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Intellectual Property, Trade, and Economic Development:
A Road Map for the FTAA Negotiations

Robert M. Sherwood and Carlos A. Primo Braga

Intellectual property (IP) protection is becoming increasingly crucial in the context of new international commitments, the competition for private investments, and global "technology racing." This paper examines the common base for a Western Hemisphere IP arrangement and notes the most prominent existing regional integration accords that include IP commitments. It assesses the recent Trade Related Intellectual Property (TRIPS) Agreement negotiated during the Uruguay Round of the General Agreement on Tariffs and Trade (GATT).

The authors discuss possible negotiating objectives, highlight a dozen "tough issues" faced by negotiators, and offer a road map in preparation for IP arrangements within a Free Trade Area of the Americas. They propose that an IP regime be considered with a primary objective of stimulating investment, which they maintain ultimately would yield the greatest benefits to the countries of the Western Hemisphere.

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The mission of the North-South Center is to promote better relations and serve as a catalyst for change among the United States, Canada, and the nations of Latin America and the Caribbean by advancing knowledge and understanding of the major political, social, economic, and cultural issues affecting the nations and peoples of the Western Hemisphere.

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INTELLECTUAL PROPERTY, TRADE, AND ECONOMIC DEVELOPMENT: A ROAD MAP FOR THE FTAA NEGOTIATIONS

Robert M. Sherwood and Carlos A. Primo Braga

Introduction

This paper offers a road map for negotiating intellectual property (IP) protection in the context of the future Free Trade Area of the Americas (FTAA). The objective of initiating negotiations toward a free trade area in the Western Hemisphere was announced by the 34 governments that participated in the Summit of the Americas in Miami in December 1994. At that opportunity, a commitment was made to conclude these negotiations no later than 2005. IP is one of the many topics on the negotiating agenda.

First, this paper considers the evolving role of IP in the world economy, noting that both large and small countries are upgrading their IP systems in response not only to external pressures and new international commitments, but also to advancing science and "technology racing." It notes increasing evidence that IP plays a significant role in investment decisions and reminds us that the introduction of new technology, which is aided by IP protection, boosts social welfare and helps sustainable economic development.

Second, the paper delineates the common base for a hemispheric IP arrangement, noting the pattern of existing treaty memberships and the future influence of the Trade Related Intellectual Property Rights (TRIPS) Agreement negotiated in the Uruguay Round of the General Agreement on Tariffs and Trade (GATT) negotiations (1986-1994).

Third, the paper identifies the most prominent existing regional integration accords (RIAs) that include intellectual property commitments and compares them in general terms to the TRIPS Agreement.

Fourth, the paper discusses several possible negotiating objectives and offers a road map for the FTAA negotiation. This is done with a view to the international trends in IP protection and against the background of global technological advancements and increased international competition. Selected "tough issues" likely to arise in the course of the negotiations are also discussed.

Finally, a negotiating objective, based on a normative level of protection for investment stimulation as distinct from trade facilitation, is presented.

The Evolving Role of Intellectual Property Protection

International Trends

Many countries in the Western Hemisphere are upgrading their IP systems for a variety of reasons. Some are implementing these reforms in response to competitiveness concerns, some in response to new types of technology, and some as the result of external pressures. Almost all countries in this hemisphere have committed to the standards of the TRIPS Agreement.[1]

Among recent examples, El Salvador recently improved its patent and copyright laws in parallel with an Investment Sector Loan operation of the Inter-American Development Bank (IDB). Mexico revised its IP system in stages between 1987 and 1994, partly in anticipation of the North American Free Trade Agreement (NAFTA) negotiations. Chile adopted a more modern system, partly in response to external pressure and partly for competitive reasons.

Most recent regional trade agreements in the Western Hemisphere address "behind-the-border" impediments to trade and investment, incorporating IP issues under their coverage. NAFTA, for example, explicitly covers IP, expanding the reach of its forerunner, the Canada-United States Free Trade Agreement. In the same vein, the Argentina-Brazil Economic Cooperation Agreement (1986) had no IP provisions in its origins. Its expanded successor, the Southern Cone Common Market (MERCOSUR), however, has been addressing issues of harmonization of IP protection. Colombia, Mexico, and Venezuela incorporated IP commitments into their Group of Three (G-3) accord. It is also worth noting that the Andean Common Market (ANCOM) countries addressed the issue of a common IP regime for their trade pact as far back as the 1970s.[2]

Advancing Science and "Technology Racing"

The velocity of scientific advancement implies that technologies on which countries and companies now rely may be rendered obsolete abruptly and that new opportunities will arise swiftly (Armstrong 1993). In both cases, the ability to respond rapidly is desirable.

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In negotiating an approach to intellectual property for the Western Hemisphere, the following trends deserve consideration. First, science will probably continue to explode with surprises. Further advances in information technology (IT), nanotechnology, superconductivity, genetic and molecular engineering, and other startling recent thrusts will continue to open new frontiers for human knowledge. Second, research and development (R&D) activities will continue to proliferate and be globalized. R&D projects are being pursued in a rapidly increasing number of directions, and strategic alliances between firms are proliferating. Third, elapsed time between scientific advance and resulting products and services will continue to shorten,[3] placing a premium on the ability to move swiftly.

Any IP regime for the hemisphere will benefit from flexibility, keeping the paradigms of protection open to incorporate new technologies rather than devising novel or sui generis types of protection. Since research and development increasingly are done globally, the ability to participate calls for congruent, if not uniform, treatment of intellectual property throughout the hemispheric "neighborhood."

Three other observations follow. As Cold War ideologies fade, technology will drive development much more effectively. As economies open their markets, knowledge flows increase, and the potential for new inventions expands. As investments in R&D increase, nations in general will benefit from the spillovers of knowledge creation. These trends point to a heightened importance for intellectual property.

Generally speaking, private capital has repeatedly demonstrated its agility, usually moving faster than government planning. This suggests that any approach to intellectual property for the hemisphere should support efforts to mobilize private capital to appropriate scientific and technological advances quickly.

The potential of expanded markets beyond traditional boundaries inspires "technology racing," in which companies and nations strive to appropriate new knowledge. It is a complex process, but private investors, particularly when encouraged by the risk-reducing effects of intellectual property protection, have shown their skills in seeking opportunities and moving swiftly to make investments that will provide new products and services. This applies to a great variety of opportunities, from broad global markets to quite specialized or fractional regional or local markets. The positive role of intellectual property protection in this process has been sufficiently observed (Sherwood 1990; Mansfield 1994) to warrant serious attention in formulating national and hemispheric policy.

Interplay of IP and Technology in Economic Development

The long-term trend with respect to IP protection in developed economies clearly has been in the direction of strengthening these rights. There is no clear theoretical presumption that a movement toward stronger standards of protection always will be welfare enhancing (Winter 1989). Yet, historical hindsight suggests that market-related incentives (as illustrated by the IP approach) provide the most effective way to promote the creation of new knowledge.[4]

The net welfare impact[5] of strengthening IP protection in a developing economy is essentially an empirical question. Potential benefits include new inventions fostered by higher levels of R&D at domestic and international levels and greater technology and foreign direct investment flows. Potential costs include additional administrative and enforcement costs, increased royalty payments, price increases of "knowledge-intensive" products, and the displacement of "pirate" producers.[6] For most developing countries, the short-run impact of strengthening IP is likely to be negative (in welfare terms), as the costs of such reforms precede dynamic benefits.

There is growing evidence, however, that the associated dynamic benefits of IP reforms can be significant. Recent empirical research has found, for example, that IP protection has a significant effect on private investment in developing countries.[7] This is not too surprising, as the historical evolution of IP protection springs from an intention to encourage private activity in particular ways. In open, capital-based economies this translates into stimulation of private investment.

Empirical estimates about the potential positive role of intellectual property protection in developing countries face, however, a particular difficulty. After all, enhanced protection has never been tried in most developing countries. Within the Western Hemisphere, Mexico recently has introduced comprehensive reforms. Anecdotal information suggests that Mexico is beginning to benefit from the upgraded protection, in particular, via an increase in investments in R&D-intensive industries.

Greater empirical knowledge would no doubt aid public discussion of the political viability of enhanced intellectual property protection as a contribution to the FTAA arrangements. In particular, a more detailed study of the Mexican "before and after" experience would provide valuable insights.

The Existing and Future Common Base for the Hemisphere

The Western Hemisphere is the beneficiary of a common base from which arrangements for the treatment of intellectual property will benefit. That base includes, first, an inheritance from Europe's experience with intellectual property protection. The hemisphere received the concepts of copyright and patent and trademark protection and incorporated them into national legal systems.[8] This experience has been in place in the hemisphere for well over a century, in contrast with Asia's experience and those of many non-European countries worldwide.

Second, the common base includes at least some practical experience of the positive results of intellectual property protection. A high regard for literary works has been reflected in copyright protection in many countries and has led to high achievement in literature and the arts. Some

countries, notably Argentina and Uruguay, made significant contributions to science and technology at the turn of the last century, with patent protection for inventions, as it was understood then, playing an important role.

Third, the countries of the hemisphere share a common base, which is found in existing treaty commitments at the global level and as part of regional integration accords.[9] The common base created by international treaties of global reach is elaborated briefly below.

The Common Base in International IP Treaties

IP rights are territorial in nature. Nations need to reach accommodation as their residents seek protection for their works abroad. Attempts to address this problem have generated numerous treaties on IP rights. The first ones were negotiated more than a century ago (for example, the Paris Convention for the Protection of Industrial Property, 1883, and the Berne Convention for the Protection of Literary and Artistic Works, 1886). Most of these conventions are currently administered by the World Intellectual Property Organization (WIPO), an agency established in 1970 that became a specialized agency of the UN in 1974; its offices are located in Geneva.

Table 1 shows the memberships of most of the countries of the hemisphere in the international intellectual property conventions of greatest prominence today. The pattern of major treaty memberships varies across the hemisphere. Of the 28 countries listed, 24 are members of the Berne Convention, which deals with the rights of authors. Nineteen are members of the Paris Convention, which deals with patents and trademarks, while a different group of 19 countries is formed by members of the Geneva Convention, which deals with phonograms, that is, an exclusively aural fixation, whatever its form. Twelve of these 28 countries are members of all three conventions. As of mid-1995, only five hemispheric countries were members of the International Union for the Protection of New Varieties of Plants (UPOV), although five others had committed to nearly equivalent protection under Decision 345 of the ANCOM arrangements. Aside from Brazil, Canada, Mexico, and the United States, only two Caribbean countries are members of the Patent Cooperation Treaty. This pattern of variable memberships extends across a range of other less prominent international treaties as well, with fewer rather than more memberships among the Latin American countries.[10]

The relevance of treaty memberships for effective functioning of national intellectual property systems might be debated, but the variable pattern of membership suggests lack of a strong common approach to intellectual property at the international level. Still, these are useful starting blocks for building hemispheric arrangements for intellectual property protection.[11]

The TRIPS Agreement, fashioned in the Uruguay Round of multilateral trade negotiations, is by far the most important recent international IP treaty. By linking IP issues to global trade rules, TRIPS provides a new and, in principle, more effective route to strengthening IP protection than is the case under the comity

TABLE 1. MAJOR INTERNATIONAL INTELLECTUAL PROPERTY TREATIES

	Paris	Berne	Geneva	UPOV 78/91	PCT	WTO TRIPS
Argentina	X	X	X	'78		X
Bahamas	X	X				X
Barbados	X	X	X		X	X
Bolivia	X	X		D. 345		X
Brazil	X	X	X		X	X
Canada	X	X		'91	X	X
Chile	X	X	X			X
Colombia		X	X	D. 345		X
Costa Rica	X	X	X			X
Ecuador		X	X	D. 345		X
El Salvador	X	X	X			X
Guatemala			X			X
Guyana	X	X				X
Haiti	X	X				X
Honduras	X	X	X			X
Jamaica		X	X			X
Mexico	X	X	X	'78	X	X
Nicaragua						X
Panama			X			*
Paraguay	X	X	X			X
Peru	X	X	X	D. 345		X
St. Kitts and Nevis	X	X				X
Saint Lucia	X	X				X
Suriname	X	X				X
Trinidad & Tobago	X	X	X		X	X
U.S.A.	X	X	X	'91	X	X
Uruguay	X	X	X	'78		X
Venezuela	X	X	X	D. 345		X

Abbreviations used in Table 1:

PARIS = Paris Convention for the Protection of Industrial Property, concluded in 1883, revised and amended on several occasions, most recently at Stockholm in 1967, with 136 member states as of January 1, 1996.

BERNE = Berne Conventions for the Protection of Literary and Artistic Works, concluded in 1886, revised on several occasions, most recently at Paris in 1971 and amended in 1979, with 117 member states as of January 11, 1996.

GENEVA = Geneva Convention for the Protection of Producers of Phonograms Against Unauthorized Duplication of Their Phonograms, concluded in 1971, with 53 member states as of January 1, 1996.

UPOV = The International Union for the Protection of New Varieties of Plants, 1978, with 27 member states as of January 1995. The Act of 1991, an alternative text signed by 16 states, was not yet in force in June 1996. ANCOM countries have adopted Decision 345.

PCT = Patent Cooperation Treaty, concluded in 1970, amended in 1979, and modified in 1984, with 83 member states as of January 1, 1996. The treaty is open only to states that are parties to the Paris Convention.

WTO = World Trade Organization, successor to the GATT, entered into force January 1, 1995; membership necessarily requires adherence to the TRIPS Agreement. As of December 1995, 112 states were members of the WTO.

* = Panama began negotiating WTO entry as of January 1996.

approach, followed under the various WIPO-administered conventions. Moreover, virtually complete World Trade Organization (WTO) membership among hemispheric countries makes the TRIPS Agreement a salient point of common reference for FTAA IP negotiations.

The TRIPS Agreement as a Future Common Base

Table 1 on the previous page lists in its last column those countries of the hemisphere that have joined the WTO, thereby committing themselves to the provisions of the TRIPS Agreement. In effect from January 1, 1995, the TRIPS Agreement, which consists of 73 articles, establishes requirements for enforcement, administration, copyright and related rights, trademarks, geographical indications, patents, industrial designs, trade secrets (called undisclosed information), and layout designs of integrated circuits.

The TRIPS text is clear and concise in places, yet vague or complex in others, primarily as the result of difficult negotiations.[12] As a deadline approached without resolution of sharp differences, the GATT Secretariat produced a "balanced text," incorporating provisions from competing proposals (December 1991). With only minor additions, the 1991 compromise text became the final TRIPS Agreement text in December 1993.

The TRIPS Agreement contains transition provisions that permit developing countries to bring their intellectual property systems into conformity with the new standards as late as January 1, 2000, with further delays allowed under defined circumstances, as in the case of extension of protection for chemicals and pharmaceutical products. Least-developed countries, in turn, have at least 11 years from the entry into force of the WTO agreement (January 1, 1995) to adjust their IP regimes.

IP rights will be strengthened on a worldwide basis as the TRIPS Agreement is implemented. In due course, TRIPS standards will establish a minimum floor of protection and a greater degree of international harmonization than was thought feasible a few years ago. TRIPS will require significant changes in the IP regime of virtually every country in the hemisphere. Needless to say, debate about the need for these higher standards, as well as the quality of administration and enforcement of the rights created, is likely to continue to generate international frictions.

The TRIPS Agreement invites analysis of the "logic" of integrating IP reform into trade agreements. First, TRIPS "legalizes" the marriage of convenience of trade law with IP law at an international level. This will tend to blunt unilateral actions such as those initiated by the United States in the 1980s. Second, the goal of harmonization implicit in the TRIPS Agreement can be conceptualized as a mechanism to avoid trade impediments generated by discrepancies between national IP systems, although it is worth noting that countries maintain many degrees of freedom in terms of how to implement and enforce international standards. Third, the focus is clearly in the direction of strengthening IP rights on an international scale, which introduces efficiencies in reaching accommodations among nations.

This logic contrasts significantly with past experiences of developing countries when they used trade agreements to deal with IP issues. South-South RIAs in the past typically used their trade accords to harmonize their IP systems with a view to discriminating against outsiders (such as transnational corporations). The "logic" then was to use these accords to impose non-tariff barriers to technology flows, with a view to promoting local capacity in the context of inward-oriented development strategies (such as the ANCOM policies in the 1970s). It is worth noting that as the developing countries in the hemisphere have moved toward more outward-oriented strategies, the new approach toward IP systems has become less controversial.

The TRIPS Agreement may illustrate the phenomenon that as countries strive for more open, or more "intimate," trade relations in the evolving global setting, the dynamic of that greater intimacy compels them to offer each other higher levels of intellectual property protection. The experience of both NAFTA and MERCOSUR, which seek trade intimacy exceeding that of the WTO, may point to that same dynamic. The MERCOSUR countries, after initial hesitation, are now working toward a higher degree of congruence in their IP regimes. The logic of associating enhanced protection with more intimate trade, however, is not yet fully appreciated by all countries.

Since TRIPS is oriented to the reduction of trade impediments, not to the stimulation of investment, private investors, both foreign and national, will generally view the TRIPS as a step in the right direction but with a distance still to go. The perceived shortcomings of the TRIPS Agreement are further explored in the section below entitled "A Road Map for the FTAA Negotiations."

Existing Arrangements within the Hemisphere

Regional integration agreements, such as ANCOM, MERCOSUR, and NAFTA, will have a major bearing on any hemisphere-wide arrangement for intellectual property. They complement the common base found in global treaty commitments.

Major Regional Integration Arrangements

ANCOM

ANCOM created one of the earliest sub-regional approaches to intellectual property protection in the hemisphere in the context of an RIA. Bolivia, Colombia, Ecuador, Peru, and Venezuela have sustained this subregional arrangement, at times with difficulty, since 1969. Decision 85, adopted in 1974, sought to establish a common regime for the treatment of patents and trademarks. The provisions of Decision 85 were viewed by many investors with concern, among other things, because of their hostility toward intellectual property protection and their tendency to offer a broad scope for compulsory licensing.

Decision 311, adopted in late 1991, replaced Decision 85 and was itself replaced by Decision 313 in early 1992. At the time, both were viewed as offering enhanced protection, but they were also considered deficient by at least some important groups of potential investors for numerous reasons, ranging from subject matter exclusions, short patent terms, and ease of compulsory licensing to issues that were not addressed, such as protection for trade secrets.

At the beginning of 1994, Decision 344 took effect, replacing Decision 313. At the same time, Decisions 345 and 351 were also issued. They were additions to the ANCOM intellectual property regime and cover, respectively, new plant varieties and the rights of authors and related rights. The texts of these three decisions were clearly written and intended to serve, not as broad-brush treaty norms, but as the domestic law of each of the five countries. Indeed, they have been adopted by each country in totality as the national legislation.

Decision 344 covers patents, utility models, industrial designs, industrial secrets, and trademarks. It is to function as a minimum requirement, with countries free to provide higher levels of protection. As to patents, inventions in some important fields are excluded from patentability; working in any ANCOM country constitutes working in any other; compulsory licenses are available and validation (or revalidation) patents are not permitted. As to industrial secrets, basically sound protection is made available, although certain disabilities and difficulties are created, including limits on the categories of protected information and the requirement that the information be in tangible form. As to trademarks, well-known trademarks have a basis for protection, first registration takes priority over first use, and parallel imports are allowed.

Decision 345 provides protection for new plant varieties. It follows the provisions of the UPOV Convention with certain exceptions. In particular, the term of protection is somewhat shorter than the convention, and the exception that permits farmers to "save seed" for their own use is broader than the convention.

Decision 351 provides for the rights of authors (copyright) and related rights. This comprehensive decision provides most-favored nation treatment for ANCOM member countries. Although it is generally consistent with the TRIPS Agreement, some questions arise regarding waiver of moral rights and full compatibility with international practice under the Berne Convention.

Broadly speaking, these three decisions have further enhanced the level of protection available in the ANCOM countries. As a "floor," they set the stage for further enhancements. At the same time, some of their requirements do not rise to the level of the TRIPS Agreement that had been completed only weeks before these ANCOM decisions took effect.

Central America

A rather complex history surrounds efforts to create and sustain a common market regime among some of the Central American countries. In the midst of this, the Central American Convention for the Protection of Intellectual Property was created in 1969 and subsequently adopted by Costa Rica, El Salvador, Guatemala, and Nicaragua. It came into force in 1975, although it took effect in El Salvador only in 1989. It has served since then as the common regime in these four countries, but it pertains to trademarks only.

This trademark convention did not create a single trademark registry, but it did attempt to coordinate the fees charged by the four registries. Its text has become the national legislation in effect in each of the four countries regarding trademarks. The convention's provisions made it difficult to resist the speculative registration of well-known trademarks, although Costa Rica's courts and registry overcame this difficulty, overriding the relevant treaty provisions in practice. Efforts to revise this convention are now being made.

Consideration of a common patent regime for Central America is now under active consideration with a draft treaty being reviewed by officials in the region.

Group of Three (G-3)

Of the Western Hemisphere's current RIAs, the Group of Three, formed by Colombia, Mexico, and Venezuela, most closely follows the NAFTA model. The G-3 entered into force on January 1, 1995. Its intellectual property chapter follows and in some regards goes beyond the content of chapter 17 of NAFTA, although there is no mention of patents. There are other important exceptions within the G-3 accord compared with NAFTA (see O'Keefe 1995). Among them, the parties refrain from requiring that they ratify the Geneva, Berne, and UPOV conventions, although their substantive terms are to be observed, and they do not echo NAFTA's Article 1707, which requires protection for encrypted satellite signals. NAFTA's Article 1714, which requires unconditional judicial enforcement, is not repeated. Instead, Article 18-25 of the G-3 accord echoes the "escape clause" conditions of Article 41(5) of the TRIPS Agreement. For Colombia and Venezuela, the G-3 accord overlaps and exceeds in some respects their commitments under the ANCOM decisions.

MERCOSUR

MERCOSUR was launched by the Treaty of Asunción, signed by the governments of Argentina, Brazil, Paraguay, and Uruguay on March 26, 1991. Its central objective was the establishment of a customs union by December 31, 1994. There were no express provisions for common treatment of intellectual property in the "umbrella" agreement. However, even before the four countries fully implemented their customs union, their merchants and traders began to experience problems because of the differing approaches to intellectual property protection within their trading area. Much that can be learned from this experience will be relevant to creation of the FTAA IP arrangements.

In 1993, an Intellectual Property Commission was created under the umbrella of MERCOSUR's Working Group No. 7, with the objective of studying alternatives to promote harmonization of the IP regimes in MERCOSUR countries. In August 1995, the four countries signed a protocol for the common treatment of trademarks. It is now

pending ratification by each of the countries. An agreement for common treatment of copyright and related rights is now being considered, and a negotiating text has been initialed. This text would foster adoption of TRIPS standards (for example, with respect to the term of protection for software) and would introduce a most-favored-nation commitment by MERCOSUR countries in this area.

There is as yet no agreement regarding patents, although informal discussions have been held. This hesitation may be largely explained by the fact that all four countries have been in the process of revising their patent legislation, a matter of considerable controversy and heated public debate in each country.

NAFTA

The NAFTA, among Canada, Mexico, and the United States, came into effect on January 1, 1994. NAFTA removes barriers to trade in goods and services and to investment flows in North America and sets the stage for changes in domestic policies that may distort trade and competition. It is an exercise in "deep integration," even though it lacks the institutional and political components of the European Union.

Chapter 17 of NAFTA establishes the primary intellectual property commitments made by its three members. Its 21 articles encompass provisions regarding copyright, sound recordings, satellite signals, trademarks, patents, computer chips, trade secrets, geographical indications, and extensive enforcement provisions. This text originated from the GATT Uruguay Round negotiating text as it stood at the end of December 1991. It tracks that text in many of its provisions. An assessment of the NAFTA text is presented below.

Others

While the Caribbean nations have gone through a series of arrangements to integrate their trading activities, they have not developed common regimes for intellectual property protection. Perhaps this is explained by the fact that at the time of their independence, many of these countries inherited intellectual property systems from Great Britain or France that were fairly convergent. They have served well enough, although as new technology has come into play, many have been slow to modernize their laws.

Other RIAs have been fashioned in recent years, and still more are being prepared. It can be argued that none of these has given extensive attention to intellectual property issues. It is also worth noting that several trade initiatives negotiated as Agreements of Economic Complementation under the Latin American Integration Association (LAIA/ALADI) "umbrella" make references to IP issues, although they do not introduce common standards of protection.

Major Regional Accords Compared with TRIPS

In recent years, when countries have fashioned trade relations that are more intimate than the common-denominator arrangements of preferential liberalization of trade in goods, they have usually given attention to associated intellectual property conditions, trade in services, and discrepancies in regulatory and investment regimes. These are the characteristics of what are often referred to as "deep integration" arrangements. Since Europe has become the most advanced experiment in "deep integration" in the world economy, its approach to intellectual property deserves careful attention by those who fashion the FTAA arrangements for IP.[13]

Table 2 shows the extent to which the hemisphere's more prominent RIAs contain IP provisions that are at least somewhat comparable to those of the TRIPS agreement.

From Table 2, it can be noted that 16 of the 28 hemispheric countries studied are already subject to some RIA-engendered minimum requirements for their intellectual property systems. These 16 include all the major economies of the hemisphere.

The ANCOM experience includes two revisions of the common intellectual property regime in response to changing conditions, and the Central American experience points to a first revision of that limited common regime. The Free Trade Agreement between Canada and the United States contained no intellectual property provisions, but the NAFTA, which supplanted it, does.

With the availability of the TRIPS and NAFTA texts, regional and subregional arrangements for common intellectual property regimes now have a point of reference. The TRIPS negotiations also provided an important learning experience for many Latin American countries.[14] Virtually all of the hemisphere's countries will be engaged in adjusting their IP systems to the TRIPS Agreement in the next few years (in most cases, the transition period ends by January 1, 2000). This means that, if not already available, governments will need to hire or train officials who can manage significant legal and institutional reforms.

In short, for most of the countries in the region, existing commitments mean adoption in the medium term of at least the TRIPS level of protection. Some are committed by other treaty obligations (such as NAFTA) to exceed that level, while others have already exceeded the TRIPS level of protection in their national legislation. In what follows, the paper discusses how the TRIPS and NAFTA standards might be used as reference points in the FTAA negotiations.

A Road Map for the FTAA Negotiations

The FTAA arrangements for intellectual property will spring primarily from the common base described above and from experience within the hemisphere.[14] By 2005, the TRIPS Agreement will be in place throughout the hemisphere, although least-developed economies may further delay its implementation.[16] By then, some countries will be operating at a higher level of IP protection, either as a singular decision or in response to RIA commitments, as may be the case for countries acceding to NAFTA.

In assessing possible objectives for an IP arrangement in the context of the FTAA, three broad options emerge as most prominent. The most evident and least

TABLE 2. REGIONAL ACCORDS' IP PROVISIONS COMPARED WITH TRIPS

	Enfc	Admn	Copy	Ptnt	TdMk	TSct	PBRs
ANCOM			YES	YES	YES	YES	YES
Central America						YES^	
Group of 3	YES	?	YES		YES	YES	YES
MERCOSUR			*	*	YES?		
NAFTA	YES	?	YES	YES	YES	YES	YES
TRIPS	YES	YES	YES	YES	YES	YES	YES

Key:
Enfc = enforceability of rights by the judicial system
Admn = public administration of patents and trademarks
Copy = copyright and related rights law
Ptnt = patent and utility model law
TdMk = trademark and service mark law
Tsct = trade secret protection
PBRs = plant breeders' rights law

Notes to Table 2:
YES = The RIA contains a provision with enough elaboration to offer guidance to member countries, not simply a generalization.
? = G-3 and NAFTA contain references that are more than a generalization, but they do not offer guidance to member countries.
___ = A blank space indicates no provision.
YES^ = The treaty binds only four countries and only for trademarks.
* = MERCOSUR has initialed a negotiating text for copyright and has held informal discussions regarding patents in the process of creating common arrangements.
YES? = The protocol has been signed but not yet ratified.

ambitious would be full TRIPS compliance perhaps with selected additions (TRIPS-Plus). A second option would be a convergence to NAFTA parity. A third option might seek an arrangement that more fully exploits the power of intellectual property protection to stimulate private investment in the creation, development, and utilization of enhanced technology.

Criteria relevant to selection of an FTAA negotiating objective would include the following:

1. Making the hemisphere as technologically competitive as possible in the global context,

2. Avoiding the creation of obstacles to future advances of science and technology,

3. Maximizing the ability to apply the highest levels of science to agriculture and aquaculture, and

4. Maximizing the ability to participate in the global information infrastructure.

These and other potential outputs will no doubt be assessed and determined in setting the objectives for hemispheric IP arrangements. The following inputs, which contribute to the identified outputs, are also likely to receive consideration:

1. Assuring adequate quality for public administration of the creation and maintenance of IP rights,

2. Assuring adequate defense of IP rights within the judicial systems of the participating countries,

3. Assuring constant revision of the common arrangements to respond best to new technological developments, and

4. Providing for dispute resolution among the FTAA member countries.

Objective 1: TRIPS-Plus

Because the TRIPS Agreement is a commitment accepted by virtually all the countries in the hemisphere, it provides an obvious, if pedestrian, objective for the FTAA. Most countries are now in the process of preparing assessments of the gap between their current national intellectual property system and the new TRIPS standards. We do not attempt this exercise here. Speaking generally, however, it is clear that virtually every country in the hemisphere will need to make adjustments, most by January 1, 2000.[17]

In one sense, obstacles to pursuing this objective are few as all the hemispheric countries, except Panama, have committed to the TRIPS Agreement. Yet the TRIPS Agreement lacks clarity in some of its most controversial articles. This ambiguity will almost surely invite "minimalist" implementation by some countries, followed by challenges from others, leading to dispute settlement proceedings. The FTAA negotiations could serve as a mechanism to clarify and expedite full implementation of TRIPS.

At the same time, the negotiations might address some of the TRIPS' shortcomings. Prominent among them are problems of textual clarity, subjects omitted, loopholes, and questions left unanswered.

The presence of TRIPS provisions that are unclear or difficult to understand, and which will cause difficulties when applied, is hardly surprising given the intensity and complexity of the negotiations. A few illustrative examples of passages that may prove difficult to understand or apply are 1) the first sentence of Article 70, paragraph 4, particularly the term "significant investment"; 2) Article 44, paragraph 2, which permits limits on remedies; and 3) the phrase, "taking account of the legitimate interests of third parties," found in Articles 17, 26 and 30 (but not in Article 13). Subjective terms such as "substantially," "reasonably," "fair," and "legitimate" abound throughout the text. Their use is hard to avoid but leads to uncertainty of application.

Among the things omitted, Article 6 explicitly excludes any use of the TRIPS Agreement to address the issue of the international exhaustion of intellectual property rights. The provisions for enforcement of rights at the border under Article 51 through 60 are relatively detailed in giving the rights holder opportunity to request suspension of release by the border authorities, but they never quite require that the member state respond to the request. Patentability is not mandated for prior inventions in fields newly granted protection. There is no explicit treatment of encrypted, program-carrying satellite signals, although some protection could be derived from Article 14.

Long transition periods are accorded to developing countries, and longer transition periods are provided for least-developed countries. While the extended transition periods can be rationalized as a new form of special and differential treatment, they have also been viewed simply as loopholes.

What constitutes an abuse and what legitimate reasons constitute justification for inaction in relation to compulsory licensing under Article 5A of the Paris Convention are important questions left unanswered, notwithstanding the provisions of Article 31 of the TRIPS Agreement. In addition, what constitutes an effective *sui generis* system for the protection of plant varieties was left unsettled.

Finally, Part III of the TRIPS Agreement provides for enforcement of rights in some detail, but Article 41, paragraph 5 weakens these provisions, as described below. Some, but by no means all, of these shortcomings were addressed or eliminated in NAFTA Chapter 17, also discussed below.

Objective 2: NAFTA Parity, A Higher Existing Standard

Among the RIAs of the hemisphere, only NAFTA consists of an intellectual property regime that rises to a level of protection broadly higher than the TRIPS Agreement. The NAFTA IP regime has been offered by some as an obvious objective for the FTAA negotiations.

The NAFTA IP provisions improve upon the TRIPS Agreement's level of protection in some important regards[18] and lessen or eliminate some of its shortcomings. As with TRIPS, a careful comparison of NAFTA's provisions with existing national IP regimes throughout the hemisphere would show many gaps and disparities in most countries.

The obstacles to achieving NAFTA's standards reside in several considerations. First, this level of protection is widely perceived in the hemisphere as having been propounded by the United States. Second, political resistance to higher levels of IP protection, which is particularly intense in some countries, has been nurtured for several decades in Latin America. The positive role of intellectual property in national economic development is not yet well appreciated, notwithstanding that many individuals in most countries are frustrated by inadequate protection. This pent-up demand for better protection has not yet found a political voice, the voice of the past, as always, being louder than the voice of the future.

Among the NAFTA provisions that exceed the TRIPS level of protection, we note the following: more precise and comprehensive treaty adherence requirements, including UPOV adherence for new plant varieties; a more positive statement of national treatment; highly constrained transition periods; protection for encrypted satellite signals; narrower controls on abusive conditions; enhanced protection for software, databases, and sound recordings; enhanced contractual rights in copyright; tighter language regarding rental rights; extended minimum trademark terms; broader definition of the relevant public in determining whether trademarks are well known; tighter compulsory licensing constraints; disallowance of dependent patents; "pipeline" protection; and reversal of the burden of proof for process patents. The treatment of patent exhaustion, sometimes called parallel imports, is not entirely clear-cut but appears to be constrained.

On the other hand, shortcomings noted in the TRIPS Agreement are carried over into the NAFTA provisions. Among them are the following: the convoluted treatment of existing subject matter (TRIPS 70; NAFTA 1720.4); the limits on remedies (TRIPS 44; NAFTA 1715.7); the balancing of the interests of third parties (TRIPS 17, 26 & 30; NAFTA 1713.4, 1708.12, and 1709.6); the imprecision of border enforcement (TRIPS 51-60; NAFTA 1718); and the lack of answers for the questions of what constitutes an abuse and what would justify non-working. The loophole of TRIPS Article 41(5), which lessens commitments to enforce IP rights, is echoed but only partially, in NAFTA in 1714.5. Subjective terminology, such as "substantial," "unwarranted," and "fair," abounds almost as much in NAFTA as in TRIPS. The TRIPS standard of "gross negligence" in preventing trade-secret losses is also carried over.

A few shortcomings not found in the TRIPS Agreement are added in the NAFTA. Prominent among them is leeway to require that trade secrets must be in tangible form. In contrast with the explicit, if imprecise, TRIPS treatment of IP administration, the NAFTA treatment is sparse, scattered, and remarkably vague.

Anticipating "Tough Issues"

No matter what broad negotiating objective is agreed upon, an array of "tough issues" will almost certainly arise in the negotiating process. This section offers a brief consideration of some of them. These "tough issues" have been selected for illustrative purposes. There are certainly others. They are presented in no particular order.

Enforceability

It need hardly be emphasized that a legal right without an effective judicial remedy is an expensive illusion. The judicial systems of the hemisphere are far from perfect vehicles for assuring effective judicial support for IP rights. The treatment of judicial enforceability under any FTAA arrangements for IP could ultimately determine whether those arrangements are effective or not.

As noted, the TRIPS Agreement contains extensive provisions regarding the enforcement of intellectual property rights. However, it also contains an important qualification (which can be interpreted by some as tantamount to an "escape clause"). This appears in paragraph 5 of Article 41, which states that "Part III" (which details enforcement requirements) of TRIPS:

> …does not create any obligation to put in place a judicial system for the enforcement of intellectual property rights distinct from that for the enforcement of law in general, nor does it affect the capacity of Members to enforce their law in General. Nothing in this Part creates any obligation with respect of the distribution of resources as between enforcement of intellectual property rights and the enforcement of law in general.

In effect, if the judicial system does not work well in general, it need not work well for intellectual property.

The comparable NAFTA provision contains only the first qualification, while the comparable G-3 provision, which is less exact than either TRIPS or NAFTA, calls for the parties to work within their existing judicial systems. Neither MERCOSUR nor ANCOM has any provision of this kind yet.

Notwithstanding the words of any treaty, the reality in many countries is that the judicial system is simply not prepared to render effective support for the rights created by an intellectual property system. This may suggest the need for technical assistance from a variety of possible sources. In fact, both the IDB and the World Bank have begun to deal with these difficulties, and the FTAA might enhance the effort.

An effective judicial system involves many things, including training, administrative support, professionalization of the judiciary, judicial independence, and more. Attention to judicial system reform is beginning to gain momentum in some countries of the hemisphere, but resistance to more than superficial reform can be anticipated. It may be, however, that resistance to judicial reform eventually can be overcome if more people have a broadening awareness that enhanced judicial system effectiveness in general can improve national economic performance.

Public Administration

Just as the effectiveness of a national IP system can be defeated by inadequate judicial system performance, both patent and trademark protection can be rendered ineffective by inadequate public administration of those functions, with serious consequent loss to the overall IP system. It is common in many developing countries for public administration of the patent and trademark offices and the copyright registry to receive only the most modest budget resources. These resources tend to shrink over time relative to inflation, eventually producing ineffective administration.

The TRIPS Agreement lays out brief, yet fairly comprehensive, if necessarily subjective, requirements for public administration regarding the acquisition and maintenance of intellectual property rights. As noted, the NAFTA has no comparable provisions, resorting instead to administrative requirements scattered throughout the enforcement provisions. MERCOSUR as yet has no provisions regarding public administration. The ANCOM common regime has no provisions as such, but it is important to note that because the detailed text of Decision 344 has become the text of the national law of each member country, each will tend to administer that law in a similar fashion. The experience gained under these conditions may provide valuable insights for public administration under all common regimes.

One of the negotiating options would be to ignore this issue and leave public administration requirements to the TRIPS implementation process. Another option would be to insist on effective administration without specifying how this should be achieved, given the reality of resource allocations. A third would be to go deeper and establish a results test, stipulating that budgeted resources must be sufficient to produce effective administration on a sustained basis.

One element of an approach that might bear consideration would be to create incentives for each country that has not been designated as an international examination office under the Patent Cooperation Treaty to grant patents on the basis of technical examinations performed in any such office (anywhere in the world). If well designed, this approach could reduce the costs of public administration and also reduce the costs of obtaining patent rights. This could be of considerable value to inventors in the smaller countries of the hemisphere.

Another element of an approach worth consideration would be to require that patents be made available on a regional basis, in a manner similar to the approach used in Europe. Using electronic interconnections, by 2005 it should be possible to permit one application to serve as the basis for obtaining patent (and possibly trademark) protection in as many countries of the hemisphere as the applicant might care to specify (and pay for). This approach does not entail a central patent office for the hemisphere, only an electronic network that would connect all of the patent offices in order to accomplish useful information functions.

As a variation of the foregoing approach, the FTAA arrangements for IP could require member countries to adhere to the Patent Cooperation Treaty or a hemispheric equivalent as a practical means of reducing public administration costs.

It is important to note the role that patent offices might usefully play in providing technical information to the public. This role could include providing information, training, and possibly subsidies to assist people in accessing databases available through the Internet and other sources.

In passing, we note that the FTAA negotiating process may usefully produce non-treaty effects, such as memoranda of understanding regarding cooperation and technical assistance in upgrading IP system administration, calls for IDB and World Bank aid, and information sharing.

Compulsory Licensing

One of the most difficult issues that will arise in fashioning the FTAA arrangements for IP will be the determination of whether and how to provide for compulsory licensing. Such provisions embody a policy contradiction. The state, having bestowed an exclusive right of property by way of a patent, trademark, or copyright in order to serve the public good, then authorizes a public official to exercise discretion in a way that may reduce the value of the property right, also to serve the public good. Since the exercise of that discretion occurs sometime after the right is created, the holder of that right cannot at the outset be certain as to how that discretion will, in fact, be exercised at some later date. This can cast a shadow of uncertainty across the planning horizon of rights holders.

The TRIPS Agreement speaks in two ways about compulsory licenses. First, as to patents, it incorporates the provisions of the Paris Convention's Article 5(A)(2). This permits members to cure "patent abuse" by issuance of compulsory licenses while at the same time requiring that members permit patent holders to justify inaction by legitimate reasons. International experience has yet to produce much needed consensus regarding the meanings of these clauses. Second, Article 31 of the TRIPS Agreement limits the conditions under which a compulsory license can be granted without resolving the foundation questions of what might constitute an abuse and what would provide a legitimate reason to justify inaction. The comparable provisions of the NAFTA provide somewhat more stringent limits than does Article 31, particularly with regard to dependent patents, but also fails to resolve these basic questions.

Most of the hemisphere's countries will need to modify their compulsory licensing legislation by January 1, 2000, to comply with the TRIPS Agreement.[19] As the TRIPS implementation unfolds, the adjustment of compulsory licensing provisions will no doubt prove complex and contentious. This is in part because the provisions of Article 31 are replete with vague phrases, such as "considerable economic significance" and "adequate remuneration," and in greater part because our understanding of what constitute legitimate reasons justifying failure to work the invention in the country where the corresponding patent was granted have not been clarified by either TRIPS or NAFTA.

A more complete understanding of the economic effects of compulsory licensing would serve the FTAA negotiating process. Among the factors to consider would be whether compulsory licensing actually serves to stimulate local working of patents or produces the opposite result, as nervous investors shy from filing applications in the first place; whether it tilts non-compulsory, arms-length licensing terms in favor of imitation companies or the reverse; whether it reduces or increases the marketplace cost of goods; and whether investment is deterred or stimulated.

The compulsory licensing of trademarks is prohibited under both TRIPS and NAFTA. The compulsory licensing of copyrighted works and related rights is more complicated.

Cultural Exemptions

The NAFTA contains a "cultural exemption," which permits Canada to exclude specified works from the Canadian market. The United States objected strenuously to this provision, accepting it in the end with significant reservations. The "cultural exemption" clause is in essence a barrier to trade in services. Still, it is of particular relevance to copyright-based industries, and it will continue to raise debate in the context of IP negotiations.

"Pipeline"

When, at a certain point in time, a country changes its law to make patent protection available for previously excluded subject matter, the question arises as to whether an invention made prior to that point in time should then become eligible for patent protection. Normal patent doctrine holds that to receive a patent, an invention must, among other things, be novel. That is, it cannot be something already known to the public. Another patent doctrine holds that an applicant who has filed for a patent in one country has one year within which to apply in other countries without violating the requirement of novelty. Thus, when a country changes its law, the question arises whether these doctrines should be put aside.

In concept, if the country has shifted its policy and determined that patenting of that particular subject matter is desirable for the country, then a patent will be granted, provided, however, that the interests of other parties are respected. This leads to an inspection to determine whether third parties may have already entered the market with the invention, or may have made substantial preparation to do so, which involves an inspection of the product "pipeline."

The TRIPS Agreement does not deal with this issue, whereas the NAFTA, in 1709 (4), provides guidance, limiting the inspection to whether there has been prior market entry by a third party. Substantial preparation will not block grant of the patent.

Because the TRIPS requires that patent protection be made available for most subject matter, this issue will diminish in importance and fade with time. By the year 2005, it may be relatively unimportant for most subject matter, with the patenting of biotechnology perhaps still somewhat unsettled.

Higher Life-Forms

This issue relates to the provision of patent protection for life-forms that are more complex than microorganisms. It arises because of the availability of the new tools provided by genetic engineering. The United States, Japan, and the European countries grant patent protection for transgenic plants and animals. El Salvador joined this group in 1993.

Both the TRIPS Agreement and NAFTA call for protection for plant varieties through patents or plant breeders' rights, or both. Higher animal forms may be denied patent protection and are not otherwise protected. The TRIPS provisions regarding this issue are to be reviewed January 1, 1999, but there is no indication of what that review is to produce.

The ability to apply higher levels of science and technology to the agricultural base of a country will be increasingly sensitive to the type of intellectual property protection available for new varieties of both plants and animals. This is particularly true where the resources available to government research programs are not adequate to generate and transmit fully the science and technology that can be made available to a national agricultural base. The role of private companies in this regard cannot be denied, turning the issue from excluding them from activity in developing countries into harnessing private companies' research results for eventual improved yields from forest and field.

The issue becomes particularly difficult in relation to inventions that would alter human genetic material. Many view the manipulation of human genes as wrong, citing ethical or theological considerations. Others stress the power to prevent and cure diseases and congenital defects. This debate obviously spreads beyond the confines of IP negotiations, but it may be helped by the FTAA process.

New Plant Varieties

Closely related to the issue of higher life-forms is the issue of protection for new varieties of plants. Traditional "field research" has long produced new varieties through careful selection of stronger or better plants, hybridization, and cross-breeding, as distinguished from the newer tools of biogenetic engineering discussed above.

As noted, both TRIPS and NAFTA call for protection of new plant varieties through patents or plant breeders' rights (PBRs), or both, with NAFTA specifying UPOV as the proper approach for PBRs. ANCOM instituted PBR protection of a fairly high order through Decision 345. Many of the considerations noted above regarding the economic consequences of protection for higher life-forms apply to new plant varieties as well.

Information Network Systems

The fast expansion of computer-mediated networks, such as the Internet, and the dawning of the digital era pose another set of problems for IP negotiations. With a few computer strokes, one can download copyrighted material and disseminate it around the world. Moreover, the frontiers between carriers and content providers become fuzzy in the context of the emerging "global information infrastructure." Also, the possibilities for digital manipulation are expanding at a fast pace.

Copyright frictions in "cyberspace" are proliferating. Countries around the world are just beginning to develop new rules of the game for IP in a networked environment.[20] Although the approach followed in these documents does not imply radical changes in copyright laws, it introduces new nuances with respect to traditional concepts such as "fair-use rights," the "first sale doctrine," and the "rights of reproduction and transmission."

This attempt to amend copyright law in industrialized countries with a view to better protect the "rights of authors" in the information age is only now becoming part of the public debate.[21] Needless to say, there is no consensus yet on how international convergence should be pursued in this area. The FTAA negotiations, however, may provide an additional forum for this debate.

Trade Secrets

TRIPS provides for the protection of "trade secrets" but permits WTO member states to adopt a standard of "gross negligence" in determining whether a third party was justified in knowing that its acquisition of undisclosed information was obtained in a manner contrary to honest commercial practices. In other words, a party whose undisclosed information was acquired without authorization by a third party must prove that the third party was grossly negligent rather than ordinarily negligent in not knowing the true nature of the acquired information. This higher standard of proof makes the protection of trade secrets more difficult than would be the case under a standard of ordinary negligence.

The comparable NAFTA provision, in its mention of "honest commercial practices," is silent regarding any standard of negligence, leaving an awkward question as to what standard would apply. If enhanced protection of trade secrets were to be sought, it is probable that the preferable approach would be to clarify that a standard of ordinary negligence is all that is required. The distinction between ordinary and gross negligence, while subtle, can be important in some situations.

NAFTA also provides for the protection of "trade secrets" but permits member states to require that for information to be protectable it must be in tangible form. The TRIPS does not contain this permission and will presumably override NAFTA in due course.

Geographic Exhaustion of Rights

The geographical exhaustion principle relates to whether a titleholder can prevent importation without his consent of products that have been put on the market in another country. TRIPS leaves this issue to the discretion of each country's national law, while NAFTA provides some guidance in giving patent holders the possibility of bringing actions against those who, without authorization, import products made abroad using a patented process. Curiously, comparable protection is not available against products themselves.

An Intellectual Property Council

The TRIPS Agreement created an Intellectual Property Council as part of the WTO apparatus. Its duties are being clarified as it begins to function. The NAFTA accord creates no comparable organ.

The ANCOM common regime does not create a specialized body for intellectual property matters, although the Junta and the Commission and even the Andean High Court[22] may serve to settle administrative matters and matters in dispute.

None of the other RIAs create an organ comparable to the WTO TRIPS IP Council. For the FTAA, the issue is whether some type of specialized body would usefully serve the functioning of the common IP arrangements. This issue can be better determined after the overall organizational arrangements, if any, for the FTAA as a whole are established.

The specialized knowledge implicit in intellectual property disputes could recommend the creation of a special body for IP dispute resolution or could recommend their referral to the special IP council, if one were created. The possibility of erecting an independent mechanism for dispute settlement was raised during the GATT TRIPS negotiations. However, IP disputes were ultimately consigned to the general WTO dispute settlement mechanism.

Other Tough Issues

The foregoing tour of "tough issues" is not exhaustive. A few others are mentioned briefly. The patenting of computer software has been debated in a number of settings. There is a tendency in Latin America to deny patents to software. The TRIPS Agreement (as well as NAFTA) preclude this denial, so presumably the issue will fade.

Although somewhat imprecise in its language, the Biodiversity Treaty, which emerged from the 1992 Rio "Earth Summit," has been viewed by some as potentially in conflict with basic concepts of intellectual property. The implications of that treaty in relation to intellectual property may be raised in the context of the FTAA negotiations.

Thought must certainly be given to unexpected new technology. The less than fully successful attempt in the mid-1980s to provide computer chips with a new category of protection illustrates the difficulty — magnified at the international level by the limited membership of the Treaty on Intellectual Property in Respect of Integrated Circuits, often called the Washington Treaty, opened for signature in May 1989. Treaties that deal with intellectual property may "freeze" protection around the state of the technology of the time. Overcoming that risk is not without its own risks but deserves attention.

Objective 3: Investment-Oriented Protection, A More Ambitious Objective

As noted, several broad negotiating objectives present themselves for consideration. A more ambitious objective, not elaborated previously, would fashion a normative standard oriented toward the stimulation of investment, as distinguished from the TRIPS and NAFTA emphasis on reducing trade impediments.

That distinction assumes, first, that a trade-related IP regime achieves less for national growth and development than would an investment-oriented IP regime, and, second, that investment stimulation is a significant objective for the hemisphere.[23]

Support for the more ambitious objective can be gathered from two recent empirical studies prepared by Edwin Mansfield for the World Bank (see Mansfield 1994, 1995). Mansfield found that the decisions of private American, German, and Japanese companies are significantly influenced by the intellectual property systems of developing countries when they consider investing, licensing, or creating joint ventures there.[24] This is particularly true of investment in high-level technological activity, such as full manufacturing, development of sophisticated products, and industrial research. It is probable that private national investors are even more vulnerable to lack of strong and effective protection than are most foreign investors.

Sherwood (1996) offers tentative impressions of how intellectual property regimes in the Western Hemisphere (and elsewhere) might compare with an investment-oriented regime. The comparisons are derived through use of a numerical rating system in which points are subtracted for those gaps and deficiencies in protection that particularly trouble potential investors. The rating system implies, but does not delineate, a regime that in many regards would indicate protection different from, and above, both the TRIPS and NAFTA levels. It exposes weaknesses within the hemisphere in the areas of enforceability of rights, patents, trade secrets, and the application of higher science to agriculture, including protection for new plant varieties.

Needless to say, resistance to such an ambitious objective is likely to be stronger than anticipated reactions in the context of the TRIPS-Plus and NAFTA Parity options described above. Still, the idea of a normative standard aimed at investment stimulation deserves consideration in the context of enhanced hemispheric objectives for both foreign and national investment and for economic integration.

Summary

First, we gave the status of the international commitments hemisphere countries have already made to upgrade their intellectual property systems. For most of the countries, this means eventual adoption of the TRIPS Agreement standards. Of the 28 countries surveyed, only Panama has not yet committed to reach this level. Some have committed by treaty to exceed that level, three in the NAFTA accord, and others through IP-specific bilateral treaties. Still others have already exceeded elements of the TRIPS level of protection without treaty involvement.

Second, we surveyed existing IP commitments in the context of major integration arrangements in the hemisphere. We noted an increasingly positive attitude toward IP protection in the region. This is illustrated by the high standards adopted under NAFTA, the recent reforms in favor of higher levels of protection at the regional level in the ANCOM, and even the willingness to negotiate convergence in the case of the MERCOSUR countries.

Third, we discussed three broad normative standards for an FTAA IP arrangement (TRIPS-Plus, NAFTA Parity, and a more ambitious investment-oriented standard), and we identified some of the "tough issues" that will have to be addressed by the negotiations. In this context, we mentioned some of the criteria that may help to determine which normative standard would best serve as an objective for the hemisphere into the twenty-first century.

Finally, we suggest that, although not enough is yet known about the conditioning effect of intellectual property protection on technology enhancement, investment promotion, and economic development, enough is known to encourage analysis of a level of IP protection that rises above the limited ambition of eliminating trade frictions. The leading challenge for the countries of the hemisphere is to shake the image of intellectual property protection as purely a rent transfer mechanism, viewing it instead as an effective instrument for technological development in a global environment of intensifying competition and opportunity.

NOTES

1. All countries in the Western Hemisphere, except Ecuador and Panama, signed the Uruguay Round agreements in Marrakesh in April 1994. Since then Ecuador has also become a World Trade Organization (WTO) member, and a working party is currently addressing the accession of Panama.

2. For a discussion of the complexities of IP regime negotiations in the context of regional accords, see Tussie 1993.

3. In the United States, for example, it has been reported that close to 73 percent of the profits of 13 major firms in the IT industry (associated with the Computer Systems Policy Project) are currently derived from products and services that did not exist 18 to 24 months ago. In other words, from the perspective of firms participating in this technological race, the product life cycle is becoming relatively short.

4. The work of Robert Solow and Edwin Mansfield, among others, suggests the power that the introduction of new technology provides for economic growth and social welfare. Stimulation of investment for the creation and development of new technology historically has been the work of intellectual property protection. For discussion of this theme, see Sherwood 1990, chapter 4.

5. By "net welfare impact," we mean the resulting conditions that affect the overall economic well-being of a country.

6. For a detailed discussion, see Primo Braga 1990.

7. See Mansfield 1994 and 1995; and Primo Braga and Fink 1996.

8. Important differences remain, however, between the laws of those countries that follow the European continental civil law tradition (that is, most Latin American countries) and those that follow the English common law tradition (such as the United States, Canada, and some Caribbean states). The different approaches between copyright law in the Anglo-American tradition and "author rights laws" in Latin American countries with respect to moral rights illustrate one of these differences. Still, convergence can be achieved, as illustrated by NAFTA.

9. Jamaica and Trinidad & Tobago have each signed and ratified, and Ecuador has signed but not yet ratified, a bilateral treaty with the United States including an intellectual property rights agreement. These IPR agreements are relevant to the extent that they signal commitments to achieve protection exceeding that of the TRIPS Agreement.

10. The Treaty on Intellectual Property in Respect of Integrated Circuits (Washington Treaty, 1989) has not been widely ratified. However, WTO member states have taken on the core of its obligations by virtue of Article 35 of the TRIPS Agreement.

11. Indeed, a possible negotiating objective might be to stipulate the major international treaties to which all FTAA member states would adhere.

Four Central American countries face a curious difficulty. Their common regime for trademarks, a treaty devised in 1969, prohibits any of them from adhering to any other international treaty that relates to trademarks without the consent of all. Each of these countries has joined the WTO and committed to the TRIPS Agreement. Aside from this, none of the other RIAs that contain IP arrangements appears to present obstacles to entering into a hemispheric arrangement for intellectual property protection.

12. For a detailed analysis of TRIPS and its implications for developing countries, see Primo Braga 1995.

13. The European countries have fashioned a patchwork of agreements and institutions over the past two decades and are currently adding to their common arrangements. The need for common IP arrangements has apparently grown stronger as the intimacy of their union has deepened.

14. Most of the countries that joined the GATT after mid-1991, however, gained little experience from the TRIPS negotiations. The TRIPS text, as it emerged at the end of the Uruguay Round, was virtually settled when the Draft Final Act was issued by the GATT Secretariat in mid-December 1991. Although negotiations for modifications to the 1991 text were pursued during the next two years, only two small changes were made. Of Western Hemisphere countries, eight (Dominica, Paraguay, St. Lucia, St. Vincent & Grenadines, Grenada, Honduras, St. Kitts & Nevis, and Ecuador) joined the GATT/WTO after 1991.

15. We can only conjecture about the experience that may be gained in other parts of the world between now and 2005. Most other countries will, by then, have lived with the TRIPS Agreement for five years. RIAs outside the hemisphere may also provide experience. Of great interest will be the Association of Southeast Asian Nations' (ASEAN) experience under its new common arrangements. The European Union's arrangements for IP are already known, although refinements can be expected.

16. The main exception is the case of the least-developed countries that may request longer transition periods to adapt their regimes. For details see Primo Braga 1995.

17. On this topic, see, for example, Sherwood 1995.

18. See Kent 1993 for a Canadian perspective of the enhancements, particularly in the area of patents. See also IFAC-3 1992.

19. El Salvador has no compulsory licensing provision in its new patent law. See Sherwood 1995 for a survey.

20. Important references in this context are the draft "Green Paper" of the European Commission on copyright and subsidiary rights in the information society and the United States "White Paper" (United States Information Infrastructure Task Force, 1995).

21. For a strong criticism of the so-called "maximalist" approach, see Samuelson 1996. A good review of the issues involved in this debate is presented in Goldstein 1994.

22. Ecuador presents an interesting recent example of a case involving intellectual property that reached the high ANCOM tribunal. The high court appears to have sustained the decision of a court in Ecuador that approved a decree of the executive branch regarding implementation of Decisions 344, 345, and 351.

23. For a different perspective on this theme, see David and Foray 1995.

24. Mansfield's survey gathered responses from 94 American, 32 Japanese, and 20 German firms. The firms were randomly selected from diverse industries ranging in sensitivity to IP protection from construction to fine chemicals. The hemisphere countries included among those studied were Argentina, Brazil, Chile, Mexico, and Venezuela.

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