

## A Look Into the Cuban Tech Scene

By Alexander Podolsky

Havana--Like aspiring tech entrepreneurs everywhere, Victor Moraton and Fabian Ruiz Estevez work 70-hour weeks and dream of internet success. Unlike their counterparts in Silicon valley, however, their office is on a bench in a park that smells vaguely of urine.

Only a few years ago, few Cubans were connected to the internet. Now, if they have enough money, they can buy wifi cards that give them internet access at one of 353 government-run wifi hotspots. Cell phones are everywhere, and a generation of visionary techies aims to bring Cuba into the digital world.

Mr. Moraton and Mr. Ruiz are in the vanguard. They are determined to succeed, but face daunting obstacles in a country where business was demonized for generations. Having to sit in a public park for internet access is the least of their concerns.

After graduating from one of the several computer science programs offered at Cuban universities, software engineers have several options. Some leave the country for lucrative jobs abroad. Those who remain have two options. Many work as freelancers, selling their coding skills to foreign and domestic companies. Others, like Mr. Moraton and Mr. Ruiz, build their own applications for use in Cuba.

Their app and web site, NinjaCuba, aims to connect freelance software engineers and designers to companies around the world. They have a ready clientele. Plenty of foreign companies want to take advantage of Cuban talent, but many of their postings remain unanswered because software engineers are unable to find them.

One 30-year-old web engineer, Gilberto Guedes, said he earns a good salary doing freelance assignments for companies in Europe and Latin America. Those companies, he said, are eager to hire low-cost Cuban computer programmers.

"There are more jobs to do than people to do them," he said from his windowless office inside the Bacardi Building, an eight-story art deco tower in central Havana.

Mr. Guedes shares his cramped office with a handful of other freelancers. They pool some of their earnings to pay the \$60-per-month fee for internet access--a luxury that is out of reach for the many Cubans who work for government salaries that rarely exceed \$25 per month.

Internet connections here are extremely slow by Western standards--just two megabytes, which is roughly 4% of the average internet speed in America. Mr. Guedes, however, said this is not a serious obstacle. He scoffed at those who might find it frustrating.

“Who needs more than two megabytes?,” he shrugged. “Two is more than adequate.”

Web designers and other software engineers have surmounted other problems here as well. They cannot easily access web pages that developers in other countries often use, such as Google’s SDK, but have used software-sharing and other techniques as an alternative. They must also deal with what one engineer called the “incredible amount of time” it takes to do everything. Since few homes or offices have internet access, for example, web developers often work from park benches near wifi hotspots.

The most daunting challenge for tech entrepreneurs in Cuba, however, is the lack of a business culture here. For decades private enterprise was illegal. Many government leaders still view it suspiciously.

“Being an entrepreneur in Cuba is difficult,” said Rafael Bello, co-developer of Conoce Cuba, the Cuban version of Yelp, which guides people to restaurants and other destinations. “Literally no one has done it before. Cubans have learned a bit about business and economics. We’re learning step by step.”

In the last two years, the government has established several hundred wi-fi hotspots around the country. Smartphones are common—at any of these hotspots, Cubans clench them like a lifeline that connects them to the outside world. Those who can afford a card that provides an internet code can access popular Western sites. Among them are some that depict Cuba in a less-than-rosy state, such as Wikipedia and the New York Times.

Software engineers here say the government does not heavily regulate or restrict their work. As long as they steer clear of politics and pornography, they are usually left alone.

“Fifteen or 20 years ago, the government may have made it difficult for us to get access to the internet,” said Mr. Guedes, the freelance app developer. “Today we live in a different Cuba.”

Some of Cuba’s most talented tech entrepreneurs have built relationships with foreign companies that ultimately allow them to leave the country permanently. Others, however, say they are determined to remain. They can live well on incomes that would be modest in other countries. Many also say they want to contribute to the development of their country and its private sector.

Mr. Moraton, the co-developer of NinjaCuba, scorned tech graduates who “claim to be changing the world, but in reality are not changing anything.” Any project that does not move Cuba forward in some way, he said, “is a waste of effort.” Besides, he added, only web designers who remain on the island can stay in touch with the rapidly developing internet culture and offer services that Cubans need.

“We don’t want to fall in the category of being just a simple chat application,” he said.

Many of the first Cuban-designed apps were aimed at tourists. One of the most successful is Alamesa, which provides a directory of high-end Cuban restaurants. Now, however, more apps provide information that Cubans can use, like tips on how to pass the driving-license test.

When it comes to internet-based entrepreneurship, Cuba remains clearly behind the rest of the hemisphere. Technical obstacles are considerable. The government remains suspicious of the web and its subversive potential. Business culture is weak. Nonetheless, the tech scene is energetic and growing. Mr. Moraton said he has plans to expand NinjaCuba and go further.

“Tenacity and effort can make a difference here,” he said. “We have lots of ideas.”