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Free software liberates Venezuela

The free software revolution comes to Venezuela

David Sugar

The third International Forum on Free Knowledge brought together many groups and individuals interested in the development of free software worldwide to the city of Maracaibo. One reason Venezuela choose to host this event is because starting in January (2006), their new free software law, directive 3.390, comes into effect, which mandates all government agencies to migrate to free software over a two year period. I was invited to speak about Telefonía Libre: the use of free software in telecommunications.

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While I am invited to speak at many events and conferences worldwide, most often I reject them immediately because they're not open to the general public. This is one of the reasons I rarely speak in the U.S.—virtually all U.S. scientific conferences in my field are for profit and are organized by groups who charge fees so high that it discourages the general public from participating, or they are organized for the benefit of commercial vendors who are trying to market themselves to potential customers. Science Fiction conventions actually would be closer to my choice of U.S. venue, although I don't seem to get invited to those.

I accepted this invitation for several reasons; first, it was open and free to the general public. Second, it was Juan Car-

los Gentile who personally asked me to attend. And finally, I have always been immensely curious about Venezuela. While there, I had the extremely lucky chance to speak with directors in many of the organizations charged with carrying out Chavez's vision of a "Bolivarian Revolution".

While my travel had been planned a number of weeks in advance, as with all travel I have experienced in Latin America, this turned out to be on a different concept of *time*. I didn't hear back at all from Venezuela until the weekend before departure, but this is actually not that remarkable. By Monday the 21st of November, I knew I'd arrive in Mara-

Map of Venezuela



caibo the next day, and return on the 29th. That much was confirmed to me by Ambar Rodriguez, who works for Conatel, which is their state telephone regulatory agency. I had a chance to speak with Ambar over the weekend, but I didn't know which airport I would departing from, or even what airlines I'd be flying, until Monday morning.

To understand the blissful attitude I had taken, you have to understand this: I recall one time I was staying with a family in San Paulo, where we were scheduled to take a flight to Porto Alegre. The airport was across town, and our departure time was about half an hour away when we finally wandered out to the car. We didn't even travel in much of a hurry. Yet, somehow, in the twisted and bizarre time warp that is Brazil, we arrived on time for our flight anyway, and I never quite figured that out either. Time often has a very different meaning in Latin America.

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Many of the events and presentations at the event were, much like mine, of a rather technical nature. My presentation caused some difficulty for the translator I was given, who had no experience or understanding of the specialized technical terms I was using. This was only corrected near the end when a different person came forward to translate my speech. Some presentations were from groups who were using free software in some social setting. The event was heavily attended by many people, and particular technical directors from many key parts of the Venezuelan government, because of their migration plans for 2006.

I eventually meet up with Jeff Zucker from Perl Mongers, who traveled by bus from Caracas and the well known international free software activist, Juan Carlos Gentile, who drove all the way from Caracas along the same roads with Marko, who is also from Italy. While it is said to take ten hours to drive from Caracas to Maracaibo, as he and Marko are Italian, naturally I expected he would arrive in only five. These three, and Ana Isabel Delgado from the De-

bian Venezuela group, were my primary "translation team" whenever I spoke with others who didn't speak English.

The People's Ministry of Economics

Venezuela is blessed with not one, but two economic ministries. There is the old ministry of economics, which deals with the traditional capitalist economy. It is worth noting that capitalism continues in Venezuela and will likely continue to do so for some time. While lands are at times redistributed to landless laborers, for the most part existing industries and businesses are left alone, and left to the old ministry of economics. Instead, they have a different idea of how to transform society here, and this brings me to the second ministry.

The Ministerio Para La Economia Popular, or roughly, the People's Economic Ministry (and for simplicity, to be referred to simply as Minep) is tasked with transforming Venezuela with a new economy. While the ministry does a number of important tasks, I believe their most interesting is to train and educate ordinary Venezuelans, who volunteer on how to run a worker co-operative. This is done by providing co-ops the tools, financing, and practical training they need to operate their new enterprises.

My interest in this aspect of Minep came in part from their interest in providing VOIP services along with the computers they are offering to their worker managed co-ops. This was a rather specific technical issue, and one they were very interested in discussing with me.

Many of these worker co-ops are composed of very small startups that typically have 10 people or less. Minep offers training and support, as well as financing, to allow co-ops to purchase computing systems for their business needs. These systems are now offered entirely with free software, starting with the Debian GNU/Linux operating system, along with Open Office for general business use, and web hosting under Apache. Co-ops that go through the Minep program also have the ability to host web sites with their own content, and these usually feature the products or services a given co-op wishes to offer. Co-ops are also trained in the use of the free software they receive and in how to maintain their own IT infrastructure.

The Minep co-op training program was piloted in 2004, with some 3000 such worker managed co-ops formed. During this year (2005) they have formed over 45,000 such co-

ops nationwide, and are expecting to train over 700,000 Venezuelans in how to form and be part of a new economy. This suggests to me that perhaps 40% of those that go through the Minep program eventually do form a commercial enterprise.

The Venezuelan revolution is perhaps
the first revolution in history saved by
computer hackers

The use of free software and offering of computer systems for business use as part of the co-op program is actually relatively new. I believe, if I understood correctly, the full version of free software training program is a 6 month course, and so is rather comprehensive. This year (2005), they've only trained people from at most a few thousand of the co-ops on the use of free software through the initial pilot program. In 2006, however, that program, and free software training should be available to all interested.

The Ministry of Intellectual Prosperity

SAPI, the Independent Service ministry of Propiedad Intelectual, is the ministry that used to define Venezuela's so called "Intellectual Property" laws. I understand SAPI also at one time concerned itself with the issue of what was called "Piracy". I would have thought, however, that controlling murderous gangs of anarco-capitalist "gentlemen of fortune" who raid ships, would be the job of the navy, or perhaps the interior ministry.

I had the good fortune to meet the current director general of SAPI, Eduardo Samán, while I was in Maracaibo. He has very different ideas for the purpose of SAPI. He is a well known internationalist, and had been a key person in establishing the program for promoting a developing nations agenda within WIPO. Rather than creating new intellectual restrictions, Samán proposes that the mission of SAPI should instead become that of promoting "Intellectual Prosperity" by creating laws and services that promote the ability to share knowledge as the common heritage of all mankind.

Assuming that private corporate interests in the developed world today do succeed in the great program of owning what people are allowed to think, it is very possible that places

"Intellectual Property"

The term intellectual property itself is of course a new-speak propaganda word that didn't even exist 20 years ago. First, the topic it covers varies from Copyrights, Patents, Trade Secrets and Trademarks, to a variety of other things, all of which are in reality all very different and unrelated. Second, it's based on the premise that you can give something intangible to someone else, and yet control it and decide what other people do with it, as if it or they (and even the ideas they may have about it) were your physical property. Intellectual property amounts in part to thought control through legal fiction. Some even say it amounts to Intellectual Slavery.

The consequence of treating ideas and thoughts as if they are tangible property is the very destruction of science and education and the elimination of individual rights and freedoms. Science is in part built upon the idea that new knowledge is created by incrementally improving ideas. Education is based on the idea that one can learn from existing things and then use that knowledge to create new works. The idea behind "Intellectual Property" interferes with both. It is barbarism, and could well lead to a new "dark ages", where only a privileged few are allowed to learn, under the exclusive control of greedy intellectual monopolies.

Since "Intellectual Property" involves exclusive licensing, when public universities do this and then let others license their discoveries, the public is made to fund research that only benefits a small number of people. Even worse, those companies which receive such funding can then use this exclusive grant to sell back to society the fruits of what society already paid for. This can be thought of as paying for something twice. This could also be thought of as public welfare for private corporations, or more simply: exploitation.

like Venezuela will become the new leading nations in science and technology.

How oil fuels the Bolivarian Revolution

Maracaibo is also the heartland of the oil industry, and the state run oil company, PDVSA. Oil companies are also tra-

ditionally conservative in nature. However, PDVSA also is a contrast, as both the primary wealth producing institution in the country, and the strongest source of support for President Hugo Chavez's revolutionary changes.

I met a number of PDVSA oil workers, who seemed well represented among the ranks of PDVSA management. I also had the chance to talk over lunch with one of their directors, Socorro Hernandez, as well as Jose Luis Rey, whose renown is both as a skilled hacker and financial genius who was involved in helping rebuild the financial trading systems that were sabotaged in 2003.

Today, the state-run oil company is a major backer of the free software movement (software libre) in Venezuela and is a major sponsor of the 3rd International Forum on Free Knowledge, which is what brought me to Maracaibo. Every question related to the use of free software in Venezuela, and to how the Bolivarian revolution started, seems to come back to PDVSA and the worker oil lockout in 2002.

A little history...

Before the worker lockout, the administration of the state oil company was strongly connected to the wealthy elite of Venezuela. Many of the wealthiest people in Venezuela had been getting much richer thanks to the oil company, in part through contracts and corruption, not unlike what has been happening here in the U.S. with politically connected companies like Halliburton.

President Hugo Chavez was originally elected on a platform to use the oil wealth to help pay for the poor of the country through education and health programs, rather than sim-

ply making the country's wealthy even wealthier. Many of Venezuela's wealthier citizens, used to having money from the state oil company, would not tolerate this, and so they decided President Hugo Chavez had to go at any cost, even if it meant sabotaging their own nation to do it.

So they tried to close the oil company in December of 2002, by locking out the workers, holding the oil resources of the nation as a whole hostage, and by having the entire IT infrastructure under their control. If the data and systems present then had been destroyed, it would have been years before another drop of oil could have been produced.

Out of 4800 managers, about 200 chose to stay behind, and together, with the help of many by then retired former managers who were less corrupt than the ones who left, the workers tried to save the oil company. But the biggest challenge was the computer infrastructure.

Management of IT was at the time contracted to SAIC, (Science Applications International Corp), which has well known political and business connections to Cheney's office, to the U.S. DOD, and the CIA. At first, when the Venezuelan army was called out to secure the oil facilities during the lockout, the SAIC staff created videos of the troops securing the facilities in an attempt to claim they were under attack and tried to persuade the U.S. congress to give Bush war powers to seize the oil fields. When this scheme failed, the SAIC workers fled the country, but changed all the passwords and kept remote control of all of the computer servers of PDVSA. They choose not to destroy the data on them because they thought they'd be back in a few months once the government of President Chavez finally capitulated.

Much of the infrastructure of PDVSA was under Microsoft Windows-based servers, and used proprietary database software such as Microsoft SQL. The IT managers didn't expect a bunch of oil workers to be capable of thwarting their plans. Those same oil workers, working together with local computer hackers, were able to secure control of vital computer servers, and in doing so saved the oil infrastructure.

The Venezuelan revolution is perhaps the first revolution in history saved by computer hackers and this is one of the reasons the government is so very strong on promoting the use of free software, particularly in public administration. The Venezuelan government wishes never again to have vital infrastructure held hostage or sabotaged by agents of foreign nations. This cannot be accomplished by source secret pro-

Hugo Chavez



Conatel Telecenter



proprietary software, such as Microsoft Windows, with its infamous backdoor NSA key. Even proprietary software from a trustworthy source has to be suspect for possible tampering, and so must be rejected, not just by Venezuela, but by any nation that wishes to protect and maintain its sovereignty against sabotage.

Back to the present...

Everyone I had met from PDVSA appears completely committed at all levels to the basic idea of converting Venezuela's oil resources into long-term and self-sustaining wealth for the nation as a whole. This is done in part through the development of a new economy, as planned for through Minep.

Capturing this wealth is viewed as an urgent matter because, even though Venezuela possesses one of the largest known reserves of oil, they expect world oil production to begin declining and see this wealth as very temporary. Socorro Hernandez said PDVSA believes that nobody will "burn" oil (as for example in automobiles) in as little as 20 years. He also said they believe that, while oil will remain important to the multitude of other industries in which it is used, the price will settle to \$5 a barrel, so now is not only the best, but also the last, chance to create something useful from this wealth.

Conatel and Conclusions

I flew from Maracaibo to Caracas on November 26th. Even in Venezuela's revolutionary republic, customs officials are still customs officials, and airports are still like airports everywhere. Given the lack of revolutionary posters, pictures

of Chavez, or military checkpoints promised by the state department, what is worth noting is the rather ordinary way society and most institutions operate in Venezuela.

One interesting program is run by Conatel, Venezuela's telecom regulatory agency, which now runs a program to deploy telecenters into communities around the country. Conatel is a regulatory agency for the telephone and broadcast services in a manner akin to the FCC in the United States. However, in this instance, Conatel also runs a community telecenter project in order to bring computing and telephone resources directly to communities across the nation. There are other similar programs running in various Latin American nations today.

I actually saw the model Venezuelan telecenter at the Conatel building while I was in Caracas. A typical community telecenter comes with up to a dozen PC workstations, and a server. Connectivity is offered through a telecom carrier for both internet data and for voice. These systems entirely use free software, and each telecenter includes a staff of two people.

One of the people is trained to manage and teach how to use the computers and resources of the telecenter, and charged with maintaining the equipment. The second person is someone trained in the social needs of a given community. For example, for a telecenter that is deployed in an agricultural town, the second person would likely be someone who was educated in agriculture. In a mining town, it would likely be a miner.

Each telecenter desktop PC runs Debian GNU/Linux, and includes software for internet browsing, for performing routine work such as Open Office, and includes a camera along with GNOME Meeting for voice and video conferencing. The telecenters also have VOIP telephones that are made in China and that load an embedded Linux.

Many carriers in Venezuela offer direct H.323 connectivity for VOIP, and presumably, like Deutsch Telecom, more than likely use GNU GateKeeper to form their mesh network. The client workstations use GNOME Meeting, which is an H.323 client, and even the telephone instruments use H.323. No doubt, it would bring a tear to the eyes of Craig Southern, who heads the OpenH323 project, to know that there is a complete end-to-end national H.323 network in Venezuela, running the OpenH323 project stack, from the national carrier down to the individual telephone instruments.

I believe telecenters are or will be the public libraries of the new millennium. Unfortunately, most existing libraries elsewhere in the world today, while often they include computers, don't understand how they should be used. For example, many libraries in the U.S. have computers, but they are really only used for web browsing, and come "attached" with nutty politicians more deeply concerned about library patrons potentially reading about sex rather than about the laws that require library content to be filtered for this reason. All these things began with the oil worker lockout. Rather than bringing down the government of Hugo Chavez, by working together with foreign interests to directly sabotage the country's most vital industry, the wealthy elite of Venezuela radicalized the oil workers in a way that no other action could. The workers of PDVSA are now fully committed to creating the new economy, and will remain so regardless of who is in power. When the rich of Venezuela ponder who it was that made Venezuela become a revolutionary nation, they shouldn't look at President Chavez, who may not have even been thinking of this at the time, and certainly had no means to accomplish it if he had; instead, they should look in the mirror.

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David Sugar is an active maintainer for a number of packages that are part of the GNU project, including GNU Bayonne. He has served as the voluntary chairman of the FSF's DotGNU (<http://www.dotgnu.org>) steering committee, as a founder and CTO for Open Source Telecomm Corporation, and currently owns and operates Tycho Softworks.