Informatics, Addis Ababa University**, was established in 1990 with the assistance of the International Development Research Centre (IDRC) and UNESCO (see below). It offers graduate as well as short-term training programmes and refresher courses in ICTs.

The **United Nations Development Programme (UNDP)** (<[www.et.undp.org](http://www.et.undp.org)>) provides technical advice to the ETC. It also supports the local SchoolNet project which is being implemented in collaboration with the EICTDA. The project delivered the first batch of 1,500 computers to the Ministry of Education in 2004 as part of efforts to bring ICTs to more than 160 secondary schools across the country.

6 <[www.iactadethiopia.org](http://www.iactadethiopia.org)>.

7 For more information see: <[www.iactadethiopia.org](http://www.iactadethiopia.org)>.

The **United Nations Economic Commission for Africa** (UNECA) (<[www.uneca.org](http://www.uneca.org)>) plays a key role in the development of ICTs, particularly in enabling countries to develop and implement their National Information and Communication Infrastructure (NICI) plans.

The **United Nations Educational, Scientific and Cultural Organisation** (UNESCO) (<[www.unesco.org](http://www.unesco.org)>) supports ICT initiatives and development in Ethiopia. This includes establishing telecentres (it launched the sixth telecentre in Ethiopia in August 2005) and supporting FOSS development, as well as initiatives assisting visually impaired people, among others.

## Conclusions

Although the situation is improving (from a very low baseline), the ICT sector in Ethiopia is still characterised by a low penetration of fixed-line, mobile and internet services, a state monopoly, and far from effective regulation.

The establishment of an ICT coordinating body (the EICTDA) is expected to promote the sector's growth. But although governmental agencies have a key role in developing ICT strategies, private sector companies, donors and civil society organisations have been the main drivers behind the development of ICTs in the country.

The government actively participated in the World Summit on the Information Society (WSIS) process, and a national consultative workshop with ICT stakeholders was organised by the ETA in collaboration with UNECA in February 2003. However, this was largely invisible to the public.

The monopoly of the telecommunications environment in Ethiopia poses a number of challenges. The policy environment needs to be opened up to encourage private sector investment and to improve the quality of services by introducing competitive pricing for services.

As stated in its website, the ETC's "vision" is to connect the country with state-of-the-art ICT infrastructure at affordable prices. However, this is unlikely to be realised if the market is not liberalised. A liberalised market will also make the existing regulator more effective in developing and implementing standards that encourage service providers to meet their service level agreements and respond to customers' needs.

Billing problems and affordability are regarded as the major constraints in utilising fixed phones effectively. The low level of internet penetration reflects an expensive but slow and low-quality service.

While there is still a scarcity of fixed lines, there has been an increase in the use of public access points, such as private kiosks, telecentres and public phones. Tariffs should be revised to allow those in rural areas to make calls, and effective strategies need to be put in place to sort out billing problems.

There remains a significant gender gap in accessing communication services in Ethiopia. However, there are also signs of improvement, such as the growing access to prepaid mobile phones and public access points run by women. There has also been a significant increase in the number of women operating telecentres, following the liberalisation of public call services in 2003. This is expected to improve women's access to ICTs more generally. ■

## References

- Admassie, A. (2002). *Information and Communication Needs in Selected Woredas (Districts) in Ethiopia: a Pilot Study* [online]. Addis Ababa: UNECA. Available from: <[www.uneca.org/aisi/nici/Documents/Woreda%20-%20ICT%20Report%20Final.pdf](http://www.uneca.org/aisi/nici/Documents/Woreda%20-%20ICT%20Report%20Final.pdf)>.
- EICTDA (Ethiopian Information and Communications Technology Development Agency) (2006). *Information and Communication Technology Assisted Development (ICTAD) Project* [online]. Available from: <[www.ictadethiopia.org](http://www.ictadethiopia.org)>.
- ETC (Ethiopian Telecommunications Corporation) (2006a). *Company Profile*. Available from: <[www.etc.net.et/index.php?option=com\\_content&task=view&id=17&Itemid=29](http://www.etc.net.et/index.php?option=com_content&task=view&id=17&Itemid=29)>.
- ETC (2006b). *Statistical Bulletin – Subscription, Traffic and Related Data 4<sup>th</sup> Qrt. 2006*. Addis Ababa: ETC.
- ESTC (Ethiopian Science and Technology Commission) (2000). *Ethiopian ICT Policy*. Addis Ababa: ESTC. Available from: <[www.estc.gov.et](http://www.estc.gov.et)>.
- Bekele, D., Atnafu, S., Mequanint, D. (2005). *ICT for Local Governance: Needs Analysis and Research Priorities for Addis Ababa City Government. A Research Report Submitted for LOG-IN Africa Pre-Project Workshop* [online]. Addis Ababa: Department of Computer Science, Addis Ababa University. Available from: <[unpan1.un.org/intradoc/groups/public/documents/CAFRAD/UNPAN021407.pdf](http://unpan1.un.org/intradoc/groups/public/documents/CAFRAD/UNPAN021407.pdf)>.
- Woldehanna, F., Bekele, G., Ayele, H., Atnafu, S. and Ayalew, J. (2004). *Proposal for the Establishment of Centre of Excellence in ICT, by, September 2004; A report submitted to the Ministry of Capacity Building, ICT Development Agency*. Addis Ababa: Ministry of Capacity Building, Federal Democratic Republic of Ethiopia.
- Demeke, M. and Biru, T. (2002). *ICT Penetration and Usage in Ethiopia: Baseline Study. The Sane-ICT Project* [online]. Addis Ababa: Addis Ababa University. Available from: <[www.idrc.ca/uploads/user-S/10850603191scan-ethiopia-report\\_edited.doc](http://www.idrc.ca/uploads/user-S/10850603191scan-ethiopia-report_edited.doc)>.

# INDIA

## IT for Change<sup>1</sup>

Vivek Vaidyanathan and Sudhir Krishnaswamy



## Introduction

This report was compiled by the research team at IT for Change using varied primary and secondary data. The primary data includes key interviews with civil society experts such as Arun Mehta and Vickram Krishna (Radiophony),<sup>2</sup> Mahesh Uppal (independent telecom consultant), Sunil Abraham (Mahiti Infotech), TK Manzoor (Akshaya), Basheer Ahmed Shadrach (International Development Research Centre, IDRC) and Nikhil Dey (Mazdoor Kisan Shakti Sangathan). Our secondary data included a survey of literature on information and communications technology (ICT) policy in India. We paid particular attention to the legal and regulatory framework for ICT policy at the national and state levels.

This report is organised into six sections, arranged to cover areas where there has been rapid development of ICT-related policy (up until the end of 2006). The sections on telecommunications, telecentres, community radio, open standards and intellectual property rights, and the information technology (IT) industry outline the key policy initiatives and the regulatory framework. They also sketch tentative future directions for development of policy in these areas. A section on *Participation* briefly notes the level of civil society participation in policy formulation and implementation.

This report shows that, unlike some other developing countries, India has not developed comprehensive ICT policy or legislation and has not established a specialised ICT agency to address all areas of ICT policy. Presently, different components of ICT policy are decided by the relevant line ministry vested with that responsibility. In this institutionally fragmented policy arena it is apparent that there are no common principles of a “people-centred, inclusive and development-oriented information society,” the goal set by the World Summit on the Information Society (WSIS, 2005). In the sections below, we examine the development of policy against these benchmark principles, and briefly propose some alternative lines of action which may be pursued in the years to come.

## Country situation

### Telecommunications

While there has been a revolutionary shift in telecom growth in India in the last decade, several lacunae persist and need sustained policy attention to achieve a just distribution of telecom resources.

#### Voice telephony

In 1994, the central government deregulated the Indian telecom market by allowing private players to bid for telecom licences, and in doing so ended the state monopoly over the telecom sector (TRAI, 1994). Telecom policy has been revised significantly over the years. In 1999, the New Telecom Policy was drafted, and there was a proposal to revise this policy in 2006, but this revision is now likely to take place in 2007 (TRAI, 1999).

<sup>1</sup> <[www.itforchange.net](http://www.itforchange.net)>.

<sup>2</sup> The institutional affiliations of the contributors are indicated in brackets.

The establishment of the Telecom Regulatory Authority of India (TRAI) as the single regulator for the telecom industry has been one of India's most successful regulatory policy reforms in the last decade. While TRAI has stimulated market growth, its ability to enhance consumer protection, promote rural telephony and enforce quality of service norms has been far from satisfactory (the continued deficiency in quality of service norms has been noted in TRAI documents) (TRAI, 2005).

Since 1994 there has been a rapid deployment of telephones all over the country (183.95 million telephones as of November 2006). The rate of growth in terms of teledensity is noteworthy when one considers that India has moved from 1.39 telephones per 100 inhabitants at the end of March 1994, when the shift to a new, more liberal telecom policy began, to 16.3 per 100 inhabitants in November 2006.<sup>3</sup> Mobile telephony grew exponentially over this period, while the number of land-line telephones has stagnated and occasionally shown signs of decline (Chandrasekhar, 2007). Official estimates indicate that the growth in teledensity will be sustained, and it is expected to increase from 16.3 per 100 inhabitants in November 2006 to 22 per 100 inhabitants by December 2007, thereby satisfying the target set by the Department of Telecommunications (DoT) (PIB, 2006a).

The difficulty is that a closer examination of the data suggests that it may not be a good measure of the extent of diffusion. To start with, the aggregate figure conceals a high degree of urban and regional concentration. Teledensity in rural India in 1998-1999 was just 0.5 lines per 100 people. While the figure crossed 1 per 100 in 2001-2002, and stood at 1.79 in December 2005, urban teledensity had risen to 34.77 during the same period. In November 2006, rural phones amounted to just 14.8 million compared to 183.5 million across the country. Furthermore, interregional variations were also substantial. In March 2003, while total teledensity in the state of Delhi was 26.85, in the state of Bihar it was as low as 1.32 (Chandrasekhar, 2003).

Access to voice over internet protocol (VoIP) services in India has resulted in the dramatic reduction of international and national tariffs over the last two years. However, there has been a recent proposal to regulate VoIP services by requiring service providers to acquire telecom licences and submit themselves to the jurisdiction of the telecom regulator as well as local tax authorities. If VoIP services are heavily regulated, it is likely to reduce or even eliminate the big price differential presently available in comparison with conventional public switched telephone network (PSTN) telecom tariffs (Elwood, 2006).

#### Data connectivity/internet connectivity

Data connectivity through packet switching networks also falls under the regulatory control of TRAI.<sup>4</sup> The development of this sector has

<sup>3</sup> The rate of growth has indeed been rapid during this period, with teledensity reaching 2.86 lines per 100 people in March 2000, 3.64 in March 2001, 4.4 in March 2002, 5 in March 2003 and 9 in March 2005.

<sup>4</sup> While TRAI's regulatory mandate is primarily confined to circuit-switched telecom networks, where a dedicated line carries data from end to end, this mandate has recently been expanded to include packet switching telecom networks, using the key protocols of the internet, such as TCP/IP. See: <[www.webopedia.com/TERM/P/packet\\_switching.html](http://www.webopedia.com/TERM/P/packet_switching.html)>.

proceeded along two distinct paths: private sector networks and state-owned networks. The spread of data connectivity by these networks has been modest. While the state-owned telecom provider accounts for almost 50% of the connections available, the overall availability of data connectivity in India is very low when compared with similarly placed developing countries (TRAI, 2006).

The Ministry of Communications and Information Technology (MCIT) has set ambitious targets for the roll-out of high bandwidth broadband connectivity nationwide through the incumbent state-owned telecom provider BSNL.<sup>5</sup> It is expected that more than one million broadband connections will be added before the end of 2007. A proposal has also been put forward to modify the definition of broadband connectivity from the present 256 kilobytes per second (Kbps) to 2 megabytes per second (Mbps) download speed (PIB, 2006a). This increase can be easily accommodated, as India presently has an installed bandwidth capacity of 16 terabits, of which only 0.2 terabits has been used (LirneAsia, 2006). BSNL and MTNL have already shifted to providing 2 Mbps connectivity in their basic broadband plan.

The recent decision by the DoT to invest resources from the Universal Service Obligation Fund (USOF)<sup>6</sup> in broadband technologies like WiFi and WiMax is a step in the right direction. It has planned to set up about 8,000 towers – the biggest cost components for wireless connectivity – in remote areas which are presently not served by any telecom network (PIB, 2006a).

One way for the DoT to achieve its ambitious broadband targets will be to encourage local governments to implement their own wireless projects. Various local governments in different parts of the world have invested public money in creating public networks which are accessible to all citizens.<sup>7</sup>

State-owned data networks have been rolled out by the central government and various state governments. Different state governments have developed different connectivity models. One noteworthy state government model is the Akshaya (Kerala) model. Akshaya telecentres use a mix of wireless and wired networks, as in the pilot in Malapuram district, where connectivity is provided through a public-private partnership. However, as the project looks to expand into the remaining 13 districts, they will ride on the State Wide Area Network (SWAN) which promises connectivity up to the “block” (sub-district) level.<sup>8</sup>

SWAN is the core infrastructure being developed by the central government under the National e-Governance Plan,<sup>9</sup> which promises to deliver e-government services and serve as a platform for G2G (government-to-government) communication (DIT, 2004).

The current implementation status of SWAN networks is unsatisfactory, however. It is only in four states (Maharashtra, Sikkim, Uttaranchal and Chandigarh) that the plan is going as per schedule

(DIT, 2006a). Certain states already have their existing network provided by the National Informatics Centre (NIC).<sup>10</sup> The aim is to synergise SWAN and existing networks and avoid duplication. The emphasis will also be on using/buying existing broadband infrastructure from public sector and private sector players.

#### Rural telephony

As pointed out, the deployment of telecom networks in India is geographically skewed and citizens in rural areas have little or no access to voice telephony or data connectivity. It is primarily the urban areas which have benefited from opening the telecoms markets to private sector participation. The policy effort to increase rural connectivity has rested on raising resources through the Access Deficit Charge (ADC) and USOF, relying on a state-owned telecom provider to roll out the necessary networks.

The 1999 National Telecom Policy established the goal of universal access to telephony, even in rural areas, leading the BSNL and other fixed-line operators to move into these areas. The entry of private players in the telecom market, however, has led to price wars that affect the profit margins of BSNL and private operators alike. BSNL operates in rural areas where it is the only service provider and revenues do not cover fixed costs, and while these were previously cross-subsidised with local and long distance calls, the price wars have made this increasingly difficult. The levying of an ADC on private operators is meant to help cover the deficit.<sup>11</sup>

The inability both to meet rural connectivity targets and to maintain a steady rural telephony growth rate has prompted a vigorous policy debate. This debate has three prominent strands.

First, it is suggested that rural telephony is an area which is not commercially lucrative. As a result, the government should step in and subsidise private sector investment in rural areas or should do the job itself.<sup>12</sup> Quoting Mahesh Uppal (2006), an independent telecommunications consultant:

So if rural connectivity is necessary, the government must give tax incentives... What we did instead was to allow all players to move from rural markets to the more lucrative markets, and in the process rural markets got neglected. We do not have transparent subsidies. If we believe in the market system, markets will not do certain things and cannot be expected to do certain things.

The second argument calls for private players to honour their licence obligations to provide rural connectivity. As tough competition to acquire customers has required significant investment in urban areas, both state-run telecom players and private telecom players have under-invested in rural areas.

Prabir Purkayastha of the Delhi Science Forum seems to suggest that recent moves like BSNL's “OneIndia Tariff Plan”, which the company adopted under political pressure exerted by the telecom minister, will adversely affect the company. The Tariff Plan reduces the tariff for national long-distance calls to one rupee (slightly over 0.02 USD) per minute, thereby leading to a reduction in the ADC which accrues to the company. The ADC was seen to be a major subsidy for

5 BSNL (<[www.bsnl.in](http://www.bsnl.in)>) is one of two state-owned telecom providers, the other being MTNL (<[www.mtnl.net.in](http://www.mtnl.net.in)>).

6 The Universal Service Obligation Fund was established in 2003 with the primary goal of providing access to basic telecommunication services to people in rural and remote areas at affordable prices. The financial resources for meeting this obligation are collected by way of a levy on telecom service providers. For more information, see: <[www.dot.gov.in/uso/usoindex.htm](http://www.dot.gov.in/uso/usoindex.htm)>.

7 Some policy advocates like Arun Mehta (2006) suggest that universal broadband access is unlikely to be achieved as long as “governments continue to look at telecommunications as a commercial venture rather than a public infrastructure.”

8 See: <[210.212.236.212/akshaya/swiderollout.html](http://210.212.236.212/akshaya/swiderollout.html)>.

9 See: <[www.mit.gov.in/plan/about.asp](http://www.mit.gov.in/plan/about.asp)>.

10 The National Informatics Centre (NIC) of the Department of Information Technology, Government of India, provides network backbone and e-governance support to the central government, state governments, union territory administrations, districts and other government bodies. See: <[home.nic.in](http://home.nic.in)>.

11 See: <[www.19.5degs.com/element/2329.php](http://www.19.5degs.com/element/2329.php)>.

12 The Bharat Nirman social inclusion programme launched by the central government does exactly this. The programme aims to establish village public telephones (VPT) covering 30,808 villages. (PIB, 2006a).

rural telephony. Purkayastha (2006) says that this, along with non-compliance by private players in fulfilling their obligation to invest in rural areas, is not doing any good to connectivity in rural areas:

The net result of all this is that BSNL and MTNL are likely to lose Rs 3,000-4,000 crore [USD 680-907 million]<sup>13</sup> of their long-distance revenue, even after higher landline rentals are taken into account. With the additional loss of Rs 1,800 crore [USD 408 million] from the lower ADC levy, at one stroke [this move] has converted what were still thriving public sector units, even under a strong competitive regime, to possible basket cases. Effectively, BSNL, which is the only company providing rural telephony, is being asked [through the new policy] to take a major hit in its revenue, while companies that are wilfully flouting the terms of their licence of providing 10% rural telephones get away scot-free.

It is apparent that neither a reliance on a state-owned telecom provider nor on private providers has worked. BSNL has been around for close to 40 years, but has failed to provide rural telephony. The free market approach has been in operation for more than a decade and the fact is that private operators have systematically excluded rural areas from their area of operations. It does not appear that providing them with further incentives would be useful.

A third policy framework has been proposed by the Rural Telecom Foundation (RTF). It seeks to ensure that rural telephony is a commercially viable enterprise run by small entrepreneurs. The foundation believes that both BSNL and MTNL, which have substantial landline operations, should seriously consider using low-cost shared party lines (also referred to as Gram-phones by the RTF)<sup>14</sup> to increase their respective market share and expand telecom access to the masses. RTF has installed pilot projects and has petitioned TRAI and DoT to adopt the model by granting it legal and policy sanction.

### Telecentres

Currently, there are around 12,000 to 13,000 telecentres spread across the country. Of these, 45% to 50% are government initiatives or public-private partnerships.<sup>15</sup> The remaining telecentres are “for profit”, with the most successful one being “e-Choupal”, run by a private commodities trading company, the Indian Tobacco Company (ITC).<sup>16</sup>

The Department of Information Technology (DIT) recently embarked on a programme under its National e-Governance Plan to establish 100,000 telecentres. These are being called Community Service Centres (CSCs). Each CSC will serve five to six villages. It is envisioned that connectivity to these centres will be provided by SWAN and content will be provided by various public sector agencies, as well as private players. The structure is a three-tiered one, with the village level entrepreneur (VLE) at the bottom, a services centre agency (SCA) managing a cluster of CSCs (for one or more districts), and the state designated agency (SDA) in charge of providing the requisite policy, content and other support to the SCAs (DIT, 2006b).

Despite the potential impact of CSCs in building an infrastructure of digital inclusion, some serious issues remain:

**Accountability:** How the CSCs are going to be accountable to the local self-government structure at the village level (*gram panchayat*)<sup>17</sup> remains a key area of concern. Since CSCs are serviced and maintained by entrepreneurs and guided by SCAs that are often private companies, community control over activities at these centres, and their adherence to larger social and developmental objectives, will be difficult to ensure.

In this context, it is important to refer to the Akshaya model in the state of Kerala. Although it is a public-private partnership with the centres run by a village entrepreneur, it is accountable to the *gram panchayat*. According to TK Manzoor (2006), the director of Akshaya:

They [the entrepreneurs] are not hardcore entrepreneurs, they are social entrepreneurs. The *panchayat* involvement is very high in the process; the entrepreneur is only a catalyst. The entrepreneur cannot take a huge profit. The ultimate beneficiaries are the people. This is what sets apart the Akshaya experience from other telecentre models.

**Revenue generation:** A related concern is the revenue generation model of the CSC. The scheme is premised on the assumption that over time (as government subsidy is phased out) these centres will become self-sustainable. However, current experience with telecentres in rural areas is not at all promising, and there are very few that have been able to achieve financial sustainability. While CSC documents do mention that the entrepreneurs can expect “guaranteed provision of revenue from governmental services” (DIT, 2005a), some key questions remain unanswered. Given the limited progress on developing back-end operations by the line ministries, whose digitalised services are to be provided through these centres? How long will it take to make enough relevant e-government services available at these centres? Will the revenues from e-government services be enough to incentivise the centre operators to balance social objectives with the commercial ones?

Aruna Sundararajan, the chief executive officer for the CSC project, insists that the business model will work:

The scheme has a calibrated kind of structure, in which government will provide at least a third of a kiosk's revenues via e-governance services. And if kiosks are not able to generate enough revenues, the government actually supports them financially. The scheme has already envisaged that the third of a kiosk's capital expenditure and operating expenditure will be guaranteed by the state and central government for four years. In other words, there is a strong element of financial support inherent in the scheme. In the first four years, entrepreneurs can draw on this support and after that – once the kiosks stabilise – they can be on their own (Talgeri, 2006).

**Content generation:** Content is another area about which the CSC scheme is not very clear. The current plan is to ensure that CSCs will serve as the nodal points for the implementation of an integrated service delivery model, under the National e-Governance Plan, whereby citizens can access different government department services across a single platform.<sup>18</sup> However, there is very little activity on the ground in terms of development of content and applications for these services.

13 One crore equals 10 million in the Indian numbering system.

14 A Gram-phone works on the principle that one telephone number, which would normally have been associated with one family, is instead associated/connected to four families. For more information see: <[www.ruraltelecomfoundation.org](http://www.ruraltelecomfoundation.org)>.

15 See: <[www.i4donline.net/articles/current-article.asp?articleid=846&typ=Columns](http://www.i4donline.net/articles/current-article.asp?articleid=846&typ=Columns)>.

16 E-Choupal is a system of village internet kiosks which provide information, products and services for improving farm productivity, reducing transaction costs and improving farm-gate price realisation. See: <[www.echoupal.com](http://www.echoupal.com)> and <[www.itcportal.com](http://www.itcportal.com)>.

17 *Gram panchayats* are local government bodies at the village level, elected by the adult population of the village. See: <[panchayat.nic.in](http://panchayat.nic.in)>.

18 See: <[www.mit.gov.in/plan/backdrop.asp](http://www.mit.gov.in/plan/backdrop.asp)>.

There is also an emerging view that services available under the Right To Information Act of 2005 should be channelled through the CSCs. The Right To Information Act (MLJ, 2005) is a recently passed law which empowers citizens to demand and obtain government information. The Act mentions that information should be disseminated over different media, including the internet. Chapter II of the Act states that “[I]t shall be a constant endeavour of every public authority to take steps in accordance with the requirements of clause (b) of sub-section (1) to provide as much information *suo motu* to the public at regular intervals through various means of communications, including internet, so that the public have minimum resort to the use of this Act to obtain information.”

In this situation, it would make perfect sense for CSCs to be the place where the Act can be implemented on issues related to accessing information, demanding access to information, and training on exercising citizen rights under the Act. A form of this model is the e-Seva initiative in the West Godavari district of Andhra Pradesh. Information related to various welfare schemes right down to the village level has been put on the internet, which can be accessed by villagers at community telecentres run under the initiative.<sup>19</sup>

The Kerala government’s Akshaya model once again has important lessons in the area of content development. According to Manzoor (2006): “There is primary-level content generation in the local language [Malayalam] in agriculture, health and education. Further plans are afoot to equip citizens in content development skills.”

*Amalgamating existing kiosks into the CSC system:* There is also the question of amalgamating existing telecentres with the multi-tier CSC system. There are currently around 13,000 kiosks out of which 45% to 50% are owned or supported by governments. Village self-government bodies are also acquiring computers in thousands of villages across the country, and they may also be interested in delivering e-government and other CSC services. It may be difficult to align the CSC system, with its strong private sector involvement and emphasis on providing many private sector services along with public services, with existing governmental initiatives at the state and local government levels. These may be differently oriented in many fundamental ways.

*Issues of monopolies in private services and in service delivery points:* Two kinds of monopoly concerns have been raised regarding the existing CSC design. One, since private service providers are allowed to become SCAs, would this not lead to the discriminatory exclusion of competing service providers? This is especially relevant in light of the fact that the government is subsidising the SCAs as well as lending its CSC brand name and credibility to them. The second issue regards monopolies on service delivery points. It is not clear from the present documents on the CSC scheme as to what happens if any person or agency other than the SCA-designated village level entrepreneur wants to “front-end” and deliver government services. Such an agency could be a local community group or the village local government body itself. Can they be refused the right to deliver e-government services? And if they are allowed to do so, would it violate the conditions under which SCAs and local entrepreneurs enter into agreement with the CSC system, because it could affect their revenue projections?

## Open standards/intellectual property policies

### Open standards

The issue of open standards is one of special significance in the public procurement context, given that the government is close to implementing the National e-Governance Plan and issues of data and software interoperability, procurement costs and national security need to be tackled upfront.

The DIT has convened a Core Group on Standards to look at the entire issue of interoperability. As software programs and the accompanying databases are developed at different levels of government by different agencies on different technology platforms, interoperability across platforms is essential for e-government to be functional and efficient (DIT, 2005b). It is also important that these platforms are accessible to all citizens irrespective of the operating systems or other software platforms used by them. The Indian Linux Users Group-Delhi has published a “Hall of Shame” list of Linux “unfriendly” Indian vendors, internet service providers (ISPs) and websites which “force consumers to use proprietary software or technologies, or otherwise perpetuate vendor lock-in.” Many government and public sector websites, including both the BSNL and MTNL sites, are included in the list. Apparently the website of the President of India, which was also listed, took notice and “removed the link promoting use of proprietary technology.”<sup>20</sup>

The MCIT and NIC are also currently working on a draft document for open standards through a Working Group on Open Standards. However, it is important that the implementation of the guidelines evolved by this group is monitored to make sure that government departments follow them. Many government agencies continue to take the easy route of being led by propriety software vendors in their e-governance plans.

Ideally, software procured with public money should be licensed under an open licence. In the present situation, where the intellectual property rights lie with the vendor, governments are left at the mercy of proprietary software providers. In contrast, with open source software vendors, the government should be in a position to use local competition to drive down prices and improve services, since with open licence software many local agencies could bid for the maintenance of the product.

### Digital rights management

The issue of digital rights management (DRM) is an area of emerging concern. The Indian government has tabled a Copyright Amendment Bill (2006) which seeks to insert a DRM clause into the Copyrights Act of 1957 (MHRD, 2006).

The following statement was submitted by the Alternative Law Forum (ALF) to the Registrar of Copyrights.<sup>21</sup>

DRM is a term used for technologies that define and enforce parameters of access to digital media or software. The reason for the deployment of such measures is – ostensibly – to “enforce” the copyright of the manufacturer or the copyright-holder as the case may be. However, DRM is extra-statutory. Consequently, rights that are conferred by the law are enforced by the copyright holder himself through technological measures so as to prevent access to such digital media or software which would infringe the copyright of the copyright holder. But, more importantly, this would

20 See: <lug-delhi.org/wiki/HallOfShame>.

21 See: <www.altlawforum.org/ADVOCACY\_CAMPAIGNS/copyright\_amdt>.

19 West Godavari District Portal. See: <www.westgodavari.org>.

also mean that DRM allows for copyright holders to restrict access to digital media or software under terms which would be currently permissible under copyright law. Furthermore, DRM will have a significant impact on innovation. This has particular significance for India where the fruits of innovation need to be accessible to both the innovator and the consumer. An example is the invention of the Simputer2, which was built on reverse engineering. With the introduction of DRM and the criminalisation of its circumvention, low-cost, locally relevant and contextually appropriate computer hardware and software may never become available to the public at large.

If an adequate policy response is not given to technology-enforced international property restrictions, the internet may soon lose its egalitarian character.

#### Software patents

The issue of software patents has been a long and contentious one. Around the world, very few countries actually allow software patents (US and Japan are notable exceptions).<sup>22</sup> Even the EU has deferred its decision on software patents after vociferous campaigning by small and medium industries.

A 2002 amendment by the Indian government declared that software would be non-patentable (MLJ, 2002). In 2005, however, the government sought to bring in software patents by defining non-patentable as applying only to a “computer programme *per se* other than its technical application to industry or a combination with hardware, a mathematical or business method or algorithms” (PIB, 2005). Since any commercial software has some industry application and these applications are technical in nature, this approach would open virtually all software to patenting. This formulation was deleted from the proposed Act when it was brought up for discussion, because of the resistance from some parties in the ruling coalition, but there is no guarantee that it will not be brought up again, and in a harsher form.

#### Free and open source software (FOSS)

Since the ICT industry has been a major employer and revenue-earner, many state governments have not been able to openly come out in support of FOSS for fear of antagonising the industry, which is dominated by multinational companies. While most Indian companies tend to plug into global value chains offered by multinationals, most multinationals have a strong interest in promoting proprietary software products.

The Indian government does not have any formal policy on FOSS, but open source software is supported in a number of ways. A National Resource Centre for Free and Open Source Software (NRC-FOSS) has been created at the Centre for Development of Advanced Computing (C-DAC), Chennai. There are other similar centres, like the Open Source Software Resource Centre (OSSRC) based out of C-DAC, Mumbai, and supported by the Indian Institute of Technology. Another FOSS initiative, supported by Anna University, has introduced two electives in this area in 300 engineering colleges across the Indian state of Tamil Nadu. Even though there is no official position, the central government’s National Informatics Centre indirectly supports FOSS, for example, by creating 118 websites using Plone.<sup>23</sup>

Mahiti Infotech’s Sunil Abraham (2006) explains:

Certain government departments have diktats which endorse the use of FOSS. For instance, the government of Delhi has mandated the use of Open Office instead of MS Office. In Tamil Nadu, the Electronics Corporations of Tamil Nadu (ELCOT) – the government’s ICT agency – has also supported the use of FOSS. It also insists that all hardware which is procured needs to be FOSS-compatible. The government of Kerala has mandated the use of FOSS in schools.

The Kerala government’s recently announced ICT policy lays an even greater stress on use of open source software (DIT, 2007). Calling for an active, but pragmatic, policy on FOSS in India, Abraham (2006) adds:

If we were a country with zero ICT, it would have helped to have mandated a FOSS policy as they have done in Vietnam. However, since we already have an ICT policy, it would make sense to move incrementally towards open standards and open source policy. The example of Vietnam can be a problem, since in that country it’s only the private sector which uses FOSS extensively. Malaysia is a better example. Malaysia mandates the use of open standards. In the case of Malaysia, if all other things remain the same in terms of functionality and price, they would prefer FOSS.

#### Community radio

In 1995 the Indian Supreme Court ruled that airwaves are public property: they were to be used for promoting the public good and for broadcasting a plurality of views, opinions and ideas. Its judgement held that freedom of speech and expression, guaranteed by Article 19(1)(a) of the Indian Constitution, includes the right to acquire and disseminate information. In turn, the right to disseminate includes the right to communicate through any media, although reasonable restrictions were permissible on such rights. The judgement said that “[t]he burden is on the authority to justify the restrictions,” adding that “public order is not the same thing as public safety and hence no restrictions can be placed on the right to freedom of speech and expression on the ground that public safety is endangered” (MIB, 1999).

In 1999, the central government opened up the airwaves to commercial broadcasters, but no mention was made of community radio. In any case, the heavy licence fees being charged for opening India’s first private radio stations were enough to ensure that only commercial broadcasters could take up the offer.

It was only in 2002 that the central government allowed “educational institutions” to broadcast, paving the way for campus radio stations. Despite this, only a few institutions used the opportunity effectively, and most broadcast facilities, even when available, lie unutilised.

The government recently came out with new guidelines in November 2006 for community radio (MIB, 2006). They define community broadcasts as follows: “The community radio station should be designed to serve a specific well-defined local community and the programmes for broadcast should be relevant to the educational, developmental, social and cultural needs of the community.”

As a result, non-governmental organisations (NGOs) are now allowed to set up their own radio stations, and the decision is expected to trigger a new community radio revolution in India. However, issues of the public funding of infrastructure and shared access

22 See: <[www.wipo.int/sme/en/e\\_commerce/computer\\_software.htm](http://www.wipo.int/sme/en/e_commerce/computer_software.htm)>.

23 Plone is an open source content management system (CMS). See: <[plone.org](http://plone.org)>.

to this infrastructure will become key issues if broad-based and sustainable community radio activity across various development sectors in India is to become possible.

### Indian IT industry

The Indian IT industry (comprising the IT, ITES<sup>24</sup> and hardware sectors) has been the “poster boy” of the entire liberalisation process. India’s IT-ITES industry is expected to exceed USD 36 billion in annual revenue in the 2005-2006 financial year, and its contribution to the national GDP has been pegged at 4.8% for the same period. The total direct employment in the Indian IT-ITES sector is estimated to have grown by over a million, from 284,000 in the 1999-2000 period to a projected 1,287,000 in the past fiscal year (2005-2006). It is also estimated that the IT industry has helped create an additional three million job opportunities through indirect and induced employment (NASSCOM, 2006).

The Software Technology Parks India (STPI) Act, and the liberal tax policy it implements, have driven investment in the sector. The law provides for direct and indirect tax exemptions, and channels all relevant government licences and permissions through a single agency. The STPI exemptions are to be phased out in 2009 and the industry is keen to get another extension. The central government seems sympathetic to the demand (Narayan, 2007).

While India has developed considerable expertise in the software export sector, the global orientation of this industry has not produced significant productivity gains for the domestic economy. The islands in which the software industry tends to operate have not had a great effect on the surrounding industrial and services ecosystem.

The IT industry has also had little relation with and responsibility for social development in India, and this has often meant a backlash against its ostensible opulence. This is contributing to social strife in cities like Bangalore, which is also called the “Silicon Valley of India”.

### Participation

ICT policy in general has been driven mostly by IT industry interests, although the urban consumer lobby is becoming increasingly assertive. There has been little input from development sectors into ICT policy processes, with the effect that the processes have mostly disregarded key developmental objectives. While being driven by industry and urban consumer interests, most ICT policies have generally taken a narrow techno-managerial orientation of efficiency and economic growth.

Recognition that ICTs can be a core public infrastructural resource, important for all-round social and economic development, will allow for a normative policy consensus for the information society. By requiring all ICT policies to satisfy the WSIS standards of being people-centred, development-oriented and inclusive, India can develop congruent ICT policies across the various sectors that are responsive to its developmental needs. However, this will require a wider participation of civil society actors from various developmental and social sectors in the ICT policy processes.

The current relationship between the public authorities and development-oriented civil society in this sector is very uneasy, and the latter’s participation in policy-making processes is abysmally low. The indifferent attitude of the establishment to civil society’s participation is evident from this excerpt from a recent report:

TRAI’s policy is to invite the consumer groups for consultations twice a year. But, it also invites service providers at the same time, making one-to-one interactions between TRAI and consumer groups virtually impossible. “There is no lobby for rural people. They are not considered consumers,” says Professor Ashok Jhunjhunwala of the Indian Institute of Technology, Madras. Under-served rural communities unfortunately have little access to the tools available to city users. With hardly any service, leave aside choice, market mechanisms clearly do not help. Complaints mean little... In his response to some of these issues, the outgoing chairperson of TRAI found little wrong with its working. He said civil society was inadequately represented, weak and poorly organised, which TRAI could not help (SATC, 2006).

The likelihood of the internet being regulated in the future makes it critical that civil society groups get involved in the policy process at an early stage, contributing to the agenda. For this purpose civil society organisations involved in different development sectors will first of all have to understand and appreciate the importance of ICT policies to their work.

### Conclusions

Our report shows that in India, ICT policy debates and the institutional environment are quite robust. However, civil society’s participation in policy discussions is low, or even non-existent. This has resulted in an industry-driven and technocratic policy process.

While the ICT industry itself is flourishing, there is a poor distribution of ICT resources across geographical regions, linguistic groups, social classes, gender and differently abled people. The failure to develop policy which responds to these concerns has resulted in a situation where certain parts of the country, and some social sectors, enjoy “developed-country quality” ICT services, while the rest of the country subsists with little or no ICT access to speak of.

The current policy efforts and business models to expand rural telephony may not do the trick. For instance, auctioning spectrum to attract high bids only serves to hike prices and prevent large-scale penetration of telecom services. Instead, such technologies must be de-licensed as far as possible. Services such as internet telephony must be legalised, a community entrepreneurship model must be encouraged, and direct public funding for spreading ICT use for social and developmental activities needs to be taken up as a priority. At a broader level, this will require a basic shift in the ICT policy paradigm whereby basic ICTs come to be seen as public goods, rather than as ordinary economic services left to the vagaries of the market. While internet regulation is still a fuzzy space, with convergence it has become an increasingly important arena: the opportunity is ripe for civil society groups to engage early on in setting the agenda.

While the new community radio policy promises much, there are certain issues which will need to be addressed early on. A key one is the ban on news and current affairs programmes for community stations, which limits their effectiveness as a medium of the masses. Arun Mehta (2006) from Radiophony points out: “News and current affairs is not part of this policy. What will people air – entertainment? [The New Delhi-based University] Jamia Milia Islamia’s community radio station has a surfeit of Urdu poetry, because without news and current affairs, they don’t have much else.” The ban applies only to radio broadcasts; several 24/7 TV news channels beam news and current affairs programmes into Indian homes.

24 IT-enabled services.



With regard to the issue of intellectual property rights, a briefing note by ALF on the impact of software patents on the software industry in India says:

Software technology is evolving much faster than other industries, including its own hardware industry. In this light, a patent that lasts up to 17 years is extremely alarming. Microprocessors double in speed every two years. Research in software is galloping ahead of developments. In most industries, researching new ideas often costs more money than bringing them to the market. The software industry is, on the other hand, loaded with ideas. The idea behind most software patents can be coded in just 20 lines of code, but any program incorporating that idea – along with many others – will be a thousand times larger. It is the writing of a program that takes all the time, not coming up with ideas.<sup>25</sup>

Arun Mehta (2006) maintains that “software patents are an unworkable idea. There is no formal system of classification of software algorithms. If I come up with a code, how do I know if I have broken the law? It is not possible to keep track of all the literature (codes). All the big technology companies have signed mutual pacts not to sue each other. It is a cartel.”

This issue, together with that of DRM, needs a clear policy intervention which upholds the public interest, especially in terms of India's developmental needs. It may be inadvisable, for instance, for developing countries to enter a “TRIPS plus”<sup>26</sup> agreement that involves an even higher degree of intellectual property protection than what is already mandated by the WTO-TRIPS norms. They should retain their freedom to legislate in the interests of safeguarding access to knowledge and information, and for broad socioeconomic development. ■

## References

- Abraham, S. (2006) [Cassette recording]. *Interview with the author*. 14 November 2006, Bangalore.
- Chandrasekhar, C. (2003). “Can Connectivity help the poor?”. *Frontline* [online], 20 (12), 20 June 2003. Available from: <[www.hinduonnet.com/fline/fl2012/stories/20030620004911700.htm](http://www.hinduonnet.com/fline/fl2012/stories/20030620004911700.htm)>.
- Chandrasekhar, C. (2007). *Aspects of India's Engineered Traverse to an Information Society*. Unpublished.
- DIT (Department of Information Technology) (2004). *Guidelines for Technical & Financial Support for Establishment of State Wide Area Networks (SWAN)* [online]. Available from: <[www.mit.gov.in/policyguidelinesforSWAN.pdf](http://www.mit.gov.in/policyguidelinesforSWAN.pdf)>.
- DIT (2005a). *Draft Framework for establishment of 100,000 Common Service Centres* [online]. Available from: <[www.mit.gov.in/cscframework.doc](http://www.mit.gov.in/cscframework.doc)>.
- DIT (2005b). *DIT Initiative. Standards in e-Governance* [online]. Available from: <[egov.mit.gov.in/initiativeegstandard.asp](http://egov.mit.gov.in/initiativeegstandard.asp)>.
- DIT (2006a). *SWAN Program Status Report as on October 15, 2006* [online]. Available from: <[www.mit.gov.in/151006ptracker.pdf](http://www.mit.gov.in/151006ptracker.pdf)>.
- DIT (2006b). *Guidelines for implementation of the Common Services Centres (CSC) scheme in states* [online]. Available from: <[www.mit.gov.in/cscguidelines.pdf](http://www.mit.gov.in/cscguidelines.pdf)>.
- DIT (2007). *Draft IT Policy* [online]. Available from: <[www.keralaitmission.org/web/main/ITpolicy.pdf](http://www.keralaitmission.org/web/main/ITpolicy.pdf)>.
- Elwood, I. (2006). “Indian Regulations Over VoIP Operation”. *VOIP-News* [online], 12 January 2006. Available from: <[www.voip-news.com/news/indian-voip-regulations](http://www.voip-news.com/news/indian-voip-regulations)>.
- LirneAsia (2006). *Asia backbone study: A general model applied to India* [online]. Available from: <[www.lirneasia.net/wp-content/uploads/2006/06/Asian%20Backbone%20study%201.7.pdf](http://www.lirneasia.net/wp-content/uploads/2006/06/Asian%20Backbone%20study%201.7.pdf)>.
- Manzoor, T.K. (2006) [Cassette recording]. *Interview with the author*. 12 November 2006, Bangalore.

25 See: <[www.altlawforum.org/PUBLICATIONS/Why%20software%20patents%20are%20harmful.rtf](http://www.altlawforum.org/PUBLICATIONS/Why%20software%20patents%20are%20harmful.rtf)>.

26 The TRIPS Agreement is the World Trade Organisation's Agreement on Trade-Related Aspects of Intellectual Property Rights. Under 'TRIPS-plus' obligations, western countries exert pressure on trading partners (read developing nations) to agree to provisions in regional and bilateral trade agreements that mandate even higher levels of intellectual property protection than those they agreed to under TRIPS. Developing countries are thus required under these trade agreements to include very high levels of protection in their national laws, with grave consequences for public health and other national policy objectives. For more information see: <[www.twinside.org.sg/title2/twr171d.htm](http://www.twinside.org.sg/title2/twr171d.htm)> and <[www.oxfamamerica.org/whatwedo/issues\\_we\\_work\\_on/trade/news\\_publications/trips/art5391.html](http://www.oxfamamerica.org/whatwedo/issues_we_work_on/trade/news_publications/trips/art5391.html)>.

- Mehta, A. (2006) [Cassette recording]. *Interview with the author*. 21 November 2006, Bangalore.
- MHRD (Ministry of Human Resource Development) (2006). *Copyright Amendment Bill 2006* [online]. Available from: <copyright.gov.in/View%20Comments.pdf>.
- MIB (Ministry of Information and Broadcasting) (1999). *Supreme Court judgement on airwaves – 1995* [online]. Available from: <www.mib.nic.in/informationb/POLICY/supreme.htm>.
- MIB (2006). *Policy Guidelines for Setting Up Community Radio Stations in India* [online]. Available from: <mib.nic.in/informationb/CODES/CRBGUIDELINES041206.doc>.
- MLJ (Ministry of Law and Justice) (2002). *The Patents (Amendment) Act, 2002* [online]. Available from: <ipindia.nic.in/ipr/patent/patentg.pdf>.
- MLJ (2005). *The Right to Information Act, 2005* [online]. Available from: <persmin.nic.in/RTI/RTI-Act.pdf>.
- Narayan, S. (2007). "Tech cos may enjoy extended tax holiday". *The Economic Times* [online]. 4 January 2007. Available from: <economictimes.indiatimes.com/articleshow/1042751.cms>.
- NASSCOM (National Association of Software and Service Companies) (2006). *Indian IT Industry: NASSCOM Analysis* [online]. Available from: <www.nasscom.in/upload/5216/Indian\_IT\_Industry\_Factsheet\_2006.doc>.
- PIB (Press Information Bureau) (2005). *Important Changes Incorporated in the Patents (Amendment) Bill, 2005 as Compared to the Patents (Amendment) Bill, 2003* [online]. Ministry of Commerce and Industry press release, 23 March 2005. Available from: <piib.nic.in/release/release.asp?relid=8096>.
- PIB (2006a). *Year End Review 2006. Department of Telecom* [online]. Ministry of Communications and Information Technology press release, 25 December 2006. Available from: <piib.nic.in/release/release.asp?relid=23614>.
- PIB (2006b). *Grant of Permission for Community Radio Broadcasting* [online]. Cabinet press release, 16 November 2006. Available from: <piib.nic.in/release/release.asp?relid=22064>.
- Purkayastha, P. (2006). "Maran's one India plan: Attacking rural telephony the wrong way". *Economic and Political Weekly*, 41 (10), 11 March 2006, pp.861-863.
- SATC (Salman Ansari Technology Consultants) (2006). *Telecenters and Community Resource and Information Centers in Pakistan* [online]. Available from: <ifossf.org/files/Telecenters%20in%20Pakistan%20Volume%201.pdf>.
- Talgeri, K. (2006). "Mapping the Last Mile. Interview with Aruna Sundararajan". *CIO India* [online]. Available from: <www.cio.in/govern/viewArticle/ARTICLEID=2461>.
- TRAI (Telecom Regulatory Authority of India) (1994). *National Telecom Policy 1994* [online]. Available from: <www.trai.gov.in/TelecomPolicy\_ntp94.asp>.
- TRAI (1999). *New Telecom Policy 1999* [online]. Available from: <www.trai.gov.in/TelecomPolicy\_ntp99.asp>.
- TRAI (2005). *Consultation Paper on Review of Quality of Services (QOS) Parameters and Cellular Mobile Telephone Services* [online]. Available from: <www.trai.gov.in/trai/upload/ConsultationPapers/13/conpaper23feb05.pdf>.
- TRAI (2006). *Study paper on Analysis of Internet & Broadband Tariffs in India* [online]. Available from: <www.trai.gov.in/trai/upload/StudyPapers/8/studypaper28nov06.pdf>.
- Uppal, M. (2006) [Cassette recording]. *Interview with the author*. 14 November 2006, Bangalore.
- WSIS (2005). *Tunis Commitment* [online]. Available from: <www.itu.int/wsis/docs2/tunis/off/7.html>.

# KENYA

## Kenya ICT Action Network (KICTANet)<sup>1</sup>

Alice W. Munyua, Muriuki Mureithi



### Introduction

There have been significant changes in the information and communications technology (ICT) sector in Kenya over the last ten years, despite the lack of a legislative framework to guide it. While it is difficult to capture all the developments in detail, the formation of the multi-stakeholder Kenya ICT Action Network (KICTANet) has been a remarkable achievement. Through the network, an inclusive policy process has been catalysed, resulting in the country's first draft ICT policy document, approved by cabinet in February 2006.

This report provides an overview of the ICT policy process in Kenya and the role of KICTANet in this process. It has been prepared by KICTANet through desktop research and by drawing on various documents from KICTANet meetings. Key policy documents were also reviewed.

### Country situation

According to Brock (1994), public policy creates public good by creating a predictable framework that results in the production of goods. The point is that a policy framework should be predictable and should not easily be changed once implemented. This is the logic that drove US telecommunications policy development. Developing countries like Kenya appear to be driven by the same desire. Conscious of the poor and unpredictable quality of services, the rapid policy evolution in Kenya over the past few years is based upon the recognition that in order to create public good, it is important to create a predictable policy environment.

Despite the lack of a legislative framework to guide the ICT sector, there has been a massive change in the ICT landscape over the last decade. Once characterised by an expensive state propaganda organ in broadcasting and by a highly indebted and inefficient state telecommunications monopoly, it was the broadcast media sector that started the breakaway from state monopoly provision to a liberalised communication sector by lobbying for media freedoms.

The Kenya Postal and Telecommunications Corporation (KPTC) previously operated as the sole service provider and regulator of telecommunications services. With pressure from global forces – specifically the World Trade Organisation (WTO), but to a lesser extent regional blocs – to change policies and accommodate global trading activities, the government began to embrace global trends in recognition of the significant role played by ICTs in achieving development and socioeconomic objectives.

In 1998 parliament passed the Kenya Communications Act No. 2 of 1998, which liberalised the telecommunications sector. This Act is by far the most influential policy paper that affects the ICT sector. It is a unique piece of legislation that has enabled Kenya to successfully move from a monopoly market structure to a multi-operator structure.<sup>2</sup>

The Act unbundled the KPTC into five separate entities: the Communications Commission of Kenya (CCK), which is the regulator; the National Communications Secretariat (NCS), which serves as the policy

advisory arm of the government on all matters pertaining to the information and communications sector; the fixed-line operator, Telkom; the Postal Corporation of Kenya (POSTA); and a Communications Appeals Tribunal.

In December 2001, the Ministry of Transport and Communications issued the Telecommunications and Postal Sector Guidelines (CCK, 2001). This recognised convergence trends, which were making it difficult to clearly separate telecommunications and broadcasting concerns. As a result, the government had to review policies that affected licensing processes, frequency management and signal transmission requirements. The aim of the review was to combine broadcasting and telecommunications policy and to eventually develop a combined ICT policy document.

The intention of the policy reform process was to position ICTs as a service to the economy. Yet the reform process itself took a while to get going. Attempts by the government to review the sector's policy, to widen its scope and to integrate it with socioeconomic endeavours only bore fruit in 2006. The slow pace of ICT policy development encouraged other sectors to produce sector-specific strategies, with a consequent loss of synergy between the sectors.

### Key strategy and policy developments (1996-2006)

Key structural changes during the period from 1999 to 2006 were:

- The elucidation of a long-term vision for the ICT sector as a contributor to socioeconomic development.
- The redefinition and clarification of roles in telecommunication sector development. Distinct roles for policy-making, market regulation in a competitive environment, dispute resolution and the operation of services among multiple players have been identified.
- The promulgation of a new market structure driven by the private sector in a competitive environment. The private sector is considered the key investor in the ICT sector with profit its main incentive. Government is to withdraw as an investor through the privatisation of the incumbent telecommunications service provider. Competition is expected to safeguard consumer interest.

Within the country's Economic Recovery Strategy (2003-2007) the government identified key ICT-related goals. These included investing in adequate ICT education and training; reviewing the legal framework to remove impediments that have discouraged the adoption and use of e-commerce; implementing tax reductions and tax incentives on both computer software and hardware to make them affordable to micro-enterprises and low-income earners; establishing an interministerial committee to incorporate ICT into government operations; and developing a master plan for e-government by the end of June 2004 (MPND, 2003).

The government published an e-government strategy in March 2004. The strategy aims to use ICTs to improve service delivery and "transform government operations and promote democracy" (Government of Kenya, 2004). A multi-stakeholder team from various organisations and government agencies developed the strategy, which

<sup>1</sup> <[www.kictanet.or.ke](http://www.kictanet.or.ke)>.

<sup>2</sup> A commentary on the Kenya Communications Act is available from: <[www.cck.go.ke/sector\\_legislation\\_in\\_policy\\_and\\_legislation](http://www.cck.go.ke/sector_legislation_in_policy_and_legislation)>.

included an e-government directorate consisting of a committee of permanent secretaries.

The CCK also worked in partnership with the International Development Research Centre (IDRC) to conduct a universal access study. The general objective of the study was to help articulate a strategy for universal access in Kenya. This report is essential in guiding policy decisions on universal access mechanisms.<sup>3</sup> It recommends the establishment of telecentres and ICT training institutions with a focus on the affordability of communications services in rural areas. It also recommends the establishment of a Universal Access Fund financed by the government, telecommunications operators and service providers, as well as development partners. One of the challenges the CCK/IDRC strategy faces is that it focuses on access to communication infrastructure and tools rather than on the broader issue of communications rights.

In implementing its mandate to facilitate affordable universal access to ICTs, the CCK has undertaken a series of regulatory and structural reform initiatives meant to enhance the development of the ICT sector. Apart from the policy liberalisation of the sector, the commission has also started to involve itself in developing ICT infrastructure. Noteworthy among its initiatives are the development of a national backbone and the commission's engagement in the East African Submarine System (TEAMS). TEAMS is a government-led initiative to build a fibre link to Fujairah in the United Arab Emirates. The project is expected to be finalised by November 2007, according to a statement issued by Telkom Kenya. These initiatives will provide greater access to low-cost broadband internet connectivity and ultimately contribute significantly to the country's ICT development.

## Participation

The World Summit on the Information Society (WSIS) has been influential in building a multi-stakeholder culture for policy formulation in Kenya. It provided an excellent window of opportunity to integrate the multi-stakeholder approach into ICT policy frameworks.

The national ICT policy process had generally lacked political will and leadership. This was reflected in the absence of a national ICT policy, but also in the ineffective coordination between different government departments and agencies with ICT responsibilities. There was also a reluctance to opening up the ICT policy process for participation by all stakeholders.

A number of civil society organisations (CSOs), private sector players and media groups had been actively attempting to contribute to the development of an ICT legislative and regulatory framework in Kenya, even prior to the WSIS process. Initial key advocacy concerns were fundamental issues of access and the removal of the monopoly in telecommunications service provision, as well as the integration of telecommunications into the national economic development programme.

The private sector umbrella body for internet service providers (ISPs), the Telecommunication Service Providers of Kenya (TESPOK), was by far the most mobilised and organised lobbying group. TESPOK had been engaged in advocacy and lobbying the government, and had several achievements which had led to significant changes in the ICT sector. It had also consistently expressed concerns around the failure of the government to include the private sector in policy formulation and lamented that a policy draft of 2003 had failed to include private sector input.

However, while private sector operators had been very enthusiastic about pinning the government down in order to liberalise the sector and finalise the national ICT policy, they were caught up in the narrow perception of assuming that growth in ICT-enabled services would amount to economic and social development. Their biggest failure was their tendency to forget about the wider development context in their lobbying strategies.

## *The role of KICTANet*

Research conducted in 2003 by Muriuki Mureithi for the Association for Progressive Communication's (APC's) Africa ICT Policy Monitor project indicates that civil society played a significant role in the development of ICTs by creating awareness, training, and introducing ICT services in the early 1990s (APC, 2003). CSO involvement in ICT policy processes was in the form of a caucus, the Kenya WSIS Civil Society Caucus, with a secretariat based at the Arid Lands Information Network (ALIN-EA), an APC member in Kenya.

While the work of the caucus had been laudable in the WSIS process, it had been driven by a very small group of CSOs that were directly and actively involved in the ICT sector. Similar to the private sector, CSOs had lamented that the government did not take them into consideration when developing various legal and regulatory frameworks for the sector. While civil society and private sector lobbies had achieved results,<sup>4</sup> there had not been a collective effort towards encouraging the government to speed up the ICT policy process in an open and inclusive manner. Many of the organisations that had been involved in ICT policy advocacy felt that there was a need to form a network that would attract all role players in the sector, and, by working with government, increase the legitimacy and social capital of the ICT policy process.

The decision to form a multi-stakeholder network was reached during a meeting held in October 2004, organised jointly by the Media Council, a non-statutory, self-regulatory body set up by journalists, editors and media owners in 2002; the APC; the Catalysing Access to ICTs in Africa (CATIA) programme (a three-year ICT intervention in Africa by the UK Department for International Development, DFID); TESPOK; a communications research firm called Summit Strategies; and the Kenya WSIS Civil Society Caucus.

Participants unanimously agreed that the vacuum in the ICT policy process was compelling enough for the creation of a network that would work towards encouraging the government to speed up the development of an ICT regulatory framework for Kenya in an open, inclusive and participatory process. The proposal for a multi-stakeholder network was also based on the perceived strength and effectiveness of collaborative policy advocacy activities, which would be based on pooling support and resources. Initial members of the network were the APC-led CATIA project in Kenya, TESPOK, Summit Strategies, the IDRC, the Kenya ICT Federation (KIF), and the Civil Society Caucus.

A window of opportunity for KICTANet to encourage a multi-stakeholder process of policy dialogue was created when the National Rainbow Coalition (NARC) – the political party that won the 2002 elections – launched an official draft of the country's ICT policy in November 2004 (it was published for comment in February 2005).

3 <[www.cck.go.ke/universal\\_access](http://www.cck.go.ke/universal_access)>.

4 For instance, lobbying for the liberalisation of the telecommunications sector had resulted in the formulation of the Kenya Communications Act (1998), which ended the monopoly of Telkom Kenya, as well as the full liberalisation of very small aperture terminal (VSAT) services.

KICTANet lobbied, agitated and advocated for the involvement of non-governmental actors in the policy process. As a result, the network was tasked with coordinating civil society, private sector, media and development partners' input into the policy development process, and "dialoguing" with the government.

KICTANet mobilised groups from the various stakeholders for workshops, seminars, electronic mailing list and roundtable discussions, and constituency-level forums, which aimed at collecting and consolidating substantive comments on the ICT policy. The network also worked with the Ministry of Information and Communications, the NCS, the CCK and the Kenya ICT Donor Roundtable to organise a national ICT policy workshop to finalise the ICT policy. The workshop was held in Mombasa in June 2005. The workshop's output was incorporated into the draft.

The content of submissions from various KICTANet groups was not surprising and was in line with the interests and positions that each sector held. For example, while the private sector was in favour of the fast liberalisation of the sector, civil society was more concerned with issues of universal affordable access and the right to communicate.

Contributions from media groups were disappointing. Prior to the telecommunications legislation of 1998, pluralism existed only in the print media – a result of intense lobbying and advocacy from media owners and practitioners. However, the media has been slow in taking on the developments within the context of the knowledge economy. Despite the fact that the policy document was addressing issues that will affect content, cross-media ownership and the licensing of broadcast equipment, media owners and practitioners hardly contributed to the process.

The document covers many issues such as universal access, radio frequency spectrum management, market structure, and telecommunication services. It represents a broad consensus reached between the different stakeholders on most issues. And although the content is not revolutionary, the broad participation process initiated by the Ministry of Information and Communications was innovative and participatory when compared to other policy processes in the ICT sector in other countries. According to the CCK, the policy replaces the Telecommunications and Postal Sector Guidelines of December 2001 (CCK, 2001). The final document was submitted in December 2005 and gazetted by the government in March 2006 (MIC, 2006a).

In April 2006, the ministry released an Information and Communications Bill 2006 for comments from the public (MIC, 2006b). In addition, a Media Bill and Code of Conduct for broadcasters were released for discussion and finalisation. KICTANet has been instrumental in facilitating discussions around these bills and consolidating input, which has been officially submitted to the government with financial support from the IDRC, the Embassy of Finland in Kenya, the APC, and more recently the Open Society Initiative for East Africa (OSIEA).

## Conclusions

Both the ICT policy and the Information and Communications Bill processes recognise the role of civil society, media and the private sector in the policy process, and seek to include them as equal partners in the appropriation of ICTs for development. If enacted, the bill will, for the first time, provide a legal framework for meaningful partnerships in development.

It is because of KICTANet – and an open government – that the national ICT policy process became participatory. The network

provided mechanisms and a framework for cooperation and collaboration among civil society, private sector, academic, media and government stakeholders. As a result, it helped increase the legitimacy of the policy process.

The multi-stakeholder ICT policy development process in Kenya confirms the need for a more inclusive and effective manner to discuss critical policy issues. It also demonstrates that the government, private sector, media, development partners and non-government entities working on ICT issues are keen to work together to provide an enabling ICT policy environment and an implementation framework.

For its part, the Kenyan government is finally acknowledging the important role the various stakeholders play in the communications sector. There is now a more democratic space for participation in governance processes. (It is worth noting that recent KICTANet policy discussions are graced by the new Ministry of Information and Communications permanent secretary, which goes to demonstrate the goodwill that KICTANet enjoys from policy-makers in the sector.)

However, civil society's engagement with the policy processes has not been as active as the private sector's. And while a few CSOs engaged in the ICT sector have managed to articulate the complexities of interactions between ICTs, poverty reduction and development, and have managed to link ICTs to human rights and social justice, these organisations are not adequately represented.

There is also a need for civil society to engage in more outreach and mobilisation activities to include CSOs that work in sectors other than ICTs. Currently there is a culture where many CSOs feel they are not part of a process or do not need to act on ICT issues because they are not directly involved in the sector. NGOs working in areas such as agriculture or human rights still do not recognise how ICT policy impacts on their work.

Despite its poor participation in the ICT policy process, the media sector is aware of its vulnerability to the state in the absence of legislation. As a result it has created a number of institutions, which seek to establish self-regulatory systems. They are also engaging KICTANet stakeholders to ensure that they are included in policy processes as part of a larger multi-stakeholder network. ■

## References

- APC (2003). "ICT Policy and Civil Society in Kenya". *APC Africa ICT Policy Monitor* [online]. Available from: <afrika.rights.apc.org/index.shtml?apc=s21843e\_1&x=26719>.
- Brock, G.W. (1994). *Telecommunication Policy for the Information Age: From Monopoly to Competition*. Cambridge, Massachusetts: Harvard University Press.
- CCK (Communications Commission of Kenya) (2001). *Telecommunications and Postal Sector Policy Statement* [online]. Available from: <www.cck.go.ke/html/telcom\_postal\_guidelines.pdf>.
- Government of Kenya (2004). *E-Government Strategy* [online]. Available from: <www.e-government.go.ke/E-GOVERNMENT%20STRATEGY.pdf>.
- MIC (Ministry of Information and Communication) (2006a). *National Information & Communications Technology (ICT) Policy* [online]. Available from: <www.cck.go.ke/UserFiles/File/national\_ict\_policy.pdf>.
- MIC (2006b). *The Kenya Information and Communications Bill 2006* [online]. Available from: <www.tespok.co.ke/test/Kenya\_ICT\_Bill\_2006.doc>.
- MPND (Ministry of Planning and National Development) (2003). *Economic Recovery Strategy for Wealth and Employment Creation (2003-2007)* [online]. Available from: <sitesresources.worldbank.org/KENYAEXTN/Resources/ERS.pdf>.



## Introduction

The end of 2006 meant a change in national-level government for Mexico. It is a good opportunity to review the previous government's record in the area of information and communications technologies (ICTs), and to examine the context that allows us to envision steps that could be taken by the new government. This document considers concrete actions carried out by the previous government, and is based on desk research conducted from September to December 2006, as well as interviews with various civil society actors, academics and national government employees.

## Country situation

Mexico's change of government does not signify a change in political orientation. Vicente Fox left the presidency and Felipe Calderón took office at the end of 2006. Both men are from the conservative National Action Party (PAN).

During its term the previous government expressed interest in expanding ICTs in the country. Its efforts, however, were not adequate. When the government changed hands, only 19% of the population had access to a telephone line. The number of internet users estimated by the Mexican Internet Association (AMIPCI) was 20.2 million people (AMIPCI, 2006a), a figure representing slightly more than 20% of the country's population. In 2005, only 11.2 of every 100 Mexicans had a computer and only one had access to broadband.

These figures are below the international average, and far below the figures seen in developed countries such as the United States or Europe, where more than 70% of inhabitants have internet access (AMIPCI, 2006b). Therefore it is not surprising that Mexican investment in information technologies is only 1.4% of GDP, a percentage significantly lower than the 4.3% of GDP average budgeted by the other countries in the Organisation for Economic Cooperation and Development (OECD), of which Mexico is a member (EIU, 2006).

This analysis becomes more dramatic when we look at the "digital divide" geographically. Mexico is a country with considerable structural differences. The northern and central regions have greater financial resources, while the south, an area of greater density of indigenous, campesino (peasant) and migrant populations, has higher levels of poverty. While 21% of the population in the central region access the internet, only 6% do in the southeast. It is interesting to note that the eight poorest states in the south have teledensities of only 5 to 10 land-line telephones in use for every 100 individuals (EIU, 2006).

Over the last six years – the length of a presidential term in Mexico – the government said it had attempted to make progress in increasing connectivity on a national level and also in the growth of digital services in various sectors critical to government and society, such as health, housing, education and tax collection. But the development of ICTs was oriented largely towards competition and the market, and much less towards expanding the benefits afforded by these technologies in the social and community realms.

In the period of government transition, various sectors of society are making efforts to support the use of ICTs at the national level. But they are also using them like a life raft amid the loss of competitiveness experienced by the country.<sup>2</sup> ICTs are seen by various sectors as one of the most efficient tools for increasing production, thereby reversing the loss of competitiveness, as indicated in a report entitled *Public Policies for the Appropriate Use of Information and Communication Technologies to Promote Competitiveness in Mexico – 2020 Mexico Vision*.<sup>3</sup> According to this document, innumerable actions will be necessary by the government to reach the "2020 Mexico Vision". These can be largely summarised as five objectives (AMITI, 2006):

- The establishment of a national agenda for competitiveness, innovation and adoption of ICTs, which promotes Mexico's transition towards a knowledge society.
- The early and efficient adoption of ICTs by the government, to spur the economy's competitiveness and improve the well-being of all Mexicans.
- The stimulation of the ICT sector so that it may hold a significant place and be an engine of growth in the country's economy.
- An efficient government whose public services become "world class" through the adoption of ICTs.
- The use of ICTs in education and the development of ICT training curricula, with the goal of rapidly closing the "education divide".

This is, however, far from establishing a specific model for the country adapted to its multicultural character, extreme economic, social and educational differences, high poverty rates and other factors that place it in a vulnerable situation.<sup>4</sup> Instead the federal government's actions reproduce, at the level of ICTs, a market model designed in the global sphere,<sup>5</sup> and tending to seek high profits for national power groups. In this way, not only do economic and technological forces that establish new conduits for income increase in influence (Micheli and Martínez, 2005), but those already existing nationally, which base their profit and power chains on information and communication processes, are strengthened.

2 The World Economic Forum estimates that in the last ten years Mexico has dropped more than twenty places, falling from 32nd to 55th place in its competitiveness ranking. In addition, Mexico is reported in the Business Competitiveness Index (BCI) as one of the countries with the greatest absolute decline, along with Thailand and Poland (AMITI, 2006).

3 The document was prepared by the Mexican Association of the Information Technology Industry (AMITI), the National Chamber of the Electronics, Telecommunications and Informatics Industry (CANIETI) and the Mexican Digital Foundation (FMD), under the leadership of the Mexican Institute for Competitiveness (IMCO), with the collaboration of the Centre for Economics Research and Teaching (CIDE) and the market research company Select.

4 One needs only to look at the recent political situation: conflict sparked by electoral fraud, violence and open repression, political ungovernability in Oaxaca, etc.

5 Taking the United States and South Korea as examples, growth in the ICT industry reportedly represents 30% of economic growth in the United States since 1995, and 50% of economic growth in Korea since 2000.

1 <[www.laneta.apc.org](http://www.laneta.apc.org)>.

There are some obvious examples with the well-known corporations Televisa and Telmex, which largely control the television and telecommunications industries, respectively. These enormous monopolies want the whole pie offered by digital convergence, starting from their current positions. Telmex, for example, controls 95% of local phone services, 80% of long distance, 75% of the mobile phone market and around 70% of the country's internet services (EIU, 2006). According to its current plans, it intends to get into television, which will undoubtedly mean a greater concentration of its monopolistic capacity.

Although various government bodies are in favour of this move, completely unified positions do not exist within the national government. While the Ministry of Communications and Transportation favours eliminating the restrictions in Telmex's concession title (licence), which would allow it to provide television services, the Ministry of Finance has been trying to block this. The small telephone companies that have been excluded through competition from fully participating in the regular provision of telephone services obviously support the Ministry of Finance. But the division shows that the actions taken by the government, and by some companies endorsed by the national government, do not represent a clearly defined public policy (Ramírez, 2006).

Mexico continues to be characterised by changes to laws and approval of reforms that do not include the protections agreed on and established in public policies. These changes and reforms typically respond to the need for transformation and growth in certain sectors, and even companies. This was evidenced by the recent approval of changes to the country's media legislation that resulted in the so-called "Televisa Law", which favours companies already awarded radio and television frequencies by offering them the possibility of using those frequencies to extend their range of services – frequencies which ideally should be national rather than private resources.

The way this happened was astounding. In November 2005 the House of Representatives passed in just eight days – voting unanimously in seven minutes without any discussion in the legislative session – a proposal of reforms to two of the country's fundamental laws: the Federal Radio and Television Law and the Federal Telecommunications Law.

Those who proposed the reforms did so behind closed doors, and expected them to be approved in a similar manner in the Senate. But actions by some senators allowed this crucial issue to come to light publicly before the approval of the reforms. Numerous consultations and debates began in which the majority expressed opposition. National institutions such as the Federal Commission on Competition, the National Commission for the Development of Indigenous Peoples, the Ministry of Finance and Public Credit, the Federal Electoral Institute and the Federal Telecommunications Commission argued for the need to reconsider the approval of the reforms (Solís, 2006). The various observations, hearings and public consultations were, however, in vain. The Senate approved the regrettable "Televisa Law" in March 2005 and published it in the Official Register of the Federation on 11 April 2005.

With the approval of this law, the state was placed at the service of the monopolistic interests of media companies. It did not recognise the needs expressed by numerous sectors of the population for community development. It assigned communication only the measly role of merchandise for accumulating more capital, and auctioned off the wealth of the nation to the highest bidder, without employing criteria for the benefit and development of the communities. And it in

no way respected a multiparty negotiation in which private companies, the state and representatives of civil society should have participated.

The threat of strategic partnerships being formed that result in monopolistic business practice is very real in Mexico. A good example is the attempt by Telmex and Televisa to develop a business alliance. If this partnership is successful, Telmex would become the leader in the pay-TV market and, through the agreement with Televisa, would offer the same content currently produced by this monopoly for national television.

With the reforms to the legislation, a greater concentration of already existing monopolies is facilitated. Far from the benefits of technological convergence becoming the property of the Mexican nation and forming part of a potential reserve of concessions to be distributed in a gradual, transparent and public way according to the needs of the majority of society, the interests of the very few are favoured.

As a continuation of the model developed by the previous government, the new administration's Minister of Communications and Transportation Luis Téllez has defined basic points in his strategy for his ministry – a key institution in the area of ICTs. These are: greater competition and quality of services in telecommunications and transportation; a review of compliance by those granted concessions; blocking the concentration of permits to individuals; and the promotion of investment and infrastructural development in close coordination with the private sector ("with all possible advantages") but without losing the state's jurisdiction (Cardoso, 2006). It is worth noting that Téllez, appointed in November 2006, comes from the boards of powerful national and foreign companies such as Grupo DESC, Cablevisión, Bancomer, Grupo México and GAP, among others. Right before his appointment he was on the boards of directors of the Carlyle Group in Mexico, one of the most important private capital investment firms in the world, as well as Sempra Energy, both of which are linked to US president George W. Bush.

In addition to reforms that in no way benefit society in general, Vicente Fox's government developed two other avenues of work in the area of ICTs. The first was the promotion of his e-Mexico programme, which goes hand-in-hand with the actions undertaken in the area of e-government. The other involved the development of the software industry, a sector still in its initial phases but with some entities created at the national level: the Digital Mexico Foundation, the Small and Medium Enterprise (SME) Fund, the Special Science and Technology Programme (PECyT), the Programme for Competitiveness of the Electronics and High Technology Industries (PCIEAT), and the Programme for the Development of the Software Industry (PROSOFT).

The federal government's e-Mexico initiative is moderately well known for its series of portals: e-learning, e-health, e-economy, e-government, and some others aimed at specific populations such as indigenous groups. It is less well known for the installation of its connectivity points, through agreements with various governmental and private entities. In terms of e-government, the growth in national policy has been heavily oriented towards developing online services that make it easier for citizens to transact with the government – such as making online payments. In December 2005 an agreement was issued that established the Interministerial Commission for the Development of Electronic Government, whose purpose is to support the various initiatives, projects and governmental processes in the area of e-government. Among the technological changes that have been made as of 2006 are a citizen's portal, *compranet* (an electronic system for government procurement), a taxpayers' registry, and a professional careers service (Gigli, 2006).

These developments present a fabulous opportunity to increase the public visibility of government action, thereby reinforcing a public image of transparency, good government and the modernisation of management (Micheli and Martínez, 2005), even when the results are not completely positive. They foster the positive transformation of administrative culture in aspects such as access to documentation, or the reduction of the time needed for administrative procedures.<sup>6</sup> However, there is a negative side. The government's adoption of technology is done at the expense of human labour, as it results in cut-backs in personnel at federal entities. More than 80% of government contracting is currently handled online.

The previous government's implementation of the Federal Transparency and Access to Public Government Information Law of April 2002 should be seen as on target (Cámara de Diputados, 2006). The objectives approved in this law were:

- To provide whatever may be necessary for everyone to have access to information through simple and quick procedures.
- To make public transactions transparent through dissemination of the information generated by those in charge.
- To guarantee the protection of personal information in the possession of those in charge.
- To encourage accountability to citizens, so they may evaluate the performance of those in charge.
- To improve the organisation, classification and handling of documents.
- To contribute to the democratisation of Mexican society and the full effects of the rule of law.

The implementation of the law, however, has not been easy. At first this law was a good incentive for the population. However, after numerous refusals to comply by several federal and state entities, enthusiasm slowly began to fade for what once seemed to be a practical step in the right direction towards securing the right to information in Mexico.

Some government departments have refused to provide public information, as was the case with the Ministry of Foreign Relations, which denied public requests on at least three occasions in 2006, availing itself of legal procedures to avoid turning over the information (Velasco, 2006). Similar cases occurred with refusals by the president to hand over documents (*La Jornada*, 2006); the Federal Institute for Access to Information (IFAI) resolution not to release files pertaining to an administrative procedure that the Ministry of Public Operations (SFP) maintained against several employees; and keeping information requested on 206 ruling party members of Congress confidential for twelve years, to mention but a few.

While there has been progress in implementing the law despite these setbacks, it is important to note that the social right of society to be informed, considering all its implications, does not appear in the Mexican government's current legislation (García and Rendón, 2005). The right to information cannot be limited to public governmental information, as defined in our current law, but should include access to *whatever* information is found in governmental institutions. Legislation is still needed in Mexico on this point.

There are other issues related to the right to information, such as the guarantee of freedom of expression, which has suffered serious setbacks in the last six years. Impunity continues for those responsible for the assassination of 25 journalists; 20 of these assassinations are directly related to issues or information that these journalists made public. Accordingly, the organisation Reporters Without Borders rated Mexico second-to-last on the list of Latin American countries that defend press freedom. Due to the alarming incidents that occurred during the last six-year period, the International Federation of Journalists considers Mexico as the most dangerous country in Latin America for journalists who report on crime and corruption. In 2005, during the Fox administration, Mexico became "the most lethal country for the press in the entire American continent," and in 2006 it ranked in second place worldwide, surpassed only by Iraq (León, 2007).

Another issue pending in this governmental transition period is the commitment of the new government to the rights of indigenous peoples, including their right to information and communication. More than 150 members of indigenous communities from 19 countries in Latin America met in Mexico City in November 2005 for a workshop sponsored by the International Telecommunication Union (ITU), the Ministry of Communications and Transportation of Mexico, and the National Commission for the Development of Indigenous Peoples, also of Mexico. Many of the demands expressed by indigenous peoples from across the continent at this gathering apply to the Mexican reality. The indigenous representatives saw as a starting point their need to participate in the use, administration and control of ICTs on a national level. This included participating in the development and design of public policies from the perspective of their own cultures, contexts and realities. This implies reflecting on the impact of modern technologies on indigenous peoples, and how grassroots cultures appropriate the information society.

The workshop participants pointed to the urgent need to recognise and defend the practice of basic rights for indigenous peoples, and freedom of expression through ICTs. At the same time ICTs should be used as effective tools to prevent the violation of their rights. Respect for the San Andrés Accords on culture and indigenous rights signed in 1996 between indigenous communities and the federal government is particularly relevant for Mexico.<sup>7</sup> Indigenous peoples' representatives made a proposal to shape the creation of communal laws, petitioned governments regarding freedom to exercise their own spirituality, and also demanded that governments recognise the legal pluralism of indigenous peoples, and their human and collective rights to exercise their own forms of communication with respect to ICTs (Sandoval and Mota, 2005).

## Participation

Throughout these last six years federal government bodies have opted to align themselves closely with the business sector; there has been very little opening up to civil society organisations (CSOs) that promote ICTs for the common good and sustainable human development. As a result, CSOs that promote ICTs from a human rights perspective have had little luck in forming partnerships with the federal government.

In addition to the monopolies already mentioned, various business groupings are also federal government counterparts. For example, AMIPCI is an association founded in 1985 with 260 member

6 The UN Global E-Government Readiness Report 2005 ranked Mexico in 31st place among 191 countries evaluated and in 2nd place in Latin America after Chile (UN, 2005).

7 For more information, see: <[zedillo.presidencia.gob.mx/pages/chiapas/docs/sanandres.html](http://zedillo.presidencia.gob.mx/pages/chiapas/docs/sanandres.html)>.



companies who joined together to stimulate the ICT industry in the country. Its president is the director of Microsoft Mexico, and one of its vice presidents is the brother-in-law of President Felipe Calderón. Calderón's brother-in-law was also involved in a scandal over the number of federal government contracts granted to his company, Hildebrando S.A. de C.V., and over irregularities in his tax payments.

In large measure, the relationship between government and business has not allowed the open participation of other sectors of society. We should expect more openness from any democratic government. Over the past six years, and in the context of political reform, the government has amply demonstrated that the diagnostics, demands and basic initiatives for communication policies presented by Mexican civil society in forums, seminars and public consultations have been denied, belittled, ignored and marginalised by the power structures. Once again, the profound disillusionment and disenchantment of civil society resurface, questioning whether the spaces created by the state are viable avenues for the transformation of these public policies (Esteinou, n.d.).

Mexican civil society continues to demand that the federal government guarantee dialogue so that the various proposals and positions of the different sectors can be taken into consideration. Mechanisms are also necessary to make transparent the positions and processes employed by the federal government in national and international frameworks related to decisions on public ICT policies. These are currently absent from the government-society relationship – a situation that must be changed in this six-year term, because the participation of civil society as an essential actor in the construction of public policies in the country is indispensable.

For its part, civil society continues to build alternative models, proposals and projects aimed at using the media and ICTs for the common good. There are numerous initiatives that involve a great deal of effort within an adverse political and economic context.

Communication and human rights organisations, as well as various alternative publications, labour daily to set the issue of ICTs within the basic human rights framework. Others work to strengthen and build infrastructure so that vulnerable populations can access new technologies that will allow them to create content according to their local needs. CSOs focused on technical and educational material are promoting the recognition and practical uses of free and open source software (FOSS) as a powerful tool. Associations of journalists, among others, are working for the defence of freedom of expression and the right to information. (Their efforts, however, have unfortunately not been very successful.)

Organisations and communities are also working arduously to promote radio as a public service that facilitates democratic participation in communications media, mostly for those historically marginalised such as women, youth and minorities, among others. Community radio stations fight an uphill battle, but are deeply rooted in their localities in different parts of the country. Internet radio is also emerging as an alternative.

Initiatives dedicated to education and ICTs are developing capacity. Not only are they bridging the “digital divide” by installing hardware, they are building local capacity by training people to use ICTs. They are helping users become creators and producers of new tools and content, and not merely consumers of information. Several successful initiatives are based on work with young people and women. This effort, linking gender and ICTs, is especially interesting. Hundreds of women have been trained and empowered in the use of ICTs.

A number of alternatives to the co-option of the information society by big business have also emerged. One of them, a proposed Citizens' Observatory of Electronic Media (OCME), aims to promote a critical conscience that can take an active part in reorienting the role of the communications media. The OCME was born as an initiative of a radio programme specialising in communications media analysis called “*El fin justifica @ los medios*” (which can be translated as either “the end justifies the means” or “the end justifies the media,” since the Spanish word *medios* has both meanings). The programme has been on the air for seventeen years on *Radio Educación* [Education Radio], a cultural radio station. The overall aim of the OCME is ambitious since it outlines a comprehensive model for media literacy education. This model includes canvassing the opinion of audiences on media content, developing audiovisual learning material, provide training on communications media, and analysing and reporting on the media. The OCME will also help develop a space for social reflection on the media, and channel audience opinions to government bodies and media companies. It is hoped that this space will eventually have the social support necessary to promote the creation of a legal framework aimed at democratising the media.

## Conclusions

Public information and communications policies in Mexico are oriented towards strengthening competitiveness, the market, and the interests of monopolistic groups. The government sworn in at the end of 2006 does not foresee any substantial changes in the next six years.

The relationship between government and society has been expressed as a unilateral strengthening of the business-government binomial. Businesses with strong economic interests have been particularly privileged. This has occurred despite the different needs, proposals and initiatives that have come from very diverse sectors of civil society. Examples of this can be found in the approval of reforms to two of the country's fundamental laws: the Federal Telecommunications Law and the Federal Radio and Television Law, subsequently dubbed the “Televisa Law”. As a result, the state has been placed at the service of the monopolistic interests of the communications companies. The government has auctioned off the nation's wealth without taking communities into account. And it did not respect a multiparty negotiation in which businesses, government and representatives of civil society should have participated.

Considering the composition of the new government and its initiatives announced to date, we cannot foresee any substantial changes in the next six years in the actions of the federal government in terms of creating public policies aimed at benefiting communities and developing the social function of technologies, at least as far as those used for information and communication are concerned. ■

## References

- AMIPCI (Asociación Mexicana de Internet) (2006a). *Existen más de 20 millones de Internautas en México* [online]. Available from: <[www.amipci.org.mx/rel\\_boletin.php?id=12](http://www.amipci.org.mx/rel_boletin.php?id=12)>.
- AMIPCI (2006b). *MC Speak*. [online]. Available from: <[www.amipci.org.mx/en\\_los\\_medios.php?mcmvme=44](http://www.amipci.org.mx/en_los_medios.php?mcmvme=44)>.
- AMITI (Asociación Mexicana de la Industria de Tecnologías de Información) (2006). *Políticas Públicas para el uso adecuado de las tecnologías de la información y comunicación para impulsar la competitividad de México: una visión al 2020* [online]. Available from: <[www.politicadigital.com.mx/IMG/pdf/SuplementoVisionMexico2020.pdf](http://www.politicadigital.com.mx/IMG/pdf/SuplementoVisionMexico2020.pdf)>.

- Cámara de Diputados (2006). *Ley federal de transparencia y acceso a la información pública gubernamental* [online]. Available from: <[www.diputados.gob.mx/LeyesBiblio/doc/244.doc](http://www.diputados.gob.mx/LeyesBiblio/doc/244.doc)>.
- Cardoso, V. (2006). *Habrá "todas las facilidades posibles" para la IP*. Interview with Luis Téllez. *La Jornada* [online], 22 November 2006. Available from: <[www.jornada.unam.mx/2006/11/22/index.php?section=politica&article=007e1pol](http://www.jornada.unam.mx/2006/11/22/index.php?section=politica&article=007e1pol)>.
- EIU (Economist Intelligence Unit) (2006). "En Ascenso, Las Telecomunicaciones en México". *La Jornada*, 19 September 2006, p. 32. Available from: <[www.jornada.unam.mx/2006/09/19/032n1eiu.php](http://www.jornada.unam.mx/2006/09/19/032n1eiu.php)>.
- Esteinou, J. (n.d.). *El Derecho a la Información en México* [online]. Available from: <[www.inisoc.org/esteinou.htm](http://www.inisoc.org/esteinou.htm)>.
- García, I. and Rendón, M. (2005). "La Problemática Institucional de la Sociedad de la Información en México". *Razón y Palabra* [online], No. 44. Available from: <[www.razonypalabra.org.mx/antecedentes/n44/garciarendon.html](http://www.razonypalabra.org.mx/antecedentes/n44/garciarendon.html)>.
- Gigli, J. (2006). "México, Segunda Cumbre de Gobierno y Tecnología". *Directorio del Estado. El portal del gobierno electrónico* [online], 9 August 2006. Available from: <[www.gobiernoelectronico.org/node/4946](http://www.gobiernoelectronico.org/node/4946)>.
- La Jornada (2006) "IFAI entra a la controversia por Ley Televisa". *La Jornada* [online], 31 August 2006. Available from: <[www.jornada.unam.mx/2006/08/31/023n3pol.php](http://www.jornada.unam.mx/2006/08/31/023n3pol.php)>.
- León, M. (2007). "México, país más peligroso de AL para informar sobre crimen y corrupción". *La Jornada* [online], 3 January 2007. Available from: <[www.jornada.unam.mx/2007/01/03/index.php?section=politica&article=005n1pol](http://www.jornada.unam.mx/2007/01/03/index.php?section=politica&article=005n1pol)>.
- Micheli, J. and Martínez, F. (2005). "Sociedad de la información en México: Los primeros pasos de gobiernos locales". *El Cotidiano* [online], No. 130, pp.15-23. Available from: <[www.cibersociedad.net/archivo/articulo.php?art=198](http://www.cibersociedad.net/archivo/articulo.php?art=198)>.
- Ramírez, A. (2006). "Ineptitud del gabineteazo, Fox finge ignorancia". *Zócalo. Comunicación, Política, Sociedad*, No. 77, pp. 22-23.
- Sandoval, F. E. A. and Mota, D. L. (2005). *Indígenas y Democracia en las Tecnologías de Información y Comunicación* [online]. Available from: <[www.ocyt.org.co/esocite/Ponencias\\_ESOCITEPDF/1MEX059.pdf](http://www.ocyt.org.co/esocite/Ponencias_ESOCITEPDF/1MEX059.pdf)>.
- Solís, L. B. (2006). "Recuento de un Debate Inconcluso". *Zócalo. Comunicación, Política, Sociedad*, No. 77, pp. 28-29.
- UN (United Nations) (2005). *Global E-Government Readiness Report 2005. From E-Government to E-Inclusion* [online]. Available from: <[unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf](http://unpan1.un.org/intradoc/groups/public/documents/un/unpan021888.pdf)>.
- Velasco, E. (2006). "Se ampara la cancelería contra orden del IFAI". *La Jornada* [online], 23 October 2006. Available from: <[www.jornada.unam.mx/2006/10/23/012n2pol.php](http://www.jornada.unam.mx/2006/10/23/012n2pol.php)>.
- Wikipedia (2006). *Carlyle Group* [online]. 23 November 2006. Available from: <[es.wikipedia.org/w/index.php?title=Carlyle\\_Group&oldid=6171839](http://es.wikipedia.org/w/index.php?title=Carlyle_Group&oldid=6171839)>.

# NIGERIA

Fantsuam Foundation<sup>1</sup>  
John Dada



## Introduction

This report presents an overview of ongoing and planned information and communications technology (ICT) initiatives in Nigeria. It has been compiled through online research, supplemented by interviews with role players involved in the three key regulatory bodies, the Nigerian Communications Commission (NCC), the National Information Technology Development Agency (NITDA), and the National Broadcasting Commission (NBC). Discussions were also held with two civil society ICT activists, and the government's national ICT policy development team. The author also attended the national consultative process supported by the Association for Progressive Communications (APC) which was held during the inauguration of the Telecentre Network of Nigeria, 25-27 January 2007.

## Country situation

Nigeria has a population of 140 million people, 70% of whom live in underserved and remote areas of the country. It also has the fastest growing ICT market in Africa and its telecom penetration has improved from 400,000 lines in 1996 to 4.7 million in March 2004. Teledensity rose dramatically from 0.4% in 1996 to 3.92% in 2004, exceeding the International Telecommunication Union's (ITU's) minimum recommendation of 1%. Nigeria has the most lucrative telecoms market in Africa, growing at twice the African average (eShekels, 2006).

In spite of this obvious and significant progress, Nigeria's performance on a global scale is still far behind countries like Sweden, which has 100% access. On Africa's Digital Opportunity Index, Nigeria ranked 31st, with an index of 0.15, while South Africa ranked 7th, with an index of 0.38. In the global ICT diffusion ranking, Nigeria ranked 161st, staying in the same lower ranks as Ethiopia at 146th, Senegal at 149th and Mali at 157th (UNCTAD, 2005).

Nigeria's relative performance is also illustrated by comparing the number of community radios in different countries in West Africa. Mali tops the list with 120, while Nigeria has only one. On 8 February 2007, the regulatory body, the National Broadcasting Commission (NBC) granted 28 new radio licences, six of which were for educational institutions (Auchi Polytechnic, Edo State; Nnamdi Azikiwe University, Awka, Anambra State; the National Teachers Institute, Kaduna; Ahmadu Bello University, Zaria; Obafemi Awolowo University, Ile-Ife, Osun State; and Madonna University, Okija). The remaining 22 were for commercial organisations. There was none for community radios (NBC, 2007).

Mobile telephony holds some promise for increasing access for marginalised sectors of the population. There has been exponential growth in mobile subscriptions (there were three million subscribers in 2004 alone) and all Nigerian states now have some form of mobile coverage.<sup>2</sup>

While rural access is often intermittent, the growth of mobile telephony can be illustrated by the financial performance of one of the major operators, MTN. In 2003 MTN generated USD 437 million in Nigeria, compared to USD 356 million in the rest of Africa combined.

Table 1: Community radios, West Africa

Country	Community radios
Mali	120
Senegal	44
Burkina Faso	27
Niger Republic	24
Republic of Benin	22
Ghana	8
Nigeria	1

Source: Ajjola (2006)

Its African subscribers outside Nigeria total 6.1 million. Nigeria alone accounts for 1.9 million subscribers (Ajjola, 2004).

## ICT initiatives

The government's role in creating an enabling environment has faced considerable challenges, despite support by pan-African bodies like the UN Economic Commission for Africa (UNECA), with its National Information and Communication Infrastructure (NICI) process,<sup>3</sup> and the New Partnership for Africa's Development (NEPAD), with its eSchools Initiative.

The National Information Technology Development Agency (NITDA), which is charged with implementing ICT policy, began to work with UNECA on the country's NICI process in March 2000. While a draft ICT policy has been produced by NITDA, it has yet to be finalised.

A Presidential Task Force on ICT Harmonisation was inaugurated in August 2006. Its job is to examine the duplication of efforts and absence of cross-sectoral convergence in the government's ICT strategies. Various sub-committees have prepared reports, but it appears that their efforts have been overtaken by an unexpected announcement in December 2006 by the Federal Executive Council that several of the 27 government ministries have been merged, reducing the total number to 19.

The merger of the ministries has also impacted negatively on the work of a team of Nigerian experts that has been drafting a strategic plan for 2005 to 2008, with support from an UNECA consultant. It was hoped the plan would streamline the various ICT initiatives in the country.

Despite these challenges, several initiatives can be grouped together as efforts to facilitate affordable access for Nigerians:

**Universal Service Provision Fund (USPF)** The Nigerian Communications Act 2003 provided for the establishment of a USPF, which finally became operational with the inauguration of its Governing Council in September 2006 (NCC, 2003). All licensed

1 <[www.fantsuam.org](http://www.fantsuam.org)>.

2 See: <[www.ncc.gov.ng](http://www.ncc.gov.ng)>.

3 NICI is the mechanism that facilitates the implementation of African Information Society Initiative (AIS) e-strategies at the national level.

telecoms providers are required to contribute 2.5% of their annual financial turnover to the Fund, and calls for proposals have been issued by Nigeria's telecoms regulator, the Nigerian Communications Commission (NCC). The Fund is expected to complement NCC projects such as Wire Nigeria (WiN), which aims to link up all the country's states with fibre optic cable, and the State Accelerated Broadband Initiative (SABI), which involves the provision of wireless broadband services in Nigerian cities.

**Broadband infrastructure.** One of the major constraints to the growth of rural telephony and internet connectivity has been the absence of broadband backbone infrastructure. This is one of the issues that is already being addressed through the setting up of Galaxy Backbone, a company owned by the Nigerian government. A deployment of 2,000 VSATs (satellite terminals) across Nigeria is planned. This will offer access to remote, underserved locations, and ensure that each of the 774 local governments will have connectivity. However, there are as yet no installations in place. Recently Nigerian Vice President Atiku Abubakar challenged the process by which the funds for Galaxy Backbone are disbursed, and it is now the subject of a senate investigation.

Fibre optic cables have been laid from Lagos to Kano, and Zaria to Jos, by Glo Telecoms, as part of its Nigeria to UK project. The National Space Research and Development Agency (NASRDA)<sup>4</sup> also plans to launch a second satellite in May 2007. It is being built by Surrey Satellite Technology, and is expected to aid agricultural and economic planning as well as help in disaster management.

**Computers for All Nigerians Initiative (CANI)** The aim of this initiative is to improve Nigerians' access to computer hardware. It includes a funding mechanism whereby civil servants will be able to purchase computers and pay back the loan at a low rate of interest. Launched in July 2006, CANI is a typical example of a public-private partnership. It is being coordinated by NITDA and involves Microsoft, Zinox and Omatek. Related to the initiative is a Petroleum Technology Development Fund (PTDF) plan to build and equip computer centres in higher education institutions across Nigeria. However, this plan does not include internet access.

**Universities Bandwidth Consortium** This is a pilot programme in which six of the nation's universities are able to bulk purchase bandwidth for academic purposes. The scheme holds promise for the over 600 higher education facilities in Nigeria.

**National Rural Telephony Project (NRTP)** The NRTP was expected to provide 500,000 connected lines to 343 local governments in Nigeria within one year. In 2003, the federal government accessed credit from the World Bank's International Development Association (IDA), and a part of the funds obtained was to be set aside to improve national teledensity, as well as to step up telecommunication penetration in rural areas. The government also signed a memorandum of understanding with the Peoples Republic of China, supported by a concessionary loan of USD 200 million for the NRTP. The project was to be executed in two phases by Alcatel-Shanghai and ZTE. However, the project was only flagged off in August 2004. The supervising Ministry of Communications reports that implementation is currently

ongoing in 108 of 218 targeted local government headquarters in Nigeria. The project is expected to combine with the USPF to offer concessionary licensing for the providers.

**Internet exchange points (IXPs).** The establishment of internet exchange points will help keep local internet traffic within the country, which reduces the need to use international bandwidth and thus significantly lowers costs. An IXP allows different internet service providers (ISPs) to exchange internet traffic between their autonomous networks without cost. Although the Lagos IXP has been completed, it has not been commissioned. Seven more were expected to have gone live by now.

**Telecentre Network of Nigeria (TNN)** The inaugural meeting of the Network was held at the National Institute for Policy and Strategic Studies, Kuru, on 25-27 January 2007, with the support of the International Development Research Centre's (IDRC's) telecentre.org programme. It is hoped that the Network, by leveraging opportunities presented by the USPF, among other initiatives in Nigeria, will attain the goal of one telecentre in each of the country's 774 local government areas.

## Participation

The near absence of the voice of Nigerian civil society in the nation's policy development processes has deprived the nation of much-needed robust consultation and discussions. However, recent events, such as the halt of an attempt to change the Nigerian Constitution and extend the term of office of the president and his governors, have demonstrated that mass mobilisation can have a significant impact. The role of civil society and media organisations across the country in stopping the challenge to the Constitution can be seen as a political watershed in Nigerians' slow and steady adoption of a democratic culture.

Civil society has also had an important impact in two other processes: the Freedom of Information (FOI) Bill and the drive to develop a community radio sector in the country.

The FOI Bill – a cornerstone of democratic government in any country – had been pending before the National Assembly since 1999. It was unanimously passed by the Nigerian Senate on 15 November 2006, largely because of the staying power of the advocacy efforts by a civil society coalition, led by the Media Rights Agenda (MRA).<sup>5</sup>

The MRA, among others, has also been active in the field of community radio. While the National Broadcasting Commission Act No. 38 of 1992<sup>6</sup> did not make allowance for community radio, this was rectified in 2001 when the MRA presented a draft Media Bill to the National Assembly. Since then, civil society has led the advocacy push for community radio in Nigeria. Key advocacy activities include collaborations with the Association for Progressive Communications (APC)<sup>7</sup> and the work of the Nigeria Community Radio Forum and the World Association of Community Radio Broadcasters (AMARC).<sup>8</sup>

These collaborations have had results. The government began to give consideration to the issue through the resolution of the National Council on Information in 2005. Working papers on community radio were developed by the NBC.

5 See: <[www.mediarightsagenda.org](http://www.mediarightsagenda.org)>.

6 As amended by Act No. 55 of 1999. See: <[www.nigeria-law.org/National%20Broadcasting%20Commission%20Decree%201992.htm](http://www.nigeria-law.org/National%20Broadcasting%20Commission%20Decree%201992.htm)>.

7 <[africa.rights.apc.org/catia1c/nigeria](http://africa.rights.apc.org/catia1c/nigeria)>.

8 <[www.amarc.org](http://www.amarc.org)>.

A Community Radio Policy Drafting Committee, which was inaugurated by the government in August 2006, submitted its report to the federal government on 12 December 2006. The government's decision is pending, but indications are that the present administration would like to bequeath the first community radio policy to Nigeria before its exit in 2007.

## Conclusions

When considered individually, the inherent ICT4D (ICT for development) credentials of the various initiatives discussed in this paper are clear. However, when viewed holistically, a lack of coherence and a lack of optimisation of resources become evident. For example, some higher education institutions have received up to three VSATs from different government programmes. This is due to the policy vacuum in which these otherwise laudable initiatives are being implemented.

While some of this duplication might be resolved through the recent merger of ministries, ICT policy issues are not likely to receive much attention in the short term, given that the current president is expected to vacate office by July 2007. The exception may be a few areas in which the president wants to leave a legacy, such as in the community radio sector. He would also, no doubt, like to leave his imprint on the development of a national backbone infrastructure.

However, numerous other policy interventions are needed. For example, telephony issues that still require regulatory attention and increased government intervention include tariffs, the local assembly of mobile handsets, maintenance and repair, and signal coverage to underserved communities.

Given Nigeria's recent military dictatorship, it may be understandable that acquiring a culture of consultation and inclusive democratic governance is slow. Civil society continues to be the most vocal advocate for sustainable ICT development and the most active facilitator of an enabling environment. Recent legislative approval of the FOI Bill may convince the next government of the advantages of an inclusive national ICT policy process.

The challenges for civil society in the coming months and years is to fill existing gaps such as the lack of a national focus with respect to the use of open standards, open access and open source software, either in education or public administration. SchoolNet Nigeria was once a champion of these innovations, but these efforts are now largely undertaken by the Nigerian Linux Users Group.

ICTs also need to be popularised and access to knowledge for development needs to be promoted, especially in underserved rural communities, and for young women and men. ■

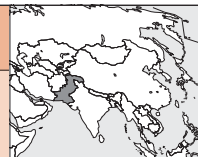
## References

- Ajjola, A.H. (2004). *Nigeria ICT Policy Issues: Paper presented at the APC/ CATIA Regional ICT Policy Advocacy Workshop in Africa*, Nairobi, 19-23 July 2004.
- Ajjola, A.H. (2006). *ICT/Community Radio as a Leadership Tool: Paper presented at the ICT/CR Advocacy Training for AAIN Partners*. AAIN & APC, Abuja, 12-14 July 2006.
- eShekels (2006). *Nigeria ICT Outlook & Forecasts* [online]. Available from: <[www.eshekels.com/downloads/Nigeria%20ICT%20Outlook%20and%20Forecasts\\_%20CTO%202006.pdf](http://www.eshekels.com/downloads/Nigeria%20ICT%20Outlook%20and%20Forecasts_%20CTO%202006.pdf)>.
- NBC (National Broadcasting Commission) (2007). *NBC Issues New Licenses* [online]. NBC press release, 8 February 2007. Available from: <[www.nbc.gov.ng/Press%20Release%208th%20February.pdf](http://www.nbc.gov.ng/Press%20Release%208th%20February.pdf)>.
- NCC (Nigerian Communications Commission) (2003). *Nigerian Communications Act, 2003* [online]. Available from: <[www.ncc.gov.ng/RegulatorFramework/Nigerian%20Communications%20Act,%202003.pdf](http://www.ncc.gov.ng/RegulatorFramework/Nigerian%20Communications%20Act,%202003.pdf)>.
- NCC (2006a). *An Overview of the Nigerian Telecommunications Environment and Successful Initiatives To Promote Communications Development* [online]. Available from: <[www.ncc.gov.ng/index10\\_e.htm](http://www.ncc.gov.ng/index10_e.htm)>.
- NCC (2006b). *Africa and the Challenge of Next Generations Networks* [online]. Available from: <[www.ncc.gov.ng/index10\\_e.htm](http://www.ncc.gov.ng/index10_e.htm)>.
- NITDA (National Information Technology Development Agency) (2005). *Nigerian National Policy for Information Technology (IT) 'Use It'* [online]. Available from: <[www.nitda.gov.ng/document/nigeriaitpolicy.pdf](http://www.nitda.gov.ng/document/nigeriaitpolicy.pdf)>.
- UNCTAD (UN Conference on Trade and Development) (2005). *The Digital Divide: ICT Development Indices 2004* [online]. Geneva: UN. Available from: <[www.unctad.org/en/docs/iteipc20054\\_en.pdf](http://www.unctad.org/en/docs/iteipc20054_en.pdf)>.

# PAKISTAN

Bytesforall.org<sup>1</sup>

Shahzad Ahmad, Adnan Rehmat, Mukhtar Ahmad Ali and Fouad Riaz Bajwa



## Introduction

Bytesforall.org (B4A) is a South Asian-wide network of information and communications technology (ICT) professionals and practitioners and a member of the Association for Progressive Communications (APC). Under the auspices of APC's Communications and Information Policy Programme (CIPP), B4A Pakistan is managing the Pakistan ICT Policy Monitor Network and maintaining the Pakistan ICT policy portal.

A small team within the Pakistan ICT Policy Monitor Network brainstormed and agreed on the process for compiling this report and on the key focus areas. Efforts were then made to involve different experts and key organisations with expertise in those areas. For example, the section on community radio was written by Internews Pakistan, the section on free and open source software (FOSS) by the Free and Open Source Software Foundation of Pakistan (FOSSFP),<sup>2</sup> and the section on access to information by the Centre for Peace and Development Initiative, Pakistan. This arrangement helped to gather the best possible information on the topics addressed.

## Country situation

Pakistan is a developing country with a population of approximately 160 million. It ranked 134th out of 177 countries on the 2006 Human Development Index (UNDP, 2006). The country faces many development challenges, including extreme poverty, a low literacy rate, poor health facilities, and a fragile socio-political situation, characterised by corruption and a lack of informed decision-making.

The ICT4D (ICT for development) sector in Pakistan is still at a nascent stage, particularly from a civil society perspective. Over the last seven years, however, ICTs have been one of the major focus areas of development for the government. There is a growing realisation among policy-makers that ICTs hold great socioeconomic potential, to the extent that the government is encouraging the use of ICTs at all levels, with planned investment in both infrastructure and technological application. This has resulted in Pakistan having the most extensive internet penetration among the countries of South Asia, with probably the cheapest internet rates. Similar progress has been seen in the development of telecommunications infrastructure, particularly regarding mobile telephony.

A comprehensive IT Policy was formulated in 2000, followed by an ambitious IT Action Plan. But for reasons such as a lack of capacity, corrupt governance structures, and an inability to comprehend the rapid developments in the field, there are not many success stories.

In terms of grassroots ICT4D projects, Pakistan has yet to present a strikingly good example that could be replicated on a larger scale in the country and elsewhere in the developing world. While it may come as a surprise, Pakistan lags behind even Bangladesh and Sri Lanka, not to mention India or Nepal, which can boast of dozens of such initiatives.<sup>3</sup>

**Table 1: Statistics**

Population (estimated January 2007)	159,278,000 *
GDP (2005)	USD 110.7 billion+
GDP growth rate (2005-2006)	6.6% +
Adult literacy rate (age 15 or above)	53% +
Adult literacy rate – male	60% +
Adult literacy rate – female	40% +
MDGs 2015 target for literacy	80% +
Human Development Index (HDI) rank	134th ^
Human Development Index (HDI) value	0.539 ^
Telecom sector share in GDP (2005-2006)	2.0% **
Foreign direct investment in telecom sector	USD 146.9 million **
Total telephone subscribers (fixed) as of Dec. 2006	5,184,132 **
Total telephone subscribers (mobile) as of Dec. 2006	48,289,136 **
Teledensity (total)	10.37% **
Total internet service providers	131 **
Total internet users on dial-up	2.4 million **
Total DSL subscribers	26,611 **
Length of fibre optic link	5,227 km **
Total FM radio licences issued	86 #
FM radios (on-air)	51 #
Total campus FM radios	3 #
Female only campus FM radios	2 #
Total household TV sets	24 million #
Satellite private television licences issued	16 #
Satellite private televisions (on-air)	12 #
Satellite television viewership (urban)	11 million
Satellite television viewership (rural)	3 million #
Cable TV licensees	1,301 #

Sources:

\* Federal Bureau of Statistics (FBS) (<[www.statpak.gov.pk](http://www.statpak.gov.pk)>).  
+ Government of Pakistan (<[www.finance.gov.pk](http://www.finance.gov.pk)>).

^ Human Development Report-UNDP (<[hdr.undp.org/hdr2006/statistics](http://hdr.undp.org/hdr2006/statistics)>).

\*\* Pakistan Telecommunication Authority (PTA) (<[www.pta.gov.pk](http://www.pta.gov.pk)>).

# Pakistan Electronic Media Regulatory Authority (PEMRA) (<[www.pemra.gov.pk](http://www.pemra.gov.pk)>).

1 <[pakistanictpolicy.bytesforall.net](http://pakistanictpolicy.bytesforall.net)>.

2 <[www.fossp.org](http://www.fossp.org)>.

3 "ICTs for Development: Moving out of the Pakistani Paradox", Hasan Rizvi, Sustainable Development Networking Programme, Pakistan.

The following sections highlight three key areas of policy concern: access to information, community radio and free and open source software (FOSS).

### *Access to information: policy and political constraints*

The poor state of governance and weak protection of rights in Pakistan can largely be attributed to a lack of access to information on public affairs, which restricts the ability of citizens, civil society groups and public representatives to effectively monitor the performance of public institutions. Access to information is the first step towards promoting and institutionalising public accountability at various levels. Its absence often results in arbitrary and non-participatory decision-making,<sup>4</sup> weak monitoring, inefficient project execution, human rights violations and rampant financial corruption in public bodies.<sup>5</sup> Lack of access to information also contributes towards sustaining excessive bureaucratic controls and the weakening of democratic institutions.

Almost all government activity in Pakistan currently takes place in a pervasive culture of official secrecy, which is manifested in both official attitudes and various pieces of legislation (e.g. the Official Secrets Act 1923).<sup>6</sup> Any disclosure or sharing of information, if and when it takes place, is on a "need to know" basis, as determined by official authorities, and not in recognition of a "right to know" as one of the fundamental human rights.<sup>7</sup> Citizens have hardly any say or control over public information, even though the information and records held by various government departments may have direct implications for their environment, health, safety and well-being, as well as their ability to make political or economic choices. This particularly affects the weaker sections of the population, as powerful people find it easier to access the required information by using their contacts and influence.

The culture of secrecy is so predominant that it has seriously undermined almost all mechanisms created for providing access to government information. Official statements and media releases often provide one-sided information and lack credibility. Annual reports are either not published or lack details and appropriate analyses which could help in determining the credibility of data presented and assessing the performance of departments. Parliamentary questions lead to the disclosure of some information, but delayed or misleading replies, and the summary dismissal of many questions, especially ones relating to any aspect of the security establishment, are common.

Court proceedings take place in the open and, therefore, can result in the disclosure of useful official information, especially when the case involves government departments. However, the amount of information disclosed is often very little and may not automatically become available to a large number of people unless a particular case attracts substantial media attention. Information could also be made accessible through websites, but most government websites offer little useful content. Similarly, the archives are not properly maintained and updated and it is difficult to access old records. All of this is, partly or wholly, because of the absence of a comprehensive policy that recognises the right to information as a fundamental human right and provides an efficient legislative and institutional framework for its implementation.

The Constitution of Pakistan does not explicitly talk of a right to information (Constituent Assembly, 1947). However, the Supreme Court of Pakistan has interpreted Article 19 of the Constitution, which is about freedom of speech and expression, as including the right to information.<sup>8</sup> Despite this, the government of Pakistan preferred not to refer to it as a constitutional right in the Freedom of Information Ordinance (FOIO) 2002.

The FOIO 2002 is currently in force. The Freedom of Information (FOI) Rules have been developed for its implementation. While about 40 ministries have designated officers who are responsible for dealing with information requests, the FOIO 2002 is extremely flawed, and offers little help in changing the culture of secrecy in government (Government of Pakistan, 2002).

The government needs to take urgent steps to provide a comprehensive legislative and institutional framework for access to information. This must conform to international best practices, including maximum disclosure, obligation to publish, promotion of open government, limited scope of exceptions, minimum costs, processes that facilitate access, open meetings, precedence of disclosure, and protection of whistle-blowers.

The FOIO 2002 does not conform to any of these best practices. It is applicable only to the federal departments and leaves out the provincial and local departments, as well as private organisations (including the ones funded by the government). It does not provide a comprehensive definition of information or records; nor does it provide an efficient mechanism for its implementation and handling complaints. It puts very limited demands on the government departments to proactively disclose information through publications, notice boards and websites. Most importantly, it includes too many exceptions and restrictions, which leave only a few records accessible. The FOI Rules 2004 have imposed further restrictions on public access to information by prescribing strict information request formats and asking high fees and photocopying charges.

A comprehensive policy on the right to access to information is a prerequisite for transparent and accountable governance. But this will only be possible when the government is willing and able to make a critical shift from a culture of secrecy to proactive information disclosure as a matter of fundamental human right.

### *Empowering grassroots Pakistan through community radio*

Until April 2002, Pakistan's electronic media was monopolised by the government, with just the Pakistan Broadcasting Corporation and Pakistan Television ruling the radio and TV airwaves. Heavily propagandist, these channels still give out highly censored news and information. With national newspaper circulation hovering around three million, and no private radio or TV, the majority of the population had no access to reliable, independent and relevant sources of information.

Then the government decided to open the airwaves to private ownership, creating the Pakistan Electronic Media Regulatory Authority (PEMRA) to issue licences for private radio and television. By November 2006, licences for over 100 commercial FM radio stations, two dozen satellite TV channels, an IPTV<sup>9</sup> and two DTH<sup>10</sup> channels had been issued, transforming the country's media scene dramatically.

4 This point was illustrated in 1999 by UN Special Rapporteur Abid Hussain, who said: "Implicit in freedom of expression is the public's right to open access to information and to know what governments are doing on their behalf, without which truth would languish and people's participation in government would remain fragmented." (Article 19, 2001).

5 Pakistan ranked 146th on the Corruption Perception Index (CPI) of Transparency International in 2006 (TI, 2006).

6 Available from: <[www.ijnet.org/Director.aspx?P=MediaLaws&ID=101585&LID=1](http://www.ijnet.org/Director.aspx?P=MediaLaws&ID=101585&LID=1)>.

7 "Freedom of information is a fundamental human right and is the touchstone for all freedoms to which the United Nations is consecrated." (UN, 1946).

8 Supreme Court, Pakistan Legal Decision, PLD 1993 SC 473 and 746.

9 Internet protocol television.

10 "Direct-to-home" satellite TV.

A low literacy rate means that print media circulation figures are also low. Most Pakistanis rely on the electronic media to get their information. Even though private television in Pakistan has begun to reflect the country's diverse society and offer independent sources of news, radio has proved the most effective mass medium. By the end of October 2006, more than 60 FM stations were operational. These filled critical information gaps that television cannot address, attending particularly to local and regional languages.

An official study by PEMRA declares that Pakistan has the potential for over 850 viable FM radio stations, enabling even far-flung communities in information-dark areas to benefit from locally relevant coverage. Radio has the potential to accelerate the pace of socioeconomic transformation sweeping Pakistan. Already the information consumption patterns of Pakistanis have changed as audiences receive information in real time and in local languages. Assisting radio stations to develop information relevant to local communities represents a major opportunity to make communications a cornerstone of the grassroots development process in the country.

This is the bright side. The rapidly evolving legal environment in Pakistan challenges the newer, smarter media to react to critical reform issues in their coverage of the legal rights of citizens, and to realise their potential to educate the public on socioeconomic and political concerns. But the exploding number of radio stations face a chronic shortage of journalists qualified to cover these complicated issues, and to make them understandable to grassroots communities in their own languages. These radio stations need technical assistance to play a more active role in public discussion and to participate in political processes.

Community broadcasting on a mass scale is a relatively new phenomenon – one that has not been served by the dozen or so universities in Pakistan that teach journalism. Some of these universities are only now coming to grips with the need for professional broadcast journalism degrees that can meet the requirements of an emerging community broadcast industry. Internews Network, an international media development non-governmental organisation (NGO), is the only organisation currently helping universities develop broadcast journalism curricula for students and strengthening broadcast journalism generally. This includes investigative journalism courses for radio and television journalists, building campus radio stations and production facilities, starting media law clinics for broadcasters, advocacy and lobbying on media law reforms with stakeholders, and research on media issues.

The challenge of ensuring a community orientation for the radio stations is made more complicated by the fact that the radio stations are set up as commercial enterprises. At the heart of this problem is a technicality. PEMRA issues licences through an open bidding process, which brings “big money” into play at the cost of broad stakeholder involvement. As a result, most operational FM stations in Pakistan are not run by community-based organisations (CBOs) or NGOs.

Several licensees are permitted to run FM stations in multiple cities. In many cases a licensee runs stations in cities or regions where it has no roots, and therefore no stake other than promoting business interests or carving out large slices of advertising revenue for itself.

PEMRA insists that by its very nature every FM station in Pakistan currently has to profile its audiences and respond to local needs. As a result it says the stations are de facto community stations, and that “big money” can only be good for the sustainability of the enterprises.

Despite the challenges, in varying degrees Pakistani commercial FM broadcasters are doubling up as community service centres, at times serving their listeners by offering a variety of information and programming geared towards the local area. This includes paying attention to particular interest groups that are poorly served by other media outlets, and making space for local voices and marginalised groups such as women, CBOs and NGOs.

Such is the success of FM radio stations as local information sources in Pakistan that they have even attracted the attention of ultra-conservative clergy who wish to create new captive audiences. Clerics in parts of Pakistan's North West Frontier Province (NWFP), tribal areas and some parts of Balochistan – all bordering Afghanistan – operate unlicensed, small-range one-way broadcasts, sermonising to increase new spheres of influence for themselves over communities that do not have access to traditional media.

In some instances, mullahs operating these illegal “suitcase” mobile radio stations have been instigating sectarian or ethnic violence that killed about 25 people in 2006 alone. The authorities have conducted crackdowns against these illegal stations, but because they are easy to get up and running, and are low-cost, they crop up again soon after they are closed down. This phenomenon is restricted to areas where no legal licences have been issued, and will continue until PEMRA allows local community-based groups to undertake legal broadcast operations.

The relatively recent phenomenon of private radio in Pakistan has shown the following characteristics:

- Improved timeliness, accuracy and credibility of information flow to communities
- Increased relevance of information reaching local communities
- Increased reach of information to isolated, information-dark areas
- Improved two-way communication flows between and among stakeholders
- Increased flow of information between communities and policy-makers
- Empowered local communities, through inclusion of their voices in the media
- Ongoing attention to the needs of communities in times of disaster
- Increased understanding of the role of local media in emergencies
- Increased space for independent media and professional journalism.

However, the situation on the ground would be altogether better if the radio stations could find roots in a development perspective. A strong policy advocacy campaign is required to encourage PEMRA to consider working with civil society organisations (CSOs) and creating non-profit community radio licensing for nominal fees.

### *FOSS in Pakistan*

FOSS<sup>11</sup> made its way into Pakistan between 1999 and 2004 through a top-level intervention by the Ministry of Information Technology and Telecommunications (MIT)<sup>12</sup> and grassroots interventions by various civil society voluntary community initiatives. These include the Pakistan Linux User Community (PLUC),<sup>13</sup> the Free and Open Source Software Foundation of Pakistan (FOSSFP), the Ubuntu-Linux Pakistan

11 <[www.fosspf.org/fossohy](http://www.fosspf.org/fossohy)>.

12 <[www.moitt.gov.pk](http://www.moitt.gov.pk)>.

13 <[www.linuxpakistan.net](http://www.linuxpakistan.net)>.



Team (Ubuntu LUC),<sup>14</sup> the Linux Professional Institute (LPI),<sup>15</sup> and the Computer Society of Pakistan's Special Interest Group on FOSS.

In 2003, the MIT set up a Task Force for Linux and as a result the Open Source Resource Centre (OSRC) was established by the Pakistan Software Export Board (PSEB) in January 2004 in Islamabad. The centre promotes FOSS in the local IT industry, and also conducts training. Other public sector institutions have joined the drive behind FOSS, such as the Pakistan Computer Bureau, which has trained 4,000 government officials on various IT issues.

The PLUC was formed in December 1999 and now has over 3,500 members. Meanwhile, the FOSSFP and Ubuntu LUC launched the National FOSS Mass Awareness Campaign (FOSSAC). The campaign aimed to educate 7,000 people, notably women, from over 506 organisations nationwide. It provided free-of-charge training, certifying over 4,800 Ubuntu Linux users and distributing 10,000 FOSS CDs. It involved a public sector university partner that donated 700 computers, 22 trainers and 600 volunteers to manage the campaign for four days (16 to 19 August 2005). The FOSSAC case study was highlighted during the World Summit on the Information Society (WSIS) in Tunisia as an example for other countries to learn from.

Within the context of software piracy, nearly all sectors of society are still unaware of the potential benefits of FOSS as an alternative to pirated proprietary software. According to international agencies, the rate of software piracy was 82% in 2006. This was only one percentage point lower than the 83% reported in 2005, despite the government's strict measures to ban the illegal production of CDs and DVDs.

Widespread open source adoption is still lacking within the public and private sectors, due to the absence of concrete policies for FOSS procurement. Widespread adoption and use of FOSS is also lacking amongst CSOs, and can be attributed to a lack of awareness and know-how. Similarly, the country lacks a telecentre programme in the rural regions that can benefit from the combination of FOSS and low-cost refurbished computers.

There is also a lack of women participating in FOSS activities, although small numbers of female students are receiving Linux training as part of the IT curriculum in higher education institutions. Gender-based CSOs continue to lack FOSS capacity.

Pakistanis speak over 70 different regional languages, with the English-speaking community making up less than 10% of the total population. In order to take ICTs to all corners of the country, localised Urdu language content needs to be developed. This includes the translation of software for desktop and server sides. Such efforts are already being made by FOSSFP and Ubuntu-Linux.

FOSS priority recommendations for Pakistan are:

- The government should invite multi-stakeholder partnerships to develop its technical capacity and encourage the formulation of concrete policies that mandate the wide use of FOSS in light of WSIS recommendations.
- FOSS should be adopted within higher education, while the inclusion of women and youth should be the priority of all ICT and FOSS-related activities. A Women Linux Users Group should be formed, and where there are religious or social constraints, women-run telecentres should be established.

- The government should take measures to combat software piracy through making citizens aware of their software freedoms through FOSS capacity development. Small and medium enterprises (SMEs) should be encouraged to use FOSS instead of pirated proprietary software.
- Multi-stakeholder partnerships should be formulated to educate all sectors of society about Digital Commons and alternative copy-righting such as Creative Commons, GPL, Open Standards and Open Content.
- The government should support language localisation efforts, such as those making various Linux distributions available in Urdu.
- The government should encourage the funding of small businesses initiated by women and youth that involve FOSS-based service delivery and business models.
- Telecentre initiatives should be established to promote ICTs and universal access in all rural regions by deploying low-cost refurbished computers running FOSS, instead of pirated or costly licensed proprietary software packages.
- International donors should be encouraged to include FOSS policies in their funding guidelines.

## Participation

The government of Pakistan was part of the WSIS process and actively participated in the global event through the MIT. However, both civil society and the private sector were not represented at the event. A steering committee on the WSIS was formed, but that too had no representation from civil society or the private sector. The committee's membership is still not known.

The one and only WSIS consultation inclusive of all stakeholders was conducted by the Sustainable Development Networking Programme in November 2003.<sup>16</sup> This consultation resulted in an agreement on the greater inclusion of various stakeholders in the WSIS process, but this never happened in subsequent years.

A project that was to be implemented between the Geneva and Tunis phases of the Summit was also agreed on. However, funding could not be provided by the government.

The project had the following three goals:

- Using ICTs to provide the necessary information and to support interaction between different stakeholders, including excluded groups. The information was to focus on education, health, and welfare. A central feature was that the ICT-based interactions would have taken place in Urdu, and possibly other regional languages.
- To adopt a truly multi-stakeholder approach, bringing together the public sector, civil society and the private sector in a clearly defined, balanced and equal relationship.
- To support, from the ground up, the emergence of a multi-stakeholder strategic process for implementing the WSIS in Pakistan.

A large official delegation headed by the prime minister of Pakistan participated in the WSIS in Geneva. At the Summit itself, the honourable prime minister spoke about his government's focus and keenness to harness the potential of ICTs for economic advancement

<sup>14</sup> <[www.ubuntu-pk.org](http://www.ubuntu-pk.org)>.

<sup>15</sup> <[www.lpi.org](http://www.lpi.org)>.

<sup>16</sup> See <[www.wsis.sdnpg.org](http://www.wsis.sdnpg.org)>.

and the social development of the people of Pakistan. In particular, he mentioned that his government had earmarked a significant part of its resources to build the necessary infrastructure, and to develop ICT applications in health, education and public sector management. However, nothing seems to be planted on the ground.

One might believe that the personal presence of the prime minister of Pakistan at the WSIS was a clear indication of the priority accorded by the government to the WSIS process, and to the use of ICTs for social and human development in the country. However, one could also argue that more could have been achieved if there had been proper planning and serious pre-event preparations. In addition, there was never any gender consideration in the composition of the delegation. Only two women participated in the Tunis phase of the WSIS,<sup>17</sup> but as individuals, one being part of the WSIS Youth Caucus, and the other representing a United Nations Development Programme (UNDP) forum. Among other things, this skewed representation resulted in Pakistan becoming a villain in civil society circles.

Various caucuses on diverse themes such as gender, youth, special people, science and trade were set up with representation from all over the world, but unfortunately Pakistan had no planned presence in any of these (other than the youth caucus in the Tunis phase). One can say that Pakistan as a nation never gave WSIS serious thought or considered how it could impact on the country's long-term future.

## Conclusions

Even though the government is committed to the development of ICTs in Pakistan, the country is a graveyard of many failed and unsuccessful projects. Unfortunately, the government seems committed to implementing every initiative on its own, without the involvement of CSOs or other relevant stakeholders.

On the other hand, CSOs have no access to funds to pilot innovative, development-oriented projects. Government rules and procedures do not facilitate access to funding, a situation that needs to be changed immediately.

There has been no consultation with CSOs before embarking upon big ICT-related projects. In ICT development projects, commercial interests nearly always take precedence over development interests. The exorbitant FM radio licensing fees is one example.

It is also clear that mainstreaming gender in the development process is not a priority for the government. There have been no initiatives where gender empowerment through ICTs could be addressed.

Unfortunately, the government takes massive loans from the World Bank and others but there are practically no checks to gauge the success of the initiatives they spend the money on, or ways of helping to root out corruption in the implementation of projects. There are hardly any monitoring and evaluation processes.

There is a serious lack of capacity in a whole range of different fields which needs to be bridged immediately if the country intends to make any advancement in the field of ICTs for development. Pakistan's IT Policy and IT Action Plan need an immediate review. Strong policy advocacy is required from CSOs, and continuous engagement with the government at all levels is needed, so that the goal of people-friendly and people-centred policies can be achieved. ■

## References

- Article 19 (2001). *Global Trends on the Right to Information: A Survey of South Asia* [online]. (n.p.): Article 19, Centre for Policy Alternatives, Commonwealth Human Rights Initiative, Human Rights Commission of Pakistan. Available from: <[www.article19.org/pdfs/publications/south-asia-foi-survey.pdf](http://www.article19.org/pdfs/publications/south-asia-foi-survey.pdf)>.
- Constituent Assembly (1947). *The Constitution of the Islamic Republic of Pakistan* [online]. Available from: <[www.pakistani.org/pakistan/constitution](http://www.pakistani.org/pakistan/constitution)>.
- Government of Pakistan (2002). *Freedom of Information Ordinance* [online]. Available from: <[www.pakistan.gov.pk/cabinet-test/policies/foio.jsp](http://www.pakistan.gov.pk/cabinet-test/policies/foio.jsp)>.
- TI (Transparency International) (2006). *CPI Table* [online]. Available from: <[www.transparency.org/news\\_room/in\\_focus/2006/cpi\\_2006\\_\\_1/cpi\\_table](http://www.transparency.org/news_room/in_focus/2006/cpi_2006__1/cpi_table)>.
- UN (United Nations) (1946). *59 (I). Calling of an International Conference on Freedom of Information* [online]. Available from: <[daccesssdds.un.org/doc/RESOLUTION/GEN/NR0/033/10/IMG/NR003310.pdf?OpenElement](http://daccesssdds.un.org/doc/RESOLUTION/GEN/NR0/033/10/IMG/NR003310.pdf?OpenElement)>.
- UNDP (United Nations Development Programme) (2006). *Human Development Report 2006. Beyond scarcity: Power, poverty and the global water crisis* [online]. New York: UN. Available from: <[hdr.undp.org/hdr2006/pdfs/report/HDR06-complete.pdf](http://hdr.undp.org/hdr2006/pdfs/report/HDR06-complete.pdf)>.
- IIPA (International Intellectual Property Alliance) (2006). *Special 301 Report on Global Copyright Protection and Enforcement, Pakistan* [online]. Available from: <[www.iipa.com/rbc/2006/2006SPEC301PAKISTAN.pdf](http://www.iipa.com/rbc/2006/2006SPEC301PAKISTAN.pdf)>.
- Dravis, P. (2003). *Open Source Software - Perspectives for Development* [online]. Available from: <[www.infodev.org/en/Document.21.aspx](http://www.infodev.org/en/Document.21.aspx)>.

17 <[www.itu.int/wsis/tunis/newsroom/highlights/18nov.html](http://www.itu.int/wsis/tunis/newsroom/highlights/18nov.html)>.

# PERU

TIC.pe<sup>1</sup>

Miguel Saravia, Erick Iriarte<sup>2</sup>



## Introduction

This report attempts to summarise the status of the information society in Peru by analysing the data offered by the National Institute of Statistics and Computing and considering the reflections of various national actors.

With regard to information and communications technology (ICT) policies in Peru, 2006 was a year of both progress and setbacks. It marked the end of Alejandro Toledo's *Perú Posible* party government and the beginning of the one led by Alan García of the APRA party (*Partido Aprista Peruano*), providing democratic continuity which is important for Peru's stability. Toledo began his government five years earlier with the Huascarán Plan<sup>3</sup> and ended it leaving in place a follow-up commission for the Commission for the Development of the Information Society (CODESI), which is also known as CODESI 2.

The APRA government does not have a clear programme regarding the information society, despite the fact that the president himself identifies it as a priority area for the country (García, 2003). On the contrary, some worrisome measures have been taken, such as the dismantling, for all practical purposes, of the National Institute of Research and Training in Telecommunications (INICTEL)<sup>4</sup> and budget cuts for the National Council of Science, Technology and Technological Innovation (CONCYTEC).<sup>5</sup> Also unclear is the strategic purpose for the absorption of the Fund for Investment in Telecommunications (FITEL)<sup>6</sup> into the Ministry of Transportation and Communications (MTC),<sup>7</sup> a move which appears to be aimed more at reducing state bureaucracy than part of any government policy in the area of the information society.

Moreover, even with the development and publication of a national strategy on ICTs, the Digital Agenda for Peru (CODESI, 2005) remains more a technological policy than a state development policy: it is not part of the national process of dialogue initiated by the government and aimed at establishing government policies for the next 20 years, known as the National Accord.<sup>8</sup>

Even though public policy in Peru has prioritised the installation of infrastructure, the year 2006 also allowed for the opening of important spaces for dialogue and proposals around ICT policies. These spaces, however, have yet to include broad sectors of society or to ensure that the policies related to the information society cut across the entire government. Until this happens, Peru's citizens will continue to be spectators and not protagonists.

This report is based on a study undertaken by Miguel Saravia as a contribution to the research project *Acceso efectivo y en igualdad de oportunidades de las comunidades rurales a la radiodifusión, estrategia clave de inclusión digital para América Latina y el Caribe* (Effective and equal access to radio broadcasting for rural communities, a key digital inclusion strategy for Latin America and the Caribbean). The study was undertaken at the request of the Association for Progressive Communications (APC) and financed by the Regional Fund for Digital Research in the Americas (FRIDA). This report also draws on the *Reporte sobre Sociedad de la Información en el Perú* (Report on the Information Society in Peru) prepared by Erick Iriarte for *Perú-Digital*.<sup>9</sup> The authors also consulted other reports and articles published on the *Perú-Digital* list and on the *Blog TIC\_Rural* (Rural ICT Blog),<sup>10</sup> among other sources of information.

## Country situation

The Peruvian government subscribes to the definition of the information society set forth in the Declaration of the Latin America and Caribbean Regional Conference for the First Phase of the World Summit on the Information Society (WSIS), which took place in Bávaro, Dominican Republic, in January 2003. According to this declaration, the information society is "an economic and social system where knowledge and information constitute fundamental sources of well-being and progress and [...] represents an opportunity for our countries and societies." The declaration has a strong human rights perspective, and states that the development of the information society requires a "deeper appreciation of fundamental principles, such as those of respect for human rights within the broader context of fundamental rights, democracy, environmental protection, the advancement of peace, the right to development, fundamental freedoms, economic progress and social equity" (ECLAC, 2003).

In 2001 the Multi-Sectoral Commission to Broaden Public Internet Use was created to organise the various initiatives being designed by the new government. It produced the document *e-Perú: Propuestas para un Plan de Acción para el Acceso Democrático a la Sociedad Global de la Información y el Conocimiento* (e-Peru: Proposals for an Action Plan for Democratic Access to the Global Information and Knowledge Society) (CMMUI, 2001). At the same time, all public offices were obliged by law to prepare action plans referring to the information society, measures for access to public information, and content for webpages. This decree included local governments.

Several government bodies have developed initiatives for the information society. In 2002, CONCYTEC, INICTEL, the Oversight Body for Private Investment in Telecommunications (OSIPTEL), the National Institute for Statistics and Computing, the Presidency of the Council of Ministers and the MTC formed a working group to create a National Information Society Plan appropriate to the Peruvian situation. While progress was made in the design of the plan, it was also evident that the degree of consensus on all its points was still insufficient, and

1 A collective formed by Alfa-Redi (<[www.alfa-redi.org](http://www.alfa-redi.org)>), the Consortium for the Sustainable Development of the Andean Ecoregion/InfoAndina (CONDESAN) (<[www.condesan.org](http://www.condesan.org)>) and the Peruvian Centre for Social Studies (CEPES) (<[www.cepes.org.pe](http://www.cepes.org.pe)>).

2 Maicu Alvarado also contributed to this report.

3 See: <[www.huascarán.gob.pe](http://www.huascarán.gob.pe)>.

4 <[www.inictel.gob.pe](http://www.inictel.gob.pe)>.

5 <[www.concytec.gob.pe](http://www.concytec.gob.pe)>.

6 Universal access fund in Peru. For more information see: <[www.fitel.gob.pe](http://www.fitel.gob.pe)>.

7 <[www.mtc.gob.pe](http://www.mtc.gob.pe)>.

8 <[www.acuerdonacional.gob.pe](http://www.acuerdonacional.gob.pe)>.

9 <[www.dgroups.org/groups/peru-digital](http://www.dgroups.org/groups/peru-digital)>.

10 <[tic\\_rural.blogspot.com](http://tic_rural.blogspot.com)>.

that it was necessary to work on guidelines for a national strategy that would get the country on track towards an information society.

During 2003, with the first phase of the WSIS approaching, the Presidency of the Council of Ministers relaunched its e-government strategy and linked it to the process of modernising the state, which was started in 2004 with funding of approximately USD 300 million from the Inter-American Development Bank (IADB).

That year the Presidency of the Council of Ministers also created the Multi-Sectoral Commission for the Development of the Information Society (CODESI)<sup>11</sup> as an entity charged with creating “a plan for the development of the information society in Peru, which should include a diagnostic of Peru’s current situation within the context of the information society, the actions that must be taken to develop it, and the proposed rules and measures that facilitate the appropriate development, implementation and promotion of the information society in Peru” (Council of Ministers, 2003).

On its website, CODESI declares its support for a society that gives priority to resolving poverty and other inequalities in a sustainable way. In order to achieve this goal, the participation and commitment of every generation is required, ensuring the intervention of a variety of social and linguistic groups, cultures and peoples. Special attention must be paid to “those most exposed to exclusion, discrimination and prejudice,” while also promoting gender equity.

The plan for the development of the information society designed by CODESI, the Digital Agenda for Peru, points out that “ICTs can be used either to exacerbate or transform unequal power relations. ICTs can be powerful tools for social action and positive social change, can contribute to building gender equality, and eliminate poverty caused by social status, gender, race, capabilities and age” (CODESI, 2005, Chapter II).

The government’s concrete mechanisms for the development of the information society are the Fund for Investment in Telecommunications (FITEL) and the Projects Office of the Vice Ministry of Communications of the MTC.

While FITEL has concentrated on the expansion of the telephonic network in rural areas through subsidising operators, and some actions related to facilitating internet access, the MTC has worked on developing an electronic platform for the state, and has several initiatives related to internet access centres in its portfolio. However, a clear relationship between the two institutions has not yet been established in order to avoid duplication and ensure a more rational use of the state’s resources.

### *Investments in ICT*

Peru’s telecommunications market was liberalised in 1999 and has open competition in fixed and mobile telephone networks, internet and value-added services. The number of mobile telephone subscribers reached that of fixed telephone subscribers in 2001, and the mobile market is continually expanding. According to OSIPTEL data, teledensity for fixed telephones systems went from 3.21% in 1994 to 7.20% in 2004. For mobile telephones, the levels rose from 0.16% in 1993 to more than 13% in 2004.<sup>12</sup>

Since 1991, when the liberalisation process began, there have been many measures to help promote the opening of the market, encourage investment in critical areas, and guarantee minimal conditions for competition in Peru’s telecommunications sector. However,

as the Peruvian Scientific Network (RCP) points out, despite these measures, teledensity in Peru remains below other countries in the region:

Disparities due to socioeconomic and regional strata persist in our country – meaning that sectors with fewer resources have limited access to these services – and there has been a marked deceleration of growth in fixed telephone systems in recent years. The industry’s structure shows high levels of concentration, and there is a limited supply of services responding to the needs and demands of consumers with lower incomes, mainly in smaller cities and in the urban periphery zones.<sup>13</sup>

Investments in telecommunications have been led by foreign capital, especially by Telefónica de Perú (part of Telefónica España), a company with which the Peruvian government has held a contract since 1994. These investments have principally benefited the inhabitants of Lima and to a lesser degree those of the rest of the country (Campodónico, 1999).

In October 2006 the government proposed renegotiating the Telefónica contract, seeking to lower rates but maintain investment in technological innovation. According to the ministry governing this sector, the investment “would allow for educational, professional, and business needs to be met as well as access to government services... Investment to increase access to the internet through broadband would allow for a reduction in the existing digital divide. This effort would contribute to achieving the goal of one million connections by the year 2011” (MTC, 2006a).

### *Regulatory limitations*

The MTC and OSIPTEL are in charge of regulating the telecommunications public service networks in Peru. The regulatory framework is defined by:<sup>14</sup>

- Universal Access Policy Guidelines
  - General Policy Guidelines for Promoting Internet Access in Peru
  - Policy Guidelines for Promoting Greater Access to Telecommunications Services in Rural Areas.
- Moscol Salina (2003) points to regulatory limitations on the installation of ICT infrastructure in rural areas:
- The rules for interconnection are insufficient for the development of infrastructure in rural areas.
  - Requirements for market access must be reduced or removed, for instance, by reducing taxes for telecommunication services in rural areas.
  - It is necessary to develop an appropriate legal framework for electronic security and e-commerce that protects users.
  - Internet access has not been defined as a public telecommunications service. There is also a regulatory vacuum for centres providing internet service.
  - It is necessary to share infrastructure between urban and rural networks. Institutions should be obliged to share infrastructure when there are economic or technical limitations preventing communities or sectors from participating in the information society.

11 <200.62.145.115>.

12 <www.osiptel.gob.pe>.

13 Internet Atlas produced by RCP. <www.yachay.com.pe/especiales/internet>.

14 See <www.osiptel.gob.pe/Index.ASP?T=P&P=2727> for more information on the legal framework.

At the same time, the development of content and local training is needed, especially for the educational, health and economic sectors and others necessary for rural development.

These barriers affect access to new technologies and the sustainability of new enterprises, facilitate concentration of media ownership into a few hands, and make the participation of the community in the development of the information society difficult.

OSIPTEL and the MTC have made progress in the development of regulations aimed at partially resolving the challenges, with an emphasis on the problem of access. Nevertheless, as the Telecommunications Sector Analysis and Forecasting Group (GAPTEL)<sup>15</sup> of Spain points out, the emergence of wireless technologies and broadband are creating new regulatory challenges that go beyond access and involve better management of the spectrum to assure greater supply. There is also a need to establish rules governing the relationship between a regulated service, such as telecommunications, and an unregulated one, such as the provision of content.

In response to the above, the MTC has proposed a process of “single concession”, defined as “the right to provide all public telecommunications services” (MTC, 2006b, Art. 47).

As for wireless technologies, the General Regulations of the Telecommunications Law define the radio frequency spectrum as a limited natural resource that is part of the nation's heritage. The MTC is responsible for the administration, assignment and control of the frequency spectrum. The same regulations state that the assignment of the spectrum in the bands identified by fixed wireless access systems, and primarily designated for public telecommunications services, will take place through public tender in areas with restrictions on the availability of frequencies.<sup>16</sup>

However, according to the general manager of OSIPTEL, WiMax in Peru is only used to transmit data, which is not regulated. In addition, he believes that as long as WiMax infrastructure does not expand, no regulation is necessary.

The administration of FTEL was initially the responsibility of OSIPTEL (MTC, 1993). Through Law No. 28900, published on 4 November 2006, FTEL was attached to the MTC, allowing a maximum of 60 days for OSIPTEL to transfer its administration to the ministry, which will continue to approve the projects declared viable and grant the corresponding concessions.

### Statistics

Indicators from the National Institute of Statistics and Computing show that as of October 2006, 28.65% of the total number of homes had a fixed telephone, 32.49% of homes had a mobile phone, 15.45% of homes had access to cable television and only 6.05% had access to the internet (INEI, 2006).<sup>17</sup>

If we compare the penetration of fixed telephone networks, mobile networks, cable TV and internet in Peruvian homes by geographic

area, we can see that all ICTs grew significantly in population centres of more than 2,000 inhabitants in the August-October 2006 quarter, compared to the same period in 2005.

Interestingly, mobile telephony in the metropolitan area of Lima (59.1%) has reached the number of fixed-line subscribers (59.8%), while in population centres of more than 2,000 inhabitants mobile phones (35.9%) are already more prolific than fixed-lines (29.97%).

For population centres of less than 2,000 inhabitants – that is, rural areas – there is limited presence of ICTs. Only fixed and mobile telephones showed significant levels in the quarter analysed. Moreover, more people by far own a mobile phone compared to a fixed-line telephone.

While 4.4% of homes had computers in 2000, this percentage increased to 6.8% in the period 2003-2004. Taking area of residence into account, we find important differences in the number of homes with computers, as well as other ICT services. As of October 2006, 29.06% of the homes in the Metropolitan Area of Lima had a computer, while only 13.39% of the homes in the remaining urban area and 0.72% of rural homes had computers.

*Cabinas públicas* (cybercafés) have been an important factor in internet access in Peru, and the figures indicate that they will continue to play a key role. Between 2005 and 2006 there was a major increase in the number of people who use them. For the period August-October 2006, 42.06% of homes had at least one person who used *cabinas públicas* for internet access. The percentage for the same period in 2005 was 27.24% of homes.

Other public institutions have carried out research that provides essential information for policy design. OSIPTEL carried out several research projects between 2003 and 2005 (Villafuerte, 2005) which showed that the internet has little impact on the rural population, and that the main internet users in rural areas are not the rural inhabitants themselves, but city dwellers who find themselves temporarily in the area for work reasons.<sup>18</sup>

### A rights-based approach

In January 2007 the Office of the Ombudsman presented its report *El desafío de la telefonía rural: una mirada desde los ciudadanos* (The challenge of rural telephone networks: a citizens' view) in which it proposes placing on the public agenda the issue of access to a public telephone service of reasonable quality in rural areas, preferably for social benefit (Office of the Ombudsman, 2007).

This is a rights-based approach, which understands that when we speak of the information society, we are speaking about people. Echoing what is stated in the Telecommunications Law,<sup>19</sup> the report declares that providing access to these public services reaffirms the government's policies of inclusion. It also facilitates the implementation of strategies of citizen registration and identification, allowing a greater number of people in disadvantaged situations to be included in development projects. In addition, it means reducing many transaction costs when buying or selling goods or services, particularly for rural people.

<sup>15</sup> <observatorio.red.es>.

<sup>16</sup> Article 128. The granting of a concession, as well as the assignments of the corresponding spectrum, must take place through public tender of offers when: 1. In a certain locality or service area there is a restriction in availability of frequencies or band of frequencies for the provision of a specific public telecommunications service; 2. It is indicated in the National Plan for Frequency Assignment (*Plan Nacional de Atribución de Frecuencias*); 3. The number of concessionaries for a specific public service covered by article 70 of the Law is restricted due to technical restrictions based on limited resources.

<sup>17</sup> While the Institute has very precise statistics, it is unclear how these are used to shape public policy.

<sup>18</sup> See: <tic\_rural.blogspot.com/2006/05/dia-mundial-de-la-sociedad-de-la.html>.

<sup>19</sup> As stated in the *Texto Único Ordenado* of the Communications Law, telecommunications are provided under the principle of service with equity (article 5), whereby all have the right to use telecommunications services (article 3). The right to their use covers the entire country promoting the integration of areas at great distances from urban centres (article 5) (MTC, 1993).

The Ombudsman's report sets out important conclusions which are in fact a call for public action. It concludes, for example, that investment by FTEL has stagnated, and calls for stronger mechanisms for transparency and citizen oversight in FTEL's operations after its incorporation and attachment to the MTC.

But it is under the section on recommendations that we find the most valuable contribution of the Ombudsman's report, not only because it clearly calls for independent management of FTEL, but because it sets forth the urgent need for the country's Congress to re-define the allocation of FTEL's resources in order to broaden the "universal access" concept to include that of "universal service". This would allow for a scaling up in the implementation of fixed lines in rural areas. It also proposes that FTEL assign more resources to developing capacity in rural areas, a demand that has been insistently made by various civil society actors.

### *Regional and international context*

The first meeting of the Internet Governance Forum (IGF)<sup>20</sup> in Athens towards the end of 2006 provided a vision of the upcoming international dialogue on the subject of internet governance. It attempted to achieve the necessary balance between access to information, development of content, maintenance of infrastructure and protection for internet users. This is a delicate balance which is often upset. In 2007 the IGF meeting will take place in Rio de Janeiro, which will allow for a greater presence of Latin American participants.

An important milestone for the development of information society policies in the region was reached in the 36<sup>th</sup> General Assembly of the Organisation of American States (OAS) in 2006. The OAS member countries adopted the Declaration of Santo Domingo: Good Governance and Development in the Knowledge-Based Society, with a clear emphasis on the use of ICTs for development. The first item of the Declaration of Santo Domingo (OAS, 2006) underlines the need to:

Emphasise the importance of information and communication technologies (ICTs) as crosscutting tools for achieving equitable and sustainable development and strengthening good governance, the promotion and protection of human rights, as well as the need to work intensely to ensure that every person in the Americas, particularly those in situations of vulnerability or with special needs, may participate in the benefits generated by the knowledge-based society.

In addition, the Regional Plan of Action for the Information Society in Latin America and the Caribbean (eLAC2007) has continued to move forward. The eLAC working groups have generated agenda items for the next meeting in November 2007 in El Salvador, where their work will be evaluated and a longer-range strategy (probably going until 2011) will be designed.

At a sub-regional level, the Andean Forum on the Information Society was convened by the National Telecommunications Council of Ecuador (CONATEL) in September 2006. At this meeting it was determined that the Andean Committee of Telecommunications Authorities (CAATEL)<sup>21</sup> should work on the development of an Andean strategy in line with existing policies and the WSIS and eLAC 2007 documents.<sup>22</sup>

20 <[www.intgovforum.org](http://www.intgovforum.org)>.

21 The member countries of CAATEL are Bolivia, Colombia, Ecuador, Peru and Venezuela, which comprise the Andean sub-region of South America.

22 For more information, see: <[www.funredes.org/mistica/castellano/ciberoteca/participantes/docupart/Informe\\_Foro\\_Andino\\_de\\_SI.rtf](http://www.funredes.org/mistica/castellano/ciberoteca/participantes/docupart/Informe_Foro_Andino_de_SI.rtf)>.

## **Participation**

At first there were no mechanisms for civil society to access discussions about establishing a digital agenda in Peru. When the Commission for the Development of the Information Society (CODESI) was made official, its exceptional nature was noted, since it allowed civil society participation: "[A]s necessary, CODESI may ask other bodies, institutions, unions and associations in general, public or private, and specialists, for the advice, information and support necessary to fulfill its objective" (Council of Ministers, 2003) While this occurred in each of the commissions created by CODESI, and civil society supported the work of the commission, very little has been done to bring about a change to the hegemonic structures that govern the development of the information society in Peru.

OSIPEL and the MTC have established consultation mechanisms for policy and regulation projects, opening up the possibility for participation by different sectors of society. But this opening does not translate into a real possibility for participation in decision-making.

FTEL provided an opportunity for civil society organisations (CSOs) to present projects that would be financed with resources from the Fund. However, the mechanisms for actually receiving the financing are very complicated and require years of continual negotiation. The Vice Ministry of Communications' Projects Office has not provided opportunities for engagement in implementing projects, and all the initiatives are directly implemented by the Projects Office or in conjunction with other state entities.

Various CSOs have begun contacting each other, spurred by a need to join together to create an agenda that allows them to design a common strategy. This process has resulted in the creation of the Private Council for a Digital Agenda for Peru (CPAD),<sup>23</sup> initially formed by the Committee for Information Technologies of the Chamber of Commerce of Lima, the Peruvian Association of Internet Service Companies, COMMON Peru (Association of Information Technology User Companies) and Alfa-Redi.

Since May 2005, Perú-Digital<sup>24</sup> has been the electronic discussion space for issues related to the information society in Peru. More than 300 messages circulate monthly on the list, which brings together more than 370 social actors involved in information society processes in Peru. The presence of political actors and policy-makers on the list has allowed collective reflection to inform some political decisions. The list has become, in effect, the most important space for engagement by civil society and the private sector.

## **Conclusions**

In analysing the development of information society policies in Peru, we come up against a structure that still perceives ICT issues as "technical" issues, in which the relevant political actors have yet to take the reins.

A multi-sectoral commission set up to monitor the implementation of the Digital Agenda for Peru (developed by CODESI) is one of the spaces from which there has been an attempt to carry forward a coordinated effort for a national ICT strategy. However, a document worked on between 2003 and 2004 and finalised in April 2005, which then spent all of 2006 under "review", was overtaken by reality. An update of the Agenda found that many of the goals had

23 <[www.agendadigital.org](http://www.agendadigital.org)>.

24 <[www.dgroups.org/groups/peru-digital](http://www.dgroups.org/groups/peru-digital)>.

no baseline, making the setting of minimal indicators the first task (which OSIPTEL has efficiently done).<sup>25</sup>

Aside from this, CODESI's greatest contribution has perhaps been the promotion of dialogue, the search for consensus, placing the issue of the information society on the agenda and helping to understand that the phenomenon is not just technological.

The dialogue with the CPAD has led to the understanding that public efforts cannot be separated from private ones, and that a shared agenda is more than necessary. Above all, the need to make the themes of the information society a government priority has become evident, just as they are being prioritised in the private sector and in civil society, and are reflected in the activities of international and regional bodies.

While some countries create specialised institutions for research on infrastructure topics, the one that existed in Peru (INICTEL) – and that needed improvement and updated goals – was dismantled.

We have said that 2006 saw progress and setbacks with regard to ICT policies in Peru. It resulted in a fruitful and constructive dialogue among activists, academics and businesspeople linked to ICTs, and a positive balance with respect to the consensus generated at certain levels of public administration regarding the sector's needed reforms, beyond the installation of infrastructure. We now possess valuable information for directing and guiding policies, and there is an entity (the Office of the Ombudsman) charged with rigorously ensuring that citizens are the principal beneficiaries of the reforms implemented.

On the other hand, 2006 has left many questions. Among them: How does the dismantling of INICTEL fit into plans for the information society? How would renegotiation with Telefónica help increase internet penetration in Peru? Why has CODESI 2 not created a space for political dialogue with the relevant actors? It is also worth asking about follow-up on promising experiences such as the Multi-Sectoral Commission on Computer and ICT Crimes led by the MTC and the Multi-Sectoral Commission on Domain Names, as well as necessary legislation such as the legislation on protection of personal data.

For non-governmental actors, questions also arise. What is the private sector's responsibility in creating public-private alliances on issues of ICT for development? How is civil society involved in the processes of the information society? What are non-governmental actors doing on the issue of digital literacy? How can we move from reflection to direct action?

From another perspective we could ask ourselves how local efforts have been meshed in the context of a regional and global process like the information society, and how we can ensure that Peru's efforts are not disconnected from regional trends. To what degree can Peru lead and become an engine of regional processes in ICT policies?

The year 2006 also left a negative balance of government reform that is not based on an understanding of how to move the country's information society forward. In particular, it left unresolved the urgent need for a government ICT policy incorporated into the National Accord, and therefore by consensus of the various political forces.

Deepening political dialogue, expanding public-private alliances and continuing to safeguard the development of the information society are three things that should be priorities for those who are working to make Peru a more equitable and just society. ■

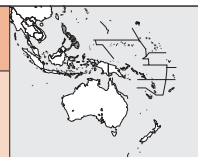
## References

- Campodónico, H. (1999). *La inversión en el sector de telecomunicaciones en el Perú: 1994-2000* [online]. Available from: <www.eclac.cl/publicaciones/xml/4/4544/1c/1206e.pdf>.
- CMMI (Comisión Multisectorial de Masificación de Internet) (2001). *e-Perú: Propuestas para un Plan de Acción para el Acceso Democrático a la Sociedad Global de la Información y el Conocimiento* [online]. Available from: <www.yachay.com.pe/cumbre/doc/doc7.pdf>.
- CODESI (Comisión Multisectorial para el Desarrollo de la Sociedad de la Información) (2005). *Plan de desarrollo de la sociedad de la información en el Perú. La agenda digital peruana* [online]. Lima: CODESI. Available from: <www.peru.gob.pe/AgendaDigitalPeru/pdf/CODESI%20-%20Presentacion.pdf>.
- Council of Ministers (2003). *Resolución Ministerial Nº 181-2003-PCM* [online]. Available from: <tinyurl.com/2gmu5p>.
- ECLAC (Economic Commission for Latin America and the Caribbean) (2003). *Bávaro Declaration* [online]. Available from: <www.eclac.cl/prensa/noticias/noticias/0/11720/BavaroFinaling.pdf>.
- García, A. (2003). *Modernidad y política en el siglo XXI: globalización con justicia social*. Lima: Matices.
- INEI (Instituto Nacional de Estadística e Informática) (2006). *Las Tecnologías de Información y Comunicación en los Hogares* [online]. Available from: <onairosjs.files.wordpress.com/2007/01/inei.pdf>.
- MTC (Ministerio de Transporte y Comunicaciones) (1993). *Decreto Supremo Nº 013-93-TCC. Aprueba el Texto Único Ordenado de la Ley de Telecomunicaciones* [online]. Available from: <tinyurl.com/yuxn3b>.
- MTC (2006a). *Resultados del Proceso de Negociación con Telefónica* [online]. Available from: <www.mtc.gob.pe/portal/comunicacion\_version\_final2.ppt>.
- MTC (2006b) *Ley que establece la concesión única para la prestación de servicios públicos de telecomunicaciones* [online]. Available from: <tinyurl.com/24sll0>.
- Moscol Salina, A. (2003). "Regulación Legal Peruana de las Infraestructuras de la Información en Areas Rurales". *Alfa-redi* [online], December 2003. Available from: <www.alfa-redi.com/rdi-articulo.shtml?x=1260>.
- OAS (Organisation of American States) (2006). *Declaración de Santo Domingo. Gobernabilidad y desarrollo en la Sociedad del Conocimiento* [online]. Available from: <www.oas.org/36AG/espanol/doc\_Res/46.doc>.
- Office of the Ombudsman (2007). *Informe defensorial Nº 117. El desafío de la telefonía rural: una mirada desde los ciudadanos* [online]. Available from: <www.ombudsman.gob.pe/descargar.php?cod=963>.
- Villafuerte, D. (2005). Encuesta telefónica sobre uso de monocabinas de acceso a Internet en capitales de distrito.

25 This is in accordance with the regional goals established in the preparatory process of the second phase of WSIS in Latin America and eLAC 2007 (<www.eclac.cl/socinfo/elac>).

# PHILIPPINES

Foundation for Media Alternatives<sup>1</sup>  
Alan Alegre and Philip Arnold Tuaño<sup>2</sup>



## Introduction

The Republic of the Philippines, with a population of almost 90 million, is an archipelago of more than 7,100 islands spread over 300,000 square km. It occupies a strategic position within the Southeast Asian region. The Philippines emerged, after a 425-year history of colonialism and a recent traumatic period of authoritarianism, as a flawed democracy labouring under continuing economic underdevelopment and periodic political upheaval.

The country has been ruled by a succession of elected governments by and large representing political elites who are also dominant in the economy, including the media and information and communications technology (ICT) sectors. The economy continues to struggle amidst a shifting globalised world order: economic growth is sluggish, poverty still widespread, and wide income disparities endure.<sup>3</sup> Political crises hound the administration of current President Gloria Macapagal Arroyo, amidst lingering questions on her 2004 electoral mandate.<sup>4</sup> Armed challenges from communist rebels and Muslim separatists persist, and a restive military continues to gain influence in the country's political life. At the same time, however, Philippine civil society is one of the most vibrant in the world, and continues to be at the forefront in advocating for good governance, sustainable development, socioeconomic and political reforms, and communication rights.

After the Martial Law years,<sup>5</sup> freedom of expression naturally exploded, and a largely free (and freewheeling) press and mass media regained its pre-Martial Law reputation as one of the most liberal in the region. Ironically, despite a free press, working in the Philippine media was recently considered a dangerous job for journalists – many have been murdered over the past five years.<sup>6</sup>

The telecommunications sector was deregulated in the 1990s, and universal access to telephony rose steadily, especially with the recent boom in mobile phones and short messaging service (SMS).

The Philippines formally linked to the internet in 1994, and it remains largely unregulated today. Though the infrastructure is present, access rates for the majority of the population remain low. The neoliberal free market economic paradigm continues to be contested, including within the communications sectors, where significant sections are dominated by big private enterprises and conglomerates. ICTs are embraced in national plans for their socioeconomic potential, but ICT and internet governance is uneven due to limited state capacity, lack of resources, and occasional regulatory capture by dominant market players.

This report seeks to present national trends in the country's ICT sector, with a particular emphasis on the framework for ICT policy and governance in the Philippines. It also looks at how civil society has been engaged in this arena.

The first of two main sections seeks to give a brief national overview. Its sub-sections look to provide both the context for public policy, as well as an initial evaluation by civil society of the current state of existing ICT plans.

The next section provides a short assessment of people's participation in ICT policy and governance for the period 2000 to 2006, with a description of civil society engagement in the policy process. It ends with an evaluation of recurring issues that still have to be addressed by development stakeholders, particularly civil society organisations (CSOs).

The choice of what to include in this report is informed by it being the *first* one on the Philippines information society to be part of a collection of reports that will be updated periodically. It hopes to serve as a conceptual baseline for looking at ICT policy and governance in the Philippines. Specific areas introduced here can be further fleshed out in future publications.

This report draws from research conducted by the Foundation for Media Alternatives (FMA) dealing with many of the policy areas and themes under discussion. It reflects a perspective of *advocates-in-action* – the public policy issues pertaining to people's participation in the policy process are ongoing advocacy concerns for CSOs in the Philippines (including the FMA). Actual CSO engagement serves as the experiential backbone of this report, which the authors hope will serve to unite diverse constituencies of communication rights advocates, and build a common public interest front for multi-stakeholder policy initiatives in 2007 and beyond.

## Country situation

### Indicators and statistics

#### National Indicators

**Telephony:** The Philippines has around 6.5 million installed fixed phone lines, but only a little more than half (3.4 million) are subscribed – an indicator of the service's continuing lack of affordability for a significant portion of the population. Still, liberalisation and competition during the 1990s has served to move the Philippines from a country with a teledensity of less than one telephone for every 100 persons in

1 <[www.fma.ph](http://www.fma.ph)>.

2 With research assistance from Nina Somera.

3 From a ranking of 77th in 2000, the Philippines dropped to 84th in the 2006 United Nations Development Programme's Human Development Report (UNDP, 2006).

4 There were two failed attempts to impeach Arroyo in Congress, after she admitted phoning a top election official at the height of the 2004 vote counting. This triggered prominent Cabinet resignations and periodic street protests in 2005–2006. She has so far survived, labelling the protests part of a rightist-leftist conspiracy to oust her.

5 This refers to the period from 1972 to 1986. Then-president Ferdinand Marcos declared martial law in September 1972, and established authoritarian rule up to the time he was ousted in a popular uprising in February 1986, which came to be known as the EDSA People Power Revolt.

6 For a state of the country's media, see the website of the National Union of Journalists of the Philippines (<[www.nujp.org](http://www.nujp.org)>) and reports from international groups such as Reporters Without Borders (<[www.rsf.org/article.php?id\\_article=20795](http://www.rsf.org/article.php?id_article=20795)>). Reports of recent attacks on freedom of expression during the 2006 state of emergency are widespread. See the blogsite of the Philippine Centre for Investigative Journalism (<[www.pcij.org/blog/?p=668](http://www.pcij.org/blog/?p=668)>).



**Table 1: Selected Philippine ICT indicators**

Indicators	Number
Installed fixed telephone lines	6,538,387 (2005)
Subscribed fixed telephone lines	3,367,252 (2005)
Mobile telephone subscribers	34,778,995 (2005)
Fixed lines per 100 population	7.76 (2005)
Subscribed lines per 100 population	4.00 (2005)
Mobile phones per 100 population	41.30 (2005)
Internet subscribers	1,440,000 (estimate, 2005)
Internet users (estimates, 2005)	4 million to 7.8 million
Broadband internet subscribers	165,000 (2005) <sup>7</sup>
Internet café prices (per hour) (2005)	PHP 33.43 (USD 0.65) <sup>8</sup>
Internet subscription prices (per month) (2005)	PHP 386.48 (USD 7.02)
Fixed line rental charges (per month) (2005)	PHP 500.07 (USD 9.08)
Mobile telephony charges	variable <sup>9</sup>
Personal computers (home use)	2,140,000 (2003)
Televisions (households)	10,579,000 (2003)
Radios (households)	10,937,000 (2003)
Television stations	232 (2005)
Radio stations	375 AM, 580 FM (2005)
Cable television stations	1,480 (2005)

Sources: National Telecommunications Commission 2005 Statistical Data;<sup>10</sup> National Statistics Office 2005 Consumer Price Index data; AC Nielsen August-December 2004 survey; National Statistics Office 2003 Family Income and Expenditure Survey; International Telecommunications 2003 ICT Report.

7 As reported in the Manila Standard Today (MST, 2006).

8 At the 2005 average foreign exchange rate of PHP 55.08 to USD 1 (source: Bangko Sentral ng Pilipinas).

9 Entry costs for mobile telephony are very low, with brand new phones costing as little as PHP 2,000 (USD 40), and a SIM card from PHP 65-150 (USD 1.30-3.00). While a local voice call costs an average PHP 7 (USD 0.14) a minute, SMS is very inexpensive, costing just PHP 1 (around USD 0.02) per SMS to networks within the country.

10 See: <www.ntc.gov.ph/consumer-frame.html>.

the years from 1970-1990, to one with a fixed-line density of 7.76 and a mobile phone density of 41.3 in 2005.

By 2005, mobile telephone subscribers outnumbered fixed line subscribers ten to one, given the popularity and affordability of SMS. Fixed-line subscriptions have seen very little growth, and installations have declined since a peak in 2001. On the other hand, total mobile phone subscribers have increased tremendously from only 34,600 subscriptions in 1991, to 34.8 million in 2005. Recent data from the telecommunications industry estimates the number reaching 40 million, 90% being prepaid subscribers.<sup>11</sup> Data from the National Telecommunications Commission (NTC), the industry's regulator, shows that by the end of 2005, Philippine mobile phone users sent an average of 250 million text messages daily, making the Philippines one of the top "texting" countries in the world.<sup>12</sup>

*Internet:* It is difficult to peg the actual number of internet users, with estimates ranging from 4 million in 2004,<sup>13</sup> to 7.82 million as of the first quarter of 2005 (CICT, 2006). The latter figure represents about 9% of the population. It is estimated that around half of the internet users are internet subscribers, while the rest have only intermittent access (i.e. via schools, offices or internet cafés).

*Broadcasting:* The number of radio and television broadcast stations has also increased significantly over the past ten years. The NTC reports a 50% increase in AM stations (from 275 to 373) from 1991 to 2004, and a tripling of FM stations (from 208 to 587). Television stations have increased from 80 to 229, while cable television stations have increased almost 30 times over from 56 to 1,453.<sup>14</sup> This space is dominated by large privately-owned national media networks with local affiliate TV and radio stations; they typically also account for the highest market shares.<sup>15</sup>

#### Regional data

Compared to its Association of Southeast Asian Nations (ASEAN) neighbours, in 2003 the Philippines had one of the highest education and literacy levels, but had a moderate ratio of ICTs to population. This reflects the relative socioeconomic standing of the country among its neighbours. According to the International Telecommunications Union, while the Philippines has the second highest literacy and primary and

11 Based on initial figures given by telephone companies and market share projections by analysts (<www.cellular-news.com/story/21070.php>). The figures are probably overstated, mainly by marketing departments of phone companies, as they refer to total numbers of subscriptions, and do not account for churn rates or inactive accounts.

12 The prepaid model lets owners buy on-air "credits" via ubiquitous prepaid cards in PHP 100 and 300 (USD 2.00-6.00) denominations. However, the introduction of "retail" on-air credits ("loads") which can be purchased from neighbourhood stores for as little as PHP 25 (USD 0.50) or can be passed from phone to phone within the same network in denominations as low as PHP 5 (USD 0.10) has made it possible for users to buy just enough credits for their daily budgets.

13 "Philippine internet users reach four million" [online], *Asia Media*, 30 March 2004. Available from: <www.asiamedia.ucla.edu/article-southeastasia.asp?parentid=9672>.

14 The high number of TV stations is due to the fact that a great majority are merely local stations which operate in small regional areas. They produce local content and earn local advertising revenue, and usually are affiliated with one of the six large national TV stations. This is also true for local cable stations, which act as resellers of the national cable companies for a particular local market.

15 Although there are media ownership restrictions, large media conglomerates typically have local "affiliates" in regional centres as part of their network. There is a state-owned TV and radio network, but it is not as popular as it is perceived to be by government mouthpieces. There are very few pure community-owned outlets, mainly because the licensing regime is restrictive.

**Table 2: Comparative ICT indicators, ASEAN countries**

Country	Lines per 100 population			Literacy rate	Enrollment (as percent of school-age population)			Number per 100 population			
	Fixed	Mobile	Internet		Primary	Secondary	Tertiary	TV	Residential lines	PC	Internet
<b>Philippines</b>	<b>3.6</b>	<b>27.0</b>	<b>0.6</b>	<b>95.6</b>	<b>112.1</b>	<b>81.9</b>	<b>30.4</b>	<b>76.4</b>	<b>14.4</b>	<b>3.2</b>	<b>5.5</b>
Indonesia	3.9	8.7	0.3	88.4	110.9	57.9	15.1	56.7	12.6	1.3	3.8
Malaysia	18.0	44.2	4.3	88.9	95.2	69.7	26.0	92.0	60.6	16.7	34.4
Singapore	45.0	85.2	115.7	93.1	94.3	74.1	43.8	98.6	100.0	69.5	50.9
Thailand	9.6	39.4	1.6	96.0	12.1	82.8	36.8	93.3	28.2	4.5	11.1
Vietnam	4.7	2.3	0.2	93.0	103.4	69.7	10.0	86.1	13.4	1.1	4.3
Lao PDR	1.2	2.0	0.2	67.3	114.8	40.6	4.3	30.7	4.8	0.4	0.3
Cambodia	0.2	3.5	0.1	70.1	123.4	22.2	2.5	42.8	1.0	0.2	0.2

Source: ITU/Orbicom (2005)

secondary enrollment rates, its fixed-line telephone penetration rate is one of the lowest in Southeast Asia. However, other ICT indicators such as mobile phone, personal computer (PC) and internet penetration rates are close to the median of its neighbours (ITU/ORBICOM, 2005).

#### Global rankings

Globally, the Philippines is typically ranked somewhere in the middle or lower echelons of international indices that attempt to measure ICT access, availability and resources (NSCB, 2006):

- The latest ITU/Orbicom Digital Opportunities (Infostates) Index (2005) ranks the Philippines 94th out of 180 countries.
- The UN Industrial Development Organisation (UNIDO) ICT Diffusion Index (2005) ranks the country 97th out of 180 countries.
- The International Data Center (IDC) Information Society Index (2005) ranks it 48th out of 53 countries.
- The Economist Intelligence Unit's E-Readiness Index (2006) ranks it 56th out of 68 countries.
- The World Economic Forum Network Readiness Index (2005) ranks it 70th out of 115 countries.

In these ranking systems the country is shown to have higher levels of human capital and a relatively open investment/business environment. But it fares poorly primarily due to a low rate of access to ICTs amongst the general population (except for mobile phones) and the relative lack of public and private investments in improving telecommunications infrastructure.

#### ICT policy development: instruments, institutions, roadmaps

##### Policy instruments

National ICT planning is a fairly recent phenomenon in the country. The following is a brief overview of the evolution of the country's ICT plans and policy institutions (Alegre, 2001).

*Planning documents, from NITP to IT21:* An early Strategic Programme for Information Technology (SPRINT) in the mid-1980s evolved into a National IT Plan (NITP) in 1989. This was updated in 1994 to NITP 2000, and for the first time was integrated into the country's broad socioeconomic planning framework, the Medium-Term Philippine Development Plan (MTPDP, 1993-98). This signified that

ICTs could not be separate from overall economic and social goals and national development strategies.

NITP 2000 was in turn updated in 1997, resulting in the National Information Technology Plan for the 21st Century (IT21), which sought to provide direction for ICTs over the long term (i.e. 10-25 years). Because of its overarching objectives and long-term perspective, it became a main reference document for other succeeding policy instruments, including the Philippine Information Infrastructure Policy (PIIP), the Philippine government's web strategy, RPWeb, and the Government Information Systems Plan (GISP).

*ICT for global competitiveness:* In 2000, a particular policy handle for promoting e-business in the country was developed, the Internet Strategy for the Philippines, or ISP.com. This strategy was developed in parallel with efforts led by the private sector to have a law governing e-commerce passed at around the same time. The Electronic Commerce Act of 2000 was passed that year due to these joint private-public sector efforts (Congress of the Philippines, 2000).

*Telecommunications-related instruments:* Other notable policy instruments were those formulated for the recently liberalised telecommunications industry. The main one is the Public Telecommunications Policy Act of the Philippines (Congress of the Philippines, 1995), to which several amendments are now being proposed to mirror shifts in the ecology of telecommunications (particularly in relation to convergence). However, several other recently issued policy guidelines from the National Telecommunications Commission (see below) are also significant. These include Memorandum Circular (MC) No. 05-08-2005, Voice-Over-Internet-Protocol (VoIP) as a Value Added Service (VAS); MC No. 07-08-2005, Rules and Regulations on the Allocation and Assignment of 3G Frequency Bands; and guidelines issued on the use of 802.11 (Wi-Fi).

##### Policy institutions

The key policy institution that served as a coordinating body for ICT policy formulation and implementation evolved from the original IT Coordinating Council (ITCC) of the mid-1980s into the National IT Council (NITC) in the 1990s. It then became the IT and e-Commerce Council (ITECC) – a merger of the ITCC and the e-Commerce Promotion Council – which existed from 2000 to 2004 until a new governmental body came into being as a transition to an envisioned (and still to be created) Department of Information and Communications Technology (DICT).

This transitional body was the presidential Commission on Information and Communications Technology (CICT).

Other government agencies have also played key roles in ICT policy development and implementation even before the CICT's time:

- The National Computer Centre (NCC) is the agency tasked to oversee the government's acquisition of ICT resources and infrastructure and to build its technical capacities, making it central to e-government initiatives.
- The Department of Transportation and Communication (DOTC), as its name reveals, is in charge of the country's transportation and communications systems and is the government's representative to the ITU. One of its sub-agencies, the Telecommunications Office (TelOf), was traditionally tasked to provide telecommunications services in under-serviced areas.
- The National Telecommunications Commission (NTC) is the regulatory and quasi-judicial body that approves guidelines, rules, and regulations related to telecommunications and media facilities and services. NTC was for a long time also an attached agency of the DOTC.

All these institutions (or, in the case of the DOTC, its communication-related agencies) were to be integrated under a new DICT, which still had to be created by legislation, and which would also then subsume the functions of ITECC.<sup>16</sup> When the proposed DICT legislation got snagged in Congress, the CICT was created to continue institutional momentum.

*Commission on Information and Communications Technology (CICT):* With the governance of ICTs moving to the forefront of global and national policy discourse, there was an effort to streamline ITECC and make it more responsive to new challenges. However, it remained essentially a private-public sector advisory council without specialised administrative and operational support. With the DICT on hold, President Arroyo issued Executive Order 269 in 2004, creating the CICT and placing it directly under her office. This affirmed her role as top "ICT champion" within government, and gave political weight to the role of ICTs within her administration.

The CICT was set up as a merger of the following government agencies: ITECC, the NCC, the NTC, TelOf and the Telecommunications Policy and Planning Group – all components of the DOTC. Executive Order 269 provided for the appointment of five full-time commissioners, headed by a chair who was conferred the rank of cabinet secretary (i.e. minister).

The CICT immediately set out to fulfill its mandate to be the government's "primary policy, planning, coordinating, implementing, regulating, and administrative entity," and to develop "integrated and strategic ICT systems and reliable and cost-efficient communication facilities and services."<sup>17</sup>

From the start, the CICT was deemed a transitional institutional arrangement. While the opposition to a new department for ICTs continues to this day, the creation of a DICT from the current CICT

remains on the radar of the present administration. It has a growing base of support from government and industry players who feel a department-level agency would be beneficial to ICT policies and programmes in the country.

However, the CICT faces other political obstacles. Aside from a very low budgetary allocation, it continues to lose much of its political clout. While the NTC – the powerful licensing and regulatory agency for media and telecommunications – was part of the CICT since its creation, it was transferred back to the DOTC in 2006 by virtue of a legal technicality and under less than transparent circumstances. Both NTC and CICT officials expressed surprise at the unexpected move and civil society groups privately communicated their disapproval and saw political agendas at work.<sup>18</sup> However, the NTC transfer became a fait accompli with CICT officials who had to advance the line that the regulatory agency would still fall under the envisioned DICT – eventually. However, this development has served to weaken the CICT's position in overseeing the all-important (and lucrative) telecommunications industry in favour of the DOTC (perceived as more "friendly" to the carriers).

#### The 2006 strategic ICT roadmap

This body of legal instruments and the ecosystem of institutions outlined above form the framework for the country's ICT policy development. Initiatives are implemented subject to particular points of emphasis depending on the priorities of the administration in power, as well as those of particular people appointed to the policy institutions themselves. During ITECC's streamlining in 2001 – marked by its transfer from the auspices of the Department of Trade and Industry to the Office of the President – the need for a strategic roadmap was felt in order to operationalise the broad ICT plans into concrete and coherent programmes.

As a result, ITECC devised a shorter and more focused planning framework to guide its own work. The ITECC "roadmap" was not a comprehensive country strategy as some were expecting, but did contain priorities for five main areas (which corresponded to ITECC's working committees active at the time): e-government, business development, infrastructure, human resource development, and legislation and policy. The significance of this focused but quite limited agenda cannot be underestimated – the strategy also became by and large the operational framework of the soon-to-be created CICT.

When the CICT was born in 2004, it carried over the ITECC roadmap as a de facto initial work plan; it became the core of CICT presentations in various forums in 2004 and 2005. By late 2005, after the conclusion of the Tunis phase of the World Summit on the Information Society (WSIS), the CICT chair then initiated a process to update the roadmap, and to develop a more comprehensive strategy for the five-year period 2006 to 2010.

The result, *The Philippine Strategic Roadmap for the ICT Sector: Empowering a Nation Through ICT* (CICT, 2006), which underwent limited consultation in the latter part of 2006, was prepared for publishing in time for the Internet Governance Forum (IGF) meetings in Greece and the ITU Plenipotentiary Conference in Turkey (both in November 2006).

16 Other national government agencies which may develop some ICT policy functions but do not have organic links to the CICT at present include the Optical Media Board (OMB), the Intellectual Property Office attached to the Department of Trade and Industry, and some agencies of the Department of Science and Technology.

17 A recent global ranking of e-government readiness in 191 countries placed the country at 41st, ahead of most of its ASEAN neighbours, save Singapore – a development well received by government officials. See: <[www.cict.gov.ph](http://www.cict.gov.ph)>.

18 Some NGOs, including the FMA, analysed the move as related to the administration's desire to monitor broadcast agencies more closely, coming on the heels of moves to limit freedom of expression in the light of the political crisis which erupted in 2005. The "rent-seeking" angle put forward by some observers relates to the lucrative licensing functions of NTC, a part of which some politicians were perceived to covet.

Aside from outlining a set of seven guiding principles, it included what it called “Strategic Programmes and Initiatives”. These were:

- Ensuring universal access to ICTs
- Developing human capital for sustainable human development
- E-governance: using ICTs to promote efficiency and transparency in government
- Strategic business development to enhance competitiveness in the global markets
- Outlining a legal and policy agenda for the Philippine ICT sector.

Recent changes in the CICT (in 2006, three commissioners resigned, including the former chair who had initiated the roadmap review process) posed challenges to the adoption of the new strategy: the new commissioners were not invested in the original process of developing the document. Indications are that a newer version, incorporating the views of the new commissioners, will be produced in the future, suggesting a lack of institutional continuity that plagues bureaucratic transitions of this nature.<sup>19</sup>

### *Participation in global and regional governance spaces*

#### World Summit on the Information Society (WSIS)

The Philippine government participated in the WSIS and sent representatives to all the preparatory meetings, as well as to the Summits in Geneva (2003) and Tunis (2005). Government delegates came either from the DOTC, NTC or CICT (which came into being during the second phase of the WSIS); or, when costs became a problem, the Department of Foreign Affairs (DFA), from its mission in Geneva or its consulate in Tripoli.<sup>20</sup>

However, there was no continuity of participation – government representatives to the Preparatory Committee meetings changed from meeting to meeting, with hardly any coordination among attendees – and no formal Philippine position for the WSIS was developed which would guide its interventions in the intergovernmental negotiations. A proposed Philippine position during the early Geneva phase drafted by representatives of the DOTC, NTC and NCC was not approved by their DFA counterparts, and no process to harmonise divergent positions was ever initiated. As a result, the Philippines was not a player in the WSIS debates, and merely allied itself with either regional (e.g. ASEAN) positions taken previously, or those of the Group of 77 developing nations during the actual WSIS meetings.

It was clear that the Philippine ICT policy infrastructure – which itself was undergoing transition at the time from ITECC to the CICT – was not prepared to engage the WSIS in a strategic way, due to a host of factors, such as reorganisation, lack of resources, weak state capacity, and inter-agency turf wars. The CICT did convene a Philippine Summit on the Information Society (PSIS) in 2004 and 2005, ostensibly to develop a Philippine position, but discussions never reached the level needed to strategically engage the WSIS debates. The two

PSIS meetings were primarily high-profile industry-driven events, rather than public policy summits that were a culmination of a strategic consultation process. CSOs had been proposing the latter since 2003, but no resources were ever allocated for this.

To be fair, the Philippines maximised its WSIS participation in other ways. For instance, it considered the Summit agreements as reference documents for its own national policy development and it took advantage of the intergovernmental meetings to strengthen existing networks and forge new ones with donors and other ICT actors. The Philippines also sent the new CICT chair and a new commissioner to the Athens IGF meetings and Antalya ITU meetings in 2006, indicating the country’s commitment to WSIS implementation.

#### Other global spaces

The country continues to participate in all annual ITU conferences, and recently regained a seat in the 12-seat ITU Council (Oliva, 2006a). Though it is an active member of global bodies such as the World Trade Organisation (WTO), the World Intellectual Property Organisation (WIPO), and the UN Educational, Scientific and Cultural Organisation (UNESCO), there is little (if any) interface between the policy discussions taking place in these spaces and ICT policy forums relating to WSIS commitments and their implementation. Communication rights advocates are increasingly saying that trade considerations (i.e. as articulated in the WTO and WIPO) continue to override the more socially oriented goals expressed at the WSIS.

#### Regional spaces

Philippine ICT policy-makers are more present in regional spaces. The Philippines is a member of the regional counterpart of the ITU, the Asia-Pacific Telecommunity (APT). The same government networks collaborate in two other distinct bodies – ASEAN and Asia-Pacific Economic Cooperation (APEC) – each with its own plans and programmes relating to information society issues.

In 2000 ASEAN adopted an e-ASEAN Framework Agreement (ASEAN, 2000) and an e-ASEAN Roadmap, and the telecommunications and information ministers of the member countries (TELMIN) and their senior officials (TELSOM) meet regularly. An e-ASEAN Working Group and various TELSOM working groups have been set up.<sup>21</sup> Similarly, APEC has its own counterpart TELMIN and TELSOM mechanisms, and its Telecommunications and Information (APEC TEL) Working Group works to implement an e-APEC Strategy adopted in 2001 (APEC, 2001).

It is worthwhile to note that all of these forums require time and resources for the government to attend and meaningfully participate in them – resources not always available to developing countries like the Philippines. The swift pace of change in the global ICT sector – a situation which has policy lagging behind technology – also places particular pressures on the government.

One tactic used by the government is to let the private sector take the lead in developing the parameters of the country’s policy framework within global spaces such as the ITU or WIPO, or even – despite civil society criticism – in defining national policy itself. The results have been uneven in producing sound policies that promote the public interest.

19 Although a late version of the strategic roadmap was published in November 2006, as part of the grant received by the CICT from a donor agency, conversations with the new CICT chair indicate that the new commissioners were not as committed to it, as it did not as yet contain their own refinements and suggestions. The presentation of a civil society critique of the roadmap (produced in late 2006) also became a factor in the new chair considering it merely a working document. It is not clear whether an updated version will be prepared for 2007.

20 The DFA, through its United Nations International Office, traditionally coordinates country participation in UN summits.

21 TELSOM working groups address the following issues: information infrastructure; e-society/ICT capacity-building; e-commerce/trade facilitation; and universal access/digital divide. There is also an ASEAN Telecommunications Regulators Council (ATRC). For background on the e-ASEAN initiative, see: <[www.aseansec.org/7659.htm](http://www.aseansec.org/7659.htm)>.

## Public policy issues: a civil society agenda

An initial assessment of the strategic ICT roadmap

In November 2006, representatives of more than 40 CSOs presented their comments on the new draft roadmap to the CICT in a multi-stakeholder forum. CSOs did affirm certain specific sections of the document, including its guiding principles; its section on human capital development; its proposals on free and open source software (FOSS) in education; and its initial position on universal access. However, they also presented a comprehensive critique of the roadmap, calling attention to specific gaps corresponding to key public policy concerns deemed strategic, but which were not addressed. It noted a lack of harmonisation of the roadmap's goals with those established in international agreements, notably the UN Millennium Development Goals (MDGs) and even most of the WSIS commitments themselves. CSOs also challenged the apparent underlying market-driven development paradigm of the draft.

Listed below are just some of the major areas that represent gaps in the draft from the point of view of civil society (FMA, 2006a). These also represent a cross-section of the public policy issues that CSOs are critically engaging with:

- *Universal access/digital divide*: Even with high mobile telephony penetration, there remain glaring inequalities in ICT ownership and use among households in different areas (e.g. rural versus urban) and among different income brackets. For example, in 2003, only 11.2% of farming households owned telephones, compared to 28.9% of all households nationwide. Access to personal computers and especially internet services is clearly limited to the most urbanised areas (Tuaño *et al*, 2007).
- CSOs rue the lack of baseline data on these “divides”, as well as the inadequacy of current interventions to bridge them. The importance of sectoral access strategies (e.g. for farmers, the urban poor, persons with disabilities, women) was emphasised, the use of traditional media technologies (e.g. community radio) was endorsed, and key policy gaps were noted (foremost was the lack of an updated strategic spectrum management policy, which would allocate spectrum for development use.)
- *Competition policy/anti-trust issues*: Even with the liberalisation of the telecommunications sector, problems persist which need strong regulatory action. CSOs note a lack of explicit rules that prevent the dominant incumbents from controlling specific segments of the ICT market, allowing them to gain very high price margins – already estimated at 84% in 1997. Predatory pricing and unregulated bilateral interconnection agreements have tended to squeeze out smaller industry players, and anti-trust issues abound.<sup>22</sup> CSOs have lauded a draft NTC consultative paper on a competition policy for the ICT sector (NTC, 2006), which seeks to strengthen regulation in this area, including the imposition of particular obligations on incumbents with significantly dominant market power. Unfortunately this whole issue is absent in the roadmap.
- *Free and open source software (FOSS)*: In 2004, 70% of government operations still ran on proprietary platforms at enormous cost to the country. The Philippines has yet to adopt FOSS as a key development strategy. Although the CICT is beginning to develop FOSS in its education strategy,<sup>23</sup> the government has

been slow to do the same in public administration. At the very least, CSOs were calling for a policy position adopting open standards in government.

- *Internet governance: ccTLD administration reform*: A long-standing issue has been the ownership and control of the Philippine country code top-level domain (ccTLD), currently run as a private monopoly by the original administrator. Public policy issues abound, making this a test case in local internet governance and the extent of state sovereignty over a public internet resource. A significant section of the internet community is clamouring for reform and the re-delegation of the administrative functions (and handing over of the databases/zone files) to a private not-for-profit entity, a scenario contemplated by the CICT's own 2005 guidelines.<sup>24</sup> Yet the roadmap is silent on this issue, betraying a lack of political will to implement the latter.
- *Intellectual property rights (IPR) and access to knowledge*: Any discussion of IPR – one of the more controversial issues in various global governance spaces – is totally absent in past or present ICT policy in the country. Given the growing critique of dominant IPR frameworks and the effect of corporate-led patent and copyright regimes on developing countries, CSOs are pushing for more flexible policies that take advantage of exceptions and “flexibilities” in global rules, explore various open access models, and incorporate an indigenous articulation of the “commons” concept (Peria *et al*, 2007).
- *Mainstreaming gender in ICT policy*: In 1995 the government released a Gender and Development (GAD) Plan to facilitate gender mainstreaming in public administration, with mandatory public spending of 5% in each agency's budget for women's programmes. However, ICT policies and policy institutions have generally been gender-blind. The view that technology is gender-neutral remains pervasive within the ICT policy community, and special measures that recognise differences among men and women users have been lacking. As a result, technologies and user environments (i.e. for access) are not informed by gendered analysis, design and planning and do not result in outcomes specifically targeted for women. A recent FMA study outlined the various interventions needed to make ICT policy in the country more gender-sensitive (Somera, 2007).

These are some of the public policy issues that CSOs have cited as lacking in the current roadmap. They also represent key elements of a more comprehensive civil society agenda for ICTs that is still to be finalised – an initiative that CSOs plan to pursue in 2007.

## Participation

### Public-private sector collaboration

From the beginning, Philippine policy development has been relatively open to private sector participation. In the various policy institutions, the private sector – almost always represented by big business/industry, but including the education sector – has been involved. With the more open policy environment in the post-1986 era, and the tacit acceptance of the key role of the private sector in ICT development, public-private sector collaboration has marked all institutional arrangements up until the creation of the CICT. ITECC, in fact, had a private sector

<sup>22</sup> For studies on competition in the telecommunications sector, see Patalinghug and Lianto (2005) and Aldaba (2005).

<sup>23</sup> See Lallana *et al* (2007).

<sup>24</sup> For the CICT's .ph guidelines, see CICT (2004). A comprehensive case study on the issue is in Yu *et al* (2007).

co-chair, and its various working committees were all co-chaired by a government and a private sector (usually industry) representative.

Even the current CICT, though a purely governmental structure, has been open to private sector participation, particularly from the carriers, service and applications providers, and industry associations. As a result, in the various policy arenas the private sector's voice is often heard loud and clear.

### CSO participation

Entering the policy space: ITECC

Civil society participation as a distinct sector is a fairly recent phenomenon in the country, and is driven by individual non-governmental organisations (NGOs) with a communication rights-based perspective (CRIS, 2005). It was essentially in the more open ITECC structure in 2000 that CSOs participated – albeit still under the ambit of the private (i.e. non-government) sector.<sup>25</sup> The leading role of the private for-profit sector was largely the norm in major ICT policy spaces, such as ITECC and the NTC on the national level, and the ITU conferences and meetings on the international level, where the big telecoms players sit side-by-side with government as “sector members”.

CSO representatives sensitised ITECC to the more social issues surrounding ICTs, and gained legitimacy for their public-interest positions, although civil society's impact was limited by the small number of CSO representatives: only two persons in the 40-person council meetings were from civil society. Realising that civil society's constituency was still too weak for an effective lobby, one CSO representative opted out of direct ITECC participation upon the latter's restructuring in 2001, choosing to concentrate on constituency-building work.

WSIS as catalyst

Aside from the early involvement in ITECC, there were few opportunities for CSOs to sit around the policy table before 2003. It was only during the onset of the WSIS process, with its mandate for governments to reach out to the non-profit sector, that then-ITECC Executive Director Virgilio Peña considered inviting civil society representatives to join the WSIS national delegation. CSO participation in UN summits was common in other contexts, but there was no similar precedent for the ICT sector, which was traditionally open only to industry players and sectoral associations. Although NGOs engaging in ICT policy during the time were still relatively few, the inclusion of two people as civil society (and youth) representatives in WSIS Preparatory Committee meetings, as well as the Summit itself, was a milestone in 2003.

The WSIS appeared to change how government considered the policy arena. Civil society ceased to be lumped together with industry, and was now recognised as a distinct actor with its own important contributions to the policy table. This clear shift was reflected in the first Philippine Summit on the Information Society in 2004, particularly in determining summit participants. Half of the 200 slots for invited participants were reserved for government representatives, while the other half were now equally divided between the private industry, education, and civil society sectors. The WSIS had opened a door; it was now up to civil society to enter.

### CSO-CICT engagement

Since then, ITECC and its successor, the CICT, have become more open to civil society collaboration than any previous policy institutions ever were. Either through informal consultative meetings (e.g. for the ICT in Education Strategy), or through more formal joint initiatives (e.g. co-sponsored ICT training for NGOs), CSOs were generally recognised as legitimate dialogue partners and the government reached out to CSOs in a manner usually reserved for private industry. As civil society's advocacy initiatives increased, the CICT opened policy discussions on a wide range of concerns important to NGOs. These ranged from traditional “NGO issues” (e.g. telecentre development, FOSS, gender issues), to non-traditional NGO areas of concern (e.g. technical issues like Wi-Fi, ccTLD administration, broadband policy, cybercrime). NGOs contributed positively to discussions and debates.

The CICT's openness was reciprocated by civil society, which became a partner in some CSO-driven policy initiatives. From 2005 to 2006, for instance, the FMA partnered with the CICT in setting common policy development and research agendas in areas such as the “digital divide”, the ccTLD administration issue, FOSS, and gender and ICT policy. Earlier, WomensHub – an NGO focusing on gender and ICTs – also partnered with the NCC on a gender and ICT policy study.

It appeared then that initial CSO disappointment at the Philippine government's WSIS (non)position abroad was being replaced by a critical appreciation for a much more open and consultative Commission that was evolving at home.

### Public hearings

CSOs explored other policy spaces alongside these developments. Certain agencies of the government – in particular the NTC and the ICT committees in Congress – were mandated to convene regular public hearings whenever they would issue important sector guidelines or memorandum circulars, or when a draft bill was filed. These consultative meetings were open venues where stakeholders could voice their comments or concerns on a particular draft policy issued.

Few NGOs usually attended such hearings until fairly recently, mainly because telecommunications (and the internet) was not yet a traditional area of concern for many local civil society activists. But as their technical understanding of the issues grew, and the public interest character of the discourse became more evident, more began to participate.

In a country where no strong consumer movement exists, NGOs initially represented the consumer protection perspective in policy discussions; from there it was not difficult to advocate for the public interest character of public communication systems. Hearings from 2003 to 2006 in Congress (on the Cybercrime Bill, the Optical Media Bill, the Anti-Terrorism Bills, and the FOSS in Government Bill), and the NTC (on the WiFi and VOIP Guidelines and the Competition Policy), plus CICT consultations (on the Public Domain Information and Broadband Policy), increasingly included more and more NGO stakeholders (FMA, 2006b).

Of course, these hearings were merely *consultative* in nature; they certainly were not co-deliberative – i.e., government was basically still free to accept or reject any comments made by CSOs. But they were the only expression of public consultation within the sector, and government officials were generally open to comments. In addition, CSOs brought a public-interest perspective to these hearings, a view that was not being expounded on by the members of the “public” who usually attended: the phone companies, service providers, and other corporate industry players.

<sup>25</sup> FMA Executive Director Alan Alegre was invited to sit in ITECC in 2000, the first representative with a clear civil society perspective to sit in the highest Philippine ICT policy-making body.

### *An initial assessment of CSO engagement*

Compared to before 2000, when hardly any civil society representative was actively engaging national ICT policy institutions, Philippine CSOs have come a long way in carving their own space in the ICT policy arena.

However problems persist in advancing peoples' participation in Philippine ICT policy:

- *Limits to transparency and accountability:* Certain political decisions still seem to be shielded from broad public information and stakeholder intervention. These include: the CICT reorganisation plan (involving how the new Commission is to be structured and "re-engineered"); NTC licensing decisions (e.g. the controversial grant of 3G licenses currently being investigated by Congress); and political decisions regarding the .ph ccTLD issue. Even in determining the appointments to the CICT itself, candidates are not publicly nominated and vetted, and the search for possible appointees is opaque. At best, it shows that government still lacks the full transparency essential for good governance and genuine multi-stakeholder partnership; at worst, it may signify political horse-trading or even an orientation towards rent-seeking (i.e. corruption-driven) agendas.
- There is often a tendency by policy-makers to *confine civil society participation to certain areas of concern* – notably those relating to the "social side" of ICT development, such as "digital divide" issues and universal access programmes, and social welfare concerns (health, education, agriculture, etc.). Although these areas have a legitimate need for attention, and provide an opportunity for CSOs to craft significant public policy, CSOs' work is not limited to engagement in these areas only. Civil society must be allowed to interrogate all facets of ICT policy development, particularly those that are not usually considered part of its traditional ambit (e.g. macro-economic policy, technical specifications, etc.). The challenge is also for CSOs to show competence in these areas, and to present concrete alternatives.
- *Lack of institutionalisation of multi-stakeholder partnership:* It has been observed that the relatively open relationship between CSOs and the CICT up to mid-2006 was affected by the resignations of two commissioners (and the pending resignation of another in January 2007) who had been dealing with civil society representatives directly. The appointment of new officials with no previous experience in dealing with CSOs visibly slowed down the momentum of the budding partnership. This was most evident in the roadmap review process, where civil society inputs were not reflected in the latest draft, despite the fact that it was the previous CICT chair who had called for civil society comments (Oliva, 2006b). It is clear that the partnership was based largely on good interpersonal relationships with specific commissioners forged during the WSIS process, without the corresponding institutionalisation of CSO participation in the CICT.
- *Lack of regional (sub-national) policy development spaces:* During a policy dialogue between the CICT and CSOs in November 2006, CSOs pointed out that the lack of regionalisation of policy-making structures and processes serves to privilege stakeholders based in the capital, where most of the face-to-face policy engagements occur. (Most policy processes and mechanisms are not yet conducted online.) This gives a Manila-centric bias to the whole process, as many regional stakeholders do not have

the resources to travel to the capital, fuelling the usual resentment felt by a majority against "Manila imperialism", and resulting in a potentially flawed policy.

- *Limited CSO capacities in policy intervention:* In many cases where government solicits civil society inputs, CSOs do not always have the resources to adequately respond quickly and in a meaningful way, reducing their potential influence on the policy process. Civil society's impact on public policy will always be a function of both the soundness of its recommendations and the capacity of its organised constituency to effectively advocate them. CSO policy engagement will have to be supported by a further strengthening of its intellectual and organisational resources.
- *Gender gaps:* A recent study (Somera, 2007) outlined the various gender gaps in Philippine ICT policy development, manifested in ICT programmes and initiatives (e.g. universal access projects, capacity-building programmes, budgetary allocation) which are gender-blind. This is due to an absence of gender-sensitive mechanisms within the ICT policy institutions (Somera, 2007). Although women comprise the majority of the CICT bureaucracy, it is important to note that there has never been a woman appointed as commissioner.

### **Conclusions**

The Philippine experience presented in this paper shows both the limits and possibilities of developing-country participation in governance arenas (e.g. the WSIS). It demonstrates how effectively international processes can influence local policy environments, but equally reveals how national contexts and dynamics play out in the local power relations that influence public policy. It also shows how civil society can be a significant actor if it engages strategically.

The Philippine experience at the WSIS has had a largely positive impact on the country's overall policy ecosystem, notwithstanding the country's passive role in the actual intergovernmental processes and negotiations. CSOs took advantage of the Summit's processes and mandates, especially in advancing multi-stakeholder approaches locally, and auditing national ICT plans.

Civil society has undoubtedly entered the ICT policy arena and has positioned itself as a legitimate actor in this space. It has successfully promoted a public interest discourse to frame its interventions and has pinpointed specific policy areas for reform. But the task remains unfinished, requiring continued strategic action on the national (and sub-national) levels. The challenge is for CSOs to leverage their initial successes, while strengthening their internal capacities, and to link up with like-minded policy actors in order to have a tangible impact on specific Philippine policy areas that remain problematic. ■

## References

- Aldaba, R. (2005). *The Impact of Market Reforms on Competition, Structure and Performance of the Philippine Economy*. Philippine Institute for Development Studies. Discussion Paper, 25.
- Alegre, A. (2001). *Philippine ICT Policy in Transition: 1969-2001*. Unpublished monograph, FMA.
- APEC (Asia-Pacific Economic Cooperation) (2001). *2001 Leaders' Declaration* [online]. Available from: <[www.apec.org/apec/leaders\\_\\_declarations/2001/appendix\\_2\\_eAPEC\\_strategy.html](http://www.apec.org/apec/leaders__declarations/2001/appendix_2_eAPEC_strategy.html)>.
- ASEAN (Association of Southeast Asian Nations) (2000). *e-ASEAN Framework Agreement* [online]. Available from: <[www.aseansec.org/6267.htm](http://www.aseansec.org/6267.htm)>.
- CICT (Commission on Information and Communications Technology) (2004). *Series 2004. Guidelines in the Administration of the .PH Domain Name. Memorandum circular No. 1* [online]. Available from: <[www.cict.gov.ph/images/files/phGuidelines.pdf](http://www.cict.gov.ph/images/files/phGuidelines.pdf)>.
- CICT (2006). *Philippine Strategic Roadmap for the Information and Communications Technology Sector: Empowering a Nation through ICT* [online]. Available from: <[lastmileinitiative.ph/stratplan/downloads/PHICT.pdf](http://lastmileinitiative.ph/stratplan/downloads/PHICT.pdf)>.
- Congress of the Philippines (1995). *Public Telecommunications Policy Act of the Philippines* [online]. Available from: <[www.ntc.gov.ph/laws/ra7925.html](http://www.ntc.gov.ph/laws/ra7925.html)>.
- Congress of the Philippines (2000). *Republic Act No. 8792*.
- Electronic Commerce Act of 2000* [online]. Available from: <[www.bps.dti.gov.ph/uploads/files/Forms\\_File\\_1104837988\\_RA8792.pdf](http://www.bps.dti.gov.ph/uploads/files/Forms_File_1104837988_RA8792.pdf)>.
- CRIS (Communication Rights in the Information Society) (2005). *Assessing Communication Rights: A handbook* [online]. Available from: <[www.crisinfo.org/pdf/ggpen.pdf](http://www.crisinfo.org/pdf/ggpen.pdf)>.
- FMA (2006a). *Civil Society Comments to the Draft Strategic ICT Roadmap 2006-2010*. Typescript, November 2006.
- FMA (2006b). *Communication Rights for the Public Interest*. Unpublished typescript.
- ITU/Orbicom (2005). *From the Digital Divide to the Digital Opportunities. Measuring Infostates for Development* [online]. Montreal: Claude-Yves Charron. Available from: <[www.itu.int/ITU-D/ict/publications/dd/material/index\\_ict\\_opp.pdf](http://www.itu.int/ITU-D/ict/publications/dd/material/index_ict_opp.pdf)>.
- Lallana, E., Bitanga, F. and Rivera, V. (2007). *Developing Human Capital through a FOSS in Education Strategy*. FMA (forthcoming).
- MST (2006). "Broadband use in RP rising fast", *Manila Standard Today* [online], 31 July 2006. Available from: <[www.manilastandardtoday.com/?page=interactive01\\_july31\\_2006](http://www.manilastandardtoday.com/?page=interactive01_july31_2006)>.
- NSCB (National Statistical Coordination Board) (2006). *Philippines Ranks behind Singapore, Malaysia and Thailand; ahead of Other ASEAN Countries in ICT Indices* [online]. Press release, 7 December 2006. Available from: <[www.nscb.gov.ph/factsheet/pdf06/fs11\\_06.asp](http://www.nscb.gov.ph/factsheet/pdf06/fs11_06.asp)>.
- NTC (National Telecommunications Commission) (2006). *NTC Consultative Document on the Development of a Competition Policy Framework for the Information and Communications Technology Sector* [online]. Available from: <[www.ntc.gov.ph/whatsnew/consultative%20draft.pdf](http://www.ntc.gov.ph/whatsnew/consultative%20draft.pdf)>.
- Oliva, E. (2006a). "Philippines wins ITU state member council seat", *Inquirer.net* [online], 17 November 2006. Available from: <[technology.inquirer.net/infotech/infotech/view\\_article.php?article\\_id=33267](http://technology.inquirer.net/infotech/infotech/view_article.php?article_id=33267)>.
- Oliva, E. (2006b). "CICT set to release ICT roadmap for RP. Plan lacks civil society group's input", *Inquirer.net* [online], 12 December 2006. Available from: <[technology.inquirer.net/infotech/infotech/view\\_article.php?article\\_id=37863](http://technology.inquirer.net/infotech/infotech/view_article.php?article_id=37863)>.
- Patalinghug, E. and Lianto, G. (2005). *Competition Policy and Regulation in Power and Telecommunications*. Philippine Institute for Development Studies. Discussion Paper, 18.
- Peria, E. et al (2007). *One for All, or All or Nothing for All?: Intellectual Property Rights and the Commons – the Philippine Experience* (tentative title). FMA (forthcoming).
- Somera, N. (2007). *Mainstreaming Gender Issues in ICT Policy Development*. FMA (forthcoming).
- Tuaño, P., Alegre, A. and de Quiroz, J. (2007). *Locating the Digital Divide in the Philippines*. FMA (forthcoming).
- UNDP (2006). *Human Development Report 2006. Beyond scarcity: Power, poverty and the global water crisis* [online]. New York: UNDP. Available from: <[hdr.undp.org/hdr2006/pdfs/report/HDR06-complete.pdf](http://hdr.undp.org/hdr2006/pdfs/report/HDR06-complete.pdf)>.
- Yu, W. et al (2007). *Study Paper on the Administration of the .ph ccTLD* (tentative title). FMA (forthcoming).



# ROMANIA

Strawberrynet Foundation<sup>1</sup>  
Rozália Klára Bakó



## Introduction

During August and September 2006, the Strawberrynet team identified key ICT policy actors from Romania and mapped their roles and relationships using public information available on government, business and civil society organisation (CSO) websites. We paid particular attention to laws and regulations related to information and communications technologies (ICTs), official statements, statistical data and scientific research. Our empirical research consisted of key informant interviews conducted during October 2006. These aimed at understanding different stakeholders' standpoints on Romanian ICT policy priorities. We found the information provided by the Association for Technology and Internet (APTI)<sup>2</sup> particularly useful for our analysis.

The *Country situation* section (below) presents the regional context for Romania's ICT policy-making process, highlighting the positive role played by EU accession criteria. We also discuss ICT-based social inclusion policies and programmes concerning the three pillars of strategic ICT use: access, skills and understanding. We conclude that Romania has experienced better access to ICTs and an increase in ICT skills over the past years. This is supported by statistical data on progress made by Romania from 2003 to 2006. However, gender and open source issues are not apparent in official ICT-related public discourse.

The main ICT policy actors and their roles in the policy-making process are presented in the *Participation* section. We find that governmental agencies play a primary role in shaping ICT development, supported by active business organisations. A key finding of this section is that although there have been dynamic and positive changes towards transparent ICT policy-making in Romania, problems remain. These include the administration and management of the country code top-level domain.ro. In terms of participation in the World Summit on the Information Society (WSIS), the government's involvement was significant, but publicly invisible.

## Country situation

Romania's ICT policy landscape has been shaped by the political context, particularly the accession negotiations with the EU from 15 February 2000 to 8 December 2004. The EU considers ICTs a strategic objective, and the European Commission insisted on ICT policy alignment with EU standards. As a result, the Romanian government accelerated legislative processes during the period between 2001 and 2004. Some of the most important regulatory changes contributing to an ICT-enabled environment included the liberalisation of the market from 1 January 2003, and legislation dealing with universal access, e-commerce and online security (such as e-signatures and e-procurement).

This favourable context explains the rapid growth of the ICT market in Romania and the steps taken towards more equitable access and better skills. The ICT sector is the largest investment sector in

Romania, accounting for 68% of total investments, and has experienced some of the most dynamic growth in the country: 22% from 2003 to 2004 and up to 25% for the 2004 to 2005 period, according to estimates. The legal framework (free competition, a flat tax rate of 16%, more transparent and participatory decision-making processes) has encouraged ICT investments in infrastructure, service quality improvement and the launching of nationwide educational projects. Market value is estimated to be over USD 1 billion. The sector now boasts 1,800 general service providers. Among the top ten businesses operating in Romania, three operate in the ICT field (Georgescu, 2006).

Internet penetration in June 2006 was 11.7% and 5.5% for broadband access, calculated for the total number of inhabitants (22 million people). The audiovisual retransmission penetration rate, which measures the percentage of households connected to a cable or satellite TV, was 55%, calculated for the total number of Romanian households.

**Table 1: ICT service penetration**

	31 Dec. 2003	31 Dec. 2004	31 Dec. 2005	30 Jun. 2006
Fixed telephones	19.98%	20.24%	20.31%	20.46%
Mobile telephones	32.47%	47.12%	61.76%	68.76%
Number of ISPs	233	515	981	1,154
Broadband internet access	196,106	382,783	751,060	522,796

Source: National Regulatory Authority for Communications (ANRC) (2006)

The main social inclusion programmes run by Romanian governmental agencies and international organisations such as the World Bank and the United States Agency for International Development (USAID) have focused on ICT access and skills improvement issues.

Community access to ICTs has been enabled by two ongoing initiatives: the telecentres project, run by the National Regulatory Authority for Communications (ANRC), and the Knowledge Economy project,<sup>3</sup> run by the Ministry of Communications and Information Technology. The ANRC's telecentres project provides basic ICT access to disconnected rural communities: two computers enabling internet, a fax machine and two telephone terminals. The project started in December 2004, when five public access points were created through public tendering. In 2005, 33 more villages were connected to the world, and 170 more in 2006. The villages where the ANRC installed telecentres were disadvantaged, as the demand and the consumption potential of their inhabitants did not stimulate investment in infrastructure roll-out. The ANRC, in partnership with the local administrations and with telephony operators, covers the cost of

1 <[www.sbnet.ro](http://www.sbnet.ro)>.

2 <[www.apti.ro](http://www.apti.ro)>.

3 The project documents are available from: <[www.worldbank.org/external/default/main?menuPK=287326&theSitePK=275154&pagePK=64027221&piPK=64027220&Projectid=P088165](http://www.worldbank.org/external/default/main?menuPK=287326&theSitePK=275154&pagePK=64027221&piPK=64027220&Projectid=P088165)>.

installation and maintenance of the access link for the telecentre. At the end of a three-year period, the obligations of the operator will cease and the local public administration will have to turn the telecentre into a self-sustainable business.

The Knowledge Economy project aims to create 200 community knowledge centres in rural and small town areas, after a pilot phase of developing eight centres in strategic locations across Romania.

The most important digital inclusion programme for education is the Romanian Education Network (RoEduNet).<sup>4</sup> The aim of RoEduNet is to offer universities and cultural and scientific non-profit institutions the means to communicate with each other, as well as to have access to the internet. The network is made up from redundant bandwidth (34-155 Mbps) connecting the main communication nodes in six big cities: Bucharest, Iasi, Tirgu Mures, Cluj, Timisoara and Craiova. Most educational institutions are connected through local nodes at the county level<sup>5</sup> to the national backbone. The internet connection is provided at the Bucharest node, using a 622 Mbps link from GÉANT (a multi-gigabit pan-European data communications network reserved specifically for research and educational use) and a 10 Mbps back-up link from the internet service provider (ISP) Romania Data Systems.

At the same time, the Ministry of Communications and Information Technology and the Ministry of Education and Research ran the 200 Euro programme, through which the state provided PC-purchasing aid to students from low-income families. In 2006, 28,005 families benefited from the programme.<sup>6</sup>

International organisations played a positive role in raising awareness on ICT issues and educating local non-governmental organisations (NGOs) and communities about ICTs and ICT-related issues from 2001 to 2005. Issues dealt with included e-government, internet rights, data security and telecentre management. USAID funded and assisted the Romanian Initiative for Information Technology, a know-how transfer project targeting policy-makers, legal system actors and telecentre developers, and the World Bank funded the eRomania Gateway initiative in an effort to stimulate a knowledge society.<sup>7</sup>

In 2005, Romania ranked 44th out of 179 countries in a UN e-readiness report. The report describes five stages of e-government, each involving more citizen participation and more “networked presence”. The first stage is “emerging presence”, meaning passive online visibility, such as a static website; the second is “enhanced presence”, with some interactivity involved; the third is the stage of “interactive presence”, where two-way communication between an institutional entity and its client is enabled; the fourth stage is “transactional presence”, where financial transactions are possible; and the fifth is the “networked presence” level, where all ICT services are integrated in a user-friendly manner (UN, 2005).

A case study we developed on e-government in environmental issues showed that Romanian environmental agencies are on the second level of e-government – few of them have reached the interactive level.

Nevertheless, e-government initiatives have become part of the mainstream ICT discourse in the country. Paying local taxes (a pilot project in most Romanian municipalities) and accessing public

information on institutions’ websites are common daily topics for the urban citizen, if not yet daily practices.

In October 2006 the ICT ministry published draft regulations on website standards for local and central governments and their agencies. This is an important regulatory step towards better usability and accessibility for people with special needs. If implemented, the official sites will be easier to find, use and update.

Public discourse in Romania is marked by a strong tone of “technocratic developmentalism” (Thompson, 2004, p. 11). The key message in the public arena is that ICTs enable a better economic, social and cultural environment for individuals and institutions, and that they are a tool for development. But while access- and skills-related issues are explicitly addressed, understanding processes and the power games involved in policy-development are not explicit. This includes debates concerning software alternatives and gender, ICTs and power.

Free and open source software (FOSS) is not part of the mainstream ICT discourse. On a professional programmers’ community level there is intense developmental activity, organised into twelve Linux groups.<sup>8</sup> However, no visible initiative promotes FOSS in public administration and community development. In 2006 the Romanian Open Source and Free Software Initiative (ROSI) was founded to promote FOSS and bridge the fragmented Linux communities. ROSI is preparing to organise a conference in Romania in May 2007, and to start up a FOSS advocacy project.<sup>9</sup>

Gender mainstreaming is also absent from public ICT discourse in Romania. Non-profit initiatives aimed at women include events such as the 2006 Eclectic Tech Carnival,<sup>10</sup> “a carnival of exchanging computer-related skills, ideas and art, by women and for women.” In 1997 Strawberryynet ran an Association for Progressive Communications (APC) women’s networking project in Romania, providing basic emailing and networking skills and distributing modems to women’s groups.

The internet is a new space for free expression in Romania, and ICTs are beginning to influence power. The presidential campaign in 2004 had a significant ICT base (e.g. SMS-campaign, blogs, electronic posters) which impacted on the young, urban, connected population (Manolea, 2005).

## Participation

The information society is defined as a strategic goal by key governmental actors (MCTI, 2002). We have identified twelve major ICT players in Romania, and they can be divided into three categories: governmental agencies, business interest promoters and general public interest advocates.

Seven of the major ICT players (more than half) belong to the first category. Governmental agencies create, develop and monitor the regulatory framework of ICT activities. The four business interest-promoting associations identified are also strong and visible in the public space. Their websites are linked to the main governmental ICT portals and they are actively involved in the related policy-making processes, at both the national and international level. Although most business interest groups presented themselves as general public interest advocates, we could only identify one genuine public interest association: the Association for Technology and Internet (APTI).

4 <[www.roedu.net](http://www.roedu.net)>.

5 Romania is divided into 41 *judetes* (counties) and one municipality.

6 See: <[euro200.edu.ro](http://euro200.edu.ro)>.

7 More information available from: <[www.riti-internews.ro](http://www.riti-internews.ro)> and <[www.ro-gateway.org](http://www.ro-gateway.org)>.

8 See: <[wiki.lug.ro/mediawiki/index.php/Pagina\\_principal\\_](http://wiki.lug.ro/mediawiki/index.php/Pagina_principal_)>.

9 See: <[www.eliberatica.ro](http://www.eliberatica.ro)>.

10 <[www.eclectictechcarnival.org](http://www.eclectictechcarnival.org)>.

The **Ministry of Communications and Information Technology** (MCTI) (<[www.mcti.ro](http://www.mcti.ro)>) is one of the most visible ICT policy actors in Romania. According to its website, the ministry's mission is to "create solid premises that will ensure the transition to the information society in Romania," and it defines its role as implementer of the government's ICT policy. Communications Minister Zsolt Nagy is a visible political personality and is seen as a "young technocrat". Strategic documents and ICT-related laws and regulations are posted on the MCTI website.

The **National Regulatory Authority for Communications** (ANRC) (<[www.anrc.ro](http://www.anrc.ro)>) is the institution entrusted with the implementation of the national policy. The ANRC aims to accomplish major objectives for the citizens' benefit, such as promoting competition, protecting the best interests of end-users and encouraging investment in infrastructure. It is responsible for guaranteeing access to universal service, and for protecting users' rights, such as privacy, consumer pricing transparency and special needs.

The **General Inspectorate for Communications and Information Technology** (IGCTI) (<[www.igcti.ro](http://www.igcti.ro)>) administers the radio frequency spectrum and operates three e-government services: e-guvernare (e-government), e-licitatie (e-procurement) and autorizatiiauto (car authorisations).<sup>11</sup> It has a user-friendly, professional website developed with EU funding.

The **National Institute for Research and Development in Informatics** (ICI) (<[www.ici.ro](http://www.ici.ro)>) is the national operator of the Romanian Computer Network for Research and Development (RNC). It has been a research and development unit in ICTs since 1970 and is the administrator, through the RNC, of the top-level domain .ro.

The **National Audiovisual Council** (CNA) (<[www.cna.ro](http://www.cna.ro)>) is a public, autonomous authority under the control of parliament. The Council was founded in 1992 in order to provide a legal framework for a competitive audiovisual market in Romania. It regulates content on TV and radio in order to protect consumers in general, and children in particular. It has advisory competence, but no right to legislative initiative.

The **Romanian Post** (<[www.posta-romana.ro](http://www.posta-romana.ro)>) is an important ICT player for rural and remote areas due to its well-rooted network of offices across Romania. The network, which is computerised, was extended to 436 offices in April 2006. Computerised postal offices offer online money transfer services for the general public, as well as traditional postal services.

The **National Radiocommunications Company** (SNR) (<[www.snr.ro](http://www.snr.ro)>) is shareholder-owned and one of the main providers of networks and electronic communication services in Romania. It is a leader in the broadcasting market. Separated from the state-owned post and telecom company in 1991, SNR owns the main telecommunications infrastructure built in Romania before 1989. This largely accounts for its prosperity as an ICT business. Its website is linked to the main government website, suggesting some level of recognition in its field.

The **Romanian Association for Audiovisual Communications** (ARCA) (<[www.audiovizual.ro](http://www.audiovizual.ro)>) represents the interests of Romanian broadcasters. ARCA is an extremely active association. It was involved in a working group set up by the CNA that developed a draft proposal for regulations concerning digital broadcasting. It also participated in public consultations on the review of the Television Without Frontiers

Directive (TWFD) organised by the European Commission, as well as in a consultation process devoted to the new draft of the Audiovisual Media Services Directive in 2005.

The **Technology and Communications Association** (ATIC) (<[www.atc.ro](http://www.atc.ro)>) advocates for ICT policy laws and regulations at the national and international level. ATIC is a member of the World Information Technology Software Alliance (WITSA) and the Council of European Professional Informatics Societies (CEPIS) and has a busy international conference schedule.

The **Romanian Association of Engineers in Telecommunications** (AITR) (<[www.aitr.ro](http://www.aitr.ro)>) is a membership organisation for the major telecommunications companies in Romania.

The **Romanian Association for the Electronic and Software Industry** (ARIES) (<[www.aries.ro](http://www.aries.ro)>) is a strong professional association lobbying for an enabling ICT environment. It is linked to the main government websites.

The **Romanian Association for Technology and Internet** (APTI) (<[www.apti.ro](http://www.apti.ro)>) promotes internet rights, spam-free internet and progressive ICT regulations for businesses and civil society. Its members were involved in the USAID-funded Romanian Initiative for Technology and Internet (RITI) from 2003 to 2005 and contributed to ICT policy development through capacity-building and training, including a skills transfer programme for the newly-formed ANRC, training judges in cyberfraud and assisting telecentre managers with project management. APTI president Bogdan Manolea is an active promoter of internet rights in Europe and maintains a website and a blog on ICT legislation.<sup>12</sup>

The country's main ICT priorities were established in 2002 and reinforced by the new government in 2004. They highlighted four key areas in Romania: to increase economic competitiveness through ICTs; to consolidate the ICT industry; to increase institutional performance of the public administration through integrated ICT services; and to increase citizens' comfort. In order to achieve these developmental standards, MCTI established a set of strategic objectives to be attained by 2008. These included affordable and high quality telecommunications; access to broadband services; more employment opportunities for highly skilled job seekers in the new economy; better information facilities for citizens to facilitate social integration; and efficient, responsive public administration.<sup>13</sup>

ICT policy-making evolved quickly, pushed by the business community and pulled by the EU accession requirements. Between 2001 and 2005 an avalanche of legislative measures were adopted to comply with the EU legislation (e.g. 2001: e-signature; 2002: communication regulation, audiovisual regulation, e-commerce; 2003: universal access to e-services, e-data collection, e-procurement, e-payment system; 2004: e-data security, e-time stamp; 2005: finalising RomTelecom privatisation and initiating Romanian Mail privatisation). The year 2006 was mainly dedicated to e-government and knowledge economy initiatives, such as e-tax payment pilot projects and the establishment of knowledge centres, co-funded by the World Bank.

12 See: <[www.legi-internet.ro](http://www.legi-internet.ro)> and <[www.legi-internet.ro/blogs](http://www.legi-internet.ro/blogs)>.

13 While an interministerial task force, the Group for Promoting the Information Technology (GPIT), was established in March 2001 to develop Romania's information society strategy and to coordinate major players' legislative actions, analysts say the task force no longer exists. Some analysts also dismiss the notion that anything like a comprehensive government ICT strategy exists. They say any claim to the contrary amounts to window dressing.

11 Respectively: <[www.e-guvernare.ro](http://www.e-guvernare.ro)>, <[www.e-licitatie.ro](http://www.e-licitatie.ro)>, <[www.autorizatiiauto.ro](http://www.autorizatiiauto.ro)>.

Romanian involvement in the WSIS process was significant, in spite of weak public visibility in terms of an official online presence and the availability of WSIS-related strategic documents (no WSIS documents were found on key government websites and the WSIS-related website<sup>14</sup> did not work). In 2002 Romania hosted the Pan-European Regional Ministerial Conference (November 2002, Bucharest) to prepare for the WSIS Tunis meeting.

## Conclusions

One finding of this report is that there have been dynamic and positive changes towards transparent ICT policy-making in Romania. However, there remains work to be done in key areas.

While government and business are actively involved in shaping and developing ICT policy, civil society is poorly represented. Perhaps as a result, a technocratic rather than a developmental discourse prevails. For example, gender and open source issues are totally invisible in official public discourse.

While governmental ICT players' roles and responsibilities were legally redefined and clarified throughout 2002 to 2005 (in line with the EU's directives and requirements), administrative procedures and mechanisms are unclear to the public. Policies and procedures that are defined should theoretically be publicly available on government websites. However, this is not always the case. For instance, the MCTI website has a number of broken links, making key documents unavailable, such as the national strategy on the information society. This amounts to a disempowerment of citizens.

As far as internet governance goes, the administration and management of the top-level domain .ro is also not transparent (several attempts by the authors to clarify the issue failed). This remains a serious concern.

Future ICT policy priorities for Romania should include promoting active civil society involvement and bottom-up consultation in the ICT policy process, and stimulating public awareness on ICT policy issues. ■

## References

- Georgescu, D.C. (2006). *Comunicatiile electronice in Romania: dinamismul serviciilor e intrecut doar de diversitatea tehnologiilor* [online]. Bucharest: ANRC. Available from: <[www.anrc.ro/admin/Portal/LinkClick.aspx?tabid=2197&table=Links&field=ItemID&id=1973&link=2006.09.25\\_DG\\_IBCC+adobe.pdf](http://www.anrc.ro/admin/Portal/LinkClick.aspx?tabid=2197&table=Links&field=ItemID&id=1973&link=2006.09.25_DG_IBCC+adobe.pdf)>.
- Glodeanu, I., Hoffman, O. (2003). *Noii actori sociali in promovarea tehnologiilor informatice si de comunicare spre SCI-SI* [online]. Bucharest: Sociology Institute, Romanian Academy. Available from: <[www.acad.ro/pro\\_pri/pag\\_com01socinf\\_tem.htm](http://www.acad.ro/pro_pri/pag_com01socinf_tem.htm)>.
- Manolea, B. (2005). *Libertatea de exprimare si Internet-ul. Aspecte practice in Romania 2002-2004* [online]. Blogpost. Available from: <[legi-internet.ro/blogs/index.php?title=libertatea\\_de\\_exprimare\\_si\\_internet\\_ul\\_a\\_2004&more=1&c=1&tb=1&pb=1](http://legi-internet.ro/blogs/index.php?title=libertatea_de_exprimare_si_internet_ul_a_2004&more=1&c=1&tb=1&pb=1)>.
- MCTI (Ministry of Communications and Information Technology) (2002). *National Strategy of the New Economy and the Implementation of the Information Society*. Bucharest: MCTI.
- MCTI (2003). *Raport de evaluare a stadiului de dezvoltare a Societatii Informationale in Romania*. Bucharest: MCTI.
- Meso, P., Checchi, R.M., Sevcik, G.R., Loch, K.D. (2006). "Knowledge Spheres and the Diffusion of IT Policies". *Electronic Journal of Information Systems in Developing Countries* [online], 23 (3), pp.1-16. Available from: <[www.ejisd.com](http://www.ejisd.com)>.
- Petac, E., Petac, D. (2003). "An Analysis of ICT Policy and Strategies in Romania in European Context". *Roedunet conference* [online], June 2003. Available from: <[193.226.6.174/roedunet2003/html/pgid66\\_site\\_EN.html](http://193.226.6.174/roedunet2003/html/pgid66_site_EN.html)>.
- Thompson, M. (2004). "ICT, Power and Developmental Discourse: a Critical Analysis". *Electronic Journal of Information Systems in Developing Countries* [online], 20 (4), pp.1-25. Available from: <[www.ejisd.org](http://www.ejisd.org)>.
- UN (2005). *Global e-Government Readiness Report. From e-Government to e-Inclusion 2005* [online]. New York: UN. Available from: <[www.unpan.org/egovernment5.asp](http://www.unpan.org/egovernment5.asp)>.
- UN (2006). *e-Readiness assessment report for 2005*. Available from: <[www.is.gov.ba/documents/publications/e-Readiness%20assessment%20report%202005%20-%20no%20cover.pdf](http://www.is.gov.ba/documents/publications/e-Readiness%20assessment%20report%202005%20-%20no%20cover.pdf)>.

14 See: <[www.wsis-romania.ro](http://www.wsis-romania.ro)>.

# SOUTH AFRICA

LINK Centre, University of the Witwatersrand<sup>1</sup>  
Charley Lewis



## Introduction

The year 2006 marked the twelfth anniversary of South Africa's formal transition from the racially based oppressive apartheid regime that ruled the country from 1948, to the fully democratic dispensation that was inaugurated in 1994. The twelve years were marked by considerable progress, including economic growth and social development, as well as significant developments in respect of information society issues – although major challenges remain.

South Africa is mid-way into the third term of office of a popularly elected African National Congress (ANC) government. The country is governed by one of the more progressive constitutions in the world, premised on the need to “heal the divisions of the past,” containing firm commitments toward a “society based on democratic values, social justice and fundamental human rights,” and governed by “the will of the people” (RSA, 1996a).

This report provides a bird's eye view of the status of South Africa's information and communications technology (ICT) sector and of progress made toward the development of the country's information society. In order to do this, a brief overview of the country is given. The status and level of development of the various ICT sectors are then described, before an overview of policy, legislation and institutional frameworks governing the sector is provided. The final section of the report offers an overview of some of the institutions in the country with a specific information society/ICT focus, together with a summary of some of the issues and campaigns they have taken up recently. Their effectiveness is briefly assessed.

## Country overview

South Africa has a population of some 47 million (Stats SA, 2006) spread across 1.2 million square km. The country has nine provinces, and eleven official languages are spoken.

The economy is of medium size, with a gross domestic product (GDP) of USD 200 billion (CIA, 2007). South Africa ranks as a middle-income country in terms of GDP per capita, estimated at USD 4,230 in 2006 – or, adjusted for “purchasing power parity” to more accurately reflect the real cost of living, USD 13,000 (CIA, 2007) – but the society remains characterised by extreme income inequality, with high levels of structural unemployment and a large percentage of the population living in poverty. In recent years economic growth has moved steadily above 4%, although unemployment continues to hover around 25%.

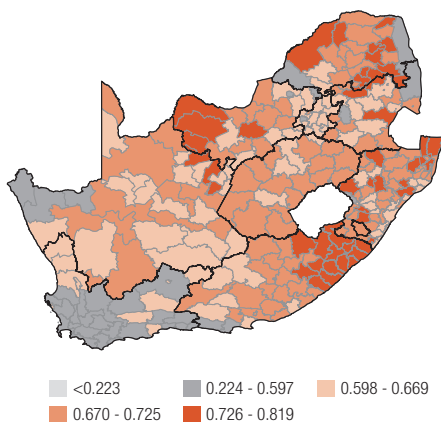
The UN Development Programme (UNDP) currently ranks South Africa a lowly 121st out of 177 countries, with a GINI co-efficient of 57.8, on its Human Development Index (UNDP, 2006, p. 337). This represents a decline from 94th out of 162 countries in 2001, suggesting the considerable challenges facing the country in improving the quality of life of its citizens.

South Africa is characterised by a strong and vibrant civil society, partly inherited from the upswell of opposition to apartheid in the 1980s. Organisations such as the powerful Congress of South African Trade Unions (COSATU), under whose umbrella over 1.8 million workers are unionised, and the South African NGO Coalition (SANGOCO), a national umbrella body for some 4,000 non-governmental organisations (NGOs), are powerful and vocal on a range of issues that affect workers and civil society. There is also a range of NGOs with a greater or lesser degree of specific focus on ICT issues. The issues and campaigns taken up by some of these bodies will be discussed below.

Prior to 1990, ICT services in South Africa were the sole responsibility of the state. Beginning with broadcasting, which was seen as key to the success of the incipient democratic transformation, a process of sector reform, including liberalisation, privatisation and the creation of independent regulation began, albeit somewhat piecemeal, from about 1993. The broadcasting sector has probably seen the greatest degree of change, with the transformation of the South African Broadcasting Corporation (SABC) from a government mouthpiece into a public broadcaster, the privatisation of numerous of its radio stations, and the licensing of many more, mainly in the community broadcasting sector. The pace has probably been slowest in fixed telecommunications, where the partially-privatised incumbent, Telkom, remains a de facto monopoly. Mobile telecommunications has seen rather more progress, with two mobile operators licensed in 1993 and a third in 2001. The internet was, from its inception, fully liberalised in South Africa, despite attempts by Telkom to roll back the tide (Lewis, 2006).

Regulation of the sector was initially undertaken by the Independent Broadcasting Authority (IBA), constitutionally entrenched to protect democracy, and later also by the South African Telecommunications Regulatory Authority, both of which were merged in 2001 to form the Independent Communications Authority of South Africa

Map 1: South Africa, GINI coefficient by district



Source: Human Sciences Research Council (HSRC)

<sup>1</sup> <link.wits.ac.za>.

(ICASA). After the initial, rather rushed broadcasting reforms, telecommunications reform was completed in a highly contested process around 1996, with a second wave of reform following in 2001 (Gillwald, 2002), and a third, which will be discussed in more detail below, in 2006.

South Africa has been involved in a wide range of global information society processes over the last decade, often in a leadership role. This can partly be attributed to the legacy of the struggle against apartheid, and the consequent commitment to enabling development, including through the use of ICTs and through the provision of universal access to ICT services to all citizens. Following interventions by the then Deputy President Thabo Mbeki, South Africa hosted the 1996 Information Society and Development (ISAD) conference, and participated in both the Global Knowledge (GK) processes of the World Bank and the various iterations of the World Summit on the Information Society (WSIS) of the International Telecommunication Union (ITU).

## Country situation

It is worth looking at the various aspects of the ICT environment in South Africa in more detail.

### Indicators and statistics

#### Summary of national indicators

Table 1 presents a snapshot of indicators benchmarking South Africa's ICT sector. Figures, as far as possible, present the picture in 2006.

#### Telephony

South Africa's telephony market has historically been separated into fixed line and mobile cellular – although this is likely to change in the future as the impact of new legislation filters through.

The fixed-line telecommunications sector in South Africa is in transition to competition, subject to a process of “managed liberalisation” (Esselaar and Gillwald, 2005). A single fixed-line incumbent operator, Telkom, was licensed in 1997, with a legislated five-year exclusivity period. Despite the formal lapse of this monopoly in 2002, a protracted and complex licensing process has seen the second network operator, NeoTel, only receiving its licence in December 2005 (Stones, 2005). NeoTel is first entering the wholesale market, and is unlikely to serve any retail customers before mid-2007 (iAfrica, 2007). Telkom's latest annual report (Telkom, 2006) lists its customer base as comprising a total of 4,708,000 lines. Of these only some 52% are identifiably residential customers, a very low proportion by global standards (ITU, 2006). It is important to note that, for a range of reasons, probably related to lack of affordability and poor customer focus, the fixed-line market has shown a slight but steady decline (of about 0.4% per year) since around 2000.

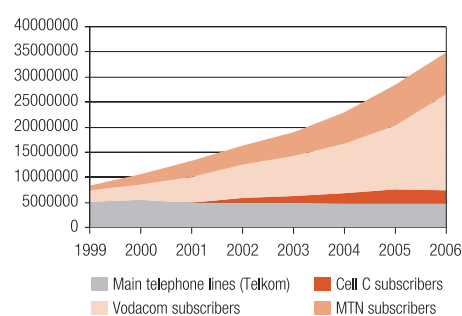
The mobile telephony market in South Africa is substantially larger than that for fixed-line services. There are currently three providers of mobile communications services operating in the South African market, two of which have been in operation since 1993 (Vodacom and MTN), with the third (Cell C) having been in operation since 2001. Their combined customer base is some 32,299,000 subscribers (Esselaar and Gillwald, 2007; Vodacom, 2006; MTN, 2006; Cell C, 2006), of which Vodacom and MTN have the largest market shares of 59% and 32% respectively, leaving Cell C a relatively distant – and weakening – third with 8%. In contrast to the fixed-line market, where the overwhelming majority of customers (82%) are on postpaid contracts, the overwhelming majority of mobile customers (85%) use prepaid services, which target the poorer sections of the community.

**Table 1: South Africa - ICT indicators**

Indicators	Number
Population	47,390,900
GDP	USD 200.5 billion
GDP per capita	USD 4,230
GINI co-efficient	57.8
Main (fixed) telephone lines	4,708,000
Teledensity (fixed)	9.9%
No. of fixed line operators	2
Mobile telephone subscribers	32,299,000
Teledensity (mobile)	68.2%
No. of mobile operators	3
Internet subscribers (estimated)	3,665,707 (2005)
Broadband internet subscribers	283,839
No. of personal computers	5,300,000
No. of internet service providers	355 (2005)
No. of television sets	7,000,000
No. of radio sets	10,000,000
No. of television stations	6
No. of radio stations	130

Sources: Stats SA (2006), CIA (2007), UNDP (2006), Telkom (2006), Esselaar and Gillwald (2007), Goldstuck (2006), Laschinger and Goldstuck (2006), Mochiko and Khuzwayo (2006), Alexander (2006), GCIS (2006).

**Graph 1: Telephony market (1999-2006)**



Source: International Telecommunication Union (ITU)

In further contrast to the fixed-line telecommunications sector, the mobile telephony market has enjoyed exponential levels of growth over the last several years, with Vodacom and MTN reporting subscriber growth of 32% and 28% respectively between 2004 and 2005.

There are some suggestions that the mobile subscriber data overstate the actual numbers of mobile customers. This is inherent in the very nature of mobile prepaid services, where the customer base is

relatively fluid due to the cheap availability of “starter packs” – Vodacom, for example, reports a churn rate of just over 30% of its prepaid subscribers (Vodacom, 2005) – and where significant numbers of customers may be inactive or lapsed at any given point in time. The subscriber figures probably therefore overstate the number of customers, possibly by as much as 30% (Goldstuck, 2005).

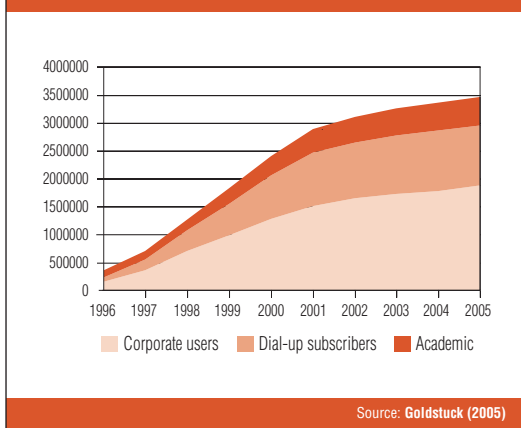
Finally, it is important to note that there is likely to be a considerable overlap between fixed and mobile telephony subscribers. A significant proportion of fixed-line customers also have mobile access; although there are no recent figures, in 2001 nearly 60% of fixed-line telephony subscribers also had mobile phones (Stats SA, 2001).

Following the 2001 changes to the telecommunications policy and legislative framework (RSA, 2001), a new category of telecommunications providers, Under-Serviced Area Licensees (USALs), was introduced. Most analysts are sceptical about their viability, with the few that have come to market doing so as resellers of mobile services (Esselaar and Gillwald, 2007). No subscriber figures are available from them, and their impact on the market is likely to be negligible.

### Internet

Despite rapid and impressive growth in the mid-1990s, the internet sector has in recent years shown signs of reaching a plateau, with growth having “slowed to a crawl” (Goldstuck, 2006, p. 47), and an estimated total user base at the end of 2005 of only some 3.6 million. Of these, a growing majority (52%) are corporate users, accessing e-mail and the internet from their places of work, with under a third (30%) getting access through dial-up connectivity. These figures would suggest that some 7.5% of South Africans have access to the cornucopia of the internet, but that only a little over 2% of the population can do this from the comfort of home.

**Graph 2: Internet users (1996-2005)**



A variety of reasons have been suggested for the slowdown in internet access, including pricing and policy uncertainty. Goldstuck (2006) argues that “accelerated growth in [i]nternet usage is heavily dependent on the timely and effective roll-out of the [second fixed-line operator].” He also points to the relative failure of a number of high-profile school connectivity projects, such as Gauteng Online, designed to provide access to all public school learners, describing them as a “damp squib” (Goldstuck, 2006). The decline in dial-up subscribers can largely be attributed to the migration to broadband, which now accounts for just over 4% of users, having grown six-fold since 2003 (Goldstuck, 2006).

The internet market is serviced by 355 internet service providers (ISPs), the majority of which are “corporate ISPs” (Goldstuck, 2006). The largest provider of dial-up access remains M-Web (accounting for about 29% of dial-up consumers), with Telkom Internet (21%) hot on its heels (Goldstuck, 2006). As with fixed-line telephony access, it is important to note that the actual number of users exceeds the number of subscribers by a considerable margin (estimates range from 100% upwards) due to the sharing of accounts by both domestic and business users (Goldstuck, 2006).

### Broadcasting

The television market in South Africa remains dominated by the state-owned SABC, which provides three free-to-air TV channels and enjoys 65% of the national viewership (OMD, 2006) of some seven million households (Mochiko and Khuzwayo, 2006). The balance of viewership is split between e-tv, a private free-to-air station with 21%, and the terrestrial and digital satellite subscription services provided by MultiChoice through its M-Net and DSTV channels, with 14% (OMD, 2006). There is also a religious free-to-air TV station targeting the Eastern Cape, called Trinity TV, as well as two part-time community TV station projects in existence; but the latter broadcast infrequently, with special event licences. A third community TV project is currently at the formation stage.

The television landscape is likely to see significant changes in coming years. Two regional television licences, covering respectively the north and south of the country and broadcasting primarily in indigenous languages, are in the process of being awarded to the SABC; applications are open for an unspecified number of subscription television licences likely to be awarded during 2007; and a migration to digital terrestrial television is very much on the cards (Mochiko, 2006; Mochiko and Khuzwayo, 2006; Glazier, 2007). In addition, the two largest mobile operators are already offering TV broadcasts to mobile handsets on a trial basis. Much of the impetus behind many of these developments is the anticipated media demand and opportunities linked to South Africa’s hosting of the 2010 Soccer World Cup.

Perhaps less glamorous, but with greater popular reach, is radio, with some 10 million radio sets in use and nearly 92% of South Africans having listened to the radio in the last seven days (OMD, 2006). The number of radio stations serving this market is about 130, with some monthly fluctuation in the number of active community radio stations (OMD, 2006; GCIS, 2006).

As with the television market, the state-owned SABC is a leading player, operating eighteen stations, of which five have national coverage, with the remaining thirteen serving regional and local audiences. The content of these stations is a mix of public service and commercial broadcasting. The three most popular radio stations, each with national listenership figures above 15%, are Metro FM, which broadcasts nationwide in English to “trendy, sophisticated black” audiences, and Ukhozi FM and Umhlobo Wenene FM, broadcasting across several regions in isiZulu and isiXhosa respectively (OMD, 2006).

South Africa has a further thirteen private commercial radio stations, mostly serving regional audiences. The most popular station is Radio Jacaranda, which broadcasts mainly music to the populous Gauteng province and enjoys a national listenership of some 8%. ICASA is expected to award additional regional private commercial radio licences during the course of 2007.

South Africa also has a relatively vibrant community broadcasting sector, with some 100 community radio stations currently licensed. Most of these are geographically based, serving local communities,

**Table 2: Comparative ICT indicators, selected SADC countries**

Country	GDP per capita (USD)	Fixed line teledensity (%)	Mobile teledensity (%)	DSL subscribers	PC density (%)	Internet density <sup>2</sup> (%)	Internet hosts	TV density <sup>3</sup> (%)	Radio density <sup>4</sup> (%)
<b>South Africa</b>	<b>2,293</b>	<b>10.4</b>	<b>43.1</b>	<b>60,000</b>	<b>8.3</b>	<b>7.9</b>	<b>609,284</b>	<b>19.7</b>	<b>24.8</b>
Botswana	4,124	8.0	32.9	-	4.7	3.5	1,734	4.4	75.6
Kenya	474	0.9	7.9	-	1.4	4.6	11,706	4.8	21.8
Lesotho	524	2.1	8.8	-	-	2.4	-	3.7	6.2
Mozambique	217	0.4	3.7	-	0.6	0.7	7,234	2.1	-
Namibia	1,523	6.4	14.2	-	10.9	3.7	3,553	8.1	21.2
Swaziland	1,871	4.4	10.4	-	3.3	3.3	2,437	3.6	17.2
Tanzania	282	0.4	4.4	-	0.7	0.9	-	4.2	41.8
Zambia	338	0.8	4.3	1,000	1.0	2.1	3,927	6.5	14.8
Zimbabwe	-	2.7	3.6	4,000	8.4	6.9	6,705	5.1	14.4
Africa	708	3.1	9.1	224,900	1.7	2.6	-	-	-

Sources: ITU (2006), Goldstuck (2006).

with many affiliated to the National Community Radio Forum, but there are also several "community of interest" stations, mostly religious in character.

#### Regional indicators

Compared to its neighbours, South Africa ranks highly on most ICT indicators, reflecting the sophisticated level of development of its ICT infrastructure, as well as its considerably greater wealth – notwithstanding the great internal disparities that remain the legacy of apartheid. Only Botswana has a higher GDP per capita, reflective of a smaller population and that country's diamond wealth. It is also the only country in the region to come close to South Africa in respect of any of the indicators.

#### Global rankings

Globally, South Africa is generally ranked in the middle levels of many of the international indices that attempt to measure ICT access, availability and resources, although many commentators make the point that the country is being out-performed by many of its competitors and continues to slide down a number of the indices (Esselaar and Gillwald, 2007):

- The latest Orbicom Infostates Index ranks South Africa 78th out of 180 countries, noting that the country has experienced very low rates of growth since 1995 (Sciadas, 2005).
- The ITU ranks South Africa 78th out of 182 countries in terms of its composite Digital Access Index (ITU, 2003).
- The ITU describes its most recent index, the ICT Opportunity Index, as a "merger of the ITU's Digital Access Index (DAI) and Orbicom's... Infostates conceptual framework." It characterises it as an "inclusive index [providing] measurement across 183 economies [and relying] on ten indicators that help measure ICT networks, education and skills, uptake and intensity of the use of ICT." The index ranks South Africa 90th out of 183 countries with a score of 96.78. This is below the global average of 147.56, suggesting even further slippage down global rankings (ITU, 2007).

- The World Economic Forum (WEF) ranks South Africa in 2006 at 45th out of 125 countries in terms of global competitiveness, down from 40th in 2005 (WEF, 2006a).
- The WEF also ranks South Africa in 2005 at 37th out of 115 countries in terms of networked readiness, down from 34th in 2004 (WEF, 2006b).
- The UN Conference on Trade and Development (UNCTAD) ranks South Africa 84th out of 180 countries in terms of its ICT Diffusion Index, down from 79th in 1997 (UNCTAD, 2006).
- The Economist's Intelligence Unit (EIU) ranks South Africa at 32nd out of 68 countries in terms of its e-Readiness Index, unchanged from 2004 (EIU, 2005).
- Arthur Goldstuck ranks South Africa at 34th worldwide (but 1st in Africa by a considerable margin) in terms of internet hosts as of July 2005, down from 25th in 2000 (Goldstuck, 2006, p. 97).

This slippage has been noted by a number of analysts. In their recent review of the performance of the South African telecommunications sector, Esselaar and Gillwald (2007) point to a number of contributory factors including increased state involvement in service provision, lack of effective competition in telephony services, high pricing (both wholesale and retail, often at monopoly levels), and a lack of effective regulation of interconnection.

#### ICT policy development: policy, legislation and institutions

South Africa has frequently been criticised for a lack of policy clarity, coherence and integration (Gillwald, 2005). As far back as 1996, the now-defunct National IT Forum (NITF), a national body bringing together sector representation, including civil society and labour,

<sup>2</sup> Percentage of inhabitants using the internet.

<sup>3</sup> Percentage of inhabitants with TV sets.

<sup>4</sup> Percentage of inhabitants with radio sets. The figure for South Africa appears far too low and contradicts OMD (2006).



had called for an overall national ICT policy framework at the highest level. To date none exists.

Policy specific to the ICT sector, including telecommunications, broadcasting and the internet, falls under the less than effectual Ministry of Communications. Other ministries, such as those of Science and Technology, and Trade and Industry, also have an active interest in the sector, leading to occasional disagreements. For example, the 2001 review of telecommunications policy saw government see-sawing between introducing one or two additional fixed-line operators, positions seen as being advocated by the Ministries of Communications and Trade and Industry respectively

Consequently the only policy framework governing the sector has been the 1996 White Paper on Telecommunications Policy (RSA, 1996b).

### Legislation

A number of disparate pieces of legislation, many of which have undergone subsequent amendment, govern the sector, including:

- The Broadcasting Act (RSA, 1999), which deals with broadcasting policy and regulation, as well as with the public broadcaster.
- The Telecommunications Act – recently repealed – which dealt with policy and regulation for the telecommunications sector, defined its market structure, and established a sector regulator and a body to oversee universal service (RSA, 1996c).
- Promotion of Access to Information Act 2 of 2000;
- The IBA Act (RSA, 1993), which set up a constitutionally entrenched broadcasting regulator in the run-up to the country's first democratic election.
- The ICASA Act (RSA, 2000), which created a unified regulator for both broadcasting and telecommunications.
- The Electronic Communications and Transactions (ECT) Act (RSA, 2002a), which provided a legal framework for electronic transactions, dealt with cryptography, cybercrime and the protection of privacy, and provided for the development of a national e-strategy, which has yet to see the light of day.
- The Interception and Monitoring Act (RSA, 2002b), which dealt with the circumstances under which electronic surveillance and interception are permitted, as well as related procedures and responsibilities.

The year 2006 saw the final promulgation of the Electronic Communications Act (RSA, 2005b), along with amendments to the ICASA Act (RSA, 2006), which are set to fundamentally realign both the regulation and market structure of the ICT sector.

The process that culminated in this substantial revamp of the sector first saw the light of day in a Convergence Colloquium called by the Department of Communications in mid-2003, to which stakeholders were invited, and which led to the publication of a Draft Convergence Bill in late 2003 (RSA, 2003). Strong public criticism of the poor quality of this draft led to the tabling of a revised Convergence Bill (RSA, 2005a) early in 2005. This was conceptually very similar to the draft bill, although with much of the poor drafting revised, and with much of the constitutionally controversial changes to the regulation of the sector removed.

The Bill was criticised on the grounds of both process and content. Despite the fundamental changes it proposed, specifically to the licensing framework and hence by implication to the market structure, it was felt by some not to go far enough in embracing the phe-

nomenon of ICT convergence. At the same time the lack of a Green and White Paper<sup>5</sup> process of the kind that had preceded the 1996 Telecommunications Act, together with the behind-closed-doors nature of the drafting, was seen to be a cardinal flaw in legislation with the potential to fundamentally alter the landscape of the sector.

The final stages of the new legislation took place in parliament, with submissions from stakeholders called for, and a series of public hearings undertaken, during which the legislation was renamed the Electronic Communications Act. Promulgation was held up when the legal advisers to the state president pointed out that the accompanying ICASA Amendment Act might well have been unconstitutional with respect to the Chapter 9 protections (RSA, 1996a) afforded to the regulation of broadcasting. Once a revised version of the latter had been passed, both Acts were promulgated on 20 April 2006.

As pointed out above, the most fundamental impact of the new Act is likely to be in the market structure of the sector (Esselaar and Gillwald, 2007, p. 12), where the historical separation of operator licences and spheres of operation into technology-specific compartments is replaced by licensing on the basis of cross-cutting technology-neutral layers of the kind identified in the analytical literature on convergence, and adopted in jurisdictions such as Malaysia. This is likely to promote increased competition in the sector and to stimulate the provision of innovative new IP<sup>6</sup>-enabled services such as mobile television.

The new Act also provides for increased independence of the regulator, whose authority is considerably less constrained except in the licensing of infrastructure (electronic communications network services), which remain subject to the issuance of policy directions by the minister. On the other hand, the appointment process for the governing council of the regulator is somewhat less subject to publicly accountable checks and balances. Much of the impact of the new legislation will depend on the regulatory capacity of ICASA, and on its ability to stamp its policy imprint and authority on the sector, which is seen by many commentators as dubious (Esselaar and Gillwald, 2007).

### Institutions

A number of institutions are created by the above legislation to regulate or provide policy intervention in the sector.

The **Independent Communications Authority of South Africa** (ICASA), as suggested, is the overall sector regulator, created to unify the formerly separate regulation of broadcasting and telecommunications. It is tasked with regulating electronic communications “in the public interest” and to “ensure fairness and a diversity of views” (RSA, 2000). Concerns have repeatedly been raised about its effectiveness in doing this, given the degree to which it has historically been constrained by legislation. Questions have also been raised about the calibre of both councillors and senior line management.

The recently renamed **Universal Service and Access Agency of South Africa** (USAASA)<sup>7</sup> is unique as a demonstration of national commitment to redress historical racial disparities in the provision of communications services. USAASA is tasked with promoting “universal access and universal service” (RSA, 2006), along with administering a Universal Service and Access Fund, through which a levy on the

5 In the Westminster parliamentary model, a Green Paper sets out policy options relating to a major legislative revamp for public debate, while a White Paper sets out the government's final policy choice.

6 Internet protocol.

7 Formerly known as the Universal Service Agency (USA).

revenues of ICT sector licensees is aggregated and disbursed to support increased ICT access (including the under-serviced area licensees).

The track record of the Agency has unfortunately been poor, with most funding having gone to telecentres, few of which have been able to demonstrate any degree of sustainability. No funding has yet been given to “needy persons”, who await a formally gazetted definition of their status, and although the new under-serviced area licensees have received subsidies, the lack of viability of these companies suggests this will make little if any impact on the provision of communications access to disadvantaged communities. A recent process of introspection and strategic planning at USAASA may, however, give some hope for improved performance.

The management of the internet is undertaken by the **.za Domain Name Authority**, established under the 2002 ECT Act to “administer and manage the .za domain name space,” as well as the relevant registrars and registries of domain names (RSA, 2002a). An elected stakeholder body, it has recently undertaken a review of how the .za domain is structured and administered.

A further government-established body with an interest in information society policy is the **Presidential National Commission on the Information Society and Development** (PNC on ISAD). The PNC on ISAD was launched in 2002 as a South African counterpart to the Presidential International Advisory Council, a high-profile body of international IT experts invited to advise the president on ICT policy and development matters. The Council consists of 31 individuals drawn largely from government and business, with a smattering of academics and a lone NGO representative. It has an advisory mandate relating *inter alia* to “bridging the digital divide” and “overall government policy framework on ICTs” (PNC on ISAD, 2007a).

However, the PNC on ISAD has little to show for this beyond announcing the February 2007 Cabinet approval of its National Information Society and Development Plan, which is based on ten unsurprising information society pillars including: Policy and Regulatory Environment; ICT Infrastructure and Universal Access; Local Content; Digital Inclusion and e-Awareness; Human Capital; and ICT Capacity Development and R&D (PNC on ISAD, 2007a). Unfortunately no copy of the plan is available for assessment. It does, however, claim five priority focus areas which seem to mirror those from its website: e-Government, e-Health, e-Education, SMMEs (small, medium and micro enterprises), and Local Content (PNC on ISAD, 2007b). The PNC on ISAD has made little contribution to ICT policy, and is widely regarded as ineffectual.

## Participation

In the absence of a coherent national ICT policy framework, and given an ICT sector governed largely by fragmented legislation and with a multiplicity of sometimes overlapping institutions, it is not surprising then to find an NGO sector that is both vibrant and marginalised.

Some of the NGOs active in the sector include:

- **SANGONeT**,<sup>8</sup> originally established as a civil society internet service provider, is the local Association for Progressive Communications (APC) partner, and frequently the lead organisation in a range of ICT initiatives.
- **Freedom of Expression Institute (FXI)**,<sup>9</sup> a freedom of speech NGO of long standing, focused on “fighting for and defending

freedom of expression, opposing censorship, fighting for the right of equal access to information and knowledge [and] proactively developing policy to ensure the free flow of information...”.

- **WomensNet**,<sup>10</sup> originally a SANGONeT project, but now a robust organisation in its own right, which sets out to “empower South African women to use cyberspace as a tool for information and mobilisation” (WomensNet, 2006).
- **Media Monitoring Project (MMP)**<sup>11</sup> analyses and comments on the media from a human rights perspective, and builds media monitoring capacity among NGOs and other groups.

Less frequently, organisations such as COSATU and SANGOCO, as well as a range of smaller NGOs, become involved in ICT policy issues, but this is not their core work. Aside from the NGOs specifically identified above, SANGONeT (n.d. a) notes that the “involvement of NGOs in national ICT policy and advocacy processes” is “limited,” partly because “many NGOs have very limited ICT capacity,” and partly because most are focused more on other development issues.

There are also a range of individually based consumer activist websites, vibrant and crusading, that often target specific companies, or are focused on specific ICT services. The better examples include Hellkom (<www.hellkom.co.za>) and MyADSL (<www.myadsl.co.za>) (Southwood *et al*, 2006).

The remainder of this section of the report will examine some of the issues and policy areas in which civil society organisations have intervened.

## World Summit on the Information Society (WSIS)

The participation of South African NGOs and broader civil society in both the lead-up to the November 2005 WSIS and its aftermath has been somewhat erratic. SANGONeT led a civil society process, including several *Thetha* discussion forums (see below), that culminated in the adoption of a South African Civil Society Statement (SANGONeT, 2005) shortly before the Summit. This identified sixteen critical areas of concern to civil society, including freedom of expression, telecommunications costs, open source and open content and gender. The September 2005 Highway Africa conference of journalists, held in Grahamstown, also issued a statement calling for the WSIS to move from statements to action (APC, 2005).

From the government side, the PNC on ISAD ran a preparatory process, which included workshops around gender, disability and youth, and was tasked with driving a follow-up process which since seems to have stalled. There were also a few Department of Communications events, including an International Women’s Mutingati<sup>12</sup> on the Information Society in August 2005.

Beyond this, the formal South African delegation, led by Director General Lyndall Shope-Mafole, whose own participation was less than effective, appears to have had little participation from civil society. Only a few individuals from outside government were included in the official delegation to Tunis (and none in the preparatory committees), and only a small handful of NGOs were present at the Summit.

Consequently, despite a few attempts at interaction, there was no consistent involvement of South African civil society in either the

8 <www.sangonet.org.za>.

9 <www.fxio.org.za>.

10 <www.womensnet.org.za>.

11 <www.mediamonitoring.org.za>.

12 The word Mutingati comes from the South African indigenous language of the Tshivenda people and means “a joining of hands, minds and forces to solve problems and improve the life situation of the community.” See: <www.pnc.gov.za/content/view/43/44>.

formulation of positions or in ensuring their adoption in the WSIS Plan of Action. Civil society itself is partly to blame in this regard for not being more insistent regarding its inclusion. Worse, no formal assessment of civil society participation from a South African perspective, and the success of the civil society agenda, has been made.

### Open source

The campaign to promote open source software and open access to content is one that can claim considerably more success. With funding and impetus from billionaire astronaut Mark Shuttleworth, a Go Open Source campaign ran from 2004 to 2006, which distributed open source software on CD, ran a 13-part television series, and signed up 5,000 members to its Geek Freedom League. The campaign was well supported by civil society organisations, for whom open source and open access had long been important issues. In late 2006 SANGONeT ran a workshop on the issue, culminating in a petition signed by over 50 NGOs, which was presented to the government (SANGONeT, 2006).

In late February 2007 the campaign was able to claim success with the adoption by Cabinet of an open source policy and strategy (Vecchiato, 2007). While a breakthrough, its implementation needs to be monitored by civil society.

### ICTs and gender

WomensNet continues to engage around the issue of ICTs and gender. Its core activity remains the provision of ICT training to women's NGOs and the promotion of ICT literacy and skills through a range of innovative approaches, such as storytelling. WomensNet is also engaged in content development, including a recent funky "Take Back the Tech" campaign, and undertakes policy advocacy (WomensNet, 2006).

### Raising awareness

SANGONeT runs a project under the title *Thetha*, an Nguni verb which means to "talk, discuss, debate and share opinions" and which focuses on the "role and relevance of ICTs to the NGO sector" in Southern Africa (SANGONeT, n. d. b). Structured around a series of one-day discussion forums, *Thetha* was initially based only in South Africa, but later ran forums in two neighbouring countries, Namibia and Swaziland, with further forums planned for Botswana, Lesotho and Angola. A regular *Thetha* newsletter is issued, and the project has commissioned a study into the state of ICTs in the NGO sector, due for completion in 2007.<sup>13</sup>

### Communications costs

The high pricing of both fixed and mobile telecommunications remains a key issue for both NGOs and civil society. SANGONeT sees pricing as one of its ICT advocacy issues, as does the FXI, which has run workshops, made submissions to ICASA, and undertaken pickets on the issue. Consumer activist websites such as Hellkom and MyADSL have also given the issue high priority. Recently a group calling itself the Telkom Action Group (TAG) launched a media campaign against Telkom, blaming it for keeping access costs artificially high. A full-page advert was paid for by hundreds of concerned consumers. ICASA has also engaged in some sabre rattling, and the matter has even made the annual presidential state of the nation address.

However, despite slight downward trends, possibly driven by the public furor, communications prices remain high and inadequately regulated (Esselaar and Gillwald, 2007), and therefore an issue that civil society will have to continue to address.

### Freedom of information

The FXI runs a number of programmes, including ones on anti-censorship, media and ICTs, and access to information, which have a direct bearing on information society issues. It undertakes research, comments frequently in the press, and is even able to fund legal battles. While many of its interventions involve public protests, it has also supported a local newspaper's (Mail & Guardian) right to protect its sources in reporting on the Oilgate<sup>14</sup> scandal, and intervened to protect whistle-blowers. It has also been highly critical of the editorial policies of the public broadcaster, for instance, by protesting against its blacklisting of certain sources through media statements and pickets. The FXI also opposed the axing of a late-night gay rights programme.

### Policy engagement

Few NGOs have had the resources to intervene directly in the policy processes relating to the information society and ICTs. Apart from the interventions discussed above, the FXI and the MMP are possibly the only NGOs to have made regular submissions into formal policy processes. These include input into the Broadcasting Act and SABC licensing conditions, participation in local content hearings, support for the independence of ICASA, opposition to the Monitoring and Interception Act, and activities in relation to the ECT Act.

In fairness, much of the current policy formulation environment does not facilitate NGO intervention. Regulation is largely through formal notice-and-comment procedures, and submissions to parliament on legislative processes require substantial resources. Open consultative processes tend now to be something of a rarity. However, NGOs could do considerably more to exploit the spaces available to them, by monitoring opportunities more closely and by working together to exploit those that are available.

### Conclusions

While South Africa represents a relatively advanced ICT environment compared to many other developing countries, it is of concern that the growth of infrastructure and capacity has been less than optimal. The continued slide down so many of the global ICT indices, including those that focus more on the softer, information society issues, is of particular concern for the development of a inclusive, ICT-empowered society.

While civil society and its ICT NGOs remain vibrant and active – raising issues, mounting campaigns, building awareness – their lack of concrete impact on either formal policy and legislation, or on South Africa's input into global information society processes such as the WSIS, is something that needs to be addressed. Greater capacity and greater cooperation will be necessary to achieve a more substantial impact. ■

<sup>13</sup> Interview with David Barnard, CEO SANGONeT, 1 March 2007.

<sup>14</sup> A petrol company was accused of paying ZAR 11 million (USD 1.5 million) of state money to the ANC.

## References

- Alexander, M. (2006). *South Africa's radio stations* [online]. Available from: <www.southafrica.info/ess\_info/sa\_glance/media/radio.htm>.
- ANC (African National Congress) (1994). *Reconstruction and Development Programme*. Johannesburg: Umananyo Publications.
- APC (2005). *Highway Africa conference issues statement for WSIS* [online]. Available from: <africa.rights.apc.org/index.shtml?apc=29740s21817e\_1&x=1413691>.
- AVERT (2007). *South Africa: HIV & AIDS statistics* [online]. Available from: <www.avert.org/safricacstats.htm>.
- Cell C (2006). *Media Briefing August 2006* [online]. Press conference presentation, 23 August 2006. Available from: <www.cellc.co.za/images/Mediaresults082206.ppt>.
- CIA (Central Intelligence Agency) (2007). *South Africa* [online]. Available from: <www.cia.gov/cia/publications/factbook/geos/sf.html>.
- COSATU (Congress of South African Trade Unions) (n.d.). *Affiliates* [online]. Johannesburg: COSATU. Available from: <www.cosatu.org.za/affiliates.html>.
- EIU (Economist's Intelligence Unit) (2005). *The 2005 e-readiness rankings* [online]. Available from: <www.eiu.com/site\_info.asp?info\_name=eiu\_2005\_e\_readiness\_rankings>.
- Esselaar, S., Gillwald, A. (2005). *South African ICT Sector Performance Review*. Johannesburg: University of the Witwatersrand.
- Esselaar, S., Gillwald, A. (2007). *South African ICT Sector Performance Review* [online]. Available from: <www.researchictafrica.net/images/upload/SA\_SPR\_31\_Mar\_2007v22.pdf>.
- FXI (Freeform of Expression Institute) (2006). *Annual Report – 2005/2006*. Johannesburg: FXI.
- GCIS (Government Communication and Information System) (2006). *South Africa Yearbook 2005/06* [online]. Available from: <www.gcis.gov.za/docs/publications/yearbook06.htm>.
- Gillwald, A. (2002). "Experimenting with institutional arrangements for communications policy and regulation: the case of telecommunications and broadcasting in South Africa". *The Southern African Journal of Information and Communication* [online], 2 (1). Available from: <link.wits.ac.za/journal/j0201-ag.htm>.
- Gillwald, A. (2005). "Good intentions, poor outcomes: Telecommunications reform in South Africa", *Telecommunications Policy* [online], 29 (7), pp. 469-491. Available from: <dx.doi.org/10.1016/j.telpol.2005.05.005>.
- Glazier, D. (2007). "ICASA tunes into digital migration". *ITWeb* [online], 6 February 2007. Available from: <www.itweb.co.za/sections/telecoms/2007/0702061036.asp>.
- Goldstuck, A. (2005). *Choose a number*. Johannesburg, South Africa: FinWeek.
- Goldstuck, A. (2006). *The Goldstuck Report: Internet Access in South Africa, 2005*. Johannesburg: World Wide Worx.
- iAfrica (2007). "Competition for Telkom... or not?". *iAfrica.com* [online], 15 February. Available from: <business.iafrica.com/features/629548.htm>.
- ITU (International Telecommunication Union) (1999). *Annual Report 1999* [online]. Available from: <www.itu.int/aboutitu/annual\_report/1999/index.html>.
- ITU (2003). *World Telecommunication Development Report 2003: Access Indicators for the Information Society* [online]. Available from: <www.itu.int/ITU-D/ict/publications/wtdr\_03/index.html>.
- ITU (2006). *World Information Society Report 2006* [online]. Available from: <www.itu.int/osg/spu/publications/worldinformationsociety/images/WISRdownload.jpg>.
- ITU (2007). *Measuring the Information Society 2007: ICT Opportunity Index and World Telecommunication / ICT Indicators* [online]. Available from: <www.itu.int/ITU-D/ict/publications/ict-oi/2007/index.html>.
- Laschinger, K., Goldstuck, A. (2006). *PC Users in South Africa 2006*. Johannesburg: World Wide Worx.
- Lewis, C. (2006). "South Africa: The Internet Wars". In Wilson, E., Wong, K. (Eds), *Negotiating the Net in Africa: The Politics of Internet Diffusion* [online]. Boulder: Lynne Rienner. Available from: <www.cidcm.umd.edu/wilson/chapter4\_South\_Africa.pdf>.
- Masuku, S. (2001). "South Africa: World crime capital?". *Nedbank ISS Crime Index* [online], 5 (1), January - February 2001. Available from: <www.iss.co.za/Pubs/CRIMEINDEX/01VOL5N01/World.html>.
- Mochiko, T. (2006). "Icasa sifts through pay TV licence applications". *Myads!* [online], 27 November 2006. Available from: <www.mybroadband.co.za/nephph/?m=show&id=4991>.
- Mochiko, T., Khuzwayo, W. (2006). "The future of TV may well be in a box". *Business Report* [online], 18 June 2006. Available from: <www.busrep.co.za/index.php?SectionId=&ArticleId=3295422>.
- MTN (2006). *MTN Integrated Business Report 2005* [online]. Available from: <annualreport.mtn.com>.
- OMD (Optimum Media Direction) (2006). *South African Media Facts 2006* [online]. Available from: <www.omdmedia.co.za/samediafacts2006.pdf>.
- PNC on ISAD (Presidential National Commission on the Information Society and Development) (2007a). *Background* [online]. Available from: <www.pnc.gov.za/content/view/22/38>.
- PNC on ISAD (2007b). *e-Mzansi Information Society* [online]. Available from: <www.meerkat24.com/pnc>.
- RSA (Government of the Republic of South Africa) (1993). *Independent Broadcasting Authority Act. No. 153 of 1993*. Pretoria: Republic of South Africa.
- RSA (1996a). *Constitution of the Republic of South Africa, 1996* [online]. Available from: <www.info.gov.za/documents/constitution/index.htm>.
- RSA (1996b). *White Paper on Telecommunications Policy* [online]. Available from: <www.polity.org.za/html/govdocs/white\_papers/telewp.html>.
- RSA (1996c). *Telecommunications Act. No. 103 of 1996*. Pretoria: Republic of South Africa.
- RSA (1999). *Broadcasting Act, 1999. No. 4 of 1999*. Pretoria: Republic of South Africa.
- RSA (2000). *Independent Communications Authority of South Africa Act. No. 13 of 2000*. Pretoria: Republic of South Africa.
- RSA (2001). *Telecommunications Amendment Act, 2001* [online]. Available from: <www.info.gov.za/gazette/acts/2001/a64-01.pdf>.
- RSA (2002a). *Electronic Communications and Transactions Act. No. 25 of 2002*. Available from: <www.internet.org.za/ect\_act.html>.
- RSA (2002b). *Regulation of Interception of Communications and Provision of Communication-related Information Act. No. 70 of 2002*. Pretoria: Republic of South Africa.
- RSA (2003). "Draft Convergence Bill". *Government Gazette* [online], 462 (25806), 3 December 2003. Available from: <www.info.gov.za/gazette/bills/2003/25806.pdf>.
- RSA (2005a). "Convergence Bill". *Government Gazette*, 476 (27294), 16 February 2005. Available from: <www.doc.gov.za/images/notice\_converg\_bill\_010305.pdf>.
- RSA (2005b). *Electronic Communications Act. No. 36 of 2005*. Pretoria: Republic of South Africa.
- RSA (2006). *Independent Communications Authority of South Africa Amendment Act. No. 3 of 2006*. Pretoria: Republic of South Africa.
- SANGONeT (n.d. a). *South African NGO Coalition. Media Strategy Delivers Dividends* [online]. Available from: <sangonet.org.za/portal/index.php?option=com\_content&task=view&id=4258&Itemid=374>.
- SANGONeT (n.d. b). *Thetha!. The SANGONeT ICT Discussion Forum* [online]. Available from: <sangonet.org.za/thetha>.
- SANGONeT (2005). *South African Civil Society Statement. World Summit on the information society (WSIS). "Content, Capacity, Connectivity"* [online]. Available from: <www.sangonet.org.za/snsite/images/stories/PDF/wsiscivilsocietystatementfinal23september2005.pdf>.

- SANGONeT (2006). *Civil Society Petition to Government on Free and Open Source Software and Open Content* [online]. Available from: <[www.sangonet.org.za/portal/index.php?option=com\\_content&task=view&id=5120&Itemid=408](http://www.sangonet.org.za/portal/index.php?option=com_content&task=view&id=5120&Itemid=408)>.
- Sciadas, G. (2005). *From the Digital Divide to Digital Opportunities: Measuring Infostates for Development* [online]. Montreal: Claude-Yves Charron. Available from: <[www.itu.int/ITU-D/ict/publications/dd/material/index\\_ict\\_opp.pdf](http://www.itu.int/ITU-D/ict/publications/dd/material/index_ict_opp.pdf)>.
- Shezi, A. (2007). "Pace of growth jumps to fastest in two years". *Business Day* [online], 28 February 2007. Available from: <[www.businessday.co.za/articles/topstories.aspx?ID=BD4A398244](http://www.businessday.co.za/articles/topstories.aspx?ID=BD4A398244)>.
- Southwood, R., Nguo, J., Sagna, O., Lewis, C. (2006). *Assessing consumer activity in the telecoms and Internet sectors in Africa* [online]. Available from: <[www.afridigital.net/downloads/IDRCconsumerdfv2.doc](http://www.afridigital.net/downloads/IDRCconsumerdfv2.doc)>.
- Stats SA (2001). *Census 2001*. Available from: <[www.statssa.gov.za/census01/html/default.asp](http://www.statssa.gov.za/census01/html/default.asp)>.
- Stats SA (2006). *Mid-year population estimates, South Africa 2006* [online]. Available from: <[www.statssa.gov.za/publications/P0302/P03022006.pdf](http://www.statssa.gov.za/publications/P0302/P03022006.pdf)>.
- Stones, L. (2005). "SNO with no name to get going next year". *Business Day* [online], 13 December 2005. Available from: <[www.businessday.co.za/articles/economy.aspx?ID=BD4A127112](http://www.businessday.co.za/articles/economy.aspx?ID=BD4A127112)>.
- Telkom (2005). *2005 Annual Report* [online]. Available from: <[telkom.quickreport.co.za/telkom\\_ar\\_2005/downloads/telkom\\_ar\\_2005\\_full.pdf](http://telkom.quickreport.co.za/telkom_ar_2005/downloads/telkom_ar_2005_full.pdf)>.
- Telkom (2006). *2006 Annual Report* [online]. Available from: <[www.telkom.co.za/pls/portal/docs/page/contents/minisites/ir/docs/Telkom\\_%202006.pdf](http://www.telkom.co.za/pls/portal/docs/page/contents/minisites/ir/docs/Telkom_%202006.pdf)>.
- UNCTAD (2006). *The Digital Divide Report: Ict Diffusion Index 2005* [online]. Geneva: UN. Available from: <[www.unctad.org/en/docs/iteipc20065\\_en.pdf](http://www.unctad.org/en/docs/iteipc20065_en.pdf)>.
- UNDP (2006). *Human Development Report 2006. Beyond scarcity: Power, poverty and the global water crisis* [online]. New York: UN. Available from: <[hdr.undp.org/hdr2006/pdfs/report/HDR06-complete.pdf](http://hdr.undp.org/hdr2006/pdfs/report/HDR06-complete.pdf)>.
- Vecchiato, P. (2007). "Govt opens up". *ITWeb* [online], 23 February 2007. Available from: <[www.itweb.co.za/sections/software/2007/0702231044.asp](http://www.itweb.co.za/sections/software/2007/0702231044.asp)>.
- Vodacom (2005). *Vodacom Group Annual Report 2005*. Midrand: Vodacom Group (Pty) Ltd.
- Vodacom (2006). *Vodacom Group Annual Report 2006* [online]. Available from: <[www.telkom.co.za/minisites/ir/vodacom\\_annualreport.html](http://www.telkom.co.za/minisites/ir/vodacom_annualreport.html)>.
- WomensNet (2006). *Intersections: Feminism in Action*. 1 (3), September 2006.
- WEF (World Economic Forum) (2006a). *Table 1: Global Competitiveness Index rankings and 2005 comparisons* [online]. Available from: <[www.weforum.org/pdf/Global\\_Competitiveness\\_Reports/Reports/gcr\\_2006/gcr2006\\_rankings.pdf](http://www.weforum.org/pdf/Global_Competitiveness_Reports/Reports/gcr_2006/gcr2006_rankings.pdf)>.
- WEF (2006b). *The networked readiness index rankings 2005* [online]. Available from: <[www.weforum.org/pdf/Global\\_Competitiveness\\_Reports/Reports/gitr\\_2006/rankings.pdf](http://www.weforum.org/pdf/Global_Competitiveness_Reports/Reports/gitr_2006/rankings.pdf)>.

# SPAIN

Pangea<sup>1</sup>

Assumpció Guasch and Leandro Navarro



## Introduction

How can we make citizens' rights effective in the information society? Without a doubt, the answer is: with a wider and more direct participation by citizens. However, the development of the information society is dominated by a commercial and technical perspective that tends to be emphasised to the detriment of other perspectives that are much more important but more difficult to measure. These include: the definition of the rules of the game and the "social contract" (e.g. legal framework), as well as indicators of indirect impact such as production of and access to knowledge, changes in social relations and participation.

The first part of this report focuses on a review of statistics and indicators at the level of the Spanish state. We then move progressively towards citizens and their participation via the different territorial spheres which make up the state. We offer a general perspective of infrastructure needs, and an overview of the administration's own imperative to comply with its objectives of transparency and e-government, among others.

In the second part of the report we offer an analysis of the participation of different information society actors in policies associated with information and communication technologies (ICTs). We attempt to create an indicator for this participation on the basis of information available in the database of activities<sup>2</sup> of the World Summit on the Information Society (WSIS). The result obtained appears to be a good reflection of what is happening in Spain, and of the great imbalance in the participation of different actors in the construction of the information society.

We have considered data, indicators and information provided by the national state administration, the European Union (EU) and the International Telecommunication Union (ITU), among other relevant sources. All of the information is accessible on the internet. We have prioritised the most current data and information. All data, with the exception of the WSIS database, was reviewed during October 2006.

The section on participation draws on data offered by the WSIS's own inventory, in the version updated as of 17 November 2006. On the basis of this update we have considered 163 activities developed by the government of Spain or Spanish entities (i.e. those that include a Spanish partner or that develop their projects in partnership within Spain).

In the analysis of participation, some estimates have been added to make up for those that were left undefined in the WSIS database. These, as well as any refinement of classifications, have been based on complementary research.

## Country situation

Most of the information society development indicators for Spain fall below the EU's average levels, except for the development of e-government, which is above average. The indicators which are close to the EU levels are: "use of the internet for health consultations", "development

of electronic commerce between businesses or between businesses and consumers", "business and home security problems and their prevention" and "broadband services for business and home users".<sup>3</sup>

Spain is ranked 31st in the UN Conference on Trade and Development's (UNCTAD) Digital Divide Report: ICT Diffusion Index 2005 (UNCTAD, 2006).<sup>4</sup> It is classified as "middle income-best", indicating an information society development position (31st) which does not correspond to its rankings in other spheres (8th in nominal GDP or 22nd in GDP per capita in the same year). The Diffusion Index also shows that there has been little sustained improvement over the years: the ranking ranged between 28th to 31st for the period 1997 to 2004.

According to the Ministry of Industry, Tourism and Commerce (DGDSI, 2006):

Overall, Spain is at a disadvantage in Europe and in relation to the Organisation for Economic Cooperation and Development (OECD) in regards to information society development indices, despite efforts made. This position does not correspond to its economic situation, nor to the indices of convergence with neighbouring economies.

## The role of autonomous communities

Given the political and territorial organisation of the country, it is essential to consider the ICT take-up in autonomous communities<sup>5</sup> and local entities, since these are closest to citizens and provide many of the public services for social well-being. According to the degree of political freedom of the autonomous communities, we should consider the existence of laws, regulations or specific directives, as well as diverse objectives and focuses in the development of the information society.

Existing reports show an effort by autonomous administrations to improve citizen access to ICTs and their services, including offering training. Funding for these initiatives may come from the federal government, the autonomous communities themselves, or from the EU.

Indicators (such as those provided by CEPREDE, 2004) show that the level of participation of these communities in the information society is evolving positively, although with different highs and lows. This can clearly be seen in the case of e-government roll-out. While Spain fares well in relation to other EU member states,<sup>6</sup> there are

1 <[www.pangea.org](http://www.pangea.org)>; Espai de dones (Women's space): <[www.pangea.org/dona](http://www.pangea.org/dona)>.

2 WSIS stocktaking database. Available at <[www.itu.int/wsis/stocktaking/index.html](http://www.itu.int/wsis/stocktaking/index.html)>.

3 The 2006 Information Society Indicators Report from the General Administration for the Development of the Information Society (DGDSI, 2006) presents a classification of information society indicators.

4 In general, the index is a function of a nation's connectivity and the ability of its people to have access and utilise it. The close relationship between the level of development of ICTs in a country and its level of income is clear. With the exception of Estonia and the Czech Republic, the 30 countries with a higher ICTDI fall in the high income category of the United Nations Development Programme (UNDP). The 30 are classified as having a high level of human development, using the UNDP's Human Development Index (HDI), which is based on income, education and life expectancy (UNDP, 2004).

5 Spain's fifty provinces are grouped into seventeen autonomous communities, which have wide legislative and executive autonomy, with their own parliaments and regional governments.

6 <[observatorio.red.es/indicadores/europe/internet\\_jul2005/indicador\\_d1.html](http://observatorio.red.es/indicadores/europe/internet_jul2005/indicador_d1.html)>.

different levels of implementation across the autonomous communities, and the impact felt at the level of local entities is uneven.

Various autonomous communities participate in the Digital Cities programme<sup>7</sup> through the Ministry of Industry, Tourism and Commerce, which supports the development of the information society in municipalities. Some autonomous communities, such as Extremadura, are involved at an institutional level in the promotion of free and open source software (FOSS), while others stand out in other aspects. For example, Catalonia is a pioneer in the area of e-learning. Overall, advances in the Basque Country are very positive. It is not a coincidence that it was the organiser of the Second World Summit of Cities and Local Authorities on the Information Society (Bilbao 2005).<sup>8</sup>

While different levels of maturity exist among the communities, the rural/urban divide is common to most. Indicators from Cantabria and Catalonia show that the gender difference also continues to be notable (although it has diminished in recent years).

### *Challenges to participation in the information society*

The increase in the number of internet users in Spain is positive, and according to the Telecommunications and Information Society Observatory (OTSI), the latest data show the number of users has increased to 17.77 million, or 48.3% of the population (OTSI, 2006). There has also been a significant increase in internet use by groups traditionally more distanced from ICTs, such as people between 45 and 54 years of age, and homemakers.

Regarding the use of the internet at home, a divide can be seen between different age groups and socio-cultural sectors. Reasons cited for not using a computer in the home include a lack of interest, a perception that it is not needed, and even a lack of time in single-person households. There is also a proportion of businesses without access to the internet because they do not feel it offers them much value (Telefónica, 2005).

Overall, we still see low levels of participation in the information society among the general population. This study has identified the following reasons for the low level of participation:

a) *The government's difficulty in reconciling the interests of business and citizens, and its lack of confidence in defending citizens' interests in the face of the lobbying power of big business or specific groups*

Organisations defending the rights of internet users<sup>9</sup> are beginning to work collectively to protect citizens' interests. At the same time, the government has introduced protective measures for affected customers, though there have been few clear results.

There has also been a protest campaign against the introduction of royalties (*canon digital*) through the reform of the intellectual property law. Through this reform a royalty is charged on technological equipment (such as recordable CDs, digital cameras, scanners, etc.) as compensation for the user making digital copies of legally acquired content. As it stands now, consumers always pay the royalty, even when they copy content that they own or which is not subject to copyright.<sup>10</sup>

b) *Weaknesses in local participation: lack of linguistic policies at a state level*

Spain's linguistic diversity is not reflected in national official statistics and indicators, although it is reflected in some autonomous communities. According to action line C8 of the WSIS Plan of Action (ITU, 2003), "cultural and linguistic diversity, while stimulating respect for cultural identity, traditions and religions, is essential to the development of an information society based on the dialogue among cultures and regional and international cooperation. It is an important factor for sustainable development."

This aspect is also not included in regulations issued by the European Parliament, which simply considers territorial and regional differences, without taking into account possible cultural and linguistic differences. The World Bank (2006), on the other hand, considers this to be an important dimension of the information society, and specifies that when cultural indicators are included, often language differences are not taken into account and that the most developed countries are not used to considering these dimensions.

c) *Limitations in the vision of women's participation in the information society*

Women's participation in the information society is low, though it is considered a positive step that data have begun to be disaggregated to show their gender component, in line with EU directives. Although there are some studies and experiences that offer a cross-cutting gender analysis (Castaño, 2003), the most common tendency is to consider women as being affected by the "digital divide" in the same way as men.

d) *Weaknesses in the implementation of the spirit of WSIS*

For the harmonious construction of the information society it is essential to have the full participation of civil society in the conception, implementation and follow-up phases. Citizen participation is crucial, and their buy-in is important. Citizens and communities should not be invited to participate only after objectives have been determined, agreements made and activities planned.

e) *Weaknesses in information regarding the active participation of organised civil society and small business*

The information offered by the e-government programme is increasing. However, it focuses mainly on the public administration's own knowledge and procedures. Access to this information facilitates transparency and the participation of civil society. Nevertheless, the information available is descriptive of previous planning, with few documents regarding "best practices" or "lessons learned" from projects already developed. This type of information must be incorporated, along with the methodologies and tools used, to meet the challenge of moving from diagnoses and speeches to action.

f) *Weaknesses in the distribution of economic benefits generated*

A balanced distribution of available economic resources among different actors would serve as an incentive to participation in the information society. Requests for proposals and competitions generally defined as large projects favour big business in the ICT sector, and serve as disincentives for small businesses. ICT workers are also affected by this, since the relocation of jobs to other countries is common practice in larger companies. This process reaches 54% in cases of computer systems maintenance and 44% in customer service centres (Ricart and Agenese, 2006).

7 <[www.mityc.es/ciudades](http://www.mityc.es/ciudades)>.

8 <[www.it4all-bilbao.org](http://www.it4all-bilbao.org)>.

9 Such as the Association of Internauts (<[www.internautas.org/gobiernoyleyes](http://www.internautas.org/gobiernoyleyes)>), Internet Users Association (<[www.aui.es](http://www.aui.es)>) and the Commission of Liberties and Informatics.

10 For more information see: <[www.todoscontraelcanon.es](http://www.todoscontraelcanon.es)>.

### ICTs as tools for citizen empowerment

Resources such as computers and connectivity, capacity and the mastery of the necessary tools is not enough to entrench democracy in any information society. Legislative transparency, public debate, and a significant share of citizens who are motivated and able to make informed decisions on the process of constructing the information society are also needed.

The information society should respond to human needs, and people should participate actively in its construction, not merely as consumers or spectators. One of the challenges is for participation not to remain limited to “collaboration” with local administrations; grassroots communities should rather take the lead in discussions regarding policies and regulatory and legal frameworks for the information society, which should be developed and implemented with respect for human rights and basic freedoms.

Up until now the population has received little information regarding essential information society issues, such as legislation. This legislation is generally based on laws established by the EU, and proposals for legislation have come from limited circles of experts. They remain unknown to the vast majority of people, who look upon them somewhat askance. The legal framework becomes known primarily through actions taken by some civil society organisations when problems arise from applying norms to the virtual world that do not take its specificity into account.

The public administration’s priorities are the implementation of electronic voting, electronic national identity documents, digital signatures and the establishment of control measures. Although some proposals for facilitating citizen participation by electronic means do exist, the measures to empower citizens are modest.

### Participation

The WSIS stocktaking database,<sup>11</sup> maintained by the ITU, aims to provide information regarding action taken by governments and other interested parties to implement the Geneva decisions (WSIS Declaration of Principles and Plan of Action), as well as to take stock of progress achieved. This database provides elements for analysing the participation of different actors in the implementation of the WSIS commitments.

The WSIS participants are classified, very generally, as governments, international organisations, civil society entities, business sector entities and miscellaneous. In this report we argue that for a better understanding of the real complexity of the Spanish context, some of the groups of participants should be subdivided or regrouped.

For example, the actions and decisions of the Spanish government, at both the federal and autonomous community level, are very fragmented among the different ministries and administrations with their associated organs, institutions and various public entities. The agreements reached at these different levels take on myriad forms such as consortiums, foundations, or partnerships with businesses, and are greatly influenced by the political and economic climate at any given time.

Some of these entities, according to the criteria established by the WSIS, end up being classified as international organisations or civil society. While this is not correct, it should at the same time be possible to differentiate local administrations, and see which among them has the level of government that is closest to people, and which play a crucial role in the education and mobilisation of citizens.

Civil society itself is not monolithic either. According to the European Economic and Social Committee (EESC), the following organisations can be properly considered as civil society: social agents, grassroots community organisations, local non-profit associations, non-governmental organisations and religious communities. Nevertheless, these criteria do not coincide with the classification in the WSIS database, and only 17% of the activities considered by the WSIS as “civil society” would be considered as such according to the EESC.

It is worth highlighting the need to separate small and micro businesses from other business entities,<sup>12</sup> and to be able to see opportunities for their participation in building the information society. Yet in the WSIS database these are included under the general heading “business sector entities”, independent of their size. Spain has a higher percentage of small businesses than many other European countries, and it is important to motivate their participation in the construction of the information society.

### Analysis of the WSIS stocktaking database

We have analysed existing activities in the WSIS stocktaking database according to the WSIS Plan of Action<sup>13</sup> indicators for each activity. For this purpose the original classification has been reorganised to reflect the origin of funding for the activities and who manages them.<sup>14</sup>

The objective of this analysis is to see how the aims of each group of organisations, according to the above criteria, influence the orientation of their activities (according to the WSIS action lines), and specifically how they are a protagonist in the construction of an information society. We have considered activities developed in Spain and/or involving Spanish actors.

The analysis of the WSIS participants and of the projects in the database (Graph 1) shows a diversity and complexity which cannot be ignored.

For this analysis, we have further differentiated the actors included in the WSIS database to consider: general governmental entities (GOB); educational governmental entities (G-EDU); governmental international cooperation entities (G-COOP); governments of autonomous communities (specifically Junta de Castilla y León and Junta de Extremadura) alone or in diverse types of collaborations with various entities (CCAA); international partnerships/entities (INT);<sup>15</sup> business entities (COM); foundations established by business entities

12 Using the definitions of the European Commission Recommendations of 6 May 2003, small businesses are those with less than 50 employees and a business volume no greater than EUR 10 million (USD 13 million), while micro businesses are those with less than 10 employees and a business volume no greater than EUR 2 million (USD 2.6 million).

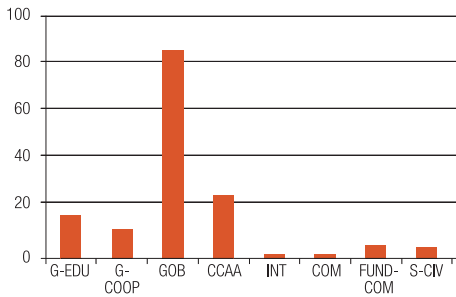
13 The Geneva Plan of Action (ITU, 2003) sets out the following action lines: C1: The role of governments and all stakeholders; C2: Information and communication infrastructure; C3: Access to information and knowledge; C4: Capacity building; C5: Building confidence and security in the use of ICTs; C6: Enabling environment; C7: ICT applications; C8: Cultural diversity and identity, linguistic diversity and local content; C9: Media; C10: Ethical dimensions of the information society; C11: International and regional cooperation; Section B: Achievement of WSIS goals and objectives; Section D: Digital solidarity programme; Section E: Follow-up and evaluation; Section F: Towards WSIS phase 2 (Tunis).

14 This rather than reflecting the legal title of the organisations that carry them out, or according to strict territorial criteria. The latter is incongruent and poorly defined when activities are carried out over the internet, or are cooperative activities that may have an international reach, or when organisations, though they may be international, act within Spain or have Spanish partners.

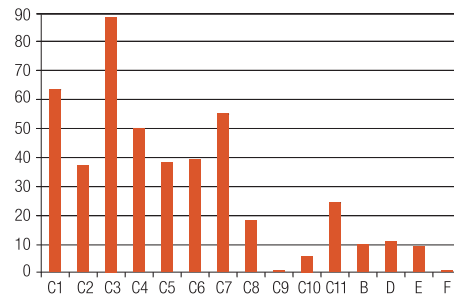
15 INT includes not only activities developed by international intergovernmental organisations, but also all those in which there are participants from several countries, including Spain.

11 The database was established in October 2004. It can be consulted and updated at <[www.itu.int/wsis/stocktaking](http://www.itu.int/wsis/stocktaking)>.



**Graph 1: Number of activities by type of agents**

Source: ITU. WSIS stocktaking database (2006)

**Graph 2: Number of activities by action line**

Source: ITU. WSIS stocktaking database (2006)

(FUND-COM) and all the other entities classified in the WSIS database as civil society (S-CIV). In total, there were 163 activities analysed.

As can be seen, there is a considerable difference between the number of governmental activities included in the database and activities led by other stakeholders.

The interests of the different actors can vary greatly, as can be seen in Graph 2 (several activities are included in more than one action line).

#### Proposed activities by action lines

Graph 3 shows the number of activities presented by the government, including those presented by autonomous communities (alone or in various collaborations). All activities in which autonomous communities have decision-making power<sup>16</sup> have been included in the “government” section.

As can be seen, at the level of government there is little interest in a number of the action lines, and C9, in particular, is practically ignored by all of the decision-makers. This action line specifies that the media, in its various forms and various ownership regimes, also plays an essential role as an actor in the development of an information society, and recognises as important its contribution to freedom of expression and plurality of information. These are all very important aspects in the democratic development of the information society.

#### Budgets assigned to proposals

The form for listing activities in the WSIS database does not facilitate the systematic incorporation of information regarding the budgets of each activity. Surely, if the budgets assigned to the different action lines by the different actors could be included, the differences would appear greater still, and would give us a better sense of the economic and power distribution among these groups. It may also give us an indication of their interest in participating in the WSIS process.

For those activities that refer to very broad plans, specifying how the budget is assigned would offer clarity as to whether it is being spent on social priorities, infrastructure priorities, administration and management priorities, or others.

#### Differentiation of interests

In analysing the distribution of activities of non-governmental entities,<sup>17</sup> presented in Graph 4, we found that although the number of activities included is low for entities classified as civil society, these tend to be distributed more evenly among the various action lines. Supplementary information has been sought to analyse these actors at a finer level, more apt for our aims.

This exploratory exercise, carried out with a limited number of proposals, points to the necessity of considering the different interests involved in the development of the information society. These interests do not necessarily coincide, are often weighted in a particular area, and show tendencies which must be analysed if we want to foster active participation of the people, real civil society and small businesses in the construction of the information society in Spain.

#### Conclusions

It is important to highlight that to speak of broad-based, active citizen participation in the information society really means to speak of the opportunity for direct democratic participation in the construction of the information society. This entails a society in which information and democratic access to it are crucial to people, not merely as end-receivers of information and services, but also as participants in informed decision-making and deliberations.

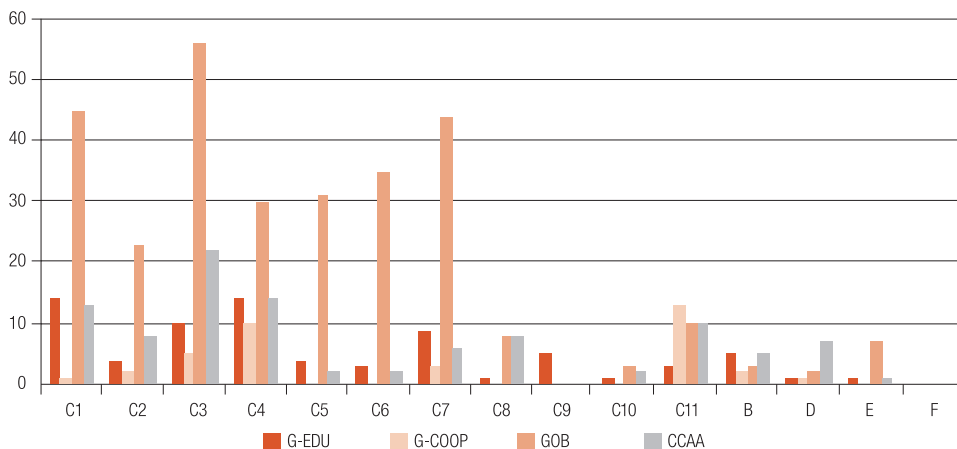
Administrations are developing initiatives which are supposedly citizen-oriented, and modifying administrative services and procedures using the potential of ICTs for e-government, but it seems that they are far from considering citizens as “actors”.

One condition necessary for people to feel more involved in the construction of the information society is their participation as subjects, not merely as objects of development measures. This participation goes beyond considering that people are participating merely because they “attend” certain activities or “use” certain telecommunications services or infrastructure. These conditions may be more or less necessary; they may even be essential, but they are not enough.

<sup>16</sup> The number of activities by the federal government and autonomous communities (alone or in various collaborations) is 148 in total. Disaggregated data only exist for the autonomous communities of Junta de Castilla y León and Junta de Extremadura. In the case of education activities, those activities in which autonomous communities participate along with the federal government have not been differentiated.

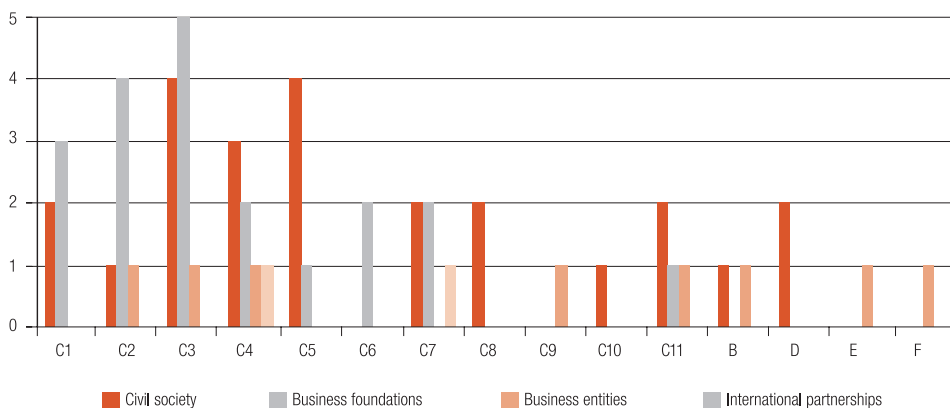
<sup>17</sup> It should be noted that the information obtained from the WSIS database is “contaminated”, given the inclusion of projects by foundations created by commercial entities in the telecom sector in the category of civil society entities. We have differentiated these different actors in Graph 4, including the category “business foundations” to refer to this particular stakeholder.

**Graph 3: Number of activities by governments (federal and autonomous communities) by WSIS action lines**



Source: ITU. WSIS stocktaking database (2006)

**Graph 4: Number of activities of non-governmental entities by WSIS action lines**



Source: ITU. WSIS stocktaking database (2006)

Active participation requires specific knowledge and skills, and digital literacy is only a first step. The concept of digital literacy can be compared to reading and writing. It is a powerful idea, if it also leads to understanding the “codes” and “keys” to the information society; but it is limited if it is only practically oriented to the knowledge and use of tools and devices. ICT education, training and capacity-building should be oriented around citizen empowerment broadly understood.

Groups that have access to the resources to participate in decision-making forums can come to have a major influence in defining actions and policies, given that a large number of citizens do not have a means of expression, or simply do not have the necessary information to decide.

This is why it is necessary to firmly develop citizen participation through specific legislation. We need to deepen the democratic tracks necessary for the information society to carve out a people-centred vision; but also to move towards a more just and equal globalisation that considers not only economic, technological or administrative factors, but also social, cultural, and legal dimensions, or any others that shape the context of people’s lives. ■

## References

- Castaño , C. (2003). *Las mujeres andaluzas y la SI*. Sevilla, Spain: Instituto Andaluz de la Mujer.
- CEPREDE (Centro de Predicción Económica - Comunidad de Madrid) (2004). *Penetración Regional de la Nueva Economía* [online]. Available from: <www.n-economia.com>.
- CORDIS (Community Research and Development Information Service of the European Union) (2006). *Information Society Technologies* [online]. Available from: <cordis.europa.eu/list>.
- DGDSI (Dirección General para el Desarrollo de la Sociedad de la Información) (2006). *Métrica de la sociedad de la información* [online]. Available from: <www.mityc.es/DGDSI/Servicios/Indicadores>.
- EU (2004). *Regulation (CE) No 808/2004 of the European Parliament and Council of Ministers of April 21, 2004 relating to community statistics of the information society* [online]. Available from: <europa.eu.int/eur-lex/pri/es/oj/dat/2004/l\_143/l\_14320040430es00490055.pdf>.
- ITU (2003). *WSIS Plan of Action* [online]. Available from: <www.itu.int/wsis/docs/geneva/official/poa.html>.
- MITC (Ministerio de Industria, Turismo y Comercio) (2003). *La sociedad de la información en el siglo XXI: un requisito para el desarrollo* [online]. Available from: <www.desarrollosi.org/>.
- OTSI (Observatorio de las Telecomunicaciones y de la Sociedad de la Información) (2006). *Magnitudes sociodemográficas de Internet* [online]. Available from: <observatorio.red.es/estudios/documentos/magnitudes\_sociodemograficas\_sep.pdf>.
- Ricart, J., Agnese, P. (2006). *El offshoring en España. Causas y consecuencias de la deslocalización de servicios* [online]. Available from: <www.iese.edu/es/files/5\_25747.pdf>.
- Salminen, A. (2003). *Governing networks: EGPA year book*. Amsterdam: IOS Press.
- Telefónica (2005). *La sociedad de la información* [online]. Available from: <www.telefonica.es/sociedaddelainformacion>.
- UNCTAD (2006). *The Digital Divide Report: ICT Diffusion Index 2005* [online]. Geneva: UN. Available from: <stdev.unctad.org/themes/ict/dd.html>.
- UNDP (2004). *Human Development Report 2004. Cultural liberty in today's diverse world* [online]. Available from: <hdr.undp.org/reports/global/2004/pdf/hdr04\_complete.pdf>.
- World Bank (2006). *Information and Communications for Development 2006: Global Trends and Policies* [online]. Available from: <www.worldbank.org/ic4d/>.



## Introduction

This report assesses whether or not Uganda is on track to meet the information and communications technology (ICT) development objectives laid out in the World Summit on the Information Society (WSIS) Plan of Action. It provides an overview of the ICT status in the country, and presents some of the rapid changes that have happened within the country's ICT sector. The report highlights the steps taken by the government in realising the WSIS Plan of Action, but also summarises the challenges the country faces. It finds that although the policy and legislative framework is in place and the political will exists, ICT development is being constrained by a number of factors, including the rural/urban divide, a lack of awareness about the advantages of ICTs, and a low level of skills.

This report was compiled mainly through desk research, and included the review of civil society and government documents. The authors acknowledge I-Network, the Ministry of ICT, the National Planning Authority (NPA) and the Uganda Communications Commission (UCC) for their input in the preparation of this report.

## Country situation

The Ugandan government recognises ICTs as a tool for social and economic development. This includes: reforming government service delivery; achieving transparency, accountability and credibility; providing effective access to information; broadening public participation and promoting democracy; facilitating research and development; and enhancing competitiveness in the global economy (NRM, 2006). The government has a strong belief that ICTs will improve its relationship with the country's business sector and citizens, and with its own employees (Uganda e-Government, 2006).

The political will behind ICT development in Uganda has been manifested through numerous ICT-related government policies, programmes and laws since the 1990s. Recent reforms in the sector include the licensing of mobile phone companies and the separation of postal from communication services. Telecom markets have been deregulated, ICT trade liberalised, and taxes on computers abolished. The setting up of the Rural Communications Development Fund (RCDF) under the UCC was another notable change. These measures have promoted the proliferation of ICT usage in the country.

In 2004 the cabinet directed all government ministries to create a budget line for ICTs. Although the amount being allocated by the ministries is not substantial, it is a step in the right direction. In addition, in the 2006 presidential elections, President Yoweri Museveni included ICTs as one of the key areas for consideration during his new term in office (NRM Manifesto, 2006).

### *Steps taken in the realisation of WSIS targets*

The WSIS Plan of Action provides a good global reference point for setting targets to improve access to ICTs. The plan includes addressing the urban/rural divide, and connecting educational institutions, health facilities, public libraries and cultural centres, among other

objectives. It has basic e-government targets (such as providing government departments with websites), and encourages countries to adapt school and tertiary education curricula to meet the needs of the information society. It also states that people should have access to broadcast services and that content should be localised (WSIS, 2003).

Steps taken by the Ugandan government to promote access to ICTs and information include legal, regulatory and policy development; consolidating the political leadership of the country's ICT strategy; and developing infrastructure.

### *Legal, regulatory and policy environment for promoting ICT access*

The national ICT policy development process was initiated in 1998 by the Uganda National Council of Science and Technology (UNCST). In May 2002, the UNCST submitted a draft National ICT Policy Framework to cabinet. It was approved in December 2003 (NPA, 2005). Other ICT-related policies in place include the Rural Communications Development Policy for Uganda (UCC, 2001), the National Broadcasting Policy (WOUNGNET, 2004), and the e-Government Strategy Framework (Uganda e-Government, 2006).

The legal and regulatory framework for promoting ICTs in Uganda includes the Electronic Media Act (Government of Uganda, 1996), the Uganda Communications Commission Act (UCC, 2000), the Access to Information Act (Government of Uganda, 2005), and the Copyright and Neighbouring Rights Act (2006). Bills that are ready for debate in parliament include the National Information Technology Authority-Uganda (NITA-U) Bill (MFEP, 2004), the Communications Act Amendment Bill (2005), the Electronic Transactions Bill (2004), the Electronic Signatures Bill (2004), and the Computer Misuse Bill (2004).<sup>2</sup>

A monopoly enjoyed by Uganda Telecom and MTN ended in July 2005. Opening up the telecoms market is expected to lead to increased investment in the sector, increased penetration of services, and innovation in the provision of services, such as the use of cost-effective technologies.

### *ICT institutional framework*

In June 2006, the government consolidated the leadership of its ICT strategy to ensure that policy development, laws and regulations are harmonised. The newly created Ministry of ICT will spearhead the development of ICTs and address problems associated with the lack of a lead agency to take the country's ICT strategy forward. These included delays in passing ICT-related bills, duplication and wastage of scarce resources, and territorial silos, which result in uncoordinated sectoral policy development and fragmented, non-integrated ICT implementation. Agencies affiliated to the new ministry include the UCC and Uganda Computer Services/National IT Authority-Uganda (NITA-U). Plans are also underway to place broadcasting services under the same ministry.

<sup>2</sup> Other legal reforms are underway that could further provide a conducive legal framework for ICT development, such as amending national laws to make them compliant with the information era.

## Implementation

The implementation of the National ICT Policy in Uganda involves various ministries, district and local authorities, development partners and non-governmental organisations (NGOs), as well as the private sector (UCC, 2003). Progress has been made in a number of areas, including developing a national backbone, rural access, education, systems integration, and stimulating private sector investment.

It is government policy to develop ICT infrastructure that enables connectivity in schools, health centres, agricultural extension units and administrative and commercial centres throughout the country. As part of this responsibility, the government is currently conducting an e-government and national backbone infrastructure study in partnership with the government of China. This will lead to the laying of a fibre optic backbone that will extend high-speed connectivity across the country. It is expected that the national backbone will enable the setup of an integrated e-government system and extend the current communications network to rural areas. Implementation is scheduled to start in 2007.

To facilitate rural access, subsidies have been granted to service providers by the RCDF since 2003. These subsidies contribute towards the provision of communications services in various parts of the country (RCDF, 2006), including:

- *ICT training centres and internet cafés.* More than 54 ICT training centres and 50 internet cafés have been set up countrywide through public-private partnerships. The target was to cover all the districts of Uganda by June 2006. New districts have since been created and will be catered for under the same arrangement, but implementation will be in the financial year 2006/2007.
- *Internet PoPs.* In order to facilitate local internet access and reduce usage cost in the country, the UCC subsidised the installation of internet points of presence (PoPs) in 32 districts (out of the then 56 districts – the number of districts has now been increased to over 80).
- *District information portals (DIPs).* The UCC also facilitated the development of information portals for all the districts to allow information to be shared with local communities, development partners and the outside world.
- *Public payphones.* The UCC has facilitated the installation of public payphones in 316 selected sub-counties across the country since 2004. The government plans to provide access to a public telephone for every 1,200 people in the rural areas by the year 2010.

ICTs are being integrated in educational institutions at all levels. Most universities and other tertiary institutions are currently offering ICT-related courses. In addition, there are several initiatives and organisations promoting ICTs for development in schools in both urban and rural areas. These include the Council for Economic Empowerment of Women in Africa (CEEWA-Uganda), I-Network, SchoolNet, Uganda Connect (uConnect), and WOUNGNET.

Some government departments are using ICTs to enhance service delivery. Information systems developed include the Integrated Financial Management System (IFMS), the Local Government Information Communication System (LoGICs), the Education Management Information System (EMIS), the Health Management Information System (HMIS), and the Parliamentary Communication and Management Information System (PMIS). The government has also developed an Automated System for Customs Data (or ASYCUDA) – a system developed in Geneva by UNCTAD, which is free for countries to use and customise.

Additional interventions planned by the government seek to address privacy and security issues as well as to encourage the private sector to invest in ICTs (NRM Manifesto, 2006). These include reviewing and adjusting public investment policies in so far as they relate to the promotion of ICTs by Ugandan firms and external investors.

There is also a move to resolve the cost and quality of connectivity within the existing licensing agreements in the telecommunications sector. For example, following the end of the duopoly agreement in 2005, the new licensing structure will allow for institutions to have their own gateways to allow them to access the internet directly instead of going through the national operators. Such a move should encourage the private sector to invest in outsourced services for data entry and call centre enterprises by lowering their costs of operation, and allowing them to improve the quality of their connectivity if they are not satisfied with what is available through the national operators.

## Impact and challenges

While the prevailing policy and legislative environment in Uganda supports ICT development, actual implementation is being hampered by a number of challenges on the ground. A study conducted by Tusubira *et al* (2005) concerning telecommunications and e-usage in Uganda revealed that access to basic telephony services in rural areas is still unacceptably low. At the same time, however, mobile teledensity is improving at a very impressive rate. The study notes that mobile telephony has the potential for the rapid achievement of nationwide access if key barriers – such as the initial cost of the phones, the absence of convenient ways of recharging, as well as the high excise on airtime for prepaid phones – are addressed through public-private partnerships supported by the RCDF.

The same study also revealed that access to the internet across the entire country is far below what would be expected with the often-praised policy and regulatory environment in Uganda. Key issues such as supporting the generation and dissemination of relevant content; developing the national fibre optic backbone and connecting Uganda to the global network; encouraging the local assembly of computers to bring down costs; and integrating ICT skills training at all levels of education, must be addressed by both government and the regulator. In addition, the study found that the higher percentage of females in Uganda (the majority of citizens below fifteen years of age are female) provides a strategic opportunity for emphasising the role of women in developing ICT skills and the use of ICTs in the country.

These findings are confirmed by both the Telecommunications Sector Policy Review (MWHC, 2005) and the e-Government Strategy Framework. According to the Telecommunications Sector Policy Review, only about 25% of the population in rural areas utilises payphone services on a regular basis. Regular usage in urban areas is just over 60%, due to higher incomes, greater ease of access and awareness. There is also no access to voice over internet protocol (VoIP) in rural areas (it is still very limited in urban areas) and there is almost insignificant access to and utilisation of computers and the internet in areas outside the major urban centres.

The e-Government Strategy Framework shows that most government offices do not have an internet connection, that bandwidth is overpriced and concentrated in cities and a few major towns, and that there is a general lack of awareness of ICTs in both the urban and rural context. Furthermore, it says that Uganda has difficulty in attracting, recruiting and retaining skilled ICT personnel (Uganda e-Government, 2006).

Regarding gender, it is widely known that access to ICTs by women is constrained by inadequate technological infrastructure in rural areas, social and cultural bias, low levels of education and skills, and the lack of disposable income to purchase technology and e-services. The media's limited understanding of gender issues and a lack of data on gender and ICTs also play a role (WOUNNET, 2006).

Finally, the government has so far not developed adequate strategies to integrate ICTs into national development plans, including the Poverty Eradication Action Plan (PEAP), a comprehensive poverty eradication and development strategy. However, the National Planning Authority (NPA) has now taken the initiative to correct this.

## Participation

Uganda is a democratic country and the development of national policies, laws and regulations are largely participatory. In the case of ICTs, the National ICT Policy Framework was developed through a consultative process involving civil society, students, government ministries, agencies, and so on. Numerous interviews, focus group discussions and stakeholder workshops were held. This process was coordinated by a steering committee under the UNCST.

While the ICT policy was criticised for not including an implementation master plan and budget, and for not being widely circulated and publicised upon completion, plans are now underway to review the document so that it matches current national development plans and systems.

Another area of participation that was promoted by the NPA is the setting up of a National ICT/e-Government Inter-Agency Planning Team. This team brings together personalities with different career backgrounds from central and local governments, civil society, academia, the private sector, and gender and other interest groups. Some of the key outputs from this effort have been the development of the draft of the e-Government Strategy Framework, advocacy for the creation of the new Ministry of ICT, and integration of ICTs into the PEAP.

## Conclusions

From the above scenario, we can conclude that the required environment for the development of ICTs in Uganda is in place. This includes policies, legal and regulatory frameworks, political will, and public participation. However, implementation has been hampered by several challenges. What is important is that these challenges are being acknowledged.

Given the prevailing political will, a number of important projects are expected to be implemented in 2007. These include the development of the national fibre optic backbone and the expansion of rural access programmes. These are positive signs that suggest Uganda is keen to achieve the targets outlined in the WSIS Plan of Action (WSIS, 2003).

It is important and indeed incumbent upon government that civil society, the private sector and other stakeholders are able to fully participate in the planning and rolling out of ICT for development projects. In this way, the most effective and sustainable steps can be taken to ensure that basic communications services of acceptable quality are accessible at affordable prices and at reasonable distances by all people in Uganda. ■

## References

- Government of Uganda (1996). *Electronic Media Act. Chapter 104* [online]. Available from: <[www.ec.or.ug/laws/tema.pdf](http://www.ec.or.ug/laws/tema.pdf)>.
- Government of Uganda (2005). *The Access to Information Act, 2005* [online]. Available from: <[www.freedominfo.org/documents/uganda\\_ati\\_act\\_2005.pdf](http://www.freedominfo.org/documents/uganda_ati_act_2005.pdf)>.
- MFEF (Ministry of Finance and Economic Planning) (2004). *National Information Technology Authority-Uganda (NITA-U) Bill*.
- MWHC (Ministry of Works, Housing and Communications) (2005). *Recommendations on the Proposed Review of the Telecommunications Sector Policy* [online]. Available from: <[www.researchictafrica.net/modules.php?op=modload&name=News&file=article&sid=457](http://www.researchictafrica.net/modules.php?op=modload&name=News&file=article&sid=457)>.
- NPA (National Planning Authority) (2005). *Report on Round Table Workshop on Integration of Information And Communication Technology (ICT) into the Poverty Eradication Action Plan (PEAP) and the Overall National Development Framework and Systems in Uganda*.
- NRM (National Resistance Movement) (2006). *National Resistance Movement Manifesto 2006* [online]. Available from: <[www.nrm.ug/manifesto.php](http://www.nrm.ug/manifesto.php)>.
- RCDF (Rural Communications Development Fund) (2006). *Rural Communications Development Fund Status Report*. (Unpublished).
- Tusubira, F. F., Kagawa, I., and Ongora, J. (2005). "Uganda". In Gillward, A. (Ed.), *Towards an African e-Index: Household and Individual ICT Access and Usage across 10 African Countries* [online], pp.162-177. South Africa: The Link Centre. Available from: <[www.researchictafrica.net/modules.php?op=modload&name=News&file=article&sid=504](http://www.researchictafrica.net/modules.php?op=modload&name=News&file=article&sid=504)>.
- UCC (Uganda Communications Commission) (2000). *The Uganda Communications Act. Chapter 106* [online]. Available from: <[www.ucc.co.ug/ucaCap106LawsOfUganda.pdf](http://www.ucc.co.ug/ucaCap106LawsOfUganda.pdf)>.
- UCC (2001). *Rural Communications Development Policy* [online]. Available from: <[www.ucc.co.ug/rcdf/default.php](http://www.ucc.co.ug/rcdf/default.php)>.
- UCC (2003). *National ICT Policy* [online]. Available from: <[www.ucc.co.ug/nationalIctPolicyFramework.doc](http://www.ucc.co.ug/nationalIctPolicyFramework.doc)>.
- Uganda e-Government (2006). *Uganda e-Government Strategy Framework*. (Final Draft).
- WOUNNET (2004). "National Broadcasting Policy". In *ICT Policy Issues in Uganda* [online]. Available from: <[www.woungnet.org/ICTpolicy/ug/ugictpolicy.html](http://www.woungnet.org/ICTpolicy/ug/ugictpolicy.html)>.
- WOUNNET (2006). *A Policy Brief on Gender Issues and Gaps in the Draft National Information and Communication Technology Policy Framework (2002)*.
- WSIS (2003). *Geneva Plan of Action* [online]. Available from: <[www.itu.int/wsisis/documents/listing.asp?lang=en&c\\_event=s11&c\\_type=ol](http://www.itu.int/wsisis/documents/listing.asp?lang=en&c_event=s11&c_type=ol)>.