



Bridging Cuba's Communication Divide: How U.S. Policy Can Help

Theodore J. Piccone, Christopher Sabatini and Carlos Saladrigas

Introduction

Throughout history, the free flow of information has been a powerful agent of liberation and economic development. For authoritarian regimes, the dilemma has been to find the right balance between these forces, usually by manipulating information through propaganda and controls on the media, rather than outright banning it.

Cuba is not exempt from these challenges. The Castro regime clearly needs to expand information and communication technologies (ICT) to spur fundamental reform of its economy, but deeply fears the political impact of widespread access to ICT. How it pursues that balance can be greatly facilitated, or exacerbated, by U.S. policy towards Cuba.

We know there is a strong correlation between access to ICT and economic growth and development. Conversely, the large investments required for ICT infrastructure will only take place when there is a revenue model to support the investment and provide investors with market-based rates of return. In the case of Cuba, this became clear with cellular phones. As little as five years ago, there were just a few thousand mobile phones in Cuba, almost all of them in the hands of government officials, foreigners and members of the elite. Since 2008, when President Raul Castro announced the lifting of the ban on cell phones, the number of cell phones is rapidly approaching one million. The reason is simple—cell phone revenues have become an important source of hard currency. The economic model outweighed political concerns.

It is unreasonable to hope for the development of other ICTs, such as the internet and social media, without economic models to make them work. Thus, the challenge for U.S. policymakers consists not only in effecting targeted reforms to its 50-year old embargo, but in broadly lifting all restrictions that hinder the development of an economic model capable of sustaining the requisite investments in ICT in Cuba, and the corresponding consumer demand for the services. A piecemeal approach will simply not do the job.

Laying this knowledge and infrastructure foundation is essential for the long-term economic prospects of the Cuban people. Getting there requires three steps: 1) **more explicit and flexible U.S. regulations** governing the export and investments in ICT infrastructure in Cuba; 2) more flexible U.S. regulations to allow for the development of an ICT consumer market in Cuba; and 3) the development of distance-learning programs on the technology, experiences and applications of ICT to economic and humanitarian activity.

Background

On April 13, 2009, President Obama took the first step in what many hoped would be a steady stream of initiatives to unlock the door to U.S.-Cuban relations, frozen for 50 years by intransigence on both sides of the Florida straits. Among the modest measures announced, the White House said it wanted to “promote contacts between Cuban-Americans and their relatives in Cuba” and “increase the flow of information to the Cuban people” by authorizing U.S. telecommunications companies to provide certain

services to customers in Cuba. Five months later, the regulations released by the Administration in order to implement the President's directive on telecommunications were met by many businesses with deafening silence and scratched heads.

Why? The technical answer is that the new rules fail to give service providers the clear guidance they need to enter the icy waters of U.S.-Cuban commerce. They also fail to facilitate the creation of the necessary economic models to sustain the investment and infrastructure needed to modernize Cuba's ICT system. But the political answer to industry's chilly reception may lie in the President's explicit linkage between liberalizing ICT regulations and the overarching goal to promote democracy and human rights, "decrease the dependency of the Cuban people on the Castro regime and to encourage positive change in Cuba." By, in effect, tasking the U.S. telecommunications industry with the difficult though laudable job of promoting democracy and human rights in Cuba, the Administration may have made the environment too "political" and therefore less hospitable for U.S. investors.

This is not to excuse in any way the Cuban regime's ongoing denial of its citizens' basic rights to free expression. As a signatory to the International Covenant on Civil and Political Rights, which guarantees the right "to seek, receive and impart information and ideas of all kinds, regardless of frontiers, either orally, in writing or in print, in the form of art, or through any other media of his choice," the Cuban government certainly should abide by its international obligations by liberalizing trade and services in modern telecommunications, the oxygen any polity needs to develop and govern itself today. But in the context of ongoing hostilities between Washington and Havana, overt U.S. demands for political change on the island inevitably are exploited as another stone in David's sling against Goliath.

There is an alternative approach to resolving this dilemma. Another longstanding U.S. policy goal, articulated both rhetorically and in such legislation as the Cuban Democracy Act of 1992, 22 U.S.C. 6001, is to support the Cuban people in their daily struggles

to cope with the deprivations of life in a closed authoritarian regime. Facilitating contact within families is certainly one way to ease the strain of separation among loved ones, both on and off the island. To that end, U.S. law allows, *inter alia*, the sale and donations of food, the export of medicines and medical supplies, and **the provision of telecommunications facilities "in such quantity and of such quality as may be necessary to provide efficient and adequate telecommunications services between the United States and Cuba."** 22 U.S.C. 6004. In other words, Congress has already authorized transactions that permit the kind of "efficient and adequate" ICT services that we take for granted today.

Taken from this perspective, and given the telecommunications revolution since the Act was passed, it is clear that U.S. policy should dramatically expand the availability of modern information and communication services to the Cuban people. The Obama administration can support the Cuban people's basic quality of life and their right to information by rewriting its regulations to allow the sale of all types of ICT equipment and permit U.S. investments in ICT, including mobile devices and fiber optic cables; reducing the red tape of case-by-case licensing; and lifting restrictions, especially on financial transactions, that limit consumer spending on ICT and the ability of ordinary Cubans to engage in e-commerce, thus helping to lessen individual citizens' dependency on the state.

Access to information and communication technologies, including the internet and mobile phones, goes beyond the importance of information as a general public good. Extensive research, experience and anecdotal evidence have demonstrated that connectivity—through the internet and through cell phones—are essential components of modern-day, long-term economic development and even human survival. Modern telecommunications strengthens productivity, allows for more efficient distribution, reduces transaction costs, and lowers the barrier to entry into the market, thus expanding the economic activities of citizens. One study concluded that "an increase of 10 mobile phones per 100 people boosts per capita GDP growth by .6 percent."¹

¹ "The impact of telecommunications on economic growth in developing countries." Waverman, Meschi and Fuss, *The Vodaphone Policy Paper Series*, Number 2, March 2005 p.2.

The expansion of ICT brings more than just economic growth, however. Evidence has demonstrated a relationship between teledensity and quality of life indicators—even controlling for GDP—such as life expectancy, lower infant mortality rates, and the rate of formation and growth of new enterprises.²

The following are some of the positive benefits that access to modern ICT services could offer Cuban citizens today:

- 1) **Improving the flow of economic and market information:** Throughout the world connectivity has had a critical leveling effect for small producers—from fishermen to small manufacturers—cutting out middle men and allowing them to seek the best prices for their products. This information is also important for linking to global markets. A World Bank survey of 56 developed and developing countries found “a significant link between Internet access and trade growth—with the greatest benefits accruing to developing countries with the weakest trade links.”³
- 2) **Expanding access to finances and credit:** Vodafone and other mobile phone companies have developed an array of applications that have expanded banking access through mobile banking. Such innovations are particularly powerful for Cubans who could conceivably receive remittances and other financial transactions through mobile phones if the proper technology and infrastructure were in place.
- 3) **Directly and indirectly generating a modern-day workforce that can compete in today’s information-driven economy:** Broad-based access to ICT is essential to competing in today’s global information and knowledge-based economy by allowing communities and private individuals— independent of the state—to gain skills, channels and capacity. The low barriers to entry ensure that even the poor and rural sectors of the population can gain easy access.

- 4) **Providing channels of communication to avert humanitarian disasters and assist in reconstruction efforts:** The International Committee of the Red Cross has developed an effective strategy using mobile phones not only to warn citizens of impending natural disasters, but also to help guide them to safety and raise and deliver funds and humanitarian assistance after the tragedy passes.⁴ This is particularly relevant in hurricane-prone Cuba, where such systems could help avert human loss if ICT services were placed in the hands of citizens.

The long-term economic potential of the internet was forcefully articulated by Secretary of State Hillary Clinton last January: “...we know from long experience that promoting social and economic development in countries where people lack access to knowledge, markets, capital, and opportunity can be frustrating and sometimes futile work. In this context, the internet can serve as a great equalizer. By providing people with access to knowledge and potential markets, networks can create opportunities where none exist.”

Even incremental changes in expanding connectivity and access to ICT could go a long way toward alleviating the economic struggles and health and human risks inherent in living under a closed, authoritarian regime.

Ironically, however, current U.S. regulations restrict the very access necessary to make this happen. Expanding the opportunity for U.S. telecoms investors and companies to provide cell phone and internet service to the island will help ensure that Cuban citizens possess the tools to become productive economic citizens once the shackles of political and economic state control are removed.

To say this is not to deny or minimize the very real controls that the Cuban government places on its own citizens’ access to the internet. But expanding citizens’ access to even the most rudimentary

² “Africa: The Impact of Mobile Phones,” *The Vodafone Policy Paper Series*, Number 2, March 2005, p.7.

³ Guislain, Pierre, Christine Zhen-Wei Quian, Bruno Lanvin, Michael Minges, and Eric Swanson, Chapter 1, *Information and Communications for Development 2006* (Washington, DC: The World Bank, 2006), p. 4.

⁴ Maarten Van Aalt, “In a Changing Climate, the Red Cross Hopes a New Focus on Training and Preparation will Save Lives,” in *Americas Quarterly* website, <<http://www.americasquarterly.org/node/1083>>.

technology in Cuba would be a giant step forward in economically empowering a new, independent generation of Cuban citizens.

Access to ICT in Cuba Today

Despite a strong science and engineering sector and the third highest research and development (R&D) expenditures per GDP in Latin America (spending an estimated 0.6 percent of GDP on R&D, behind Chile at 0.7 percent and Brazil at 0.9 percent), Cuba has the lowest level of internet penetration in the hemisphere and one of the lowest in the world. By the Cuban government's own estimates, 1.8 million users, or 13 percent of the population, have access to the internet, though international accounts place it substantially lower at about 2.6% penetration. Part of the reason for the discrepancy is that official statistics may include access both to the worldwide web as well as to Cuba's internal network or intranet.⁵ This is compared to internet penetration in Haiti of 23 percent. Ownership of personal computers is considerably lower: 723,000, or 6.2 percent of the population.

In Cuba, the internet is primarily accessible to academics, government officials, foreigners, and tourists. Lack of access is the primary blocking tool used by the Cuban government to restrict the technology to the population at large. A censored version of the internet (more of an intranet) is offered through universities, secondary schools, post offices and government youth computer clubs, in line with a decree that the internet cannot be used in violation of the country's moral principles or laws or jeopardize national security. To obtain access to the internet, users have to be approved by Etecsa, the state-owned telecommunications company, and a commission linked to the Committee for the Defense of the Revolution Act.

However, since 2008, when the Raul Castro government lifted a ban on the ownership of personal computers, cell phones and other personal electronics, private, black market access has become one of the most rapidly growing areas of the underground Cuban economy. Users are countering the

ensorship by connecting through authorized users who sell their university or state-owned enterprise log-ins, setting up satellite dishes smuggled into the country, or using computers available in tourist hotels or through a growing number of internet cafes.

Fixed line and mobile phone market

In 1993, the Cuban government launched the first large-scale privatization, inviting proposals for joint venture partners for Etecsa, the sole fixed network operator on the island. A joint venture was launched with the Mexican holding company Domos, which separated the company from the Ministry of Communications but maintained Cuban government control. Etecsa was awarded a 25-year concession to provide local, domestic long-distance, and international telephony, internet access, data transmission, public telephony, subscription TV and other value-added services—all telecom services, save for mobile telephony.

Between 1995 and 1997, Domos pulled out of Cuba and its stake in Etecsa went partly to Telecom Italia, and partly to banks controlled by the Cuban government. Telecom Italia today has a 27% interest in Etecsa through its subsidiary, Telecom Italia International. The Cuban government controls the remaining 73%. In 2003, Etecsa absorbed mobile companies Cubacel and C-Com and was granted a monopoly on all fixed and mobile voice telephony services until 2019. By 2009, 95 percent of services were digitized. In early 2010, Telecom Italia was rumored to be nearing a deal with Spain's Telefonica regarding the possible sale of its 27 percent stake in Etecsa.

More recently, the Castro government announced a significant reduction in charges for domestic and international mobile calls and a trial period for testing internet access through cell phones. Nonetheless, despite Raúl Castro's lifting of the ban on personal purchase of cell phones, most Cubans, with average monthly salaries of \$20, have simply not been able to avail themselves of the change. Even fixed line teledensity is one of the lowest in the hemisphere, at 10.5 percent.

⁵ In 2009 the Cuban government launched its own Operating System (NOVA). The system, however, is a means of controlling internet access, effectively rendering the island's service to one of intranet more than internet.

Fiber optic and broadband

There is, however, a potential benefit to the low levels of landlines and fiber optic cable in Cuba: it will allow the country—when the time comes—to leapfrog over older technologies directly to wireless. Currently, two internet service providers operate in Cuba. The first, Etecsa, offers dial up ISDN⁶ and dedicated access and data communications. The second, CENIA—operated by Citmatel, a branch of the Cuban Ministry of Science and Technology—provides dial up and corporate internet services, including hosting and network management.

There are several plans underway to build a fiber optic cable to Cuba, including one by Cobian International to link the United States and Jamaica, with a branch leg from Jamaica to Cuba (expected to be completed in 2013); and another between Telecom Venezuela and Cuban company Transbit (with a partnership agreement currently under negotiations with Cable & Wireless of the United Kingdom). This project has stalled, though it is expected to be operational by 2011. A potentially more significant development, announced in October 2009, was a U.S. government authorization for Miami-based TeleCuba Communications to lay the first fiber-optic cable to connect the United States and Cuba—a project, which if approved by the Cuban government, is expected to be operational by mid-2011. At a cost of \$18 million, it would be financed by private investors, resulting in 8Tbps—10Tbps capacity cable. This cable would dramatically improve access and reduce the cost of telecom services in Cuba. However, under current U.S. rules, a U.S. company would not be allowed to extend the cable to Cuban territory.

U.S. Regulations

U.S. sanctions against Cuba are administered and enforced by the Departments of Commerce and Treasury and are governed by provisions of the Trading with the Enemy Act of 1917 (TWEA), the Cuban Democracy Act of 1992 (CDA), the Helms-Burton Act of 1996, and the Trade Sanctions

Reform and Export Enhancement Act (TSRA) of 2000. The regulations that govern the activities of U.S. firms in Cuba are determined by the relevant departments' interpretation of the interplay between presidential directives, recent congressional actions like in the Omnibus Spending bill of 2009, and existing statutes of law.

The legal statutes governing telecom investment were codified in the CDA [Section 1705(e)] when the Congress first authorized telecom links between the United States and Cuba. The CDA authorizes telecom “facilities” in such “quantity and quality” as to provide “efficient and adequate telecommunications services between the United States and Cuba.” The law, however, prohibits U.S. investment in Cuba’s domestic telecom network.

On April 13, 2009, the President issued a directive to revise the scope of licensing policy regarding telecommunications in order to increase the flow of information between the United States and Cuba. The memo contained directives to:

- Authorize U.S. telecom providers to enter into agreements to establish fiber-optic cable and satellite telecommunications facilities linking the United States and Cuba.
- License U.S. service providers to enter into roaming service agreements with Cuban providers.
- License U.S. satellite radio and satellite television providers to engage in transactions necessary to provide services to customers in Cuba.
- License persons subject to U.S. jurisdiction to pay for telecommunications, satellite radio, and satellite television services provided to individuals in Cuba.
- Authorize the export or re-export to Cuba of *donated* personal communications devices such as mobile phone systems, computers and satellite receivers.

⁶ Integrated Services Digital Network (ISDN) is a set of communications standards for simultaneous [digital transmission](#) of voice, video, data, and other network services over the traditional circuits of the [public switched telephone network](#).

In accordance with this directive, on September 3, 2009, the Treasury Department's Office of Foreign Assets Control (OFAC) published changes to the Cuban Assets Control Regulations (CACR) authorizing, by general license, certain financial transactions necessary to expand telecommunications links with Cuba. On September 8, 2009, the Bureau of Industry and Security (BIS) at the Department of Commerce published changes to the Export Administration Regulations (EAR) revising existing licensing policy for certain telecommunications-related exports to Cuba.

Among other things, the new CACR and EAR regulations:

- Authorized transactions by U.S. telecom service providers, under a general license, including payments for (1) the provision of telecommunications between the United States and Cuba; (2) the provision of satellite T.V. services to Cuba; and (3) entry into roaming service agreements with telecommunications service providers in Cuba.
- Authorized persons subject to U.S. law to enter into, and make payments under, contracts (including contracts for cellular telephone services) with non-Cuban telecommunications providers for services provided to Cubans.
- Authorized transactions, under specific licenses, incident to the establishment of facilities to provide telecom services linking third countries to Cuba if they are necessary to provide efficient and adequate telecommunications services between the United States and Cuba.
- Created a license exception authorizing the export or re-export of *donated* communications devices including mobile phones, SIM cards, laptops and desktop computers, and peripherals, internet connectivity devices, satellite television and radio receivers, digital music and video players and recorders, and more. The sale of such devices, however, remains prohibited.

Limitations

With regard to telecoms and satellite links, the presidential directive released on April 13, 2009 represented an important step toward ensuring enhanced communications between the United States and Cuba and the promotion of contacts between Cuban-Americans and their relatives in Cuba. These links are consistent with foreign policy objectives and are a means to encourage positive change in Cuba. However, the regulatory changes the departments made to reflect the directives issued by President Obama fall short of what is necessary to actually begin establishing greater telecommunications links.

The creation of the legal possibility for investment in Cuba by U.S. telecom and satellite companies will not necessarily spur private sector investments in this area. The risk, given the relative size of the market for telecommunications and satellite services in Cuba, is that the procedures and guidelines are too unclear and complex to act as an incentive for companies to make serious efforts to explore possibilities for investment. Thus, the companies most capable of fulfilling the President's directives by working to establish expanded telecom and satellite links may be the least likely to actually undertake projects there.

For example, while the Cuban Democracy Act of 1992 forbids investment in Cuba's domestic telecommunications network, the presidential directive appears to authorize activities that, by their nature, require investments that have in the past been considered contributions to Cuba's "domestic network." Thus, while items such as mobile phones and SIM cards appear consistent with the aim of facilitating the establishment of expanded communications links, such devices may violate prohibitions on investment in Cuba's domestic network.

Recommendations:

Given the low probability of congressional action to amend laws regulating U.S. ICT investments in Cuba, the Obama Administration should take steps now to build on its initial efforts to expand ICT services to the Cuban people. In keeping with the spirit of current law and policy to facilitate and

expand communications services between our two countries, it should:

- narrow the interpretation of language prohibiting U.S. investment in Cuba's telecom network by, for example, specifying that the prohibition is limited to physical manufacture of network architecture by U.S. firms on the island;
- define "efficient and adequate" telecom services broadly to mean fast and reliable links that allow Cubans access to modern satellite, internet and mobile communications services and the necessary infrastructure to make such services feasible;
- devote a significant portion of the \$20 million in U.S. government support to civil society to provide families, small farmers and other entrepreneurs in Cuba with training and equipment in modern telecommunications services;
- explore and catalogue options for free online software that can be downloaded by people on the island for local use;
- further revise regulations and if necessary seek legislative amendments to allow U.S.

companies to invest in telecommunications network on the island;

- authorize more flexible end user requirements to allow for the sale of pre-paid phone cards and phones in Cuba;
- work with private foundations and corporations on creative ways to donate telecom services on the island, for example by offering to donate equipment under the one laptop per child initiative;
- develop distance-learning programs on the technology, experiences and applications of ICT to economic and humanitarian activity;
- issue a general license authorizing any U.S. citizen to engage in transactions necessary to pay for cellular, satellite TV and radio fees for Cuban citizens.

By expanding access today through regulatory reforms, the Obama Administration would also help ensure that Cuba's citizens and economy are well positioned for the transition to a modern, information-based economy that can provide broad-based, sustainable economic development on the island.

Theodore J. Piccone is a Senior Fellow and Deputy Director for Foreign Policy at the Brookings Institution; he served eight years as a senior policy advisor on Latin America in the Clinton Administration. Christopher Sabatini is Senior Director of Policy for the Americas Society/Council of the Americas and Editor-in-Chief of Americas Quarterly. Carlos Saladrigas is Co-Chairman of the Board of the Cuba Study Group, a non-profit, non-partisan organization comprised of business and community leaders of Cuban descent who share a common interest and vision of a free and prosperous Cuba.

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Other publications on U.S.-Cuba policy:

Learning to Salsa: New Steps in U.S.-Cuba Relations

By Carlos Pascual and Vicki Huddleston

Brookings Press, 2010

<http://www.brookings.edu/press/Books/2010/learningtosalsa.aspx>

Coping with the Next Oil Spill: Why U.S.-Cuba Environmental Cooperation is Critical

By Robert Muse and Jorge Pinon

http://www.brookings.edu/papers/2010/0518_oil_spill_cuba_pinon.aspx#.

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By Paul Hare, former British Ambassador to Cuba, March 2010

http://www.brookings.edu/papers/2010/03_us_cuba_diplomacy_hare.aspx

The Obama Administration and the Americas

By Abraham F. Lowenthal, Ted Piccone, Laurence Whitehead and Foreword by Strobe Talbott

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By Carlos Pascual and Vicki Huddleston

Foreign Policy at Brookings, April 2009

http://www.brookings.edu/reports/2009/04_cuba.aspx