

## IP Imperialism

Charles Nesson

Copyright-related issues have become increasingly relevant and important for developing countries as they enter the information age and struggle to participate in the knowledge-based global economy. The extension of copyright control to software, and the extension of the copyright regime around the world to developing nations puts huge pressure on the ability of those in developing nations to minimize software piracy and yet still gain the benefits offered by information technology. As you read the following materials, bear in mind that the protection of Intellectual Property is a relatively new construct. Most legal doctrines in this area have been developed over the course of the last hundred years by a handful of countries. Do developing countries deserve a chance to get up to speed? Or should everyone play by global rules, even if the rules weren't written by them?

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Peter Drahos and John Braithwaite  
**Information Feudalism (2003)**

TRIPS [standing for Trade Related Aspects of Intellectual Property Rights] is the most important agreement on intellectual property of the 20<sup>th</sup> century. More than a hundred ministers signed it on behalf of their nations in the splendid Salle Royale of the Palais des Congres in Marrakesh on 15 April 1994.

TRIPS is one of 28 agreements that make up the Final Act of the Uruguay Round of Multilateral Trade Negotiations, the negotiations that had begun in Punta del Este in 1986. Another of those agreements established the WTO [World Trade Organization], and it is the WTO that administers TRIPS. In the US, high technology multinationals greeted the signing of TRIPS with considerable satisfaction. TRIPS was the first stage in the global recognition of an investment morality that sees knowledge as private, rather than public, good. The intellectual property standards contained in TRIPS, obligatory on all members of the WTO, would help them to enforce that morality around the world....

TRIPS is about more than patents. It sets minimum standards in copyright, trade marks, geographical indications, industrial designs and layout-designs of integrated circuits. TRIPS effectively globalizes the set of intellectual property principles it contains, because most states of the world are members of, or are seeking membership of, the WTO. It also has a crucial harmonizing impact on intellectual property regulation because it sets, in some cases, quite detailed standards of intellectual property law. Every member, for example, has to have a copyright law that protects computer programs as a literary work, as well as patent law that does not exclude micro-organisms and microbiological processes from patentability. The standards in TRIPS will profoundly affect the ownership of the 21<sup>st</sup> century's two great technologies – digital technology and biotechnology. Copyright, patents and protection for layout-designs are all used to protect digital

technology, whereas patents and trade secrets are the principal means by which biotechnological knowledge is being enclosed. TRIPS also obliges states to provide effective enforcement procedures against the infringement of intellectual property rights.

One of the puzzles [we set] out to solve is why states should give up sovereignty over something as fundamental as the property laws that determine the ownership of information and the technologies that so profoundly affect the basic rights of their citizens. The puzzle deepens when it is realized that in immediate trade terms the globalization of intellectual property really only benefited the US and to a lesser extent the European Community. No one disagrees that TRIPS has conferred massive benefits on the US economy, the world's biggest net intellectual property exporter, or that it has strengthened the hand of those corporations with large intellectual property portfolios. It was the US and the European Community that between them had the world's dominant software, pharmaceutical, chemical and entertainment industries, as well as the world's most important trade marks. The rest of the developed countries and all developing countries were in the position of being importers with nothing really to gain by agreeing to terms of trade for intellectual property that would offer so much protection to the comparative advantage the US enjoyed in intellectual property-related goods.... Of the 3.5 million patents in existence in the 1970s, the decade before the TRIPS negotiations, nationals of developing countries held about 1 per cent. Developing countries such as South Korea, Singapore, Brazil and India, that were industrializing, were doing so in the absence of a globalized intellectual property regime. ...

The stakes are high in the case of intellectual property rights. Intellectual property rights are a source of authority and power over informational resources on which the many depend – information in the form of chemical formulae, the DNA in plants and animals, the algorithms that underpin digital technologies and the knowledge in books and electronic databases. These resources matter to communities, to regions and to the development of states.

### ***The Linkage between Copyright and Trade***

Why would developing nations agree to subject themselves to the copyright strictures of TRIPS when it seems like they had nothing to gain? The answer lies in a US strategy linking copyright and international trade coupled with a diplomatic initiative to force developing nations to swallow that bitter pill.

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Peter Drahos and John Braithwaite  
**Information Feudalism (2003)**

The Caribbean Basin states had in the 1980s an excellent communications system based on a microwave system that was linked to global communication networks. Some of these states were using their systems to transmit signals of US movies without the approval of the owners of the copyright

in the films. An opportunity to prevent this practice came in the early 1980s when the US began to think of a strategy for dealing with Caribbean states that rested on encouraging processes of liberalization in those states. In 1983 President Reagan signed into law the Caribbean Basin Economic Recovery Act of 1983. Under the Act, states of the Caribbean would be given duty-free privileges for their goods in the US market if they met certain criteria. The President was obliged to refuse a country this benefit if a government-owned entity in it was broadcasting copyrighted material without the consent of the US copyright owners. ...

Some Caribbean states ... found themselves having to acquire copyright law in a hurry in order to get entry into the US market on favorable terms. Finding the necessary local expertise to do the job was something of a problem since intellectual property protection had not been a high domestic priority. US copyright experts soon found themselves on flights bound for the Caribbean, where they drafted the necessary legislation. Inevitably, they produced laws based on US models. The process of imprinting US intellectual property standards on the world had begun.

Of itself the Caribbean Basin initiative on intellectual property was not particularly economically significant....The deeper significance of the events in the Caribbean Basin lay in the realization by key individuals in the US that the rules of trade and intellectual property could be re-written in order to form a global partnership between the trade and intellectual property regimes. This partnership could bring with it access to new markets and vastly increased royalty incomes. ...

The year of 1984 turned out to be an important one for US trade law. The link between trade and intellectual property that had been made in the Caribbean Basin legislation in the previous year found its way into the Trade and Tariff Act of 1984. As one Washington lobbyist told us: "It was the Motion Picture Association that introduced an amendment to the Bill." Beneath the legal language there were two simple approaches at work: the carrot and stick approach and the big stick approach.... Section 301 of the Trade Act was amended in 1984 to make it clear that the President had the authority to deal with states that failed to provide 'adequate and effective' protection for US intellectual property. ... Under the 301 process an unfavorable finding could see the President authorize the withdrawal of trade benefits to a country or impose duties on its goods. The USTR [Office of the United States Trade Representative] was also given the power to 'self-initiate' a 301 action against a foreign country. Intellectual property slowly but surely was being placed at the heart of those legislative provisions that guarded US commerce. The simple message, which was repeated again and again on Capitol Hill, was that American commerce was a commerce of ideas and creativity in desperate need of protection from thievery. ...The 1984 trade amendments [gave] legal backing to a bilateral process of ratcheting up standards of intellectual property protection in other countries....because other countries wanted to get their hands on the vast US market. As long as these countries calculated that the cost of complying with US

demands on intellectual property was outweighed by the benefits of access to the US market then the 301 process would bring positive results.....

In 1988 the 301 process was the subject of further refinement. To the existing procedures was added what came to be referred to as 'Special 301'. Special 301 was a public law devoted to the service of private corporate interests. Under its terms the USTR had to identify those countries that denied 'adequate and effective protection' of intellectual property rights or that denied 'fair and equitable market access' to US intellectual property owners. Countries with the worst records on intellectual property were to be tagged 'priority foreign countries'. This in turn led to a 301 investigation of their laws and practices on intellectual property....

The Special 301 process was set up in a way that allowed the USTR to respond to the differing dynamics of each country negotiation on intellectual property. Within the process there were three important categories: priority foreign country, priority watch list and the watch list. A country put on the watch list was being sent a message about its unsatisfactory practices on intellectual property. It knew it was on the 301 conveyor belt that led to trade sanctions. Regular contact with the USTR was the first stage of the process. Typically, at this point the target country would make some promises about investigating the USTR's complaints. If a country did nothing to shut down its levels of piracy it would be upgraded to the priority watch list. Typically, for such a country the USTR had formed some set of precise objectives which the relevant country had to begin to work towards. ... Priority foreign countries were those on trade's death row. These countries had, in the words of the legislation, 'the most onerous or egregious acts, policies, or practices' when it came to intellectual property. Countries in this category lived with the possibility of trade retaliation by the US. ... Between 1985 and 1994 (the year in which TRIPS was signed as part of the Final Act of the Uruguay Round) the USTR brought Section 301 actions dealing with intellectual property against Brazil (1985, 1987, and 1993), Korea (1985), Argentina (1988), Thailand (1990 and 1991), India (1991), China (1991 and 1994) and Taiwan (1992)....

The aim of the 301 process was to push and prod developing countries into accepting intellectual property rules that would allow their economies to be integrated into a global knowledge economy being led by US entrepreneurs. For this purpose it was more important to give countries the feeling that their behaviour on intellectual property was the subject of constant surveillance. The watchlist method under Special 301 did precisely this. Dozens of countries were listed under Special 301 once it was introduced in 1988. No country was exempt from the watchlist process with both Australia and Europe appearing on it. Once under surveillance a country found itself drawn into an atmosphere of threat, with the possibility of a 301 action lurking in the background. Rather than risk a full blown dispute with the USTR, countries would attempt to do something on intellectual property to appease the USTR and avoid a really bad 301 assessment. Every year as the deadline for the USTR's Special 301 review approached countries would rush through some amendment to their intellectual

property law, perhaps put a few more pirates in jail, increase penalties or take some other action, all in an effort to demonstrate their commitment to respecting US intellectual property. .... The annual 301 report card handed out by USTR to each country looked at the progress that it had made since the previous year and hinted at what might happen if a country did not become a better student. Good pupils were given encouragement and the delinquents chastised; everybody was told how they could do better. The following are taken from the USTR's 2000 Special 301 Report:

*Ireland: However, Ireland's commitment to enact comprehensive copyright legislation has not been met . . . The US government remains hopeful that Ireland will take steps necessary to complete the legislative process in the very near future, but will feel compelled to consider other options in the face of any further delay.*

*Kuwait: Kuwait has been lowered to the watch list this year in recognition of its efforts over the past year to address concerns regarding its intellectual property laws and enforcement actions.*

*Latvia: Although Latvia has made progress in improving its intellectual property rights regime since it became a member of the WTO in February 1999, there is still much room for improvement.*

The watchlist mechanism has in this regard proved to be surprisingly effective, as this observation from an USTR official shows: "One fascinating aspect of the Special 301 process occurs just before we make our annual determinations, when there is often a flurry of activity in those countries desiring not to be listed or to be moved to a lower list. IP laws are suddenly passed or amended, and enforcement activities increase significantly."

Sovereign states, no matter how big or small, are caught up in a global surveillance network consisting of American companies, the American Chamber of Commerce, trade associations and American embassies, a network that gathers and reports on the minutiae of their social and legal practices when it comes to US intellectual property.

### ***Balancing Trade and Development: the Conditions for Piracy***

Both developed and developing countries often have economic and cultural conditions that tempt pirates, modern day privateers who make and distribute unauthorized copies of materials protected by Intellectual Property laws and treaties. Some argue that protected materials such as software, DVDs and CDs are too expensive, and coupled with the ready availability of technology to create cheap copies that can be sold at high profits, piracy is too tempting an option for many individuals to refuse. Others look at cultural traditions, such as reliance on the use of copying as a pedagogical method, and argue that cultural norms are too deeply rooted to be displaced by foreign constructs of Intellectual Property.

Whatever the case, the lack of enforcement of Intellectual Property laws is certainly a key enabling factor for would-be pirates, resulting in little to no risk suffered in exchange for high profits. Organizations like the MPAA in the United States have recently been stepping up private enforcement efforts against individuals who use peer-to-peer networks to copy protected materials, fighting to deconstruct a culture of Intellectual Property violations made rampant through user-friendly technology and the ready availability of high-speed network connections. But often governments decline to expend their resources to find and prosecute pirates, whether on an individual or international scale; some argue that certain countries, despite their facial accession to international Intellectual Property agreements like TRIPS, facilitate and even encourage piracy. As you read the materials that follow, consider the conditions for piracy: what choices do developing countries have?

### ***China's Intellectual Property (Piracy) Regime***

China has had intellectual property laws that meet the minimum standards of TRIPS for a number of years. Yet despite formal recognition of IPR, the country is widely considered to be one of the leading IP pirates of the world. It is estimated that over 90% of computer software, music, home video and entertainment products in China are pirated. In 1995, China purchased on average only \$1 of legitimate software per desktop computer. Piracy continues unabated because IP laws remain largely unenforced. With its recent entry into the World Trade Organization and under increasing international pressure, this may change. But a deeply rooted culture and economy of IP piracy may be difficult to overcome and it is not clear that it should be.

IP losses in China generate concern among the executives of America's creative industries. To some extent these losses are overstated – they presuppose that Chinese consumers could afford and would purchase the genuine product if pirated versions were not available. They also ignore the potential offsetting benefits of piracy: the widespread availability of cheap US products in China may have created increased appetites for US goods in China which may in turn allow the US to reap the financial rewards of this “investment” when and if intellectual property laws are ultimately enforced in China. The principle is simple: allowing developing countries to pirate US resources now creates a market for the future that might not have otherwise existed. This may explain why companies like Microsoft, Dell and others continue to invest in joint ventures with Chinese software companies, despite lack of IPR protection.

More importantly for our purposes however is the question of how China's system of IP piracy impacts development in China (particularly ICT development)? Piracy has produced a number of benefits for consumers and creators alike in China. It is a highly profitable domestic industry which creates jobs. For many villages, it is the primary industry. Piracy has also increased the accessibility of goods that consumers might not otherwise have been able to afford or which might be blocked from legitimate distribution channels as a result of the Chinese government's information policies. These goods may in turn be freely used as the building blocks for the development of China's own industries. Furthermore, as concepts of individual rights and private property are relatively new to China, the current culture of piracy meshes well with the longstanding traditions of communism and Confucianism.

The drawbacks however are also apparent. The country suffers from a lack of direct foreign investment in the technology sector and may face trade sanctions through the WTO. Consumers may be denied access to the highest quality and latest versions of software which US and European companies refuse to release in China.

Perhaps the most interesting and challenging question relates to the impact of soft copyright and patent enforcement on domestic innovation. One might expect that domestic innovation would suffer from lack of economic incentives. The evidence however is not clear. China has failed to develop significant export markets for its technological and creative products (e.g. China's global market share in computer software is less than 1.2%). Still, there is at least some evidence that China has maintained robust creative and software industries, made possible in part through piracy. Zhongguancun (the Silicon Valley of China) is said to be a thriving technology district, with over 4500 computer companies, most of them seat-of-the pants start-ups trying to devise the world's next computer gadget or killer application. How is China sustaining such innovation and creativity in the absence of IPR? China provides an alternative model for providing incentives to creators by state sponsorship of its computer and creative industries and by providing non-economic rewards (e.g. Wang was rewarded with celebrity status for his development of one of the first programs that read Chinese characters). The district is reported to have grown 30% a year for the past 11 years, with all its companies totaling 45 billion RMB (US\$5.5 billion) in sales. The net effect in China for development has yet to be determined in any empirical way, and may well depend on what you consider to be the relevant timeframe, what the development goals are and who you ask.

It is interesting to note that the US was at one time itself an "international pirate". It used the IP tools of other nations to springboard its own IP industries. It was not until these industries were developed to a point where the US became a net-exporter of IP products, that the US began to be concerned with international enforcement of intellectual property. It has been suggested that developing countries should likewise be permitted to follow a similar path.

### **Discussion Questions:**

Intellectual Property piracy in China arguably has roots in a long cultural tradition of Confucianism, with emphasis on copying as a primary means of education. Yet piracy and disregard for Intellectual Property on an individual scale is widespread even in the United States, which lacks such a culture. Should developing countries be given a "grace" period, free from restrictions on Intellectual Property, to help them get their own development efforts off the ground? What are the costs and benefits for producers of Intellectual Property? If developing countries forego legitimate software due to prohibitive cost, do they have any chance of ever achieving economic development without the advantage of technology? Can cultures of piracy be overcome without hyper-enforcement? Can developing economies afford to direct their resources towards providing an economic benefit for other countries?

Some observers estimate that the industry of piracy in China employs from three to five million people across the country, and generates between 40-80 billion dollars

each year. What are the potential repercussions for a government that seeks to dismantle an industry that would have such devastating economic impact for local economies across the country?

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## **FINAL REPORT**

### **U.K. COMMISSION ON INTELLECTUAL PROPERTY RIGHTS (2001)**

The prevention of unauthorized copying has always been the principal objective behind the development of international copyright rules and this remains the case. Unauthorised copying of copyrighted works (usually described rather more pejoratively as “piracy” by copyright holders) has a long history and remains an international phenomenon, occurring in both the developed and the developing world. The US, for example, justified its persistent refusal to grant copyright protection to foreign authors during the 19<sup>th</sup> century on the grounds that this was a necessity to meet the nation’s needs for knowledge and enlightenment. And interestingly, although industry claims that current rates of unauthorised copying are highest in some developing countries and transition economies, the biggest financial losses to rights holders still occur in developed countries, because their market size is so much bigger. For example, North America, Western Europe and Japan alone account for over 65% of global revenue losses from counterfeit computer software, according to the Business Software Alliance (2001). It should be noted that the methodology of these studies has been criticised. The description indicates that they are based on the difference between estimated installed software and estimated legitimate supply, valued at the prices of legitimate supply. No reference is made to the fact that, in the absence of “piracy”, additional legitimate sales would necessarily have been much lower. On this basis, some have claimed these are very substantial overestimates of lost sales revenue....

In the past, however, the evidence shows that weak levels of copyright enforcement have had a major impact on diffusion of knowledge and knowledge-based products in certain cases, such as computer software, throughout the developing world. Indeed, it is arguably the case that many poor people in developing countries have only been able to access certain copyrighted works through using unauthorised copies available at a fraction of the price of the genuine original product. We are therefore concerned that an unintended impact of stronger protection and enforcement of international copyright rules as required, *inter alia*, by TRIPS will be simply to reduce access to knowledge products in developing countries, with damaging consequences for poor people.

Responding to this concern, representatives from the copyright-based industries point to the special initiatives they are undertaking for developing countries, such as donation schemes and low price “budget” editions of books and computer programmes for cost-sensitive users, as the way forward rather than any weakening of international copyright rules and/or enforcement measures in the developing world. ... But ultimately commercial companies are responsible to their shareholders. They are not charities, nor are they intended to be. Companies therefore think it is the responsibility of governments from

developed countries and development agencies to meet developing countries' requirement for subsidised access to affordable copyrighted works in order to address their needs for education and transfer of knowledge. [N]o one has yet suggested that the makers of notebooks, compasses or rulers should supply them to educational establishments free of charge. So why should the copyright-based industries tolerate widespread unauthorised copying of their books, journals, computer software or scientific databases?

***Discussion Question:***

The dilemma facing developing countries is not one with an easy solution. As we have seen in the previous section, on the one hand, countries have economic, social and even cultural conditions which foster a disregard for intellectual property regimes; on the other, the sanctions threatened by the United States for ignoring these regimes would be devastating for a developing economy. As a result, many countries scramble to facially comply with international IP treaties by enacting legislation, while maintaining an unofficial policy of under-enforcement toward software piracy. One implication of under-enforcement is that it tends to undermine the legitimacy of legal institutions in a country. This in turn can have a detrimental impact on the rule of law, the existence of which, as we have seen in Section A, is arguably crucial for dismantling barriers to physical access. Under-enforcement, while convenient, is not desirable to further an agenda of connectivity for a developing country.

Is there another way to prevent piracy while obtaining the benefits of technology and evading the delegitimization of a rule of law? Logic holds that there are two alternatives to eliminate piracy: either by strictly enforcing IP laws to prevent people from copying, or eliminating the restrictions on software so that when people copy, the activity is not illegal. The latter, "permissive" approach, embodied in Open Source software, which is collaboratively written and free to all, is increasingly embraced by governments seeking a way out of the Intellectual Property vise in which they are forced to embrace Intellectual Property laws in order to have access to trade, but are unable to afford to curtail piracy as it provides access to desperately needed technology.

As you read these materials, carefully consider the implications of "non-ownership": can a non-proprietary, cooperative model of production perpetually provide software tools that are stable, robust and full-featured? Can a distributed and relatively uncoordinated group of programmers provide a feasible alternative to major software companies like Microsoft? Is this what Digital Democracy is all about?

***The Open Source Alternative: Open Source v. Proprietary Software***

Open Source software is an example of one potential way of providing technology that is not hindered with ownership restrictions that render it prohibitively expensive. Countries like South Africa, as indicated in the excerpt below, are seeking a way out of this dilemma. Their goal is to access technology while fully complying with IP regimes and strengthening the rule of law. As you read the following excerpts, think about whether an innovative form of ownership alone could present a way out of the copyright-piracy dilemma for developing countries, and if so, what level of organization is required to maintain its momentum. Is adopting a non-proprietary standard enough,

or do governments also need to take steps to dismantle the conditions conducive to piracy? Are there specific situations in which open source software a more appropriate development tool than proprietary software? When is this the case? What is the best way to facilitate the right mix of proprietary and open source development? These are important questions for countries that are in nascent stages of technological development. These choices have the potential to shape other choices, creating lock-in effects that are not easily reversed, as software tends to create strong dependencies due to the steep learning curve that accompanies different systems or designs.

Some developing countries, convinced of the advantages of open source software over more traditional proprietary software, have sought to encourage or even mandate open source software.

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South Africa National Advisory Council on Innovation

### **Open Software & Open Standards: A Critical Issue for Addressing the Digital Divide (2002)**

[L]owering software costs by violating proprietary license conditions [i.e. software piracy] is not an option. Happily, there are often legal alternatives to proprietary software: non-proprietary “open software” attracting no license fees at all. Furthermore, open software may be freely probed, customised and modified. This is the cheapest way of generating software suited to the country’s needs. It is also an ideal jumpstart for entering the software development arena.

South Africa and other developing countries are extremely well placed to compete in the global software development market. Creating software is best done with a relatively inexpensive but well trained labour force. Software development is, and will continue to be, a knowledge and people intensive activity.

Like governments in many countries (developed and developing), it is time for South Africa to promote open software and open standards.... However, government action cannot be the sole objective. Various people and institutions in South Africa, including small and large companies, are already using open software products (notably Linux and associated software tools) precisely because they already have the freedom to do so rather than because they have been prompted by government policy. The bare minimum is to ensure that this freedom is not curtailed by introduction of inappropriate policy.

That said, government has a key role to play in accelerating universal access and providing leadership for the African continent as a whole. Furthermore, government is the largest procurer of Information and Communication Technology (ICT) in the country, accounting for some 70% of total spend. Given this level of clout, government action is bound to stimulate industry in various ways, such as the provision of open software training and support.

Open software is both an opportunity and an important resource. South Africa now has the opportunity to participate in, and benefit from, the open

software movement. South African companies and developers are already a driving force in many open software projects. If open software is able to change the rules in the information technology industry, the country and the companies that better understand it and are more advanced in its use and knowledge will have a clear competitive advantage. ...

Many governments are now developing national policies to promote the use of open software – examples include China, Thailand, Brazil, Argentina, Germany, France and the United Kingdom....

Open software has reached a critical mass that has allowed it to enter the mainstream software market and its impact is becoming noticeable in the software industry and in society as a whole. Companies like IBM, SAP, Sun, Intel, Hewlett-Packard and Silicon Graphics are committed to using open software as a core part of their business and are investing significantly in enhancing its already impressive capabilities.

Open software is an especially useful tool to allow developing countries to leapfrog into the information age. It encourages novel development models that have been demonstrated to be particularly well suited to take advantage of the work of developers collaborating across the Internet. In general, it also has a positive impact as an enabler for the creation of new markets and business opportunities.

### ***An Exemplary Debate in Peru***

When a Peruvian congressman, Mr. Edgar Villanueva Nuñez, introduced a bill before the Peruvian congress that would have mandated the government to purchase software only if its source code was open, the head of the Microsoft office in Peru and Mr. Nuñez debated the merits of the proposal.

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From: Juan Alberto González, General Manager, Microsoft Perú

To: Mr. Edgar Villanueva Nuñez, Congressman of the Republic of Peru

Date: (April 2002)

The bill makes it compulsory for all public bodies to use only free software, that is to say open source software, which breaches the principles of equality before the law, that of non-discrimination and the right of free private enterprise, freedom of industry and of contract, protected by the constitution....[B]y compelling the State to favour a business model based entirely on open source, the bill would only discourage the local and international manufacturing companies, which are the ones which really undertake important expenditures, create a significant number of direct and indirect jobs, as well as contributing to the GNP, as opposed to a model of open source software which tends to have an ever weaker economic impact, since it mainly creates jobs in the service sector.

The bill imposes the use of open source software without considering the dangers that this can bring from the point of view of security, guarantee, and possible violation of the intellectual property rights of third parties.

The bill uses the concept of open source software incorrectly, since Open Source does not necessarily imply that the software is free or of zero cost, and so arrives at mistaken conclusions regarding State savings, with no cost-benefit analysis to validate its position. It is wrong to think that Open Source Software is free of charge. ... [T]he alternative adopted by the bill (i) is clearly more expensive, due to the high costs of software migration, and (ii) puts at risk compatibility and interoperability of the IT platforms within the State, and between the State and the private sector, given the hundreds of versions of open source software on the market.

The majority of open source code does not offer adequate levels of service nor the guarantee from recognized manufacturers of high productivity on the part of the users, which has led various public organizations to retract their decision to go with an open source software solution and to use commercial software in its place.... [T]he use of open source software in education has been discussed, without mentioning the complete collapse of this initiative in a country like Mexico, where precisely the State employees who founded the project now state that open source software did not make it possible to offer a learning experience to pupils in the schools, did not take into account the capability at a national level to give adequate support to the platform, and that the software did not and does not allow for the levels of platform integration that now exist in schools.

If open source software satisfies all the requirements of State bodies, why do you need a law to adopt it? Shouldn't it be the market which decides freely which products give most benefits or value? ...

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From: Mr: Edgar Villanueva Nuñez, Congressman of the Republic of Peru  
To: Juan Alberto González, General Manager, Microsoft Perú  
Date: (April 2002)

To guarantee the free access of citizens to public information, it is indispensable that the encoding of data is not tied to a single provider. The use of standard and open formats gives a guarantee of this free access, if necessary through the creation of compatible free software. To guarantee the permanence of public data, it is necessary that the usability and maintenance of the software does not depend on the goodwill of the suppliers, or on the monopoly conditions imposed by them. For this reason the State needs systems the development of which can be guaranteed due to the availability of the source code. To guarantee national security or the security of the State, it is indispensable to be able to rely on systems without elements which allow control from a distance or the undesired transmission of information to third parties. Systems with source code

freely accessible to the public are required to allow their inspection by the State itself, by the citizens, and by a large number of independent experts throughout the world. ...[F]or software to be acceptable for the state it is not enough that it is technically capable of fulfilling a task. The contractual conditions must satisfy a series of requirements regarding the license, without which the State cannot guarantee the citizen adequate processing of his data, watching over its integrity, confidentiality, and accessibility throughout time, as these are very critical aspects for its normal functioning. ...

You point out that: "The bill makes it compulsory for all public bodies to use only free software, that is to say open source software, which breaches the principles of equality before the law, that of non-discrimination and the right of free private enterprise, freedom of industry and of contract, protected by the constitution." This understanding is in error. The Bill in no way affects the rights you list; it limits itself entirely to establishing conditions for the use of software on the part of state institutions, without in any way meddling in private sector transactions. It is a well established principle that the State does not enjoy the wide spectrum of contractual freedom of the private sector, as it is limited in its actions precisely by the requirement for transparency of public acts; and in this sense, the preservation of the greater common interest must prevail when legislating on the matter. ... The Bill does not introduce any discrimination whatever, since it only establishes \*how\* the goods have to be provided (which is a state power) and not \*who\* has to provide them (which would effectively be discriminatory, if restrictions based on national origin, race religion, ideology, sexual preference etc. were imposed).... By way of an example: nothing in the text of the Bill would prevent your company offering the State bodies an office "suite", under the conditions defined in the Bill and setting the price that you consider satisfactory. If you did not, it would not be due to restrictions imposed by the law, but to business decisions relative to the method of commercializing your products, decisions with which the State is not involved.

It is necessary to stress that there is no position more anti-competitive than that of the big software producers, which frequently abuse their dominant position, since in innumerable cases they propose as a solution to problems raised by users: "update your software to the new version" (at the user's expense, naturally); furthermore, it is common to find arbitrary cessation of technical help for products, which, in the provider's judgment alone, are "old"; and so, to receive any kind of technical assistance, the user finds himself forced to migrate to new versions (with non-trivial costs, especially as changes in hardware platform are often involved). And as the whole infrastructure is based on proprietary data formats, the user stays "trapped" in the need to continue using products from the same supplier, or to make the huge effort to change to another environment (probably also proprietary).

In respect of the jobs generated by proprietary software in countries like ours, these mainly concern technical tasks of little aggregate value; at the local level, the technicians who provide support for proprietary software produced by transnational companies do not have the possibility of fixing bugs, not

necessarily for lack of technical capability or of talent, but because they do not have access to the source code to fix it. With free software one creates more technically qualified employment and a framework of free competence where success is only tied to the ability to offer good technical support and quality of service, one stimulates the market, and one increases the shared fund of knowledge, opening up alternatives to generate services of greater total value and a higher quality level, to the benefit of all involved: producers, service organizations, and consumers.

It is a common phenomenon in developing countries that local software industries obtain the majority of their revenues in the service sector, or in the creation of "ad hoc" software. Therefore, any negative impact that the application of the Bill might have in this sector will be more than compensated by a growth in demand for services (as long as these are carried out to high quality standards). If the transnational software companies decide not to compete under these new rules of the game, it is likely that they will undergo some decrease in revenues in terms of payment for licences; however, considering that these firms continue to allege that much of the software used by the State has been illegally copied, one can see that the impact will not be very serious. Certainly, in any case their fortune will be determined by market laws, changes in which cannot be avoided; many firms traditionally associated with proprietary software have already set out on the road (supported by copious expense) of providing services associated with free software, which shows that the models are not mutually exclusive. ...

Your letter continues: "The bill imposes the use of open source software without considering the dangers that this can bring from the point of view of security, guarantee, and possible violation of the intellectual property rights of third parties." Alluding in an abstract way to "the dangers this can bring", without specifically mentioning a single one of these supposed dangers, shows at the least some lack of knowledge of the topic. So, allow me to enlighten you on these points. National security has already been mentioned in general terms in the initial discussion of the basic principles of the bill. In more specific terms, relative to the security of the software itself, it is well known that all software (whether proprietary or free) contains errors or "bugs" (in programmers' slang). But it is also well-known that the bugs in free software are fewer, and are fixed much more quickly, than in proprietary software. It is not in vain that numerous public bodies responsible for the IT security of state systems in developed countries require the use of free software for the same conditions of security and efficiency. What is impossible to prove is that proprietary software is more secure than free, without the public and open inspection of the scientific community and users in general. This demonstration is impossible because the model of proprietary software itself prevents this analysis, so that any guarantee of security is based only on promises of good intentions (biased, by any reckoning) made by the producer itself, or its contractors.

In respect of guarantees, as you know perfectly well, or could find out by reading the "End User License Agreement" of the products you license, in the great majority of cases the guarantees are limited to replacement of the storage

medium in case of defects, but in no case is compensation given for direct or indirect damages, loss of profits, etc... If as a result of a security bug in one of your products, not fixed in time by yourselves, an attacker managed to compromise crucial State systems, what guarantees, reparations and compensation would your company make in accordance with your licensing conditions? The guarantees of proprietary software, inasmuch as programs are delivered "AS IS", that is, in the state in which they are, with no additional responsibility of the provider in respect of function, in no way differ from those normal with free software.

In respect of intellectual property laws, the model of free software in no way implies ignorance of these laws, and in fact the great majority of free software is covered by copyright. In reality, the inclusion of this question in your observations shows your confusion in respect of the legal framework in which free software is developed.

You go on to say that: "The bill uses the concept of open source software incorrectly, since it does not necessarily imply that the software is free or of zero cost, and so arrives at mistaken conclusions regarding State savings, with no cost-benefit analysis to validate its position." This observation is wrong; in principle, freedom and lack of cost are orthogonal concepts: there is software which is proprietary and charged for (for example, MS Office), software which is proprietary and free of charge (MS Internet Explorer), software which is free and charged for (RedHat, SuSE etc Gnu/Linux distributions), software which is free and not charged for (Apache, OpenOffice, Mozilla), and even software which can be licensed in a range of combinations (MySQL).

Certainly free software is not necessarily free of charge. The definitions included in the Bill state clearly *what* should be considered free software, at no point referring to freedom from charges. Although the possibility of savings in payments for proprietary software licenses are mentioned, the foundations of the bill clearly refer to the fundamental guarantees to be preserved and to the stimulus to local technological development. Given that a democratic State must support these principles, it has no other choice than to use software with publicly available source code, and to exchange information only in standard formats. If the State does not use software with these characteristics, it will be weakening basic republican principles. Luckily, free software also implies lower total costs; however, even given the hypothesis (easily disproved) that it was more expensive than proprietary software, the simple existence of an effective free software tool for a particular IT function would oblige the State to use it; not by command of this Bill, but because of the basic principles we enumerated at the start, and which arise from the very essence of the lawful democratic State....

You continue: "[T]he alternative adopted by the bill (i) is clearly more expensive, due to the high costs of software migration, and (ii) puts at risk compatibility and interoperability of the IT platforms within the State, and between the State and the private sector, given the hundreds of versions of open source software on the market." Your first argument, that migration implies high costs, is

in reality an argument in favour of the Bill because the more time goes by, the more difficult migration to another technology will become; and at the same time, the security risks associated with proprietary software will continue to increase. In this way, the use of proprietary systems and formats will make the State ever more dependent on specific suppliers. Once a policy of using free software has been established (which certainly, does imply some cost) then on the contrary migration from one system to another becomes very simple, since all data is stored in open formats. On the other hand, migration to an open software context implies no more costs than migration between two different proprietary software contexts, which invalidates your argument completely.

The second argument refers to "problems in interoperability of the IT platforms within the State, and between the State and the private sector" This statement implies a certain lack of knowledge of the way in which free software is built, which does not maximize the dependence of the user on a particular platform, as normally happens in the realm of proprietary software. Even when there are multiple free software distributions, and numerous programs which can be used for the same function, interoperability is guaranteed as much by the use of standard formats, as required by the bill, as by the possibility of creating interoperable software given the availability of the source code. ...

[With respect to your comment about Mexico], in fact Mexico has gone into reverse with the Red Escolar (Schools Network) project. This is due precisely to the fact that the driving forces behind the Mexican project used license costs as their main argument, instead of the other reasons specified in our project, which are far more essential. Because of this conceptual mistake, and as a result of the lack of effective support from the SEP (Secretary of State for Public Education), the assumption was made that to implant free software in schools it would be enough to drop their software budget and send them a CD ROM with Gnu/Linux instead. Of course this failed, and it couldn't have been otherwise, just as school laboratories fail when they use proprietary software and have no budget for implementation and maintenance. That's exactly why our bill is not limited to making the use of free software mandatory, but recognizes the need to create a viable migration plan, in which the State undertakes the technical transition in an orderly way in order to then enjoy the advantages of free software.

You end with a rhetorical question: "If open source software satisfies all the requirements of State bodies, why do you need a law to adopt it? Shouldn't it be the market which decides freely which products give most benefits or value?" We agree that in the private sector of the economy, it must be the market that decides which products to use, and no state interference is permissible there. However, in the case of the public sector, the reasoning is not the same: as we have already established, the state archives, handles, and transmits information which does not belong to it, but which is entrusted to it by citizens, who have no alternative under the rule of law. As a counterpart to this legal requirement, the State must take extreme measures to safeguard the integrity, confidentiality, and accessibility of this information. The use of proprietary software raises serious

doubts as to whether these requirements can be fulfilled, lacks conclusive evidence in this respect, and so is not suitable for use in the public sector.

The need for a law is based, firstly, on the realization of the fundamental principles listed above in the specific area of software; secondly, on the fact that the State is not an ideal homogeneous entity, but made up of multiple bodies with varying degrees of autonomy in decision making. Given that it is inappropriate to use proprietary software, the fact of establishing these rules in law will prevent the personal discretion of any state employee from putting at risk the information which belongs to citizens. And above all, because it constitutes an up-to-date reaffirmation in relation to the means of management and communication of information used today, it is based on the republican principle of openness to the public. ...

**Discussion Question:**

Is the creation of software dependency a deliberate choice by manufacturers, or an unintended consequence of design? Could a government create and enforce standards for software for ALL software manufacturers? What other standards exist that are universally abided by, whether by government or market forces?

***The Copyright Establishment Fights Back***

While some argue that it remains to be seen if the Open Source movement can provide a sustainable model of software development, large software development companies like Microsoft are not taking a “wait and see” approach. The potential of this kind of democratic model of software development constitutes enough of a threat to induce action by software companies to try and defuse it. If companies are willing to give away software in order to get users “hooked” on their proprietary systems, does this amount to anything more than Information Imperialism?

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Duncan McLeod

**Suspicion Over Microsoft Gift to Poor Schools**

Financial Times (London) October 8, 2002

Advocates of free computer software have expressed concern that Microsoft is engaged in tactics in poor countries that will help it further entrench its dominant position in the industry.

As free alternatives to proprietary software gain credibility, Microsoft is preparing to give away its products to schools across the developing world. This comes as education authorities in poorer countries are turning to the free Linux operating system because they are unable or unwilling to pay for licenses to use software from Microsoft and other commercial vendors.

Microsoft has already announced it will give away its software to schools in Africa and the Middle East. Industry observers believe that by doing so it will foster and retain captive markets for its products. If schoolchildren learn a certain system, the thinking goes, they will want to continue using it in adult life.

Microsoft's South African office has said it will give free software to all of the country's 32,000 public schools. It says it will lose "most" of the R20m (\$1.9million) in annual sales it makes to South Africa's education sector.

Garry Hodgson, Microsoft's director of community affairs in Africa and the Middle East, who is behind the project, says the company has identified a need to bridge the "digital divide" between rich and poor nations....

But Microsoft's offer has been greeted with skepticism from free software advocates. Evan Summers is the head of South Africa's Linux School Computer Lab Project, an organization working to install cheap, Linux-based PCs in secondary schools. He is concerned about Microsoft's donation. "Businesses are opportunistic and driven by shareholders' interests," he says. "There is a fine line between charity and exploitation."

*Bridges.org*, a nongovernmental organization that helps people in emerging economies use technology, says the South African government needs to be aware of the implications of adopting Microsoft software wholesale in schools. Executive director Teresa Peters says the government should "plan wisely to gain the benefits without suffering the consequences". Those consequences, she says, include the possibility that the adoption of Linux and other systems that compete with Microsoft will be limited.

Microsoft counters criticism that the project to donate software to schools is in any way insidious. Mr Hodgson says the company is genuinely interested in bridging the digital divide. It's important that software vendors put aside differences to work for the good of children's education, he says.

But industry watchers point to the company's record. In late 2001, Microsoft offered to provide software, hardware, training and support to 16,000 poor US schools as part of a proposed antitrust settlement with US authorities. Microsoft's rivals argued that the plan only served to solidify the company's monopoly in PC operating systems. The plan was scrapped.

Similar controversy has dogged Microsoft in other developing markets. A Peruvian congressman recently proposed that his government use open-source software as standard. In response, Microsoft reportedly enlisted the US ambassador in Lima to try to persuade the Peruvians to kill the legislation. At the same time, Bill Gates, Microsoft chairman, called on Peruvian President Alejandro Toledo and donated Dollars 550,000 to Peru's school system.

Microsoft, Mr Hodgson says, will not preclude any school to which it donates software from using open-source alternatives. "We're not excluding anyone. The digital divide is far too important to be bickering over competitive issues."

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Thomas Fuller

## **How Microsoft Warded Off Rival Software**

International Herald Tribune May 14, 2003

At least 90 percent of the world's personal computers run on Windows software. But Microsoft wanted still more. Last summer, Orlando Ayala, then in charge of worldwide sales at Microsoft, sent an e-mail message titled Microsoft Confidential to senior managers laying out a company strategy to dissuade governments across the globe from choosing cheaper alternatives to the ubiquitous Windows computer software systems.

Mr. Ayala's message told executives that if a deal involving governments or large institutions looked doomed, they were authorized to draw from a special fund to offer the software at a steep discount or even free if necessary. ...The memo on protecting sales of Windows and other desktop software mentioned Linux, a still small but emerging software competitor that is not owned by any specific company. "Under NO circumstances lose against Linux," Mr. Ayala wrote.

Tony Stanco

## **On Open Source Procurement Policies**

**April 29, 2003**

This is a very timely topic being looked at by a number of governments around the world. Governments ranging from Texas and Oregon to Peru, India, China, U.K., Germany, France and the U.S. Federal government are all seriously analyzing Open Source procurement policies.

[T]his is a very politicized issue with multi-billion dollar companies and their non-profit associates actively trying to disparage the Open Source model. The Open Source side doesn't have the money to hire lobbyists and salesmen to constantly knock on the doors of government officials to give their side of the story.

One question that is seldom asked is, how can Open Source possibly be giving multi-billion dollar companies so much competition that they feel they need to actively dissuade government officials from even thinking of using Open Source software? This is not an idle question. Open Source doesn't have lobbyists or marketers or ad men to promote its software. So, to say that governments shouldn't have rules to consider Open Source software, as Open Source opponents often do, takes away the only avenue that Open Source has to really reach government. The Open Source sales model is fundamentally a "pull" model, where enlightened procurement officers need to know enough to ask about Open Source in the first place. There is no "push" model of sales in Open Source like that employed by the multi-billion dollar companies with their legions of salesmen, ad men, and lobbyists. In fact, the average large software company is 1/3 software developers, and 2/3 salesmen, marketers, management, apologists, and lawyers. So, a very apt question is -- if their software is so good

and they have an extra 2 people for every one developer pushing it, why is it that they try so hard to impede government officials from making side-by-side comparisons? You would think that they would be anxious to have procurement rules that require such comparisons so that they can show how much better their very expensive software is. But they don't do that. Instead, they descend on any government official who tries to introduce a law or regulation that requires procurement officers to consider using Open Source software when acquiring new software. This is a very subtle silencing of Open Source.

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Hiawatha Bray

### **CHALLENGES LOOMING FOR LINUX UTAH FIRM'S SUIT AGAINST IBM COULD DEAL A BLOW TO OPERATING SYSTEM**

The Boston Globe, June 9, 2003

Linus Torvalds, receiver of stolen goods? That's the assertion of a Utah software company whose lawsuit against IBM Corp. threatens to cripple the surging popularity of the Linux operating system.

You know Linux, the powerful operating system software that anybody can download off the Internet at no charge. Torvalds is the legendary Finnish-born programmer who developed its kernel - the core software that handles Linux's most basic functions - and for whom the software is named.

Once scorned as a toy for nerds, Linux is now so powerful and versatile that it can do most of the tasks once reserved for expensive operating systems like Unix. That's why many of the biggest businesses and government agencies in the world use Linux these days, saving billions in the process.

But how did Linux so quickly become a viable substitute for Unix? By stealing the necessary know-how, say executives of SCO Group, a small company in Utah that owns rights to Unix. SCO has licensed its Unix to IBM and many other firms. Now SCO is suing IBM, claiming IBM's been taking SCO's intellectual property and plugging it into Linux - a sort of binary plagiarism.

If true, it means that Linux has been transformed from an operating system into a computer virus, one with a particularly nasty payload: lawsuits and licensing fees. Already SCO has warned 1,500 corporations that using Linux could mean a costly trip to the courthouse. Even those who didn't get the warning letters are bound to take heed. Executives will wonder if it isn't time to replace Linux with something a bit less controversial - a traditional Unix, say, or Microsoft Corp.'s Windows XP. And those who haven't made the leap to Linux have just been given a good reason to hold back.

It's a problem that could mushroom into a crisis for Linux, because the way the software is developed lends a certain plausibility to SCO's allegations.

Any competent programmer can put forward a chunk of code for possible addition to the Linux kernel, the system's core software. Torvalds gets the final say on which contributions will be included.

But where do these code contributions come from? Yes, they're tested for safety and effectiveness. But what about authorship? How does Torvalds determine whether a kernel contribution is original, or simply a bit of stolen code?

"It's not an easy thing to do," Torvalds admitted by e-mail. "For copyright infringement, the best protection is the fact that the code is open. Think of it like stealing a car: as a potential car thief, would you do it in full daylight with a lot of people looking on, or would you prefer to do it when nobody is watching?"

SCO is saying this is precisely what has happened: IBM stole its software in broad daylight, in effect daring SCO to do something about it.... IBM says it's innocent; SCO says otherwise. Time, and the lawyers, will tell. But, meanwhile, every major corporate user of Linux is beginning to sweat.

Perhaps it's no coincidence that Microsoft recently agreed to buy a SCO license. In fact, critics grumble that the entire SCO-IBM fight was instigated by Microsoft to hobble Linux, but there's no evidence so far. Buying a license injects some extra cash into SCO's coffers to cover legal expenses, and it gives SCO's case against IBM an extra dose of credibility....

### **Discussion Question:**

Even with the support of developing countries around the world, can a distributed and relatively uncoordinated organization like the Free Software/Open Source movement survive against the powerful forces opposing it? To what extent is it in the interest of developed countries, their governments and industries to maintain a Digital Divide?

Is SCO's suit challenging the copyright provenance of Linux likely to be a precursor of more legal challenges to open code? Are such suits likely to change the methods of developing the code and of preserving its provenance? Is the fear, uncertainty and demoralization such legal attacks are likely to produce substantial enough to make them a winning competitive tactic even if the legal attacks fail on their merits?

Is there some hope that developing nations and nonprofit institutions will come together in support of open code and form a coordinated effort of code, people, communication and pooled resources that can build a foundation for a true bridge of the digital divide? Or is a movement like Open Source/Free Software – enabled across time and space by communications technology and anchored by the idea that resources are more efficiently used if they are open and shared, rather than proprietary – in and of itself a bridge across the digital divide?

At the beginning of this chapter, we posited that the real impact of information technologies for the have-nots would be enabling freedoms and power, not solely conferring economic benefits upon the poor. When we conceptualize problems of technology and development as a series of physical and legal barriers, rather than as a “divide”, the real power of communications technologies seems to be democratic, rather than economic. For now the lines are drawn and the tensions run between corporations and grassroots organizations – fighting over the model of ownership that will bring the benefit of communications technology to the developing world. But the real challenge for the next wave will be to extend the creation and sustenance of Digital Democracy to the political sphere, where the barriers will only increase as oppressive regimes are challenged by access to information and the consequent freedoms and power.