INTEGRATING IPR POLICIES IN DEVELOPMENT STRATEGIES

Now is a good time for thinking about the role of IPR strategies in development. The Doha Ministerial Declaration recognizes that the new round of international trade negotiations will be, more fundamentally than any previous negotiation, a negotiation between developed and developing nations, and it reflects a move toward balance on issues such as technology transfer and access to medicines. The UK Commission on Intellectual Property Rights (CIPR) has just completed a substantial study that carefully explores developing nation concerns. An important review of the patent system is to be published by the U.S. National Research Council sometime this winter. And institutions such as MIHR are seeking to help find ways within the IPR system to develop new technologies for developing nation needs.

I. UPCOMING INTERNATIONAL ISSUES

The CIPR report identifies two IPR issues of great importance to developing countries that are on, or very close to, the current international agenda.

A. Harmonization/WIPO

The first of these is the move to harmonize patent law. This negotiation, already underway, is strongly supported by the EU and the US as a way to avoid duplication of the costs of patent searching and granting, because, with harmonized standards, a search (and possibly a decision) in one office can be accepted in another. There is, however, an important implication for the developing world: a harmonized treaty would probably leave significantly less flexibility than does TRIPS. This is a problem if the harmonized structure ends up, as is likely, as a compromise between the U.S. and the European systems, for such a compromise is likely to include a low inventive step standard and a very broad subject matter standard, standards that are not in the interest of developing nations (nor, in the judgment of many, of the developed nations either). The question is what is the right strategy for the developing nations: to attempt to participate and seek a positive standard? to attempt to participate and seek special provisions for developing nations? to refrain from participation?

B. Software/internet

The second is a negotiation over appropriate arrangements for digital material, especially in relation to the Internet. Here, the driving force is the concern of the music and cinema industries that digital material can be readily copied, thus making impossible an adequate return on the investment in content production – but the principles involved will almost certainly affect computer programs and perhaps scientific information as well. These concerns have led to a desire to provide "technological protection," such as encryption, for such material, and to seek international treaties and statutes, e.g. the 1996 WIPO Copyright Treaty and the 1998 US Digital Millennium Copyright Act, to prohibit circumvention of such technological protection. This may interfere with fair use rights and thus not be in the interests of the developing world. There will certainly be an effort to extend such anti-circumvention legislation and treaties to the entire world, and the developing nations will need to consider how to respond.

But it may be possible for the developing nations to think more boldly – the new technology can permit a fundamentally new approach to the economics of information. The transition is as profound as that from the scribe to the printing press (which led, indirectly, to the creation of copyright law). If information can be reproduced at zero cost, a system of incentives based on charging for the making of copies seems unlikely to be successful in the long run. Is there a way for developing nations to take the lead in designing ways to take advantage of this ease of dissemination while also maintaining incentives for development and creation of digital material?

II. MAKING THE CURRENT IPR SYSTEM WORK AS WELL AS POSSIBLE

A second set of tasks is to find ways to make the current IPR system work as well as possible for developing nations. This is particularly an issue for the patent system, for it is an especially expensive system, but also an issue for other areas. And there is the obvious question of who should pay for the strengthening of developing nation IPR systems. In some cases, the costs may be appropriately borne by the World Bank or national donors. In other cases, they may not properly be high-priority development areas; the funding should rather come from the international intellectual property community, as through fees by patent applicants or support from WIPO (which comes in large part from PCT filing fees).

A. Developing-country IP law design

The obvious first example is the creation of model laws and grant of technical assistance in drafting national laws. As the CIPR report shows, the laws most adapted to developing nations are not the same as those currently used by developed nations. That report goes quite far in defining appropriate patent systems; it does not give the same level of detail for copyright. In developing the detail needed by developing world legislators and law reformers, additional studies may be useful, as may a series of working level meetings among IP offices and practitioners from the developing world. The development of workable TRIPS-compatible compulsory license procedures is particularly important. And it may be desirable to strengthen regional IP systems, in order to save costs and create larger markets that may be more likely to attract research investment.

B. Other areas of law

In the face of strong political pressure and building on substantial technical assistance that is generally based on a developed world model, most developing nations have adopted the basic IP legislation needed to protect global IP rights holders. They have been much slower, however, in adopting the legislation that might help them in meeting their own specific needs. The obvious examples are the legislation (or regulation) needed to help wisely transfer public sector technology into the private sector – this includes a definition of the relative rights of public sector employees and of public sector employers, as well as a reasonable licensing procedure. After all, in most developing nations, public sector research far outweighs private sector research. For some nations, there may be a need for legal arrangements to manage genetic resources or traditional knowledge. For some, there may be a need to elaborate price control procedures. And for some, the need may be to develop antitrust principles that can complement IP legislation.

C. Human resources

None of these areas of law is useful without human resources, nor can developing nation concerns be effectively represented in specific transactions or in general national and international policy making without such resources. This requires people who understand not only the formalities of the law, but also the way to operate effectively in the international arena on behalf of developing nation clients. It is a need almost certainly beyond the ability of the existing short-term study programs or general-purpose graduate law programs. Perhaps a one-year program at a major university, possibly with an externship or clinical component, is essential, but it may be possible to achieve significant benefits with a 6-week or summer program. It is essential to find ways that such programs can be organized and funded.

a. Access to developed-world IP systems

Another need identified in the CIPR report is to enable developing country scientists to use the IP system in the developed world. The international legal system provides for reciprocity – the developing country scientist can file for a patent in the developed world (where, because of the large market size, the patent is most likely to be valuable) just as the developed world scientist can file for one in the developing world. But the developing world scientist often doesn't have the funds to have the application prepared, so the reciprocity is often meaningless in practice. Are there mechanisms to solve this problem – pro bono obligations for developed-world law firms? international legal assistance systems on the pattern of the Advisory Centre on WTO Law?

III. BEYOND THE CURRENT IPR AGENDA – TOWARD REAL TECHNOLOGY POLICY

All the points so far are essentially about making the IP system as useful as possible. But the crucial issue is not IP but technology for development. It is clear that IP systems can play only a slight role in actually encouraging the creation of that technology – and it seems essential to move the debate beyond a reactive one focusing on IP to a proactive one focusing on technology (in which IP may play some role). This must be done in a way that recognizes the enormous difference between the world that led to the technology-transfer debates of the 1970s and today's world. Those debates involved minimizing the costs of technology imported for import-substitution purposes; today, the need is for technology for use in a global economy.

b. Need for thinking on technology and development

In the first instance, there is an important intellectual agenda – we know from economics studies that technology was extremely important to the development of the United States and probably of other developed nations as well. We know much less, however, about how to shape the technological input to development in developing nations today. What is it that contributes to a take-off, in the sense of the take-off of the East Asian nations over the last generation? Does a new nation have a chance without a new technology, such as the steel and rail technologies that were central in the way the United States and German competed with Great Britain or the move to semiconductors and computers that played such an important role in East Asia? GATT and the WTO have given the world the benefit of substantially free trade – and also therefore deprived developing nations of approaches based on infant industry protection. Similarly, TRIPS has deprived them of approaches based on imitation. Yet, under today's global regime, production economies of scale arise far beyond the national level and markets must be global – so the

traditional infant-industry or imitation industrialization strategies may no longer be practical anyway. How can the necessary thinking best be encouraged? Through an existing international institution like UNCTAD or UNIDO? As a cooperative project of National Academies of Science? Through symposia designed to attract the interest of academic economists?

c. Intermediate-level nations

The appropriate strategies must be thought out nation-by-nation, and sector-by-sector, if not firm-by-firm, for the needs differ from case to case. But it is especially important to think further about the needs of the technologically more advanced developing nations, such as India and Brazil. These nations were not emphasized in the CIPR report, which concentrated on the poorest. For these more advanced nations, unlike the poorest nations, IP systems may encourage domestic innovations, and for the larger ones, or those in appropriate regional groupings, such systems may even encourage outside innovation focused on the special needs of the particular nations. But these nations face a new group of problems beyond poverty – how to enable their firms to participate in a global business community. In today's world, the leading firms in that community (and these are almost always developed-world firms) hold strong IP positions that may be used to defend their existing oligopolies against new entrants. It is hard, for example, to see how a new firm, from anywhere in the world, could become a semiconductor or an agbiotechnology major. Certainly, firms within these nations can start as licensees or strategic allies of global majors, but can they become more independent industrial competitors? The difficulty of entry into markets dominated by multinational oligopolies is thus compounded by the international IP system. What can reasonably be done in response? Are there international antitrust approaches that might be helpful? National antitrust arrangements in the developing world alone may well be inadequate, for a license created under national IP-antitrust principles does not necessarily permit export of products to major markets with different IP-antitrust principles. Can new international patent-antitrust principles be negotiated in an area as intellectually difficult and strategically important as this? Is the WTO or the OECD the right place to begin?

d. Global research programs

Programs are emerging to provide global public goods, such as medical and agricultural research, especially oriented toward the developing world. At this point, there are fundamentally public programs, such as those of the U.S. NIH and of the CGIAR centers, and there are many efforts are integrating the public sector with the private sector, such as the new partnerships for HIV, TB, and malaria. The fundamental problem in these areas is persuading the taxpayers in wealthy nations that the programs are worth funding. But there are also IP problems being faced by almost all these institutions, because of the variety of patents held by both universities and the private sector on fundamental research technologies. These research institutions are in turn being assisted by a new generation of intermediaries designed to help with such IP problems, but it is not yet clear that these intermediaries will be successful. Might there be value in more legislative solutions, such as creating an international analogue of the public use provision of U.S. patent law, which allows use of patents by or for the government without license, albeit subject to an obligation of reasonable and entire compensation? Perhaps, there might be some other form of automatic license, at least for research uses? Is such a license already available under an appropriate interpretation of TRIPS, perhaps of Article 30? Are there ways that the availability of such a license could be clarified so that it would be political acceptable and would not undercut private sector incentives? Are there other IP needs of global research that might be met by some form of global negotiation?

D. Access to medicines

There is an additional important and immediate issue associated with access to medicines that are already available on the market. Article 6 of the Doha Declaration on TRIPS and Public Health called for consideration of ways to enable nations with insufficient manufacturing capabilities to use compulsory licensing, an issue posed by the language of Article 31(f) of TRIPS. Such negotiations are taking place. Unfortunately, as the CIPR report points out, resolution of the technical legal issue will not resolve the real world economic problem. After 2005, there will probably not be a generic industry anywhere in the world making generic substitutes for new products on patent. Hence, production under compulsory license will require that a firm learn how to produce the particular product, carry out the necessary quality control (which may require bioequivalence testing), and scale up a production facility. This will require significant expense that must ultimately be covered by those using the product (or by the world public sector) – it will not be possible to rely on others to cover this expense as is the case with production by the current developing-world generic industry.

The choice of a solid economic alternative is unclear, but there are at least three directions that should be explored. One is to find some way to maintain what amounts to a standby generic industry, in which there is some mechanism to spread the start-up costs of producing a new product. A second is a public sector approach, perhaps based on the pattern of public sector pharmaceutical production in Brazil. And a third is to find ways to obtain strong enough commitments from the pharmaceutical industries that alternative production capabilities are not needed. Each direction has its pros and cons; it would be useful to explore them carefully prior to any form of international negotiation. And the appropriate forum for the exploration and negotiation is not yet clear – it might be well to begin with the WHO or the World Bank.

E. Technology Transfer Treaty

For the developing nations a critical component is the creation of a scientific and technological human resource infrastructure. This is the heart of a "sound and viable technological base," as sought in TRIPS Art. 66.2. There are already many bilateral and regional agreements to encourage the cooperative development of new technologies that, in general, provide a framework within which specific public sector collaborations can be negotiated. These include, for example, a 1994 Agreement Relating to Scientific and Technical Co-operation between Australia and the European Community, a 1994 Memorandum of Understanding on Scientific Cooperation between the United States of America and the Russian Federation, and a 1999 Agreement on Scientific and Technical Cooperation between the

Caribbean Community and the Kingdom of Spain. Why not expand this network into a global process through an international treaty designed to strengthen commitment to science and technology, to education in it, and to its sharing, particularly with developing nations? Such a treaty might itself state key commitments; it might also, in the pattern of the WTO General Agreement on Trade in Services, provide a framework for negotiating further commitments.

There might be procedural provisions encouraging negotiations and arranging for dispute settlement; possible substantive provisions might include:

- Commitments by all nations to maintain specific levels of funding of education and research. The educational commitments might be cast as performance specifications; those for research may be more reasonably funding specifications. The commitments might differ according to the income level of the nation.

- Commitments by developed nations to assist developing nations in achieving these educational and scientific/technological goals. These are, after all, among the areas in which international assistance is most effective – a treaty commitment may be especially useful, since the economic benefit is often long-term so that short-term political incentives for such support may be weak.

- Commitments to ensure that the benefits of publicly funded research are made available to all and not just to nationals. Although preferences to national recipients are politically understandable, there is neither scientific nor economic logic to restricting the beneficiaries of research to nationals. Removing such restrictions on a basis of reciprocity would be of benefit to all.

- Similar reciprocal commitments against favoritism to national firms in treatment of such issues as ability to participate in research consortia or ability to achieve the benefit of research-oriented tax benefits.

- Commitments against visa restrictions that limit the ability of students to study at universities in another nation, or restrict the ability of scientists or engineers to gain experience at firms in another nation.

- Commitments to ensure international access to scientific conferences.

- Commitments to ensure access to scientific literature and databases. This might, at least in respect to developing nations, include fair use provisions that would help shape the application of intellectual property law.

- Appropriate arrangements for intellectual property associated with international scientific and technological collaboration

- Appropriate protections for national security and technology proliferation concerns, as with respect to military uses of biotechnology, but such protections should be no broader than essential.

- Regular meetings and review procedures to evaluate the actual degree of scientific and technological cooperation, its mutual benefit, and its benefit for developing nations.

There are many questions that must be explored in designing such an agreement. The focus might be more on science and education or it might be more on technology and entrepreneurial activity. The former would concentrate more on human resources and basic research; the latter would recognize the importance of the private sector in much technology flow, but might raise greater concerns about threats to trade secrets and industrial competitiveness.

Moreover, the focus might be more on encouraging the flow of technology generally or more on specifically benefitting developing nations. After all, scientific and technological progress builds upon the work of predecessors and colleagues, and the exchange of scientific and technological ideas among nations accelerates the progress of science and technology and makes it possible for the benefits of free trade to be expanded. Thus, a global treaty is in the interests of the developed nations themselves (and serves essentially the same goals as cooperative scientific programs within the European Union). With

strong enough commitments, such a treaty would contribute extensively to the rate of development of science and technology in the world and would therefore benefit all; it would be in some sense an extension of WTO past goods and services and IP to technology itself. A global treaty would particularly benefit developing nations, by providing the prerequisites for real technology transfer to these nations. But it might be better to pursue such a treaty as a new generation development treaty, concentrating on differential treatment and tailoring the provisions to the needs for technology transfer from developed to developing nation.

There are several fora in which such an arrangement might be negotiated, and the choice depends on the focus of the agreement. Among the options are a WTO Code on International Access to Technology (perhaps beginning with the WTO Working Group on the relation between trade and the transfer of technology), an UNCTAD Agreement on Technology Transfer, or a UNESCO Agreement on Strengthening International Scientific and Technological Cooperation.