

Why Intellectual Property Rights Matter to Less-Developed Countries^{1,2}

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Introduction

Intellectual property rights (IPR) are a fault line in the Information Society. At the World Summit on the Information Society (WSIS) at Geneva in December 2003, IPR constituted one of the most contentious issues discussed (Selian & Cukier, 2004). Participants clashed over patent rights, the role of open source software, and protections for pharmaceuticals and other medical therapies. Disputes typically pitted developed country interests, such as software companies, against developing country interests, leading to a final WSIS Declaration of Principles that was purposefully, if frustratingly, vague (Klein, 2004; Selian & Cukier, 2004).³ Unfortunately, the WSIS clash typifies discussions of IPR in international forums—discussions that neglect important interests in IP policy and that impoverish a vital debate. This paper suggests that developing and less developed countries can benefit from strong IPR and that developed countries may gain from weak IP protections at times. These countervailing interests add necessary

complexity to the debate over appropriate levels of IPR and should be part of policy analysis at the next WSIS meeting in Tunis in 2005 and beyond.

Why should less-developed countries⁴ (LDCs) care about intellectual property rights? In the standard North-South debate, they shouldn't. Developed countries (DCs) try to impose strong IP⁵ protection to protect their dominant industries,⁶ while LDCs seek weak controls to benefit from DC innovation⁷ (Davis, 2003; Smith, 1999). LDC advocates view IPR as a distraction from more pressing problems at best and, at worst, a developed country attempt at exploitation. This framework is understandable since it reflects the usual bargaining positions of DCs and LDCs in international forums and trade negotiations. However, it simplifies the role of IP in both contexts. Developed countries, including the United States, prospered from weak enforcement of intellectual property protection and widespread copying early in economic history⁸ and may seek to limit IPR in the face of current challenges, such as bioterrorism or increasing health care costs (Ben-Atar, 2004; Long, 1996; Pear, 2004a; Stevenson, 2001). Developing countries can realize significant benefits from establishing and policing strong IPR regimes to spur domestic innovation, protect unique resources, and encourage development of vital therapies (Homere,

1. The editors noticed that intellectual property rights were inadequately addressed in this issue so we commissioned a piece on it. We are delighted that Derek Bambauer rose to the occasion and wrote this paper.

2. I thank Colin Maclay, John Palfrey, and Ethan Zuckerman for suggestions and criticism of drafts of this paper.

3. There are divisions even within developed country interests; Microsoft and IBM take diametrically opposed views on the role and value of open-source software (Klein, 2004).

4. The term "less-developed countries" challenges definition. While somewhat imprecise, the use of less developed countries here incorporates countries that are not formally listed as LDCs but are still considered "developing" by organizations such as the International Monetary Fund (IMF Staff, 2001). This group of less-developed countries exhibits significant diversity in economic status and development.

5. Intellectual property rights protect creative works, useful inventions, and valuable information. Typically, IPR is divided into several areas. Copyright protects artistic creations such as songs, stories, and dramatic works. Patent gives exclusive control over useful, novel innovations, such as genetically modified organisms or new pharmaceutical therapies. Trademarks protect commercial indicators such as slogans, insignia, and brand names that aid consumers in identifying a product's origin. Other IPR may cover information in databases, breaking news stories, industrial designs, computer software, and trade secrets, such as manufacturing processes (Merges, Menell, & Lemley, 2000; Merges, 2000).

6. Davis (2003) notes that "even after threatening to sanction countries for failure to join TRIPS, the United States continues to stalk and threaten them with trade sanctions for failing to adhere to United States, not international, standards" and argues "the United States has far less interest in enforcing TRIPS than it does in enforcing its own raw power and parochial interests."

7. Smith (1999) points out the common "desire of developing countries to permit free copying until that country's own inventors and economies have a chance to catch up to the level of development enjoyed by other countries."

8. Long argues that "the United States, in its early days, used the works of foreign authors to feed the voracious needs of this country's publishing industry—works which United States copyright laws did not protect" (1996, pp. 162–163). Similarly, Ben-Atar notes that the "transfer of protected European technology was a prominent feature of the economic, political and diplomatic life of the North American confederation from its first moments as an independent political entity" (2004, p. 81).

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2004). In addition, differential development by their domestic industries will rapidly convert IPR policy from a DC versus LDC issue to one of prioritizing internal interests. This article offers a brief look at how IPR can benefit LDCs and, at times, how it may pose challenges to developed nations.

Four Reasons IPR Matters

LDCs naturally tend to view intellectual property issues in the context in which they normally arise: trade negotiations with developed countries such as the United States. While in theory trade agreements improve outcomes for each party involved, the negotiating processes tend to be adversarial—developed countries try to obtain guarantees of strong IP protection, while developing countries seek reductions in agricultural tariffs and subsidies from their potential trading partners (Romero, 2003; Sarma, 1999).⁹ Hence, LDCs see IPR as a bargaining chip to use strategically, not as a framework that has benefits independent of trade ramifications. This article suggests that LDCs should think about intellectual property not only as something to swap at the negotiating table but also as an independent issue. IP protection offers potential benefits to LDCs for economic development in the short and long term, cultural and natural resource preservation, and public health efforts.

The current context for intellectual property systems in LDCs tends to be a top-down, externally-driven implementation at the behest of outside parties, such as developed countries that are trading partners, and international bodies, such as the World Trade Organization (Homere, 2004). This context has two key characteristics: it pushes LDCs powerfully toward adopting (if not enforcing) formally strong protections for IPR, and it leads these countries to view these protections as unfavorable terms imposed upon them [Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS), 1994; Woods, 2002]. The United States in particular has pushed for countries to adopt strong IP systems, particularly in the contexts of pharmaceutical protection, copyright, and anti-circumvention provisions (modeled on its own Digital Millennium Copyright Act; McCullagh, 2003). When, despite their relatively weak negotiating posi-

tion, developing countries have successfully resisted pressures for stronger IPR in international forums, the United States has moved to bilateral negotiations (Romero, 2003). This lets the United States deal with countries individually, negating their ability to bargain as a bloc and creating pressures to acquiesce for fear of being bypassed by competing nations. For example, the United States faced opposition (led by Brazil) to its agricultural subsidies and IP provisions in negotiations for a Central American Free Trade Agreement and subsequently moved to conclude individual agreements with some of the relevant countries (Office of the U.S. Trade Representative, 2003; Romero, 2003). Pragmatically, LDCs face strong pressures to adopting rigorous IP rights. This article suggests that this outcome offers important benefits as well as costs.

Economic Development, Access to Markets, and Foreign Direct Investment

IPR can enhance an LDC's economic development, access to developed country markets, and potential for foreign direct investment (FDI). The standard model of IPR for developing countries views intellectual property as a necessary evil forced on less-developed nations by developed countries (Smith, 1999). This perspective notes that countries such as the United States relied on copying foreign innovations in the early part of their history (Ben-Atar, 2004). Weak intellectual property laws may allow developing countries to catch up through copying innovations from abroad (Ben-Atar, 2004). This creates a "late mover" advantage for LDCs who can cheaply adopt useful techniques and advances or who can create a gray market in copied goods (Maskus, 2000).

Adopting strong IPR rules, however, can directly benefit developing countries economically in at least three ways (Homere, 2004; Maskus, 2000). First, safeguarding intellectual innovation can help domestic firms and industries. For example, a study of apparel producers in Lebanon found that weak enforcement of trademark laws hindered innovation, development of new products, and market entry by new firms (Maskus, 2000). Africa's music industry suffers from widespread piracy that depresses revenues to artists (Seligman, n.d.). Trademark protec-

9. Romero states that the United States and Brazil had to "remove sensitive issues like agricultural subsidies and intellectual property protection from the talks" on a multilateral trade agreement to avoid an impasse.

tion can help domestic producers reap rewards from maintaining consistent product quality. Copyright aids domestic development of creative products such as songs, movies, and computer software (Maskus, 2000). Patents may stimulate innovation within an LDC by protecting useful inventions such as new business methods and by providing an incentive for skilled workers to remain in the country rather than moving abroad.

Second, IP protection may be the price of entry to developed country markets for developing nation items, such as agricultural products and manufactured goods. DCs may predicate reduced tariffs and enhanced access to their markets via adoption of at least basic IPR by a developing country (Bentolila, 2003). Thus, IPR benefits LDCs by fiat—as a requirement to export domestically produced goods and services to attractive consumers. For example, countries seeking to join the World Trade Organization must adopt, at a minimum, the intellectual property protections outlined in the agreement on Trade-Related Aspects of Intellectual Property (Homere, 2004; Smith, 1999). While LDCs receive additional time to comply with TRIPS, the deadline for implementation is less than two years away (Homere, 2004; Tully, 2003).¹⁰ The “carrot” of reduced trade barriers through TRIPS compliance and WTO membership is reinforced by the “stick” of trade sanctions wielded by developed countries. The United States can impose trade sanctions on countries that fail to meet its standards for intellectual property protection under Section 301 of its Trade Act of 1974 [19 U.S.C. § 2411 (2003)]. In addition, the U.S. has moved to bilateral (rather than multilateral) trade agreements in which it requires adoption of strong IPR (Office of the United States Trade Representative, 2003; Romero, 2003). This approach maximizes U.S. negotiating leverage by isolating each potential trading partner. Since developing countries frequently depend economically on access to developed countries’ markets and hard currency, IPR may act as an “entrance fee” for favorable trading rights. Though the costs of IPR implementation and enforcement are not inconsiderable, scholars suggest that adopting IPR may be worthwhile in this context since LDCs frequently lack the resources or infrastructure to copy DC innovations effectively

(Homere, 2004). Developing countries already understand this point and use adoption of IPR as a chip in their bargaining with developed nations over market access (Blustein, 2003).

Third, adopting IPR may stimulate foreign direct investment (FDI) in LDCs. Strong intellectual property protections can signal potential investors about the economic and legal climate of a country. This can improve the nation’s economy not only through employment, as foreign investors and multinationals support local businesses or open branches, but also through knowledge and technology transfer. Often, LDCs suffer from limited productivity growth due to inadequate managerial skills and infrastructure development. FDI can ameliorate these conditions by training local workers and providing access to technology. Foreign entities may also be more willing to “invest” knowledge in LDC enterprises by licensing technology and inventions when there is a background of strong IPR (Maskus, 2000). The value of IPR in encouraging FDI varies by industry; fields with greater use of technology or higher productivity demonstrate greater sensitivity to the character of a country’s intellectual property regime.

Intellectual property considerations have other important ramifications for developing countries; for example, open-source software (such as the GNU/Linux operating system) depends or rides on top of IP rights. For open-source to flourish, an IP regime must exist to ensure that its licensing system can create a software “commons” of freely available resources. Without IP, either all software is effectively open (rampant copying makes programs freely available for use or modification without credit or authorization) or closed (digital rights software prevents both piracy and knowledge sharing). In essence, intellectual property rights are the foundation on which open-source is built; open-source is simply a different conceptual model for software application development. Several other articles in this volume explore the implications of the open-source model for LDCs; this article only notes that IP supports this scheme of software production (see also Ahuja-Cogny’s piece on open-source software in this issue of *ITID*, pp. 60–62).

Thus, adopting IPR can aid LDCs economically in at least three ways. First, protecting invention and

10. Tully points out “developing countries received far fewer preferences than LDCs in the TRIPS Agreement” (2003, p. 138).

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rewarding innovation can encourage domestic creators, promote competition, and stimulate productivity growth. Second, IPR may be the cost of admission to favorable trade relationships with important developed country partners. Finally, foreign corporations and investors may require IP rights before investing directly in LDC countries or before transferring useful technology to them.

Protecting Resources

IPR can help LDCs protect indigenous resources. These resources include naturally occurring items, such as biodiversity or unique geographic features; historical artifacts, such as ruins or antiquities; cultural creations, such as traditional knowledge, folklore, music, and art; and useful information, such as medical products and techniques, agricultural methods, and trade practices. Protection implicates both economic and nonpecuniary concerns: LDCs may want to preserve their ability (or that of their citizens) to commercialize these resources and obtain revenue, and to prevent exploitation or market use for normative reasons. IPR can help with both goals. LDCs can utilize IP resources to promote development, bolster the local economy, and compete in foreign markets. Defensively, LDCs can prevent unwanted or uncompensated use and exploitation of their resources by other nations, companies, and multinationals. Thus, protecting intellectual property may aid LDCs in maintaining control over valuable, possibly unique, assets.

IP fits well with the requirements of protecting indigenous resources. Intellectual property regimes apply to many of the types of assets central to LDC concerns, such as folklore (copyrights), geographic or ethnographic signifiers (trademarks), and useful practices or inventions (patents). Establishing resource protection in IPR form has recognition value. Foreign countries, multinationals, and citizens are generally experienced with intellectual property regimes and are more likely to respect these rights for both legal and normative reasons. The existing inter-

national IPR framework through mechanisms such as TRIPS or the Berne Convention may help LDCs enforce and legitimate claims to control resources. Experience with IPR in other countries and contexts offers LDCs a "late mover" advantage in establishing and configuring protections. Finally, intellectual property systems that have public registration or deposit requirements confer two benefits germane to LDCs. First, they enable potential users to discover whether a given item enjoys protection, reducing the chance of inadvertent violations and exploitation. Second, these repositories help publicize knowledge once their terms of protection end, allowing future creators easy access to valuable information.

An IPR system has two primary drawbacks for protecting LDC resources: first, it generally requires identifying the rights holder; and second, it limits the duration of exclusivity to maximize the production of socially useful ideas. Conferring control on a single owner may be at odds with the goals of protection overall. LDCs may want to create a limited commons, open to use by their citizens but off limits to outsiders, or even an "anti-commons"—a zone of ideas or resources that cannot be exploited commercially by anyone (Paterson & Karjala, 2003).¹¹ Second, IPRs typically are limited in duration to allow later creators access to ideas. LDCs, though, may not want protection for certain resources to expire, particularly where these resources have high non-pecuniary value. For example, use of a plant considered sacred for medicinal purposes may not fit well with a patent regime since allowing non-adherents to sell (or even use) this preparation may be offensive.¹² Thus, LDCs might need an IPR system with different, possibly conflicting protections,¹³ or might have to use non-IP means to protect resources.

Native resources, such as cultural knowledge and biodiversity, are often an LDC's most valuable assets, whether because of their commercial potential or because they play a vital role in the country's national or spiritual identity (Woods, 2002). Thus, pro-

11. Article 27(2) of TRIPS (1994) permits countries to exclude inventions from patentability if commercial exploitation in the country would harm public order or morality, including "protect[ing] human, animal or plant life or health or . . . avoid[ing] serious prejudice to the environment." However, this exclusion does not prevent patenting or use abroad.

12. Downes discusses use and attempted patenting of an Amazon basin plant described as a "religious and cultural symbol analogous to the Christian cross or Eucharist" for indigenous people (2000, p. 279).

13. For example, consider a situation where two indigenous groups have long used a medicinal preparation from a native plant, but while one group considers the practice sacred, the other has always regarded it as commercial and seeks to capitalize on its specialized knowledge.

protecting these items is a central concern as a country engages other nations, companies, and people in the exchange of goods and information. Though IPR may not perfectly match LDC goals for safeguarding this wealth because of a tendency to assign rights of limited duration to a single entity, the widespread recognition of intellectual property protection and the value of depository and registration systems help make IP a valuable tool.

Transitional Considerations

As an LDC's economy changes over time, the importance of and demand for IPR will shift. Interestingly, this can create tensions within a country as different groups and industries advocate for and benefit from different IP protection levels. The standard view of IP in economic development over time accords with the North-South divide: as a country moves toward developed status, its interest in strong IP increases. LDCs enter the IPR debate as net consumers of intellectual creations; their economies are largely agricultural and lack the infrastructure and skills necessary for significant IP industries. Thus, they view IP issues in the context of a relatively unidirectional flow of information to them from developed countries. This gradient traditionally produces weak IP regimes that maximize the opportunity to benefit from outside innovation. As the country's economy grows and different sectors emerge over time, IP protection will increasingly become beneficial to guard the country's products from other, less developed nations.

However, this standard narrative neglects the heterogeneity of a country's industries from an innovation perspective. For example, a developing country may have a thriving domestic film industry or music artists interested in strong copyrights, but also possess a profitable software piracy trade resisting copyright (Maskus, 2000; Seligman, n.d.). Filmmakers want strong copyrights and software duplicators want weak ones. IPR strategy will provide an ongoing policy challenge for LDCs, as this clash within one IP doctrine demonstrates. While a country could disaggregate intellectual property laws—for example, setting different copyright protections for films

and computer programs—doing so complicates IP policy. In addition, the rules a country sets for intellectual innovations not only protect current creations, they also shape the production of new ones. LDCs must shift from viewing IPR as an issue of foreign versus domestic interests to one that pits internal industries and consumers against one another.¹⁴ Even if this struggle does not confront a country immediately, it emerges in time as economic sectors develop at different rates and start to place divergent values on IP.

Public Health and Access to Therapies

In the public health context, IPR is a matter of life and death. Strong patent rights underwrite research and development, but may create therapy prices beyond the reach of LDC citizens. Weak patent rights allow compulsory generic licensing and parallel importation to improve availability, but may inhibit pharmaceutical manufacturers from developing treatments for maladies that primarily affect LDCs. The usual debate over IP protection for pharmaceuticals opposes public health advocates in LDCs, who favor limiting patents to promote access, to industry advocates in DCs, who point out the need to recoup the high cost of developing a successful drug. However, the picture is more complicated. Developing countries may need stronger patent protections to encourage research on therapies for maladies limited to LDC citizens, and developed countries may seek to abrogate IPR in moments of crisis or to control spiraling health care costs. In addition, recent research argues that the most critical barrier to essential pharmaceutical access is poverty, not IPR (Attaran, 2004).¹⁵ The tradeoffs in establishing patent rules are considerable, particularly in light of the problems at issue.

The scope of the public health problem is stunning. For example, AIDS killed an estimated 2.28 million people in 1998, with 98.6% of those deaths in low and middle-income countries (World Health Organization, 1999). Malaria afflicts 300 million people per year and causes 1 in 5 deaths of African children (World Health Organization, 1999). Poor

14. This problem is obviously not unique to LDCs. The United States has confronted tensions in IPR policy as well. Pharmaceutical patent protections—frequently touted as vital to supporting research and development—have been questioned or seen as important barriers to efforts against bioterrorism and to cost-control in health care (Gathii, 2003; Pear, 2004b).

15. Attaran (2004) argues that manufacturers patent only 31% of eligible pharmaceuticals listed on the World Health Organization's Model List of Essential Medicines and rarely block generic versions of these therapies.

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countries suffer epidemic diseases disproportionately—their citizens are 3 times as likely as those in developed countries to contract tuberculosis (World Health Organization, 1999). Effective treatments exist for most of these conditions,¹⁶ but high drug costs often make them unavailable, particularly for patients in underdeveloped areas such as sub-Saharan Africa (Barnard, 2002; Galvao, 2002; Rein, 2001; 't Hoen, 2002; Trouiller et al., 2002; World Health Organization, 1999).¹⁷

Patents allow manufacturers to maintain relatively high drug prices by monopolizing medication supply (Barnard, 2002; Rein, 2001; Sykes, 2002). Thus, LDCs and public health advocates often seek exceptions to patent rights, including compulsory licensing to generic manufacturers and importation of cheaper versions from abroad (Attaran, 2002; 't Hoen, 2002). Many countries consider access to effective therapy a basic human right and view the cost of patented pharmaceuticals as unjustified—it is morally unacceptable not to provide effective pharmaceuticals to ill patients (Ford & Piedganel, 2003; United Nations Commissioner on Human Rights, 2002; World Health Organization, n.d.). IPRs, in this view, are unacceptable from public health and moral perspectives.

However, advocates for stronger LDC IPR argue the lack of effective patent protection creates inadequate incentives for researching treatments for maladies that afflict primarily people in LDCs (Sykes, 2002; Trouiller et al., 2002).¹⁸ Without patents, they argue, researchers will not undertake costly R&D, thus reducing innovation and preventing drugs from being available in the first place (Mansfield, 1986).¹⁹ They point out that pharmaceutical innovation is sensitive to financial incentives and total average cost per drug is high (DiMasi et al., 2003).²⁰ If producers cannot recoup R&D costs from DC customers, they may not create treatments for patients in

countries that will limit returns by licensing to or importing from generic manufacturers (Sykes, 2002). Hence, LDCs may need strong IPR to encourage manufacturers to develop remedies for diseases primarily affecting them.

Developed countries that normally espouse strong IPR for pharmaceuticals may find their resolve weakening when confronted with public health crises. For example, the United States faces rapidly increasing health care costs, including expenditures on pharmaceuticals. U.S. consumers and providers have begun purchasing and importing drugs from Canada, where the government's single-payer system negotiates lower prices than those in America's more market-oriented framework. In addition, the U.S. government considered mandatory licensing of the patented antibiotic ciprofloxacin when confronted with the threat of terrorist attacks using anthrax. These incidents may provide America with a greater understanding of the challenges LDCs face from tight health care budgets and widespread serious disease.

The correct level of IPR for pharmaceuticals is complex for both developed and developing countries. Strong patents encourage development of effective therapies, but permit manufacturers to charge prices that can greatly limit access. Patent exceptions and limitations benefit patients by permitting lower-cost access to generic drugs through parallel importation and compulsory licensing. Fortunately, the IPR debate for pharmaceuticals is moving beyond a North-South division as developed countries explore methods like parallel importation to improve access and reduce health care expenditures. Expensive medicines—and the discoveries they underwrite—are a problem in all countries, and the struggle with conflicting needs may help guide LDCs in formulating their legal regimes.

16. Trouiller et al. (2002) find that for malaria "four new chemical entities have been approved between 1975 and 1999, and 18 projects were in clinical development in 2001."

17. Barnard (2002) compares the USD\$9.34 cost per dose of a patented antifungal used against opportunistic infections in HIV patients (in 1999) with the \$0.60 generic cost per dose.

18. Trouiller et al. find that "only 1% of the 1,393 new chemical entities marketed between 1975 and 1999 were registered for [tropical] diseases" and question whether "intellectual property rights protection is [viable] . . . as a system for stimulating research and development and delivering the most needed medicines" (2002, pp. 2189–2191). Sykes, however, argues that in the aggregate, consumers in poorer countries may provide a substantial market to pharmaceutical producers and hence create sufficient incentives for development if robust patent protection exists (2002).

19. Mansfield (1986) estimates that without patent protection, 60% of pharmaceutical products in the United States from 1981–1983 would not have been developed and 65% not introduced.

20. DiMasi et al. estimate the total pre-approval cost of a new drug at USD \$802 million (2003).

Conclusion

Less-developed countries naturally resist pressure from developed nations to adopt legal systems that strongly protect intellectual creations. Since most LDC economies are primarily agricultural, IPRs appear to be measures that benefit primarily DC interests and industries. Hence, LDCs tend to treat IPR as a tradeable good readily exchanged for reduced DC agricultural subsidies or tariffs. This article suggests that IPR may have intrinsic benefits to LDCs both currently and as they develop. Protecting intellectual innovation can help even developing countries encourage domestic creators and can make foreign firms and citizens comfortable investing funds, technology, and knowledge in LDC industries. IPR may create a useful framework allowing a nation to commercialize—or protect from exploitation—unique resources such as biodiversity, folklore, and historical artifacts. Developing states will face, either immediately or in the future, competing demands from sectors and firms that value intellectual property differently, converting the IP debate into a political issue of prioritizing among domestic interests. Finally, a country's choices about IP protection for pharmaceuticals—regardless of whether that country is the United States or Sudan—will have profound consequences for its access to effective therapies and its prospects for research on public health challenges that face it. In short, LDCs should consider IPR as more than a chip in the poker match of trade negotiations; protecting intellectual creations affects a country's economic, cultural, and health development potential, and accordingly deserves serious consideration. ■

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Internet Governance: A Bits and Atoms Story

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Reflections on WSIS

I attended the World Summit on the Information Society by special invitation, which included the request to be as helpful and supportive as possible to our Swiss hosts. That in turn, included the request that I chair a closed-session round table (it was literally a round table of 10 people) on the topic of Internet Governance.¹ Based on my belief that innovation can come from not knowing too much about a subject, I was delighted to do so. By contrast, I do know something about telecommunications and have been using the Internet and its predecessors so long that there was a period in the beginning when I knew everybody on it. So I did not feel like a beginner by any means. I came prepared as somebody living in three countries, carrying two passports, spending over 25% of the year in developing countries. Furthermore, I do not have a nationalistic bone in my body.

More background: The worst telecommunications on this planet is also the most expensive. Moreover, the countries in most need of it for development are the same ones that tax it like tobacco and alcohol or, worse, make voice-over IP illegal. And, believe it or not, the scarcity of spectrum is the consequence of regulation, not physics, technology, or manufacturing.

With this anomalous backdrop, I arrived at WSIS to hear a lot of whining about the allocation of address space for domains. More than once, it was pointed out that MIT has 1/255 of all space, which is more than most countries. This is a strange fight because IPv6 changes all this, by generously expanding the available address space, and it is already running in some places. There had to be another agenda.

In fact, a great deal of that agenda, the complaints about IP address space allocation included, reduced to an often justifiable anti-Americanism. But of all the areas where the United States has not

1. The nine others were: Rapporteur: Ayisi Makatiani, CEO, Gallium Capital Partners, Kenya; Pascal Couchepin, President of the Swiss Confederation; Anriette Esterhuysen, Executive Director, Association for Progressive Communications, South Africa; Paul Twomey, President, Internet Corporation for Assigned Names and Numbers (ICANN), USA; Andre Kudelski, President and CEO, Kudelski Group, Switzerland; Bertrand de la Chapelle, Co-Convener, Open WSIS Initiative, France; Talal Abu-Ghazaleh, Chairman, Talal Abu-Ghazaleh International & Co., Egypt; Tim Berners-Lee, World Wide Web Consortium, USA; Esther Dyson, Chairman, EDventure Holdings, USA.