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WHAT IS A GOOD PATENT SYSTEM?

The defense of intellectual property rights
today is the new frontier as were the human rights yesterday.

I. Introductory Premises: Truisms about the Nature and Importance of Patents

A. An IP System Should be Part of the Infrastructure.

A patent system should be part of a country's infrastructure from the outset, rather than something thought about after reaching a fairly advanced state of development, concluded Robert M. Sherwood (Counselor in International Business in Washington) in his book "Intellectual Property and Economic Development" (Westview Press, 1990):

> "Although largely invisible, an intellectual property system which protects innovation and creative expression may be viewed as a helpful precondition to creating and using new technology which boosts economic growth and aids development. From this point of view, the intellectual property protection system may be considered as a valuable part of a country's infrastructure.
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> The concept of infrastructure has proven useful in examining economic development. Roads, irrigation, sewers, schools, water supply, health care and electrical systems are among the preconditions thought beneficial for development. Creation of infrastructure is accorded priority because of this." (p.6)

Furthermore, Sherwood stated:

> "It is submitted that viewing intellectual property protection as an important aspect of a country's infrastructure would focus attention and analysis on its role in the economic development process rather than on trade conflicts." (p.5)

How true! What a revelation!

B. There are no Viable Alternatives.

Strong and modern patent systems, following the model of the European Union, are of interest for all nations, including the smallest and also the least developed. For this reason, such systems are being adopted universally, which is not surprising.

The new Indonesian patent legislation, just like those of other Asian countries, such as, Malaysia, Thailand and even Vietnam, also follow the European standard with protection for all products and processes.

Also, Hungary, Poland, the CEI (Community of Independent States), the Czech Republic, and other Eastern Europe countries, have come to recognize the need to protect chemical products of all kinds. In fact, most of the Eastern European countries are advancing as a block toward granting patents for chemical, pharmaceutical and biotechnological products and it is these countries that are going to be the competitors of the developing countries around the world.

~~In this context it should be pointed out that~~ these Asian and European countries ~~have~~ established or strengthened their intellectual property systems before the GATT-TRIPS era and without being swayed by pressures from the outside. Why? Because they had come to realize that intellectual property systems would serve their own self-interests.

For example, a high official of the Indonesian Government made the following statements in a seminar which I attended in Jakarta a few years ago when I served as a consultant for the Patent , Trademark and Copyright Office, to assist them in implementing their first patent system:

> "The need to expand our knowledge and to improve our technological development and dominance require a greater availability of technological information through growth and development of the patent system. Only through the expansion of knowledge, and the increase in technological dominance, will we be able to carry out efficiently the process of technology transfer as well as solve related problems.
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> Especially today one cannot ignore the role that intellectual property plays in international markets, which is becoming increasingly more important.
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> The future economic development of the country will focus more and more on the industrial sector directed to exports,

which obviously will need access to international markets. This access will only be achieved if we participate in mutual agreements in the sector of intellectual property, through the operation of sufficient, efficient and reciprocal legal protection.

.....

The current situation, where intellectual property has greater value and more importance provides a very different stage from that of the fifties, sixties or even the seventies."

In my opinion, these affirmations — and similar ones which I heard on ~~recent~~ trips to Korea and Malaysia — are very positive, modern, and at the same time surprising, since until 1991 there was no patent system in Indonesia. Furthermore, these statements have much relevance in other developing countries because there is considerable parallelism among many of them and Indonesia.

Indeed, we live in the nineties and not in the sixties or seventies, and nowadays we all live in a world that is becoming smaller and more interdependent every day, that is to say, we live in a "global village."

In Mexico as well as in other Latinamerican countries, granting patents for almost all product and process inventions has also become possible in recent years.

As we can see, patent systems everywhere are being modified and modernized for the purpose of establishing effective and strong protection for all inventive products and processes. And effective patent protection has to be in the interest of countries that wish to improve their economy and make it competitive in world markets. And the recent GATT-TRIPS will no doubt accelerate this trend.

On the other hand, there are no countries where patent systems were abolished, although Professors Melman and Machlup, famous economists of the fifties, after reviewing the American patent system in a study commissioned by the U.S. Congress, arrived at the following surprising conclusion: "If we did not have a patent system, it would be irresponsible, on the basis of our current knowledge and of its economic consequences, to recommend establishing one."

But the patent system has survived Professors Melman and Machlup and other critics of similar mentality. Today critical opinions about the patent

system are rarely heard, and conclusions such as those of Professors Melman and Machlup seem like bad jokes. Professors Mansfield and Scherer, well-known contemporary economists, never would say such things.

For Mansfield, the patent system is a very important instrument as regards the technological development, because he understands that investment in R&D always depends on the degree of protection of IP. Mansfield concludes that given the intimate relationship between industrial innovation and economic growth, adequate protection of IP is indispensable for industrialized as well as for developing countries.

Time and again studies and proposals have been presented regarding alternatives to patents, as for example, economic incentive systems to inventors without grant of an exclusive right; but the patent system has outlived these and other proposals, because time has demonstrated that, when all is said and done, it is the best and most viable alternative of them all.

In this connection, the Spanish Professor Carlos Fernández-Novoa, of Santiago of Compostela, in his book "Toward a New Patent System," studied other alternative systems, particularly a governmental system of monetary premiums, but rejected it. He concluded that: "(T)he patent system is the only system that provides incentives for technological research that is reconcilable with the system of market economy." ~~I agree one hundred percent.~~

~~Nowadays~~ I believe it is incontrovertible that a strong system of IP rights is indispensable for technological development, which stimulates economic growth and social welfare.

C. A Patent System is in the Interest of Nationals.

~~Nor should one believe that strengthening patents means conceding monopolies to foreign companies~~. A patent system, ~~as I stated before,~~ first and foremost is in the interest of nationals. There is genius and creativity everywhere. No country has a "monopoly" on that but where national talent and inventiveness are neglected, inventors and scientists have to go abroad to protect adequately their inventions. And this leads to the so-called "brain drain."

~~Two~~ years ago, in a seminar in Lima, Peru, which was organized by INDECOPI and which I attended to give a talk, I was approached by a

couple who told me that the husband had invented significant improvements in cars. They wanted to go to Miami to enlist an American patent attorney in order to patent his inventions in the United States, because "it made no sense to try to patent anything in Peru." ~~All this is very interesting but at the same time very deplorable~~.

A few years ago I attended a seminar organized by the ABPI (Brazilian IP Association ~~of IP~~) and held in Salvador, Bahia. ~~I could not believe what I heard: Brazilians talking about IP and technology transfer as one would expect to hear in developed countries~~.

~~For example~~, Dr. Virgilio Da Costa Neto, President of the Research & Development (R&D) Center of Bahia (CEPED), expressed wistfully that Japan was a wonderful example to imitate as concerns technological development and patents. Japan showed the way, he said.

Regarding that country, he made reference to the gigantic electronics company, Sony, which emerged after the last World War as a small family business, with a single patent based on a good idea for improving the radio.

Dr. Da Costa Neto also referred to ~~interesting~~ other concepts: Obtaining patents, he said, is a good business practice... patents help at the table of negotiations... and only through patents can an entrepreneur or a small company resist the competition of the giants.

Furthermore, he deplored the fact that, in spite of having a staff of more than 100 persons in his R&D Department, sufficient funds, and considerable technological development, he had not received any request to patent something.

Similar considerations were also expressed by Professor Eloisa Biasotto Mano, Director of the Macromolecular Institute of the Federal University of Rio de Janeiro.

The problem in countries without a solid patent system, is that there are none of the incentives provided by such a system, which is prejudicial to technological development and economic growth. Actually, there are four incentives that a patent system furnishes, namely, to invent, to divulge inventions, to "invent around" prior invention and to invest in the commercialization of inventions and, interestingly, the incentive to invest is the most important of them all.

In this regard Sherwood had the following comments in his already cited book (p.197):

> "If people seem to be more inventive in the United States or Europe or Japan, it is not an accident. It is not because of genes or schooling or intelligence or fate. Implementation of the intellectual property system is critical because of the habit of mind which is fostered in the population. Human ingenuity and creativity are not dispersed unevenly across the globe. Those talents are present in every country. In some, unfortunately, the enabling infrastructure of effective intellectual property protection is missing."

Interestingly, the fact that most of the patents are granted to foreigners in developing countries does absolutely not mean that the patent system serves only foreigners. The truth is that this occurs also in all industrialized countries with Japan and the USA the only exceptions. In the USA almost half of all the granted patents belong to foreigners, too.

> "(T)he proportion of patents granted to non-residents within all countries appears to be high as the result of a multiplier effect. An invention which is patented in a number of countries will be recorded as a domestic invention in only one country, but will appear in the statistics of patents granted to non-residents in all other countries in which the invention is patented. This multiplier effect accounts for the high proportion of patents granted to non-residents in the vast majority of countries." (WIPO, Background Reading Material on Intellectual Property, 1988, p.77)

In this connection, let me quote a comment from a recent article of Professors Zuccherino and Mitelman, entitled "Solid IPR Protection as a Tool of Economic Development" (6 Derechos Intelectuales 79,87, Editorial Astrea, Buenos Aires, 1994) (in translation):

> "It would be a mistake to think that patent protection constitutes a useful institution only for industrialized countries — an instrument of protection exclusively adapted for technology owners. On the contrary, it is fundamental for those countries that find themselves at the beginning of their industrial development.
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> The leading industrialized nations, Japan, United States, France, Germany, or England introduced patent protection in an era in which they all were underdeveloped countries and

the prevailing motivation was to surpass the technological gap when compared to others; first, through import and adoption of foreign technology, and then, through the progressive development of a home-grown technology".

Robert Sherwood ~~will also shortly~~ has recently published an article on correlation of investments and IP. In it he evaluates and classifies regimes of IP of different countries as well as the GATT-TRIPS regime using a scale of 0 to 100. This study was done from an investor's perspective. Some of the numerical scores are: Guatemala 15; Argentina and Brazil 40; Costa Rica 47; Pakistan 48; TRIPS 55; Mexico 65, etc. GATT-TRIPS does not obtain a higher score inasmuch as it is a system of minimal standards; in other words, it is a floor and not a ceiling. TRIPS merely reduces trade conflicts rather than stimulate investments. Sherwood then invokes Professor Mansfield's investment/IP protection correlation from his ~~recent~~ World Bank report, indicating that the TRIPS level of protection is only good enough to support private investment in sales and distribution, assembly, and parts manufacture. A higher level of protection is needed to stimulate private investment in complete manufacture, in sophisticated product development and in research. Attached Table 1 presents all of this quite graphically.

In this context, it is interesting to note there still exists a school of thought that asserts that technology is the "common heritage of mankind", that is to say, that all technology should be made available for free. But if technology should come free, why not oil and gold? This observation was provided by one of my students, none other than the Director of Patents and Trademarks of Zimbabwe, Mr. Naboth Mvere, upon commenting that some countries have oil and others have gold and some countries have technology; and the countries that have oil and gold do not consider them part of the "common heritage of mankind" and accordingly give them away for free. Well said! And don't many developing countries have "green oil", that is, an abundance of germoplasma and biodiversity?

D. Patents do not Constitute Monopolies.

~~Let's now tackle another important issue. There is~~ The notion that ~~we should get rid of once and for all and that is that~~ patents constitute monopolies is widely held. This is a misconception that has caused a lot of mischief. A patent as well as other IP as such can never be a monopoly. The prevailing thought today is that a patent is property — a property like a house or a car or a share of stock — and not a special privilege, a monopoly granted by the government.

— which spawning improvement inventions by others —

The concepts of patent and monopoly should be clearly distinguished. While in a monopoly something is taken away from the public domain, an invention is given to the public domain, although during a given term the inventor has the exclusive right to his/her creation. That is to say, a monopoly is something in the public domain that the government takes from the public and gives to a person or a company. An invention is something that did not exist before and was not in the public domain. It is something new, novel, that upon publication via the grant of the patent enriches the public domain with the knowledge of the invention, and upon expiration of the patent, enters into the public domain, free to be used by anyone.

and

Other reasons:

It is also important ~~to keep in mind that~~ the Patent Laws of the United States (Sec. 261) and those of many other countries specifically state that patents are property, ~~that~~ a patent does not grant the positive right to make, use and sell the patented invention but merely the negative right to prevent others from making, using and selling such an invention, ~~and that~~ there are always other competitive products, other subsequent or previous alternatives and that the patent right is too severely restricted in terms of duration, scope and patent misuse laws to be considered a monopoly.

II. Indispensable Features of a Modern, Effective Patent System

In light of the above premises and principles, a modern, strong, effective patent system, one that would provide the greatest incentives for 1) domestic research and development with the aim to achieve useful innovations; 2) productive investments and thus economic progress; and 3) international technology transfer often coupled with investment ventures, should have the following indispensable features.

A. Virtually no Exclusions of Subject Matter from Patentability

With respect to the topic of exclusions of subject matter from patentability or, more specifically, concerning the issue of patentability of inventions in the nutritional, pharmaceutical and biotechnological fields, the judgment of the Supreme Court of the USA, in 1980, in the *Chakrabarty* case is very interesting, if not compelling. In deciding that new living organisms are patentable, they recognized that there is no better way to provide incentives for such potentially very valuable inventions.

Clearly, this point nullifies ~~eliminates~~ the argument that ~~medicines and foods~~ are too important to be patented. On the contrary, exactly because of high public interest, they are too important not to be patented. And because of this,

Professor Thomas Field, my colleague at the Franklin Pierce Law Center, emphasizes that such products should be patentable *a fortiori*. In other words, the greater the public interest, the greater the need for protection. ~~Incidentally, in the *Chakrabarty* case the Supreme Court stipulated the following: Everything under the sun made by man is patentable — and that's the way it should be, in my opinion.~~

Besides, the act of patenting is a neutral act and should not be restrained for social engineering purposes, and the patent right is a negative one, a right of exclusion rather than a positive one, a right to use. Should there be a public policy need to control the commercialization of a patented product, let there be separate legislation for that purpose a la Finland's recent separate side-by-side (proposed) legislation on patenting and regulating biotech inventions.

B. A Patent Term of Twenty-five Yers from Filing

With respect to the issue of appropriate lifetimes of patents and appropriate exclusivity periods, I submit that it is utterly absurd to have such short periods as, for example, one year in Costa Rica for pharmaceutical products, seven years in India and even 10 or 15 years that Latin American and other countries used to have in past years. Also it is absurd that a patent could be cancelled or be subject to a compulsory license for non-use after only three or four years of its grant; finally, it is absurd to consider importation of a patented product as a non-use of a patent.

In the annexed Table 2 there are some examples of the lag times that elapse from the conception of an invention until its commercialization. Interestingly, the author of this table was a Government employee and not a private sector employee. As can be seen in this table, in many industries lag times are longer than those which exist in pharmaceutical industry.

In light of this table, there is no doubt that short periods for patents, compulsory licenses, or cancellation for non-use, represent elements of unrealistic and anachronistic legislative regimes.

In an era of computation and biotechnology things are very different from earlier times, when simple tools or machines were invented. Consequently, R&D costs have risen steeply. It has been calculated that, at present, the introduction of a new medicine in the USA will take more than 10 years and will cost more than US$ 250 million.

In my judgement, there is no need to begin or continue with a compulsory

license scheme; however, if abolition is politically impractical, compulsory licenses should be possible only in emergency situations and upon due compensation. And there should never exist a risk of cancellation, because this would result in the taking of property without any compensation, something which is anti-constitutional. Besides cancellation is too draconian a penalty.

Nor must there be a requirement of use, since the patent is property and, hence, it is the inventor or owner whose decision it is whether to use or not to use. But again, if it is politically unacceptable to eliminate this requirement, importation should be sufficient, inasmuch as it is completely unrealistic to require domestic production at all times and in all countries in which a patent is obtained.

The term or life of a patent should be at least 25 years from filing, and for pioneering inventions possibly 50 years. Such a scheme is preferable to a system of shorter terms plus extensions in certain product areas or for delays in the Patent Office, like we have in the U.S. now and is fully justified by the fact that lead times for commercializing inventions have become longer in all industries, as pointed out above. Hence, the conventional periods of three or four years till lapsing or compulsory licensing and short patent terms are badly out of step with present realities; and, in fact, short patent terms, early compulsory licenses or cancellation for non-working thwart a patent law and turn it into a hoax and violate principles of property.

C. 16. Trade Secrets and Patents are Complementary.

Of course, any IP system must include not only patents, but also trade secrets, utility models, industrial designs, trademarks, copyrights, etc. All of these are most important for technological development and economic growth and, therefore, it is important to establish and maintain strong and modern systems in these other fields just as in that of patents. Furthermore, another element of great transcendence, is a judicial system that assures the defense of IP rights.

In relation to trade secrets, it should be kept in mind that the patent system and the trade secret system are not mutually exclusive, but, in reality, are complementary. To protect adequately new inventive products or processes both can and should be used in complementary, even synergistic, ways.

There are those who would disagree with this thesis. When I defended this posture in a seminar of the ABPI in Sao Paulo, some years ago, ~~Dr.~~

~~Margarida de Mittelbach,~~ chief of the Patent Office, was horrified, and expressed to be in total and profound disagreement with me. However, ~~it is the pure truth!~~

The ~~American~~ Supreme Court in the ~~case~~ *Kewanee Oil* indicated that

> "Trade Secret law and patent law...(e)ach has its particular role to play, and the operation of one does not take away from the need for the other...the extension of trade secret protection (even) to clearly patentable inventions does not conflict with the patent policy of disclosure".

In this same decision, in a concurring opinion, Justice Marshall asserted that Congress, in promulgating the law of patents, merely intended to offer to inventors a limited monopoly in exchange for disclosure of their invention, rather than exerting pressure on inventors to enter into this exchange by withdrawing any alternative possibility of legal protection for their inventions.

In another, more recent decision of the American Supreme Court, in the *Bonito Boats* case, it was maintained that trade secrets "dovetail" with patents.

In fact, as a practical issue and in terms of management strategy, not only is it possible but very important to proceed as follows:

firstly, maintain the invention as a secret while a patent application for the same is in preparation or pending;

secondly, hold as trade secret the" know-how" associated with the invention that does not have to be revealed in the patent application;

thirdly, after the patent application is on file, preserve as trade secret all the improvements and R&D data subsequently obtained; and

fourthly, with respect to technologically complex products and/ or processes, obtain protection via patents for some inventions, and simultaneously preserve as trade secrets other aspects, in particular, other inventions and know-how related to inventions already covered by patent applications or patents.

In summary, a good management strategy consists in creating an IP estate, consisting of patents, trade secrets, utility models, industrial designs, trademarks, copyrights, etc. in order to obtain optimal protection for a given piece of innovation.

~~D.~~ 6. A strong, modern patent system should also include a petty patent or a utility model or a short-term patent, as it is called in Ireland, which

established such a system recently, with the European Union to follow shortly. Such second-tier protection for subpatentable inventions is desirable, given the strict patentability requirements, the long pendency and the high cost of conventional patents. In other words, petty or short-term patent protection would provide coverage for a large area of innovations which fall between design and utility patents, cannot be protected by trade secrets and for which present utility patents are out of reach because of high patentability standards and/or excessive costs. Furthermore, a new *sui generis* kind of system should be instituted for the protection of services inasmuch as the service sector in the economy is burgeoning while the manufacturing sector is slowing down.

E. A strong, modern patent system should be based on the first-to-file principle rather than a first-to-invent scheme inasmuch as first applicants are the first inventors in the vast majority of cases and inasmuch as a first-to-file system with prior-user rights is fully equivalent to a first-to-invent system with interferences only that it is better, simpler, and cheaper. The recent change in our Patent Code that admits evidence of inventive activity from NAFTA and WTO countries and thus globalizes interference practice, will turn out to be unworkable.

III. Conclusion

To modernize and strengthen a patent system, ~~the following~~ course of action should be pursued:

1) replace anachronistic national patent legislation, with a European-style patent law,
2) adhere to the most relevant international treaties,
3) create consciousness in the public as well as the private sector of the significance and benefits of patent rights,
4) institute judicial mechanisms for the enforcement and defense of patent rights, and
5) join forces with neighbor countries to form and establish a centralized regional patent system and patent office.

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