

Internet Policy and Users' Practices

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Nine years after the first connection to the Internet, the Cuban government has reiterated its policy and commitment to the expansion of information and communication technologies (ICT) in the country. Baptised as the “informatization of the society,” Cuban policy on the Internet follows a pattern described as “alternative.” This concept stimulates the social use of ICT in the scientific, technical education, public health, communication and cultural fields as well as the development of the most important sectors of the national economy. This model is based in a collective use of ICT and gives no preference to individual access to the Internet. (*The Round Table*, 2004; Rosabal and Sanz, 2005)

When summarising the improvements and achievements of recent years, Cuban Minister of Informatics and Communication Ignacio González, reiterated that through promotion of mass use of ICT, Cuba’s aims to harmonically develop and introduce “those technologies in all the social, economic and political sectors of the society.” (Rosabal and Sanz, 2005) Such a policy is on line with the 1997 UNESCO proposal that Internet policy “focus on community programs and the strengthening of development sectors like education, prior to wiring each individual home.” (Venegas, 2003)

By year-end 2005, the Cuban government had registered around 300,000 computers, or 2.7 computers per 100 Cuban citizens. At the same time there were 1,209 sites under .cu, the Cuban national domain; more than 1,500 Cuban Internet sites (136 of them related to the Cuban media), more than 790,000 email users and more than 150,000 Internet users as well. (Rosabal and Sanz, 2005) Six national Internet service providers operate on the island, as well as a public net for data transmission with 51 data transmission points throughout the country. (Heredia, 2005) Likewise, the Cuban software indus-

try aims to be among the most the country's important export products in the near future.

However, all advances in Internet access and ICT use in the country has followed the "planned and harmonic" policy mentioned above. Acts, decrees, political declarations and specific rules are among the methods applied by Cuban authorities regarding ICT allocation and use of the Internet, and each, in many ways, is an example of the traditional vertical Cuban policy model regarding information and communication.

Since 1997, official Cuban policy has promoted use of ICT as a means of developing of the national information technology industry, the establishment of comprehensive services for citizens, the "informatization" of governmental, administrative and economic sectors as well as territorial informatization. (WSIS, 2003) However, within Cuba's borders, the political discourse also describes development following a vertical pattern of resources allocation. As in official international declarations, national proclamations promote the expansion of the national networks and e-mail usage, but not the public access to the Internet.

Various structural reforms in the government, including the creation of a new ministry and numerous agencies and technical enterprises related to the information and telecommunications issues, have taken place, as well as some additional changes in the educational agenda, investment in telephone service, the importation and domestic production of computers, the establishment of criteria for the allocation of information and communication resources and the development of electronic commerce.

Technical considerations

When this comprehensive policy was launched, Cuba's technological situation of was woefully lacking. In 1995, at the time Cuban Telecommunications Company (ETECSA) was created, there were only approximately 350,000 telecommunications landlines installed in the country. Telephone density was 3.2 phones per 100 inhabitants, and the majority of users were government offices. Some private users were still using lines installed in the pre-revolutionary period. From the 1960s on, the connection of new lines was hampered by a lack of technical capability, as well as a selective criteria approach that gave priority to people with important responsibilities in the economic, political or social sectors. Lines were also installed as rewards for important contributions those sectors. Indeed many families that had asked for lines in the 1960s are still waiting. (IPS, 2003) Even today, connection of the country to international networks is made by satellite (*The Round Table*, 2004; WSIS, 2003), which even the director of the National Office of Informatization acknowledges is more expensive and lower in quality than fiber

optics. However, Cuba cannot gain access to the international fiber optic network due to ongoing economic embargo applied by the American government. Cuban authorities regularly call attention to this issue in international forums noting the severe repercussions to Cuban economic and social development. (WSIS, 2003)

Likewise, Cuba has revealed that due to the embargo the Cuban communication sector has lost several millions dollars in commercial transactions. Specifically, the U.S. government has blocked the import of digital signature technology that is essential to electronic commerce. As a consequence, Cuba has limited its participation in the International Communication Union program. In April, 2003 the U.S. Department of Commerce denied permission for the export of 423 computers that an American NGO wished to donate to Cuban hospitals. (WSIS, 2003)

Equally, it was only in July 1994 that the Treasury Department authorised the transference of data or information to Cuba from U.S.-based servers, even though financial transactions were still restricted. This occurred in spite of the fact that the 1992 Torricelli Act called for improving communication with Cuba in order to foster change in the country. (Venegas, 2003)

The Meaning of Social and Planned Use of ICT

Under the particular conditions of Cuban social and economic system and framed by the historical confrontation with the American government, Cuban Internet policy has been based on political criterion for resources allocation and operation. The government decides when, where and under what conditions technology is deployed. It also controls allocation of Internet connections. The existence of the technology in specific places does not signify the subsequent permission to the net access.

The Cuban economic system is still highly centralized and the allocation of resources by the state is still one its main characteristics. In fact, the allocation of ICT resources is typically a political decision. Decisions regarding allocation of computers and other ICT are basically limited to those entities without market functions, and in many cases consideration is not based on economic viability. In the majority of the cases—such as schools, media organizations, government offices and hospitals—equipment is provided for free, and users seldom are aware of the real costs of either equipment or connection.

At the same time, the Cuban government has made clear its intention of creating a national community of technicians and teachers capable of fostering expansion of ICT. The quality of the Cuban educational system makes this goal highly achievable.

The process of allocating computers to schools began in the 1980s but soon was restricted to a few privileged places, mainly in the capital city and typically scientific research centers. Expansion, both in terms of equipment and education, began again in the 1990s, and by 2004, 46,290 computers were installed in primary schools classrooms where students began receiving computer instruction in their earliest school years. In the secondary, technical and high schools there are now 2,290 computers; Cuba's 423 schools for disabled people have 1,500 computers. During this span, Cuba has produced 78 educational software packages, all designed to support computer education. (*The Round Table*, 2004; Rosabal and Sanz, 2005)

Similarly, many technical schools have modified their general curricula to include specialised information education. Today, 38,000 students are enrolled in information technology schools, including 6,000 at the University of Information Sciences—which was built in 1992 on the location of a former Soviet military base. Already, the University has produced 3,000 graduates. In addition, in the early 1990s a program was implemented with the purpose of graduating teachers to provide primary school instruction in an Emerging Course of Basic Computing. Over the course of 1 ½ years 1,200 students took the modules. (IPS, 2003) In 2004, Cuban universities housed 15,800 computers, 52 percent in computer education classrooms—an average of one computer per 12 students—and 84 percent of them connected to the national network with 37 percent having full Internet access. (*The Round Table*, 2004)

All told, Cuban scientific and research centers and the country's public health system have been privileged in terms of the distribution of ICT and access to the Internet. (*The Round Table*, 2004) Cuban universities and research centers are connected to a national "cluster" where accessible information is stored. Cuban officials have deemed that "this is better than having everybody accessing in a disorganised way to the information." (*The Round Table*, 2004) One of the most celebrated of these national networks is INFOMED, which serves clinics, hospitals and medical personnel across the country with a specialised digital library database of medical information from national and international sources. Some 300,000 Cuban professionals have access to INFOMED.

The cultural field has also benefited from the introduction of ICT as well as access to email and the Internet. In 2004, 591 national and regional cultural organisations had national email and access to the national cultural network, *Cubarte*. In addition, more than 1,000 artists and intellectuals also enjoyed the privileges of surfing the national net and using national and international email. Still, as of that year only 47 national institutions, with 500 individual accounts, had been given full access to the Internet, mainly

through two or three cybercafés built on the premises of select cultural institutions. (*The Round Table*, 2004)

Certain sources argue that technological inadequacies are the reason for the limited number of cultural institutions with computers, equipment and network access. Nonetheless, many of those working in Cuban organizations note that even if they had the necessary resources and access to the national cultural net, they would still not be given access to the Internet. Similarly, they explain that in many places only one computer is connected to the net while others operate essentially as word processors. Usually, the computer connected to the national net is operated only by one person who receives, sends and distributes most information, typically e-mails. Decisions regarding who can use the connected computers are left to the heads of organizations. The most frequent explanation for restricted access inside the organization is the need to protect equipment and avoid technical disruptions due to lack of user expertise.

Outside of the formal educational system, in 1987 the Youth Communist League gave birth to the *Joven Club* project, whose goal was the creation of a classroom for teaching computing and electronics in every municipality of the country. Today, there are 400 *Joven Club* rooms in the 169 municipalities. Since 1987, half a million people have studied the basic computing under this project, including housewives, elderly people and the general public. In the year 2004, 143,395 persons were registered, 2,167 disabled persons among them. (Rosabal and Sanz, 2005)

Considered to be one of the priorities of Cuban policy on ICT, the national software industry was reorganised in 2002 toward promoting exports of its products. (IPS, 2003) Simultaneously, universities and other information technology organizations have produced educational software for use on the island. Some of them are designed to solve basic problems in specialized areas, but others are considered marketable products that can be exported to developing countries. Despite a laudatory vision within the Cuban press, however, development of an export-oriented software industry has been disappointing.

The informatization of administrative activities, aimed at providing better services to citizens, is also in its earliest stages. In general, this so-called informatization amounts to a computer with access to limited data. Many organisations receive second- or third-hand computers from privileged organizations in the same ministry. In many instances these are older 386 or 486 models that function as word processors only. Other times equipment is a mix of quality resources with old-fashioned, nearly useless equipment that has been repaired several times. Such machines have been dubbed "Frankensteins." However, among the services beginning to be computerised is the

post office system. Computers already perform such basic services as money sending or message transmission within the national territory. Differing levels of resources between the regions, however, often makes transmission even worse than before. Likewise, the so-called Government Online—which contrary to its name is not intended to promote democratic participation but to connect the local government with the central government—is still in an early stage of development. (Rosabal and Sanz, 2005)

*The Legal Framework: Selective Criteria,
Technological Monopoly and Reliability*

In June 1996, the Ministry of Science, Technology and Environment issued decree 58-96, detailing the norms for the connection, access, use and diffusion of Internet services. By the end of 1996, it had also issued decree 204 concerning the Protection and Technical Security of Information Systems. These laws apply to all institutions and organisations within the Cuban state, all the state's enterprises, joint ventures and international economic associations. The rules are compulsory although they include specific sections for the foreign organisations and enterprises. Among the obligations of the network managers are technical and Home Ministry-mandated requirements relating to the safeguarding of information. Each organisation is required to create mechanisms for tracing and registering the actions of ICT users. Web managers must be Cuban citizens, and demonstrate not only technical expertise but also demonstrated reliability. Part of their job is to elaborate and distribute internal rules regarding use of the net, and propose measures against the people who violate them.

It is evident that the laws regarding the use of ICT and accessibility to information not only establish the technical measures but also establish a centralised mechanism to determine and apply a selective criterion for accessibility. Simultaneously, such legislation implements mechanisms of control and punishment for the misuse of services. The combination of technical measures with other mechanisms of control—reliability, for example—is one of the main characteristics of the Cuban policy on the Internet. In January 2000, the Ministry of Communications was renamed the Ministry of Information and Communications. The former minister of Heavy Industry and Electronics became the new Minister of Information and Communications. He is still in the post. His main function is regulating, running, supervising and controlling the policy of the state and the government in regard to ICT activities.

Until the year 2000 the resolutions, agreements and other lawful pacts regulating the ICT use and access did not refer to criteria other than technical

expertise. However, the lack of political or ideological reference in these of documents could suggest that the reliability principle, for instance, would be addressed by other means, such as political speeches or specific practices.

Only in November 2001, with decree 188 issued by the Ministry of Information and Communications, did the state explicitly regulate by law the conditions and procedures that a Cuban organization must follow to obtain the permission to access to the Internet. One of those procedures was authorization from the minister of the organization to which it belongs. The permission includes the technical dictate related to security conditions. Each organisation must register and control authorized persons within its premises. It establishes that the web master must fulfill a reliability criterion and be Cuban national, residing in the country on a permanent basis. (Economic Press Service, 2002a) This document, however, makes no declarations about Cuban citizens and the Internet. As a result, Cubans, as individual citizens, are neither given nor denied access to the Internet. Under this legal framework, organizations themselves, once authorized, become the bodies to permit access. There are no laws regarding those who do not belong to an authorized organisation.

Such decrees, agreements, laws coincide in creating a vertical structure of permission for accessing ICT and especially the Internet. Thus, it follows a pattern, common to the Cuban tradition of organizational centralization, of a series of mechanisms, or “filters,” that create levels of accessibility to the resources and information. Known as “the chain scheme,” this insures that the government alone decides where to situate ICT. No organization without special permission has the right to introduce ICT, or to use the Internet. No individual citizen is authorised to access to the Internet. Within privileged organizations, only certain privileged people are allowed to make use of such resources.

Beyond the law

During the first days of 2004, a rumor made the rounds in Havana that on New Years Eve the Ministry of Information and Communications had passed a decree declaring that connection to the Internet would be possible only through telephones paid in dollars. While a large number of Internet users in Cuba are foreign companies or Cuban organizations with dollar accounts, in many other organizations Internet access is subsidized, symbolically paid in the national currency, and citizens are not allowed to have a telephone line paid in dollars.

Behind the rumor was word that the Ministry had data that 40,000 people were accessing the Internet through a “pirate connection.” At that time—as it still is today—it was possible to find black-market computers and passwords.

People with permission were selling their passwords for 30 dollars a month, advising the buyer to use the line only between midnight and dawn, times when their respective offices were not connected. (IPS, 2004) By early February there were new rumors that the supposed measures, if applied, would be ignored or selectively acted upon. In a press conference, the minister—in an ambiguous speech that did not make clear if he was talking about the expansion of services or the new criteria for payment—offered assurances that there had been no change in Cuban policy on the Internet. After several weeks the rumor and the panic had virtually disappeared. The decree is remains, but it has never been imposed. (IPS, 2004)

Still, it is not known if official data about the number of users reveals the total number of people within a privileged organization or includes those who bypass the restrictions to access to the net on regular or sporadic basis.

In December 2004, the Minister of Information and Communications issued decree 85, which directed that the Internet and e-mail services would fall under the jurisdiction of the Agency of Control and Supervision. The decree states that if an organization violates regulations regarding permitted services, the punishment would be the definitive or temporal cancellation of the permit and the confiscation of the equipment, in addition to other administrative and punitive measures. It added that any office or space with Internet access could be inspected by the agency without notice. The punishment stipulated under this law, combines economic (confiscation of equipment), technical (suspension of the license) and political (permanent cancellation of the permit) criteria together with administrative (again there is space for political or ideological verdict) and legal instruments.

Likewise, the Cuban citizens who travel to other countries are not allowed to import computers freely. In fact, Cuban customs does not mention computers among the forbidden or limited articles to import. Once again the law prohibits, but simultaneously guarantees flexibility and privileges. The Finance Ministry has passed a decree to permit Cuban travellers to import personal computers after obtaining a special permit from the Ministry to which the traveller belongs. Without such a permit, customs confiscates the computer (Economic Press Service, 2002b). The number of computers legally imported from abroad by Cuban travellers is not known. The number of computers received as gifts from foreigners is also unknown. However, it is well known that on the island, mainly in the capital, technicians assemble computers from accessories and components taken from their respective organizations. Some parts are new. Others are used and reported as useless but are in perfect working condition. The prices of computers vary from a few hundred to around US\$1,000, depending on its condition and the number of people involved in and the complexity of the process of illegally acquiring it. For this reason, no

one really knows the true number of computers in Cuba. Nonetheless, few Cubans can afford or are brave enough to buy one through the black market. Consequently, the true number of computers in the country probably is not too different from that found in official data. The December 2004 decree made clear that use of ICT and the Internet is intended for economic purposes and that Internet policy is in tune with the national development strategy. It states that the restrictions are only related to speed connection and timetable for the exploitation within the privileged organizations. (Rosabal, 2004) To this day, in Cuba no citizen can buy a computer on the official market. Indeed, not a single shop sells computers to Cuban citizens. In some stores it is possible to buy accessories and components such as a mouse, pad, microphones or wires, but even buying all the accessories it is impossible to assemble a computer. This market for computers accessories operates only in dollars and prices are very high. Only enterprises, organisations and other entities can buy computers or components and accessories in the specialized shops, and then only after going through an authorization process and with foreign currency. (IPS, 2003)

The Cuban press online

Due the low penetration of ICT in Cuba, Cuban online media are directed at a foreign audience, and when navigating through the Cuban press online and Cuban web sites in general, it is easy to find a clear and evident coincidence with official state points of view. This is evident not only the themes, but also the approaches, with a remarkable trend toward propaganda of the achievements and political efficacy of the government. One of the pillars of the Cuban policy on the Internet has been the desire to spread news or Cuban achievements around the world while denouncing policies of the U.S. government and right-wing Cuban exile groups. "In Cuba, it becomes difficult to separate the emphasis on national security from censorship, when official government discourse highlight these dangers and the extreme right-wing exile community (aided by the US government) continues to flood Cuban networks with counterrevolutionary emails." (Venegas, 2003) In recent years, the Cuban press has begun to use the Internet to counteract the effects of this ideological war. By 2001, all of Cuba's print media had launched online versions, and six radio stations and the national television had established an Internet presence as well. Today, the 136 web sites of the Cuban press include 9 national radio stations, one international radio station, 17 regional radio stations, 13 regional TV stations, one international TV station, 19 regional newspapers, 52 national newspapers or magazines (nine of them exclusively online), and six sites from the Union of Cuban Journalists. (Rosabal and Sanz, 2005) Searching the Cuban press online, one can find that the contents and approach do not differ from those of the rest of the media

within the country. In fact, one can say that the contents are even more coincident with the political speech, avoiding the small range of criticism found in Cuba's print and broadcasting media. During the past few years, Cuba's online media also have become a pillars of the island's international political campaigns, as exemplified by the case of the Elián Gonzalez, the campaign for the freedom of the "Cuban Five," and, most recently, requests for the U.S. for the extradition of Luis Posada Carriles so he could stand trial on charges of terrorism.

The users and the use

Even though access is restricted and pages are blocked, there are a variety of practices, mechanisms and tricks users employ to use ICT in ways not sanctioned by the authorities. It is well known, for instance, that members of the scientific community surf the net searching for international scholarships and sponsorship for international events that are not of interest to their organisations. Cubans also appeal to foreign friends to bring components or computer equipment into the country. Moreover, Cubans regularly use e-mail services to communicate with their friends or relatives abroad and, in spite of regulations banning such practices, provide the same services to relatives, friends and neighbours. It is also alleged that technicians in charge of monitoring the Internet impose filters on the general public while, confident of their bosses' IT illiteracy, maintaining full access for themselves and their friends.

Under this scenario no one can confidently assert the influence of the Internet in the people's routine and mentality. It has been suggested, however, that to some extent the types of practices described above could serve to undermine the central authority of the Communist government.

Conclusions

Information and communication technology (ICT) and Internet policy in Cuba are centralized, politically-oriented and lack market perspective. Both have been implemented following a planned principle of collective use that focuses on selective criterion for privileged access. Research centers, universities, government agencies, scientists, lecturers, doctors and journalists are among the privileged users. ICT and Internet access allocation are in tune with Communist Party priorities and leave no room for personal or individual connection to the Internet. Similarly, the government maintains a monopoly of ownership and management over ICT, centralizing the allotment of resources, forbidding any attempt to promote open access to the technology and strictly regulating the import of communications and information equipment into the country.

Meanwhile, the automation of government and economic sectors and the automation of services have followed a slow, irrelevant, almost insignificant course. The political discourse about the informatization of society and its achievements is euphoric, overconfident, and excessively optimistic. It makes reference to statistics about resources that takes no consideration of its quality. Likewise, the political discourse cynically avoids discussion of restriction on consumption, not to mention the production, of information in the country.

Cuban ICT governance also faces the challenge of the technological illiteracy of political cadres. Those who traditionally generate and implement the communication policy are Party officials, following certain political and ideological orientations. Generally speaking, they lack the technological understanding to do so efficiently. Internet operators are called upon to act as information gatekeepers—virtual censors—following the government's rules. The ideas, feelings and opinions of the professional community in charge of the technical functioning and control of ICT and the net are unknown.

In Cuba, the Internet has not altered the traditional concept of media ownership and management. Instead, the policy has been designed and implemented taking advantages of the centralized and politically oriented mechanism of allocation of resources and information. Therefore, it has not generated democratic participation and has not help make information available to the public. In contrast, the characteristics of the Internet facilitate the government interest in applying a selective and privileged criterion of access to the information.

National security, nationhood, sovereignty, and historical confrontation with the United States are some of the key issues of the Cuban political discourse within the national frontiers and in the international arena. Such a discourse has not change in decades and to some extend has been emphatic during the last years. The very existence of the confrontation with the United States and American government support of Cuban opposition groups' activities, together with the American program for a transition in the island, limit any possibility for more individual, democratic access to the net.

As in the United States during the first years of Internet development, governance of the Internet in Cuba is subject to the absolute ownership and management of the government. However, a new phase in which the governance of the net would be transferred to industry is unthinkable in Cuba. The characteristics of the Cuban political and economic system eliminate any possibility for a market-oriented governance of the Internet or other communications industry. Organizations can, however, develop internal mechanisms of management within the limited space provided by the centralized.

Although the Cuban government's stated policy is to spread the benefits of ICT and the Internet services, the current economic situation on the island discredit the best attempts to carry it out. Poverty is such that even less-expensive technologies cannot function in a pervasive way or on a regular basis. Besides, the basic telecommunication infrastructure in the country is still very precarious, and unstable, making the availability and the accessibility to any potential Internet services quite difficult.

Ultimately, official Cuban policy on ICT and the Internet privilege access, limit the technical and financial possibilities of the technology, and hamper the professional development of a huge mass of educated, highly skilled people. In many ways the policy is, if not isolating, at least, retarding the possibilities of the Cuban professionals to take part in a high level scientific international community. Likewise, the Cuban policy on information and communication technology has reinforced mechanisms that limit access to the information and restrain democratic participation. Nonetheless, it is very likely that even with such policies the Cuban government will be unable to hold off the information revolution forever. Time will be the witness.

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